#### PROTECTING YOU THROUGH EDUCATION

SECURITY LICENSE | FIRE AND LIFE SAFETY DIRECTOR | RSOE Q-01 FIRE SAFETY COORD | FIRE SAFETY & EAP PLANS | CPR/AED

# **RADIANT** FIRE AND LIFE SAFETY DIRECTOR F-89/T-89 **ANSWERS TO THE 1,000 SCENARIOS**

#### Revised April 17, 2024 Please disregard previous versions of this project

There are no limitations on the number of times that the 1,000 scenarios may be printed from the Radiant website— FREE of charge. Readers may also make copies of the scenarios for distribution purposes.

Radiant Training & Consulting, LLC currently offers the following courses (as of March 1, 2024):

- Fire Emergency Course/Life and Life Safety Director F-89 Program
- Coordinator of Fire Safety F-80 Course
- Non-Fire/EAP Emergency Course/Fire and Life Safety Director F-89 Program
- Active Shooter and Medical Emergency Preparedness Course/Fire and Life Safety Director F-89 Program
- Fire Guard for Impairment Course F-01
- Fire Guard for Homeless Shelters Course F-02
- > > Indoor/Outdoor Place of Assembly Safety Personnel F-03/F-04
- FLSD On-Site Exam Preparatory Course
- Construction Site Fire Safety Manager Training Course S-56
- High Pressure Boiler Operating Engineer Preparatory Course
- Refrigeration System Operating Engineer Q-01
- LL124: Role of the Security Guard in Serving Homeless Shelter Clients
- Security Pre-Assignment Training Course for Security Guards
- Security On-the-Job Training Course for Security Guards
- Security Annual In-Service Training Course for Security Guards
- First Aid, CPR and AED sponsored by the American Red Cross
- Sexual Harassment Course

Radiant also provides fire safety consulting services and prepares Comprehensive Fire Safety and Emergency Action Plans, Fire Safety and Evacuation Plans, Fire Protection Plans and Tenant Protection Plans.

Radiant's fees for these courses are the lowest in New York City. Please visit our website radianttraining.com for additional information, services and to register for these and other courses.

#### **About the Author**

Radiant Training & Consulting, LLC was founded by Elvis Polanco. MS, CPP to meet the growing demand for professional training and consulting services in the protection management field. The author's strategic initiatives are designed to provide training and consulting services based on a lifetime of professional experience and a graduate level protection management education.

Mr. Polanco holds a Bachelor of Arts Degree from the Bernard M. Baruch College School of Liberal Arts and Sciences and a Master of Science Degree in Fire Protection Management, summa cum laude, from John Jay College of Criminal

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Justice. He is certified as a Protection Professional—CPP—in Security Management by the ASIS International Professional Certification Board.

As a New York City Fire and Life Safety Director—FLSD, the author combines his security and fire safety management experience, from both academia and the built environment, to develop and administer compelling, comprehensive, and incomparable fire safety consulting programs. He is a NYS Certified Security Instructor and an American Red Cross Certified First Aid, CPR/AED Instructor who has authored and published numerous articles on security and fire safety in the built environment in *Security Director* and *Security Director News* magazines. His opinions have been published in the *New York Daily News* and *The Wall Street Journal* and he's been written about in *The Bronx Chronicle*.

His active professional memberships include ASIS International, the National Fire Protection Association (NFPA), the FLS Directors Association of Greater New York (FLSDA), NYPD Shield, the John Jay College Alumni Association and the International Law Enforcement Educators and Trainers Association (ILEETA). He is a Notary Public Officer of the State of New York.

The Company's programs offer sound consulting principles to assist in the resolution of contemporary fire safety issues and emergency management concerns critical to the protection of people from harm and property from loss.

Radiant recently opened a security services company: Radiant Protection Management, LLC.

- 1. The white stripe indicates that when a manual pull station is activated, the fire alarm signal will be automatically sent to the Fire Alarm Control Panel, the Central Station, and the Fire Department. Group "B" and "R-1" properties must have the fire alarm systems monitored by Central Stations; therefore, the fire alarm does not stay "in-house." Note: The 2008 Fire Code mandated that all buildings with fire alarm systems have central station monitoring, regardless of whether the manual pull stations have the white stripe.
- 2. Area smoke detectors must be located in elevator lobbies to activate elevator recall. The elevator lobby area smoke detectors activate because there is smoke in the elevator lobby, hence the proximity of the smoke to the elevators and their occupants is prioritized and the elevators recall to the Ground Floor or lowest terminal landing to protect the elevator occupants and allow them to escape the property. When two smoke detectors are located in elevator lobbies, they must both activate to sound the alarm and recall the elevators. They are known as "cross-over smoke detectors."
- 3. No. A sky lobby exists when passengers must transfer from one elevator bank to another elevator bank to reach the desired floor. The option of getting in the high-rise bank elevators on the lobby level does not exist. Therefore, the high-rise bank elevators are not express elevators. In the high-rise bank, the space between the second floor and the sky lobby floor consists of office space.
- 4. False. The FLS Building Evacuation Supervisor (FLS BES) is not required to hold a Certificate of Fitness of any category. Because the FLS BES must be available to respond to the Fire Alarm Control Panel when the building has 450 occupants or less and a fire alarm activates, then it is impossible for the FLS BES to oversee torch operations as a Fire Guard, even if the FLS BES did in fact have a Certificate of Fitness Fire Guard F-60.
- 5. Heat transfer via conduction requires an intervening medium (direct contact) that allows the heat to transfer from point "A" to point "B." For example, a metal pipe heated at one end will eventually heat the opposite end and anything touching the pipe. There is no solid object connecting the sun to Earth. Heat transfer from the sun is via Radiation (electromagnetic waves).

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- 6. The Ball-Drip Valve is designed to detect when the Lower Check Valve in the system is defective or has failed completely. It is also designed to drip excess water from the pipe between the Fire Department Connection and the Lower Check Valve to prevent the water from freezing after the Fire Department disconnects the fire hoses from the Fire Department Connection. Hence, the Ball-Drip Valve must be at a level that is lower (Cellar level) than the location of the Fire Department Connections (street level).
- 7. The FLS Building Evacuation Supervisor (FLS BES) is required to be in the Group "B" property when the Fire and Life Safety Director is not required to be in the property. A Fire and Life Safety Director is required to be in the property when there are more than 450 in the entire building or more than 100 people above or below the Ground Floor, excluding the Ground Floor; and during normal business hours of the building.
- 8. All automatic and manual alarm-sending (peripheral) devices first send the signal to the Fire Alarm Control Panel to alert the Fire and Life Safety Director that a fire alarm has been activated.
- 9. Duct smoke detectors are positioned to detect smoke particles in the duct work associated with the Heat, Ventilation and Air Conditioning (HVAC) system. Upon detecting smoke, the duct smoke detectors activate a fire alarm signal and commence the process of controlling the smoke by closing smoke dampers and shutting down HVAC fans.
- 10. The Fire and Life Safety Director must call 911 upon activation of a fire alarm since being "off-line" prohibits the central station from transmitting the signal to the Fire Department. When the system is "off-line", the Fire and Life Safety Director or FLS Building Evacuation Supervisor, as a "Rule of Thumb", must remain at the Fire Alarm Control Panel until the system is back "on-line".
- 11. Because of the location of the Waterflow Switch in the fire suppression system, it will only activate when the Branch Lines are re-filled. If the Waterflow switch is not disabled upon the drain down, it will not activate a fire alarm signal, but the Tamper Switch will transmit a signal to the Fire Alarm Control Panel.
- 12. The OS&Y valves cut off water to the fire suppression system, therefore as a precautionary measure the valves are usually chained/padlocked in the open position even when monitored by Tamper Switches, this will prevent anyone from physically attempting to close the valve.
- 13. The Fire and Life Safety Director's name appears in the Fire Safety and Emergency Action Plan.
- 14. Access stairs are listed in the Fire Safety and Emergency Action Plan because they are a means of smoke spread to all the floors connected by the access stairs. Upon a fire condition all the floors connected by access stairs must be in-building relocated or evacuated, depending on the location of the access stairs.
- 15. False. When a peripheral device such as a smoke detector is disabled, the smoke detector will not activate a fire alarm signal to the Fire Alarm Control Panel, therefore a fire alarm signal will not be transmitted to the central station. Hence, there is no need to take the system "off-line" since the Fire Department will not be responding to the property.
- 16. False. The fail-safe door release system is mutually exclusive from "taking the system off-line". The activation of a manual pull station will transmit the signal to the Fire Alarm Control Panel, central station, and Fire Department.
- 17. True. The two-way communication system that is activated by pressing the "Alarm" button in elevators does not become inoperable during Elevator Recall Phase I (or Phase II).
- 18. The caps are made of metal (Iron) in the event the Lower Check Valve fails. If the Lower Check Valve fails, the caps will not allow the water from the standpipe/sprinkler system to be discharged out to the street via the Fire Department Connections.

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- 19. The Inspector's Valve is located at the farthest point from the water source (Gravity Tank). If there is water at the farthest point, the Cellar Level, then there must be water throughout the system.
- 20. No. Disabling the smoke detector after it has been activated is unnecessary because it will automatically self-reset after smoke clears the chamber (head) of the detector. The fire alarm system cannot be operationally reset by the Fire and Life Safety Director if the building is "on-line" (even if it is known that the alarm was caused by something other than a fire) and must wait for directions from the Fire Department supervisor to reset the system.
- 21. False. A Rate-of-Rise heat detector activates a fire alarm when the room temperature increases at a rapid rate (12-15 Degrees Fahrenheit per minute)
- 22. The Upper Check Valve in the Standpipe/Sprinkler Riser prevents the water from entering the Gravity Tank when the Fire Pump is activated or when the Fire Department Connections are activated. The water in the Riser and Branch Lines in an automatic-wet system is contaminated and must not be allowed to enter the Gravity Tank, which might contain water for domestic use by the building occupants. Adequate water pressure is also maintained by the closure of the Upper Check Valve.
- 23. True. It is the color of the caps that determines the type of system in the building, not the color of the exposed pipe. Red caps indicate that the building has a Standpipe System. Only in a non-automatic system (dry pipes) must the entire exposed pipe be silver-colored (aluminum).
- 24. Tom Smith cannot be a member of the FLS Brigade because he is an employee of a tenant, Company X.
- 25. False. Retail stores are tenants (leaseholders) and because they have peripheral alarm-sending devices (manual pull stations, etc.), they must participate in modified fire drills.
- 26. No. Bill Sawyer must relinquish his FLS Brigade duties because he is now an employee of a tenant, Company Y. FLS Brigade members must be base-building employees who work directly/indirectly for property management.
- 27. The Deputy Fire and Life Safety Director must immediately assign and train a new FLS Building Evacuation Supervisor (FLS BES).
- 28. False. Company B may have one employee who will assume the title of Deputy FLS Warden. Company B only occupies 5,000 sf, but because Company B is a separate tenant from Company M, a Deputy FLS Warden must be assigned to Company B.
- 29. False. Light fixtures in the emergency Means of Egress (and possibly other sections of the floors) are equipped with 90-minute battery back-up power or are tied into the building's emergency generator.
- 30. The "Return" stairwell has a landing between floors that "turns around" people towards the point where they entered the stairwell, but on another floor below or above the floor where they entered the stairwell.
- There is no interruption in the communication string between the peripheral devices, the Fire Alarm Control Panel, the central station and the Fire Department when the building is "on-line". When "off-line" the communication is interrupted between the central station and the Fire Department.
- 32. False. Carbon Dioxide Fire Extinguishers displace the oxygen from the Fire Triangle. Water cools a fire.
- 33. Yes. A person who has intimate knowledge of the use of fire extinguishers and who has used fire extinguishers in the past may extinguish a fire with an area greater than 2 sf. with a 2A rated fire extinguisher.

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- 34. False. A person must be at least 18 years old to acquire any Certificate of Fitness from the FDNY.
- 35. No. A Place of Assembly must hold a minimum of 75 people to require it to have a Place of Assembly Certificate of Operation.
- 36. The Fire and Life Safety Director will not be issued a Notice of Violation. Violations are issued when the mandates of the Code are not met. In this case, the Fire and Life Safety Director is doing more than required, which is acceptable.
- 37. False. The objective of Check Valves is to allow water to go in one direction only. OS&Y valves allow water to enter the Sprinkler/Standpipe system.
- 38. A "loaded" sprinkler head is one that will not activate as designed because of foreign elements on the sprinkler head, for example: paint, or have a design flaw. The Fire and Life Safety Director should immediately contact the engineers/vendor, holding a C of F S-12, not the Fire Department, and have the sprinkler head replaced.
- 39. No. James Jones should not have been terminated as he could not have been a member of the FLS Brigade because he is an employee of Company J, a tenant. FLS Brigade members must be "base-building" employees who work for property management/ownership.
- 40. Neither. The FLS Building Evacuation Supervisor does not exist in hotels/motels because hotels/motels have Certificate of Fitness Fire and Life Safety Director coverage 24/7. In a Group "B" commercial high-rise building, the FLS Building Evacuation Supervisor reports to the Fire Alarm Control Panel. FLS Brigade members report to the floor below the fire (alarm) floor, assist people with special needs and fights small fires with the use of portable fire extinguishers.
- 41. The Fire and Life Safety Director should meet with the construction Foreman and inform him to install the doors immediately. Emergency stairwell doors cannot be removed for any reason other than to install a new door.
- 42. The candidate is not even allowed into 9 Metrotech Center because he did not bring with him two pieces of identification. Candidates do not have to be employed to take the Certificate of Fitness Exam at the Fire Department.
- 43. False. Although the hotel guests are not required to participate in fire drills, the drills are conducted quarterly (on each shift) in hotels, not semi-annually.
- 44. True. The Gate Valve must be opened, and the hose fully extended in order to activate a Waterflow switch fire alarm. The "folds" keep the water from flowing into the hose until the final fold comes off the guick-release rack.
- 45. No. Manual Pull Stations do not activate elevator recall in either property.
- 46. False. Missing door-closers must be reported by the Fire and Life Safety Director to the engineers/vendors/manager so that the closers are installed immediately after discovering that they were missing. No need to report this issue to the Fire Department.
- 47. False. The "attack" stairwell is not pre-defined by the first letter designation. The stairwell that the Fire Department will use to attack the fire will be the one with the Standpipe Riser. Pre-determined "attack" stairwells only exist in buildings with one Standpipe Riser.
- 48. R-1: Hotel: FLS Director, Deputy FLS Director and FLS Brigade. B: Commercial High-Rise Building: FLS Director, Deputy FLS Director, FLS Building Evacuation Supervisor, FLS Brigade, FLS Warden, Deputy FLS Warden, FLS Male Searcher, FLS Female Searcher and Buddies.

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- 49. False. The Waterflow Switch only activates when the Branch Lines are refilled. Therefore, the Waterflow Switch must be disabled prior to the refill of the Branch Lines to prevent a fire alarm activation. When the Branch Lines are drained, the Tamper Switches activate Supervisory Signals to the FACP.
- 50. The fire alarm signal will terminate at the Fire Alarm Control Panel. The Fire and Life Safety Director should post a sign at the Fire Alarm Control Panel indicating that 911 must be activated if a fire alarm is received at the Fire Alarm Control Panel.
- 51. No. When the system is "on-line", the transmission of the fire alarm signal from the central station to the Fire Department cannot be terminated.
- 52. No. The form letter must be signed before a Notary Public Officer by the person who wrote the letter, not by the candidate for FLSD.
- 53. Setback Roofs. Yes, they may be found on one, two, three or the four exposures of a building, depending on building design.
- 54. The elevator banks that service the fire floor will recall: "B" and "C". Bank "A" elevators will continue to operate normally.
- 55. 21 is a Sky Lobby because you must transfer from Bank "A" to Bank "B" on the 21<sup>st</sup> Floor to get to Floors 22-40. Bank "C" are express elevators; therefore, the blind shaft exists between Floors 2-40.
- 56. The Fire Pump. The Upper Check Valve will prevent the Standpipe/Sprinkler water from entering the Gravity Tank.
- 57. False. The life safety emergency generator is designed to provide emergency power to life safety systems (lights, elevators, fire alarm system, etc.). Workstations are not life safety systems.
- 58. Impairment Coordinator. This title is assigned by management to a Certificate of Fitness holder F-80, F-89 or S-95, or to a responsible person who is not a Certificate of Fitness holder.
- 59. The fire alarm system and the Heat, Ventilation and Air Conditioning (HVAC) system: fans shut down and dampers close upon alarm activation. The interface of these two systems does not have an effect on Elevator Recall Phase I (or Phase II).
- 60. False. Stairwell doors are always unlocked from the occupant (office) side. A fail-safe door release system releases (unlocks) the reentry doors from the stairwell side.
- 61. It is not bound.
- 62. The Fire Alarm Logbook.
- 63. False. Tamper Switches do not activate fire alarms; therefore, the Fire Department will not respond whether the system is "on-line" or "off-line".
- No. In a newly constructed Group "B" property, the fire drills must be conducted quarterly for the first two years and every six (6) months thereafter.
- 65. Water is a conductor of electricity. The operator of the water-based fire extinguisher on an electrical fire may be injured.

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- 66. Both the smoke detector and the sprinkler head must activate: When the smoke detector activates, the extinguishing agent is released into the branch lines, when the sprinkler head fuses, the extinguishing agent is released on the fire via the sprinkler head. Vise-versa: When the sprinkler head fuses, the pressurized air is released, when the smoke detector activates, the extinguishing agent is released via the fused sprinkler head. This system is usually found in computer rooms because of the sensitivity of the equipment housed in those rooms. Pre-Action Systems activate upon the detection of smoke AND heat.
- 67. Because the water may freeze, and the pipes burst if an automatic wet system is installed in loading docks, automatic dry systems are installed instead. When this system is activated, a fire alarm will activate at the Fire Alarm Control Panel, which will then transmit the signal to the Central Station and the Fire Department.
- 68. Yes, because there are 500 people or less in the entire building (the FLS Building Evacuation Supervisor is on duty at this time) and the FLS Director also holds a Certificate of Fitness Fire Guard F-01.
- 69. Yes, because there are more than 500 people in the entire building the FLS Director or Deputy FLS Director is on duty at this time and the FLS Building Evacuation Supervisor also holds a Certificate of Fitness Fire Guard F-01.
- 70. False. The elevator lobby door(s) release (unlock) upon elevator recall because otherwise they would create a "mantrap" for John Peterson (no elevator/stairwell access). Mr. Peterson has to be able to get to an emergency stairwell from all elevator lobbies in the building upon activation of automatic fire alarms.
- 71. The elevator Mr. Miller is riding will not recall to the street level because the fire alarm activated on a floor (FL-12) that is not serviced by the Bank "B" elevators.
- 72. The sprinkler head was "loaded" with foreign elements (i.e., paint). When "loaded," sprinkler heads may not function as designed and not fuse at the required temperature.
- 73. False. The fire drills in hotels are conducted by the Fire and Life Safety Director. The Coordinator of Fire Safety oversees fire drills in homeless shelters (not Group "B" and "R-1" properties).
- 74. False: Only the elevators that service the fire alarm floor must recall. False: Elevator recall overrides "independent" mode, hence the elevator(s) on "independent" mode will recall in Phase I and operate in Phase II.
- 75. The Fire and Life Safety Director will disable the peripheral devices (not take them "off-line"). The system may remain "on-line" with the Central Station.
- 76. Yes. The elevator landing above the street level is known as the "lowest terminal landing", i.e., mezzanine level. People will then have to take the escalators to reach the actual Ground level where they are able to exit the building.
- 77. We do not know. The individual representing the Fire Department may be a firefighter, examiner, or inspector.
- 78. The Fire Alarm Control Panel will send an "auxiliary" tone throughout the building (except to the fire floor, the floor above the fire floor and the floor below the fire floor) to inform the Fire and Life Safety Director that a fire alarm was transmitted to the Fire Alarm Control Panel. The Fire and Life Safety Director did not violate the Rules since they only state that a Fire and Life Safety Director must be available in the building, not necessarily standing next to the Fire Alarm Control Panel.
- 79. Yes. Mr. Katz is now a base-building employee and may be assigned to the FLS Brigade.

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- 80. Two smoke detectors or two Waterflow switches, or one of each activated simultaneously: one on a floor serviced by Bank "A" and one on a floor serviced by Bank "B". Ellen and Patricia's elevators are recalling as indicated by the activation of the "Fireman's Helmet light".
- 81. No. Only smoke detectors in elevator lobbies, elevator machine rooms and elevator shafts activate elevator recall. Three methods of activating elevator recall are: Waterflow switch activations, manually from the Fire Alarm Control Panel, manually from the main lobby key switch using key #2642 (and the smoke detectors listed above).
- 82. No. The firefighters will only use their fire hoses. The building's fire hoses will be removed and replaced with Fire Department hoses that firefighters can "trust" and are 2½ inches in diameter.
- 83. Originally it was elevator recall, but because the elevator remained on the 18<sup>th</sup> floor (instead of recalling); the elevator malfunctioned, thereby entrapping Ms. Garcia.
- 84. The Fire and Life Safety Director will activate the Central Station Fire Alarm Trip Switch ("Silent Trip Switch"). A fire alarm did not activate from the third floor possibly because the peripheral devices had yet to detect the smoke/fire condition.
- 85. "Off-line". The system is scheduled to automatically go back "on-line" at 7:00 a.m. since there are no entries in the Alarm Logbook indicating that the system was put back "on-line" and the maximum number of hours a system may be "off-line" is 8 hours. The one entry (one phone call to the central station) was made at 11:00 p.m.
- 86. False. The Fill Pumps continue to operate and provide water to the Gravity Tank as needed for domestic use and fire reserve, even when the Fire Pump is activated.
- 87. The Fire and Life Safety Director is correct. The central station is operational 24/7 and should process all "off-line"/"on-line" requests regardless of holidays.
- 88. The Fire and Life Safety Director is correct. There is no limit on the number of times a system may be taken "off-line" or placed back "on-line" with the central station.
- 89. The Deputy Fire and Life Safety Director discovered that the torch operator did not have a Certificate of Fitness for Torch Operations. Yes. A person using a torch must have a Certificate of Fitness in order to be allowed to do the torch work in the building.
- 90. We don't know. The Gravity Tank may hold water for both domestic use (faucets, toilets, water fountains, kitchens, etc.) and fire reserve (sprinkler/standpipe system) or for either one.
- 91. The Auxiliary Tone. No, the fire alarm was not acknowledged hence the reason for the activation of the Auxiliary Tone is to inform the Fire and Life Safety Director that a fire alarm was transmitted to the Fire Alarm Control Panel.
- 92. The fire alarm activated somewhere above the 11<sup>th</sup> Floor; hence Joe does not hear the alarm siren. Building X has a fail-safe door release system because Joe was able to open the doors on the 8<sup>th</sup> and 4<sup>th</sup> floor from the stairwell side without the use of a key/card. The fail-safe reentry system is at every fourth floor, hence the doors only released on the 8<sup>th</sup> and 4<sup>th</sup> floor as Joe walked down to the street-level discharge.
- 93. 1) The Fire and Life Safety Director was not informed by the FLS Warden; 2) The Fire and Life Safety Director is complacent and is not properly maintaining the program; 3) No one in the fire safety team on the floor knew that Mr. Malig had resigned from his position.

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- 94. False. Only pendent type sprinkler heads may be used where drop-down ceilings exist. Upright sprinkler heads are only used when the Branch lines are exposed. Drop-down ceilings are used to not expose the branch lines, therefore pendent sprinkler heads are used when drop-down ceilings are in place.
- 95. False. Both smoke detectors in a cross-over system must detect smoke in order to activate the fire alarm and elevator recall. The first smoke detector generates a Supervisory Signal; and the second smoke detector generates a Fire Alarm signal.
- 96. A vibrating beeper. The beeper will vibrate upon the activation of a fire alarm.
- 97. The fire alarm was activated somewhere between floors 2-80. The freight car was recalled because it services all the floors in the hotel, except the 81<sup>st</sup> floor. Because Elevator #1 is express from floors 1-81, it did not recall and continued to operate normally, not the Department of Environmental Protection.
- 98. False. Although the cafeteria violated the approved plan by adding 3 tables and 12 chairs, for which a violation would be issued, it is the Department of Buildings that the inspector would inform not to renew the Place of Assembly Certificate of Operations.
- 99. False. Although the sensors measure the water levels in the Gravity Tank, the Fire Pump does not re-fill the Gravity Tank. The Fill Pumps fill the Gravity Tank.
- 100. False. The red caps indicate that the building has an automatic wet standpipe system.
- 101. A Waterflow switch from the 45<sup>th</sup> floor activated elevator recall of the Bank "B" elevators: #s 5-8. There are four elevators in Bank "A" #s 1-4.
- 102. A cell phone or a regular office phone. Warden phones do not have numeric keypads; hence they do not require dialing.
- 103. The number of people between 7p-7a is 450 or less in the entire building or 100 or less above or below the street floor, thereby not requiring a Fire and Life Safety Director to be on duty. The FLS Building Evacuation Supervisor is on duty. It is not a hotel since hotels require Fire and Life Safety Directors 24/7.
- 104. The people on three floors heard the fire alarm siren. The Fire and Life Safety Director was not at the Fire Alarm Control Panel, hence the activation of the auxiliary tone that was heard on the other 42 floors because the Fire and Life Safety Director did not acknowledge the alarm within 45 seconds.
- 105. An atrium. A FLS Warden is not required in atriums as most atriums are public access spaces.
- 106. True. Certificate of Fitness Holder F-89 may work in a Group "B" property and a Group "R-1" property.
- 107. Sprinkler heads. The Waterflow Switches are the devices that activate fire alarms when sprinkler heads fuse and Waterflow is detected.
- 108. Yes. The person with the disability should change the workday hours to 9a-5p, the same hours that the Buddy works in order to always be around the person who will assist them in an emergency evacuation.
- 109. The Fire and Life Safety Director activated the Central Station Manual Trip Switch at the Fire Alarm Control Panel and the system was "on-line".

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- 110. The Fire and Life Safety Director abandoned the Fire Alarm Control Panel and reported to the fire floor where he/she identified the smoke detector with the steady light, which is the visual indicator that that was the smoke detector that activated.
- 111. The fire suppression system agent was Carbon Dioxide, which displaced the oxygen in the room and which killed the employee. The system was "on-line" since no tests were being done at the time because the FLS Building Evacuation Supervisor was the only other person in the building.
- 112. No more than 30 feet. "K" fire extinguishers cannot have a travel distance of more than 30 feet from cooking appliances.
- 113. No. Light fixtures have 90 minutes of battery back-up power.
- 114. The Lower Check Valve failed. The Fire Department did not respond because the system was "off-line". The Chief Engineer failed to maintain the fire suppression system by not having caps on the Fire Department Connections.
- 115. Two hours. Each Gypsum board ("Sheetrock") is generally rated at one hour and two are needed to create separating walls (one on each side of the wall).
- 116. A major fire is in progress. The Bank "B" elevators (#s 5-8) were recalled by the two elevator lobby smoke detectors on the 25<sup>th</sup> floor. The Bank "A" elevators (#s 1-4) also recalled when the smoke detector in the low-rise elevator machine room was activated on the 23<sup>rd</sup> floor.
- 117. Deluge System. In a Deluge System, the sprinkler heads are "open," (fused), eliminating the need for them to fuse and flooding the entire area with water.
- 118. The annual unannounced inspection. The inspector called the Borough Dispatcher and informed them not transmit the fire alarm to the local fire house when the Central station operators call them. The inspector was testing the communication system between the manual pull station, Fire Alarm Control Panel, central station and the Fire Department. The fail-safe door release did not activate because manual pull stations do not activate fail-safe door release. A violation was not issued as nothing went wrong during the unannounced inspection.
- 119. The elevators servicing the low-rise bank have recalled, thereby disabling the hall-call button that Zach had pressed. Zach does not hear the fire alarm or any announcements because the fire alarm activated on three floors other than the one where Zach was on while waiting for an elevator in the low-rise bank. The elevators in the mid-rise and high-rise banks continued to operate normally.
- 120. The Fire and Life Safety Director failed to test the two-way communication system in Passenger Elevator #1. Susan was entrapped for 6 hours because she could not communicate with anyone.
- 121. False. The Fire and Life Safety Director will be looking at the "FLS Wardens Sign-in Log" at the Lobby Desk to determine if the FLS Wardens reported to work.
- 122. No. The document that the FDNY Inspector was asking for was the Certificate of Occupancy (COO).
- 123. The name of the company on Floor 34, 36 and 37 is Company Q. The Fire and Life Safety Director immediately and simultaneously In-Building Relocated the four floors (34, 35, 36 and 37) because there is an access stair connecting the four floors. The floor below the fire floor (33) was also In-Building Relocated.
- 124. The Battalion Chief rides in the Suburban (SUV).

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- 125. Michael's function is to "coordinate assistance to building occupants with special needs" as a member of the FLS Brigade. Michael is not required to make an announcement via the Fire Alarm Control Panel; hence the occupants did not hear Michael. They heard the FLS Building Evacuation Supervisor.
- 126. 44 floors. 4 floors do not have Guest Rooms (C2, C1, Lobby and 10). 12 fire drills are conducted annually.
- 127. Peter is working at a construction site. Jeff is working in a high-rise commercial building or high-rise hotel and Jasmine is working in a homeless shelter.
- 128. There are more than 500 people in the entire building or more than 100 people above or below the Ground Floor. Joe is assigned as a Fire Guard on floors 10-13. Joe is being paid time-and-a-half (overtime) while working as a Fire Guard because he already works full time as a Deputy Fire and Life Safety Director. He is telling Stephanie the truth because he is a Deputy Fire and Life Safety Director and must hold a Certificate of Fitness Fire and Life Safety Director F-89.
- 129. The evacuees were instructed to re-enter on the 10<sup>th</sup> floor since this building has a re-entry system at every four floors. They could not have re-enter the 14<sup>th</sup> floor because that is just one floor below the fire floor and people must be In-Building Relocated to at least three floors below the fire floor. In both Stairwells "A" and "B", the second floor is the re-entry floor nearest to the street level. In other words, both stairwells have the same re-entry floors.
- 130. The "Emergency Stop" button is designed not to engage during Elevator Recall Phase I so it did not malfunction. It is designed to engage during Phase II. The "Alarm" button functioned as Jack was able to speak to the Fire and Life Safety Director.
- 131. The tread is the part of a stairwell that is stepped on. The riser is the vertical part of the stairwell that connects the treads.
- 132. Yes, the Fire and Life Safety Director will respond to the Fire Alarm Control Panel. The device that was activated was a manual pull station of the single action type with a glass piece. The alarm could not have been activated by a Waterflow Switch because all the automatic devices were disabled.
- 133. Because the elevators serve a "lowest terminal landing," the escalators are between the lowest terminal landing and the Main Lobby. The hotel is in Code violation because it numbered the stairwells 1-10. Stairwells must be designated by alphabetical letters.
- 134. Smoke detectors: Photo-electric and Ionization, respectively. Yes, these smoke detectors will activate if the system is "off-line".
- 135. The hotel guests heard the alarm on Floors 55 (fire floor), 56 (floor above the fire floor) and 54 (floor below the fire floor). Tamper Switches do not activate fire alarms.
- Banks "A" and "C" will recall if a Waterflow Switch activates on the 6<sup>th</sup> Floor. Bank "B" services floors 1, 13-24. Bank "B" has a blind shaft on floors 2-12 and Bank "C" on floors 2-5 and 7-24.
- 137. Yes, there are revolving doors and a member of the FLS Brigade was instructed to collapse the revolving doors.
- 138. This fire drill is taking place on the 45<sup>th</sup> Floor of a Group "B" property since guests do not participate in hotel fire drills.
- Roy is wrong. Signs with the words "In case of fire do not use elevators unless otherwise instructed" do not exist. These signs are posted in elevator lobbies but must read: "In case of fire use stairs unless otherwise instructed".

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- 140. The building's re-entry floor system is not in violation of the Code when the reentry floors go from 16 to 11, 7 and 3. The reason for this is that there is no 13<sup>th</sup> Floor in this building. The visitor using the elevator could not get off on the 13<sup>th</sup> Floor. Waterflow Switches and smoke detectors in elevator lobbies, Elevator Machine Rooms (EMRs) and elevator shafts could not have activated the fire alarm otherwise the elevator would have recalled.
- 141. The room is typically known as the "Fill Pump Room". During the Fire and Life Safety Director's first visit to the room the pumps were active because they were filling the Gravity Tank with water. On the second visit the pumps were not active because the Gravity Tank had sufficient water.
- 142. When standing in the "Exit", the person is standing inside the protected emergency stairwell. The "Exit Access" is the corridor that leads to the stairwell door on a floor and the "Exit Discharge" is the public walkway/lobby where people exit the last door from a stairwell.
- 143. The Fire and Life Safety Director evacuated the five floors because they are connected by access stairs. One company occupies the five floors that were In-Building Relocated. Floors that share access stairs must all be evacuated or In-Building Relocated because the access stairs allow for rapid smoke spread throughout the connected floors.
- 144. The officer inserted the 1620 key in the key switch at the Fire Alarm Control Panel. The officer will ask the Fire and Life Safety Director to purge (remove smoke) from the affected floors only after the fire has been extinguished. This system does not protect people during fires.
- 145. A failure of the strobe lights to activate will affect the 50 students and 10 staff members who are deaf because they will not have an early warning signal.
- An addressable fire alarm system. Every device in the system is assigned a "point number". A Points List Book is provided to the building by the vendor that services the fire alarm system.
- 147. The sole survivor heard correctly: "Coordinator of Fire Safety." This tragic fire took place at a homeless shelter, where the Coordinator of Fire Safety COF F-80 holder oversees the fire safety program.
- 148. The first alarm was activated by a Waterflow Switch since the elevators recalled and the carpenters were working in an area far from the elevator lobby smoke detectors. There was a fire in the building due to the fact that an automatic Waterflow Switch activated, and a manual pull station was activated by a building occupant. Two reasons that show that the FLS Building Evacuation Supervisor was not trained properly by the Fire and Life Safety Director are:

  1) The FLS Building Evacuation Supervisor assumed that the alarms were not activated by an actual fire situation and 2) The building should not have been "off-line".
- 149. Since FLS Brigade members report to the floor below the fire floor, then the fire alarm activated on the 19<sup>th</sup> Floor. The device that activated the fire alarm was a smoke detector. (Note: smoke detectors have a blinking red light when normal and a steady red light when activated (or a green light when normal and a red light when activated)).
- 150. The Fire Department officer is going to tell the Fire and Life Safety Director that they received a 911 call for an elevator entrapment. The communication system between Passenger Elevator #1 and the Elevator Panel at the Lobby Desk failed.
- 151. Only firefighters are authorized to use 2½ inch fire hoses (Class I). 1½ inch fire hoses may be used by non-firefighters, but their use is discouraged (Class II). [Note: Class II systems (1½ inch fire hoses) are not recognized in New York City.]. A Class III System is inter-changeable between 1½ and 2½ inches via the use of Pressure Reducing Valves (PRVs).

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- 152. The device is manual, and it is a double-action manual pull station that may be found in a Group "B" property.
- 153. The FLS Building Evacuation Supervisor activated the Fire Department via the Central Station Manual Trip Switch ("Silent Trip Switch") at the Fire Alarm Control Panel when the Fire Guard reported the fire via walkie-talkie.
- 154. The Fire and Life Safety Director is correct because there must be a minimum of two fire drills every six months after the first two years of operation of a Group "B" property.
- 155. The item in the scenario is a curtain that is found in a concert hall. Once laundered, the curtain must be reflame-proofed because laundering removes the fire-retardant treatment.
- 156. False. Aluminum colored caps (and all exposed sections of pipe) indicate that the system is non-automatic and must be supplied with water by the Fire Department via the Fire Department Connections. The color on the exposed sections of pipe of Fire Department Connections do not have any significance, it is the color of the caps that represents the type of system: Red/Standpipe, Green/Sprinkler and Yellow/Combination.
- 157. To feed water to the Cellar 3 (C3) level sprinkler system, the firefighters must connect to the yellow Fire Department Connections that services the sprinkler system in the sub-Grade levels. In hotels sleeping rooms are found above Grade level.
- 158. Light fixtures in the means of egress provide 90 minutes of battery back-up power in the event of a blackout. The tenant is not paying a fee as the generator in this building provides power to base-building systems only (not tenant appliances).
- 159. Steven made the right decision to seek shelter in an office with an opaque door and a large window. The door will protect Steven from the fire/smoke and the window will be used to attract the attention of people on the street level or surrounding buildings.
- 160. Smoke will not enter a pressurized stairwell on any floors.
- 161. True. The Branch Lines are pressurized by Booster Pumps on the floors immediately below a Gravity Tank to ensure proper pounds-per-square-inch (PSI) sprinkler protection.
- 162. The engineer activated the Waterflow Switch during quarterly testing. The Fire and Life Safety Director failed to take the system "off-line" prior to the start of the test, hence the Fire Department responded to the Waterflow Switch activation.
- 163. The fire alarm activated on the first floor; hence an announcement was made to the first floor, the second floor and the Cellar. The elevators recalled to the first floor.
- 164. The push-bar on the door is not defective, but it is equipped with a Fire Department-approved delayed-egress mechanism for security purposes. Hence the security officer is talking to Mr. Smith while standing at the "Exit Discharge."
- 165. Jennifer is riding an elevator under normal conditions since she only needed to press the "Door Close" button (She did not need to keep it depressed until the doors fully cycled closed). Since the elevator was not in Phase II operations, the Call Cancel button was inoperative and served no purpose when pressed by Jennifer.
- 166. Frank was not taken to the hospital because of the laceration to his finger. "Ambulatory" means that a person is able to function without assistance.

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- 167. Ansul systems are common in hotels because these systems are used in kitchens (commercial cooking systems) and hotels generally have more commercial cooking systems than office buildings. Ansul systems may be used on all types of cooking media fires.
- 168. Peter is evacuating the 30<sup>th</sup> Floor via a Fire Tower which has two doors separated by an open-air vestibule. Fire Towers are common in buildings built prior to 1968. The 1968 Building Code did not mandate for them to be constructed in fully sprinklered buildings.
- 169. The fire suppression system contained Clean Agent, which leaves no residue.
- 170. An MEA number must appear on the Fire Alarm Control Panel to indicate that all its parts have been approved for use.
- 171. The Guest Room does not have a plenum because there is no drop-down ceiling. The Guest Room does have sprinkler heads on the walls known as "sidewall" sprinkler heads. These sprinkler heads discharge the water horizontally across the Guest Room.
- 172. Supervisory signals are transmitted to the central station but do not activate fire alarms, hence the Fire Department did not respond even when the system was "online".
- 173. Yes. The alarm silence switch only silences the fire alarm siren. It does not stop the transmission of the fire alarm signal to the central station.
- 174. The fire alarm had to be activated on either the 28<sup>th</sup>, 29<sup>th</sup> or 30<sup>th</sup> Floor because Vincent heard the announcement. The fire alarm was not activated by Vincent because Waterflow Switches are not activated by smoke. The scenario does not state whether Lynn was smoking on the 28<sup>th</sup>, 29<sup>th</sup> or 30<sup>th</sup> Floor, but because she was smoking in a telephone closet (which have area smoke detectors); Lynn was the person who activated the unwarranted fire alarm.
- 175. The scenario does not state on which floor the fire alarm activated that recalled the elevators. It could have been activated on any of the floors serviced by Bank "A": 1-16. However, because Passenger Elevator #6 recalled, the alarm could not have been activated by a manual pull station or the duct smoke detector.
- 176. A minimum of 24 spare sprinkler heads must be in stock in the building at all times. There should be 200 glass pieces in stock: one for each manual pull station.
- 177. Tim is in a movie theater watching a movie in which all the building's sprinkler heads fuse simultaneously for special effects purposes, hence he does not get wet while eating a hot dog on the Orchestra level.
- 178. The Fire Department officer makes the final determination as to when water control valves should be shut off after a fire.
- 179. These are the colors found on sprinkler heads. Each color represents the degree range of activation.
- 180. A fused sprinkler head activated the Waterflow switch since the hose was not completely extended off of the quick-release rack. The folds keep the water from entering the fire hose.
- 181. A manual pull station has been manually reset.
- 182. The air from the vent will keep the area smoke detector from activating, regardless of whether the system is "on-line" or "off-line".

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- 183. False. The Fire Department does not respond to supervisory signals, only to fire alarm signals.
- 184. Neither office building nor hotel. It is the fire drills requirement for Homeless Shelters.
- 185. The Fire and Life Safety Director remains at the Fire Alarm Control Panel at all times until the Fire Department exits the building. However, the Fire and Life Safety Director may communicate the medical emergency to Fire Department personnel present in the lobby or call 911 to report the medical emergency.
- James may use either the water fire extinguisher (silver canister) or the "A/B" fire extinguisher (red canister) because the fire is no longer a Class "C" electrical fire after the copier was unplugged.
- 187. Fire extinguishers.
- 188. Kent made the correct decision to break the glass window since the door to the office was closed and the fire was outside the office (no oxygen fed to the fire) and because it was a floor with a set-back roof, the glass fell on the set-back roof (glass did not fall on pedestrians or firefighters on the street level). Kent was now on the outside and clearly at a safe distance from the fire on the floor.
- 189. Outside Stem and Yoke valve. The Stem (S) must always be visible to indicate that the valve is open.
- 190. Only the "loaded" sprinkler head should be changed out. However, standard sprinkler heads have to be tested on the 50<sup>th</sup> year after installation and every 10 years thereafter. If the test results are negative, then all the sprinkler heads must be replaced.
- 191. The off-site assembly area is a pre-determined location where evacuees of fire emergencies and other emergencies reunite, and a head count is performed to account for all the people who evacuated. The Assembly Areas must be as far away as the height of the building in feet.
- 192. This sign is posted on the stairwell side of a stairwell door on floors 7, 8, and 9.
- 193. The mixed sprinkler heads allowed the fire to spread because they activated at different temperatures.
- 194. NFPA: National Fire Protection Association feels that protecting the fire fighters is critical. Subjecting people who use the "attack" stairwell for evacuation purposes to smoke is an unfortunate consequence.
- 195. Fire Alarm Control Panel (FACP).
- Beam smoke detectors are usually found in atriums, where the height of the atrium makes the use of area (spot) smoke detectors on the ceiling virtually useless because of the delay in activating the fire alarm.
- 197. The FLS Building Evacuation Supervisor may override the Fire and Life Safety Director's decision to remain "on-line" when the peripheral devices are being tested. The FLS Building Evacuation Supervisor will not be terminated for insubordination.
- 198. The central station operator is telling the Fire and Life Safety Director that the automatic transmitter failed to send a signal to the central station at the designated time.
- 199. The candidate for the FLS Director Certificate of Fitness F-89 is taking the practical on-site exam at 366 5<sup>th</sup> Avenue on Staten Island. All Certificates of Fitness are applicable to the five boroughs of NYC only. An F-89 is not issued on Long Island. 366 5<sup>th</sup> Avenue is a high-rise building, requiring warden phones on a selective fire alarm system, hence mandating FLSDs.

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- 200. If a person's clothes are on fire, the person should stop, drop to the ground and roll on the ground to self-extinguish the flames.
- 201. ABC Exterminators were conducting a Thermal Insecticidal Fogging Operation; and the Fire and Life Safety Director shut off all sources of ignition in the area of the operation to prevent an explosion/fire.
- The Manual Pull Station is not the cause of unnecessary/unwarranted fire alarms (10-35s) because they are manually activated by people whose behavior the FLSD has no control over.
- 203. The Department of Buildings is the city agency that approves the material that may be used to create photo luminescent markings and signs. Photo luminescent markings and signs are not found in Group "A" properties.
- 204. A Company Certificate is issued by the Fire Department to the Central Station. The Company Certificate authorizes the Central Station to operate in NYC. The certificates have a 2-year life.
- 205. The Fire and Life Safety Director manually (and correctly) activated the fire alarm on the floor below the floor of alarm activation. Fire alarms must activate on the fire floor, the floor above the fire floor and the floor below the fire floor. [Note: If the building's fire alarm system is programmed to activate floor/floor above only, then the FLSD must manually activate the floor below].
- John is correct. Covered malls with more than 50,000 sf must have an approved Fire Safety and Evacuation Plan. A FLS Director would be required if the Fire Alarm System has Warden Phones.
- 207. Jake was terminated from Building "A" because his Certificate of Fitness was suspended by the Fire Department after failing the on-site exam in Building "B". The termination was justified because Jake's Certificate of Fitness for Building "A" was no longer active.
- 208. Paul is taking the Remedial R-58 exam at the FDNY because he failed an on-site exam in a second property on his first attempt. He has to prove to the FDNY that he is competent in the first property where he holds a Certificate of Fitness by passing the R-58 exam.
- 209. Pre-Action System.
- 210. The red tag is located on the valves of a fire suppression system and the white disc is located on the Fire Department Connection. The fire suppression system is completely out of service.
- 211. There is a sprinkler system in Building "A"; the color of the Fire Department Connections in Building "B" is red, indicating that this building has a Standpipe System. The colors of the valves' hand wheels correspond to the colors of the caps on Fire Department Connections. Green = Sprinkler System, Red = Standpipe System; Yellow = Combination System
- The Certificate of Fitness for Sprinkler System is the S-12 and for Standpipe Systems is the S-13. Both of these are citywide certificates and may be used in any property in NYC.
- 213. A loaded sprinkler head is one that has a foreign substance on it (i.e., paint) or a design flaw (unlisted) that will not allow it to function as designed by the manufacturer. The Certificate of Fitness S-12 holder who also is a Master Fire Suppression Piping Contractor may replace the sprinkler head.

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- 214. The project that concluded at 4:00 p.m. was a hot work operation. The Certificate of Fitness Holder Fire Guard F-60 was present and near the torch operator throughout the hot work operation and checked the area a half hour after the hot work operation ended at 4:00 p.m.
- 215. Building Y was issued a Certificate of Occupancy by the Department of Buildings between 1968 and June 30, 2008, which states that the elevator lobby emergency sign should read, "In case of fire use stairs unless otherwise instructed." The 2008 Building Code changed the wording to read: "In fire emergency, do not use elevator. Use exit stairs."
- The Examiner was wrong and Sam is correct. If an on-site exam is prematurely terminated by management, it will not be counted against the candidate as a failure on his/her first attempt at the test. Building management will still be invoiced the on-site exam fee of \$750.00.
- 217. The fire alarm system must receive secondary emergency power, whether by generator or battery, within 10 seconds of the loss of primary power due to a loss of electricity.
- 218. The Fire and Life Safety Director will activate a Partial Evacuation because the alarm activated on the 3<sup>rd</sup> Floor. When an alarm is activated on Floors 4, 3, 2, 1 or sub-Grade floors, a Partial Evacuation is executed. Occupants of Floors 5-50 will be informed to Shelter in Place, which means that they will remain on their floors (no people movement), unless conditions warrant another response.
- In a hotel setting, the statement ends after the word "floor". 99% of hotels have every-floor stairwell re-entry systems therefore occupants do not have to be In-Building Relocated to "the next re-entry floor." Re-entry systems at every two, three or four floors are mostly found in multi-tenant commercial high-rises (Group "B" properties). One-tenant commercial high-rises might have every-floor reentry systems.
- 220. Tom or Jose may be selected to be the Impairment Coordinator. The motel has less than 12 Guest rooms because a Certificate of Fitness Holder Fire and Life Safety Director is not required in this property. Had the motel was over 75 feet in height, the Certificate of Fitness Holder Fire and Life Safety Director would most likely have been assigned the title of Impairment Coordinator.
- 221. George did something wrong and deserved the reprimand as he is not authorized to reconfigure the fire suppression system while only having a Certificate of Fitness S-12. He must have the Certificate of Qualification Q-01 Refrigeration Systems Operating Engineer with an S-12 or Licensed Master Plumber (limited) with an S-12 or Licensed Master Fire Suppression Piping Contractor with an S-12 to service/maintain/repair the system.
- 222. Susan is not correct. Debbie is supposed to train the kitchen staff every 6 months. Debbie explained to the kitchen staff how to manually activate the Ansul Fire Suppression System. There is no Front Desk Agent in this property, therefore it is a Group "B" property (not a hotel) because there is a FLS Building Evacuation Supervisor, Susan, who is assigned to this property. Hotels (Group "R-1" properties) do not have FLS Building Evacuation Supervisors on staff.
- 223. The violation was issued because there was no one present with a Certificate of Fitness FLS Director F-89 at the time of the Inspector's visit to the property. A FLS Building Evacuation Supervisor (FLS BES) is not a Certificate of Fitness Holder. The FLS BES worked until 4:00 p.m. since the Inspector visited three hours into the shift at 11:00 a.m., therefore we can conclude that the eight-hour shift started at 8:00 a.m.
- 224. The automatic device that activated the fire alarm was the Waterflow Switch (WFS). The WFS always recalls elevators whenever they activate a fire alarm. It could not have been the smoke and heat detectors because they were disabled; and manual pull stations do not activate automatically and do not recall elevators. The strobe lights did not activate because the Fire Alarm System is defective. The FSD must contact the fire alarm system service company to

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correct the problem with the strobe lights. There is a Trouble Signal on the Fire Alarm Control Panel because of the strobe light impairment.

- 225. The plan being activated is the Emergency Action Plan (EAP). The strobe lights did not activate because they are not required to be activated when the EAP is executed. Additionally, because there was no controlled movement of people, the emergency is happening outdoors, and the people are being protected by being Sheltered-in-Place (no controlled movement of people). The Certificate of Fitness FLS Director F-89 Holder activated the Plan.
- 226. The fire alarm was activated by the Waterflow Switch that was triggered when Joseph opened the Hose Valve on the Standpipe System to allow water to flow from the riser to the fire hose. The fire alarm could not have been activated by a Rate of Rise Heat Detector since these devices are not posted in elevator lobbies. The elevators serving the 4<sup>th</sup> floor did not recall because the fire alarm activated on the 25<sup>th</sup> floor, and since there are two elevator banks, that means that the elevator bank servicing the low-rise floors (including the 4<sup>th</sup> floor) continued to operate normally after the alarm activated. Since this is a building that is over 75 feet in height (25 Floors is more than 75 feet in height), it has to have a Standpipe System.
- 227. The Refrigerating System contains more than 200 pounds of a refrigerant, which then requires that a test of the vital components of the system be conducted on a monthly basis by the Refrigeration System Operating Engineer.
- 228. Since the General Manager (GM) of the hotel could not produce a Building Information Card (BIC), the hotel has not updated their Plan. The GM will be issued a Notice of Violation with a 90-day period to have the new Plan created and submitted to the FDNY for approval.
- 229. All Group "R-1" properties (hotels/motels) must have an approved Fire Safety and Evacuation Plan (fall 2011 version). Combined Fire Safety and Emergency Action Plans were required in Group "B" properties only (Commercial high-rise buildings) in 2011. Residential Fire Safety Guides and Notices are found in residential properties.
- 230. A Certificate of Fitness holder W-64 for cleaning commercial cooking exhaust systems and who has the tools, material, and equipment necessary to perform the cleaning. The cleaning is performed quarterly.
- 231. The Fire and Life Safety Director did not acknowledge the fire alarm because a Certificate of Fitness Holder Fire and Life Safety Director was not required to be in the building because there were 500 or less people present in the entire building. The FLS Building Evacuation Supervisor (FLS BES) answered the call from the Central Station operator when they called the building. The Central Station is required to call the building when a fire alarm is transmitted to them and the system is "on-line." The call is to inform the Fire and Life Safety Director/FLS Building Evacuation Supervisor that they received the fire alarm and have dispatched the Fire Department to the building.
- 232. The plastic cover placed over a manual pull station does not change the type of pull station and it remains either single or double action type. David is mistaken. Maria is correct in claiming that the hotel has single action manual pull stations.
- 233. Jamie is correct. A Notice of Violation (N.O.V.) hearing is held at the NYC Environmental Control Board. The ECB is a neutral agency and a judge determines if the building representative is at fault or not. After the hearing, the ECB mails a formal decision to the building representative.
- John works in the kitchen, where a K-type portable fire extinguisher cannot be more than 30 feet from the commercial cooking system. Cooking caused the grease fire.
- 235. The name of the project is a Thermal Insecticidal Fogging Operation, which requires that the areas that are scheduled to be fogged be cleared of people at least one hour prior to its start. The FLSD did not disable the manual

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pull stations because the Thermal Insecticidal Fogging Operation would not activate fire alarms via the manual pull stations.

- The individual who conducted the test of the strobe lights was the technician from the fire alarm company. The FLSD is responsible for overseeing the test. The technicians changed out the strobe lights that were found to be defective and needed to be replaced. The Central Station was not called because the test of the strobe lights does not require the activation of fire alarms.
- 237. The Central Station operator called to report that they did not receive the every-24-hour automatic telephone transmittal signal from the Central Station Transmitter box. The operator informed the FLS Building Evacuation Supervisor (FLS BES) that technicians will be dispatched to the building to correct the problem with the telephone lines dedicated to transmitting fire alarms to the Central Station. There were 450 people or less in the entire building or 100 people or less above or below the street-level floor (excluding the street level), hence the FLS BES was on duty.
- 238. The Ladder Truck team of firefighters since they concentrate more on rescue operations, as opposed to fire extinguishing operations.
- 239. Heat detector. The Fixed-Temperature type heat detector activated the fire alarm because it required replacing after activating since they do not self-reset, hence the call to the fire alarm system service company by the Fire and Life Safety Director. Of course, heat was detected.
- 240. The Property Manager knew what was happening on the 37<sup>th</sup> Floor because she has a Remote Annunciator Panel in her office that informs her of all activities happening at the Fire Alarm Control Panel in the Main Lobby.
- 241. The fire suppression system on the 24<sup>th</sup> Floor is a Carbon Dioxide Total Flooding System. People work on a regular basis in the area where this system is installed. These systems cannot be installed in regularly occupied areas in new constructions and those properties that had them must have removed/changed the system to a non-Carbon Dioxide system by July 1, 2013.
- 242. Miguel is correct. Although the white stripe is a visual indicator that the fire alarm system is connected to a Central Station, the line is painted incorrectly. It should run diagonally from the top left to the bottom right (not top right to the bottom left). The white stripe must be redone or removed on all the manual pull stations in the property. Note that the 2008 Fire Code eliminated the mandate for the white stripe since all buildings with fire alarm systems must be supervised by a Central Station Company.
- 243. A Trouble Signal. Trouble Signals are transmitted to the Central Station; therefore, the Central Station called the property, but did not notify the Fire Department. The FLS Building Evacuation Supervisor (who is not a Certificate of Fitness holder) was on duty and received the Trouble Signal at the Fire Alarm Control Panel.
- There are no fire hoses connected to the hose outlets in the stairwells. In this building, the fire hoses are stored in the lobby and are them transported to the fire floor and connected to the hose outlets. The hose outlet design in this particular standpipe system does not allow for a hose to be installed on a quick-release rack, but because it is a commercial high-rise building, fire hoses must be available in the building. This is not a Class II standpipe system ( $1\frac{1}{2}$  inch hoses) because Class II systems are not recognized in NYC.
- 245. The FLSD informed the Fire Department Field Public Communications Unit and the property occupants on the 10<sup>th</sup> Floor of a scheduled Thermal Insecticidal Fogging Operations project. This project is necessary because insects were found on the 10<sup>th</sup> Floor.

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- 246. There could have been more than 75 people in the Place of Assembly, where the fire alarm activated. Ownership was issued a Place of Assembly Certificate of Operation for all areas that hold 75 or more people for entertainment purposes. These Certificates of Operation are issued by the Department of Buildings.
- 247. The potential fire is in a kitchen, less than 30 feet away, which is the maximum distance between the K-type fire extinguisher and the commercial cooking system.
- The property is a hotel/motel. The smoke alarms in the Guest Rooms in this hotel/motel are battery-operated, therefore not interfaced with the fire alarm system. The life/fire safety procedure that management failed to do was to check if there was a battery in the smoke alarm prior to assigning the room to new guests. In this case, there was no battery in the smoke alarm. Smoke <u>detectors</u> must be hard-wired in Group "B" properties (commercial high-rise buildings). Note: Smoke Alarms are battery-operated alarm-sending devices while Smoke Detectors are interfaced with the Fire Alarm System.
- 249. Six months ago, the Fire Department issued the property a Letter of Acceptance for their Comprehensive Fire Safety and Emergency Action Plan. Upon receiving a Letter of Acceptance for the FS/EAP, the first EAP (Non-Fire) drill must be conducted within six months from the date on the Letter of Acceptance.
- 250. Supervision of Fire Alarm Systems S-95. A person with a Certificate of Fitness FLS Director F-89 is not required to acquire an S-95. The S-95 is required in properties that do not require Fire and Life Safety Directors but have a fire alarm system (e.g., residential property). The S-56 and the S-12 are mutually independent and irrelevant to the F-89.
- 251. This is a homeless shelter, where hourly patrols by Certificate of Fitness holders F-02 are mandated 24/7.
- 252. This is the "peek-a-boo" feature of Firemen's Service Elevator Recall Phase II. There is no phase III.
- 253. The tank is located in the cellar. The room is sprinkled and contains an exhaust system to exhaust the fumes from the fuel.
- 254. This is a "B" property since hotels were not required to have photo luminescent signs and markings in 2012. The black and white striped markings are for obstructions, therefore found on the standpipe riser in the "attack" stairwell.
- 255. This property is not in violation because the system is fail-safe and should release all the locks to allow people in the stairwell the ability to enter the occupancy side without the use of a key. This property could be either a hotel or an office building.
- 256. The "Door Unlock" switch at the Fire Alarm Control Panel was pressed by the FLSD to release the doors in a fail-safe system. A responsible person assigned by the FLSD pulled the doors to ensure that they opened.
- 257. On a rainy day the occupants used an external fire escape to descend to the second floor, at which point they pushed a door that led them to the Ground floor of the office building or hotel. Fire escapes are not considered attack stairwells because they do not contain standpipe systems.
- Tony should not be considered for any title or position in the fire safety program because he travels too much as a member of the marketing team. David may join the program as a FLS Warden, Deputy FLS Warden or FLS Male Searcher.
- 259. The supervisory signal was triggered by a Tamper Switch activation. The fire alarm did not activate because Tamper Switches do not activate fire alarms.
- 260. FLS Directors holding the F-89 Certificate of Fitness work as FLSDs in New York City only.

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- 261. Instead of pressing the "Call Cancel" button on the passenger panel, Robin mistakenly pressed the emergency stop button, which caused the elevator's emergency alarm to activate in the elevator.
- 1) There was no sprinkler protection, 2) the structural integrity of the building was compromised so the firemen evacuated and 3) a large amount of fuel in the building.
- 263. 301 3<sup>rd</sup> Street is a homeless shelter. 590 Broadway is a high-rise building needing a FLSD. The fire alarm system at 590 Broadway has 2-way voice communication as required in high-rise buildings' fire alarm systems.
- A fire is happening on the 81<sup>st</sup> floor. Tenant companies may contract with central stations to supervise their burglar alarm system but not their fire alarm system. The FLSD does not make an announcement when a tenant burglar alarm is activated.
- Scissors stairs. The Riser (not the fire hose) will be found when the door to Stairwell "A" is opened on the 20<sup>th</sup> floor. On the odd floors, the fire hose will be in stairwell "A" (and for the even floors in stairwell "B").
- 266. The elevator shafts are pressurized.
- 267. The fogging operation is happening in a hotel with battery operated smoke alarms in the rooms. The FLSD failed to remove the battery from the detector. The FDNY did not respond because the smoke alarms are battery operated and do not transmit fire alarm signals to the FDNY via the central system.
- 268. The FLSD reset the after the fire alarm activation on the 10<sup>th</sup> floor because there was no fire and the system was off-line, therefore the FDNY was not expected to arrive. When the fire was confirmed on the 50<sup>th</sup> floor, the FLSD immediately dialed 911 to report the fire. The FLSD was posted at the Fire Command Station during both alarms because the system was "off-line".
- 269. Yes. This information is found in the Comprehensive Fire Safety and Emergency Action Plan and the Building Information Card (BIC).
- 270. Yes, the FLSD can do the monthly inspection but must also hold the Citywide Sprinkler System C of F S-12. When a building has over 1,000 sprinkler heads, there must be 24 spares. After replacing 10, 14 spares remained.
- 271. The Deputy FLSD failed to recognize that an out of service condition (impairment) was in progress because of a lack of communication between the FLSD and the Deputy FLSDs. The engineer hung up on the Deputy FLSD because it was a planned impairment; and therefore, went back to sleep.
- 272. The responsible person was ordered to attend a hearing because he did not provide supporting documents (logbook entries) confirming that the drills were in fact conducted. The hearing was held at the Environmental Control Board (ECB) and any building representative could have attended the hearing, including the Deputy FLSD.
- 273. Hospital. Horizontal evacuations (from one side of the floor to the other) are acceptable in the hospital because of patients that are bed-ridden, in wheelchairs or other disabilities that make them non-ambulatory; and there are fire rated doors in the corridors. The employee did not commit a crime since there was no means of extinguishing the fire in the patient room and the patients were bed-ridden and unable to self-evacuate. The FLSD ordered the horizontal evacuation as hospitals need FLSDs because of the offices within the hospitals and whenever the Fire Alarm System has Warden Phones for two-way voice communication.

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- 274. ABC Hotel did not have an approved updated Comprehensive Fire Safety and Emergency Action Plan. They need to produce and submit for approval the latest version of the Comprehensive Fire Safety and Emergency Action Plan in order for the FDNY to administer the EAP on-site exam to the candidate.
- 275. The person was awakened by bed shakers activated by the fire alarm.
- 276. Because the bomb was situated in close proximity to the building's curtain wall and the potential for harm to the occupants and to the structure was substantial, the proper response should have been to Evacuate the building using emergency stairwells on the opposite side of the building to protect the occupants.
- 277. The FLSD is correct. The EAP Brigade (or Non-Fire Brigade) consists of three people: the chief engineer, the director of security and the property manager; or designees.
- 278. A Mutual Aid Agreement is an agreement between two communities, towns, cities to assist each other in the event of catastrophic events affecting their citizens and infrastructure.
- Yes. When In-Building Relocating the building occupants, the occupants may be directed to relocate to an upper floor of the building, including (and depending on the hazard) the floor immediate above the hazard floor.
- 280. F.I.S.T. should be implemented whenever there is a large crowd gathered for an event. The event may be in an auditorium or gymnasium in a building; or in a sports arena such as Madison Square Garden. Force is the pressure created by overcrowding, pushing and the domino effect of people leaning against one another; Information is the information about a venue and the people occupying it before a group assembly occurs; Space refers to the physical structure and components of a venue; and Time refers to the control of pedestrian demand rates so that traffic flow does not exceed the capacity of any element of the venue.
- 281. The EAP is being activated as these three actions are fundamental to all EAP activations: Outside air intake fans are shut down; the elevators are manually recalled in Phase I and placed on Independent Mode (manual operation) and the fail-safe doors are manually released.
- 282. A candidate for the FLSD F-89 is not required to hold a certificate of fitness prior to applying for the F-89. He was rejected for other reasons.
- 283. This is not the Building Information Card (BIC) because the BIC must measure 11 x 17 inches.
- 284. False. A third EAP concept is Shelter in Place, which requires all occupants to remain where they are at the time of the EAP activation. There is no controlled movement of people. Defend in Place is when the FDNY fights a fire while a building is occupied by tenants.
- 285. John will be reached first because he is located on the highest floor of those listed as needing assistance during an EAP In-Building Relocation, Partial Evacuation or Full (Total) Evacuation. The elevator operator will then stop on the other floors in descending order.
- 286. The EAP on-site test requires that elevators be activated in Phase I only. After activating Phase I, elevators will be run on Independent Service. Phase II operation of the elevator is not required in an EAP activation.
- 287. Yes. The FLSD must always shut down the outside air intake fans, release the fail-safe doors and activate Phase I of elevator recall regardless of the type of hazard. In this scenario, controlling air movement is critical, therefore shutting down the fans and recalling the elevators were a must in order to prevent the hazard from spreading.

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- 288. The candidate for the C of F F-89 failed to take the EAP (Non-Fire) course and provided a copy of the Graduation Diploma to the FDNY representative.
- 289. The FLS Director must choose Building "B" because the assembly areas selected by the FLSD must be at a distance that is greater than the height of the building in feet. Building "A" does not meet this criterion because it is only 600 feet away and the building's height is 850 feet.
- 290. A representative from each tenant company is responsible for accounting for their employees, not the FLSD or the FLS Staff. However, the FLSD approves the method of accounting for employees submitted by the tenant companies. The FLS Warden or Deputy is usually assigned this task. Kenneth, however, disregarded his supervisor's directives and may be disciplined for insubordination.
- 291. Allen is correct, and he will not be arrested. The FLS Director does not have the authority to force occupants to remain in the property, even when the shelter in place provision is activated. These people are exercising their "Right to Risk" their lives. All FS/EAPs have a designated exit route for the purpose of allowing occupants who wish to exit the property when the Shelter in Place or In-Building Relocation provisions are activated.
- 292. The announcement is incomplete because it does not state WHERE the explosion occurred. All EAP-activation announcements must include WHAT has happened, WHERE the incident has happened, WHAT provision of the EAP is being activated and WHY that provision is being activated.
- 293. The EAP (Non-Fire) Brigade consists of three individuals: property manager, director of security and chief engineer.
- 294. One. The Fireman's Service key switch in the elevator lobby will be activated using the 2642 key during Phase I recall.
- 295. The Coordinator of Fire Safety F-80 is applicable to homeless shelters, not hotels.
- 296. False. The "silent" trip switch plays no role in the activation of the EAP.
- 297. The fundamental flaw with designating primary and alternate stairwells to each floor for the purpose of having an equal number of people utilizing the stairwells is that the population on the floors differs from floor to floor. Because of this, one stairwell might be over-crowded and one under-utilized.
- 298. The Examiner will question the candidate on all parts of the Building Information Card as this is information that an FLS Director should be familiar with about their property.
- 299. Temporary considerations listed on the BIC are those conditions that are temporary in nature, such as construction taking place on a floor. These conditions are to be written with a marker on the BIC itself (Box #10) and erased after the condition is satisfied.
- 300. A utility shaft is used to run cables/pipes throughout the building. All buildings have multiple utility shafts.
- 301. True. Listed are the number of people during the day, night, and weekends.
- 302. The letter designation for the Elevator Bank that has SE #12 is "D" since the "A" and "B" Elevator Banks consist of the passenger elevators and "C" consists of SE #11. SE #11 is the designated elevator for rescuing people needing assistance because it services the entire building. Bank "A" has five Passenger Elevators (PE #1-5) and Bank B has five Passenger Elevators (PE #6-10).

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- 303. The distance between your building and your neighboring buildings has to be less than 200 feet. All buildings located within 200 feet of your building are considered neighboring buildings. The Comprehensive FS/EAP will include contact information for the neighboring buildings in the event you need to share information with the neighboring buildings.
- 304. Any suspicious activities/vehicles/packages must be reported to 911 without delay. The NYPD will then determine whether the suspicious item poses a threat to the area. If the suspicious item is deemed credible, the NYPD/FDNY will order the FLS Director on what they feel the FLS Director should do to protect the building occupants.
- 305. The "Exit Access" in the Emergency Path of Egress is the corridor that leads occupants to the emergency stairwell. The "Exit" is the stairwell proper and the "Exit Discharge" is the sidewalk/street (public walkway) where occupants exit the emergency stairwell.
- 306. The emergency stairwell (the "Exit").
- 307. Each Company that leases space in a building is responsible for accounting for their employees when a Partial Evacuation, Evacuation or In-Building Relocation is ordered by the FLS Director. This task is commonly assigned to the FLS Warden. Two employee accounting systems would be: A name checklist and a mass-email system.
- 308. The FLS Director should consider whether there might be a second device planted at the primary (and secondary) assembly area. Terrorists are known for planting multiple devices that activate at different times to maximize the killing of people and destruction of property.
- 309. The other major purpose behind the use of the elevators is to get medical personnel to injured people on the upper floors.
- 310. No. The strobe lights are not activated during EAP emergencies, only during fire emergencies.
- 311. Because Ms. Kennedy is picked up from the freight area in the Service Elevator, she is listed in the Comprehensive FS/EAP as a person who needs assistance during an emergency.
- 312. Nothing. Although the 23<sup>rd</sup> Floor is assigned Stairwell "P" in the Comprehensive FS/EAP, Mr. Smith is not prohibited from using Stairwell "Q".
- 313. Mr. Burns is correct. The FLS Director does not have the right to "arrest" anyone by prohibiting them from exiting the property; regardless of the reason the occupant gives the FLS Director for wanting to exit the building. The FS/EAP has designated exit areas for such instances.
- The FLS Director must refuse access into the building to anyone who is on the outside and possibly contaminated for fear of cross contaminating all the people who are "safe" inside the building.
- When In-Building Relocating people, they are moved from an endangered area to a safe haven, but not to the outside of the building.
- In this scenario, the Authority Having Jurisdiction (AHJ) is the Battalion Chief. The FLS Director must follow the orders of public agency incident commanders (or Con Edison) who are on the scene.
- 317. Yes. The FLS Director has the authority to refuse anyone access to evacuated areas of the building that the FLS Director deems dangerous to humans until the incident/area has been declared safe.

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- The FLS Director should be concerned with addressing the suspicious package that is next to the load-bearing column. Damage to the column may lead to the collapse of the building. Load-bearing components of a building are those components that keep the building intact.
- 319. No, Mr. Sanders is not listed in the Comprehensive FS/EAP. Employees of tenant companies are not assigned to conduct base-building functions such as controlling access/egress.
- 320. False. The retail tenants are part of the building and are leaseholders. In the event of an EAP emergency they will be informed of the incident and the appropriate responses as determined by the FLS Director.
- 321. False. The primary means of communication between the FLS Director and the building occupants is the Public Announcement (PA) system. This system allows the FLS Director to reach everyone who is in the "affected area" at the time of the activation of the EAP.
- Occupants requiring assistance will wait in the passenger elevator lobby on their floor since the Service Elevator is in the same lobby as the Passenger Elevators. The freight elevator is #8.
- 323. Ms. Lane is correct. A person who wishes to be added to the list of occupants requiring assistance in an emergency need only give their name, Company name, telephone number and floor number to the FLS Director, etc., not the medical condition from which they suffer.
- 324. The freight elevator (aka: the service elevator) which is usually the Primary Elevator used to rescue people needing assistance is probably out of order, hence the security officer had to use Alternate Elevator #8 to rescue people needing assistance.
- 325. The FLS Director's email address is found in the "FLS Director Designation Form". This form also has other contact information and certificates of fitness numbers for the FLS Director.
- 326. Yes. Mr. Garcia's name appears on the Building's Critical Operations Staff List because he is assigned to one of the tasks designated by the FLS Director.
- 327. The Deputy FLS Director is correct. Once a provision is instituted, it can be changed to another provision to further protect the occupants from harm. If the incident is fluid, then adjustments to the provisions must also be fluid to ensure the protection of the occupants.
- 328. Yes, the FLS Building Evacuation Supervisor is authorized to activate the EAP when on duty. The appropriate response would be to Evacuate the building because the fumes can spread uncontrollably to areas of the building below and above the 10<sup>th</sup> floor.
- 329. True. During the on-site test and whenever the Comprehensive FS/EAP is activated, the FLS Director must wear the identifying apparel in order to be readily recognized by all people involved in the incident.
- 330. Some of the more obvious symptoms associated with radiation contamination are nausea, diarrhea, vomiting, fever and headache.
- 331. The FLS Director should immediately call 911 so that the powdery substance can be collected and examined. Of course, other people in the chain of command for a particular property will also be notified.
- 332. Although a place of assembly can be approved by the Department of Buildings for a specified use, the space may not necessarily be designed to deal with crowd disasters and emergencies. For example, over-ticketing an event will likely lead to a crowd disaster where people are subject to dying because there are not enough emergency egress doors

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to accommodate the over-populated space. The crowd disaster incident at City College in NYC on December 28, 1991 is an example of a crowd disaster where the event was over-ticketed and led to the death of nine people. Twenty-one people suffered injuries.

- 333. In a Single Command incident there is only one person who makes all final decisions with every respect to the response execution (e.g., FDNY Battalion Chief in a 1-alarm fire). In a Unified Command incident, multiple people are in charge and oversee the response to the disaster. The larger and more catastrophic an event, the more people/agencies are involved and is likely to lead to a Unified Command response (e.g., Hurricane Katrina).
- False. Whenever there is an EAP activation where the occupants are expected to exit the property, the revolving doors are collapsed to facilitate the Evacuation and allow emergency personnel speedier access to the property.
- 335. Yes. This building is in violation of the Code because there must be a FLS Director on-duty whenever there are more than 100 people above Grade (street level). In this case, "at all times".
- No. In-Building Relocating to the roof of a high-rise building should only be done as a last resort. Helicopter rescues are problematic and possibly not feasible. Exiting to the roof to await an aerial rescue is discouraged.
- 337. The FLS Warden would be the appropriate tenant employee to ask for assistance during a bomb search because the Warden is familiar with the people and the office layout. The Warden is also trained to deal with emergencies and is the most knowledgeable relative to keeping people safe from harm.
- 338. Indian Point Nuclear Power Plant in Westchester County is the nearest power plant to New York City. An accidental or intentional dispersion of radiation may reach NYC since the distance is within a 50-mile radius. Alarms indicating radiation incidents at nuclear power plants are set to activate at the 10-mile radius and the 50-mile radius informing the residents in the two zones of the incident.
- 339. True. An FLS Director who is employed in a property that houses a concert hall, auditorium, theater or other public assembly venue, should activate the In-Building Relocation concept if there exists the potential for a craze or other crowd disasters.
- 340. The Building Information Card (BIC) has data relative to the building, its components and its content; as well as Appendix D in the Comprehensive FS/EAP.
- 341. The title of the person who is responsible for utilities and fuel oil systems is the "Chief Engineer."
- 342. True. An emergency stairwell is designated to a floor that does not have an In-Building Relocation Area. The stairwell is used to reach the In-Building Relocation Area on another floor.
- True. All FLS Directors know whether there is an emergency generator in the building, and whether there is a Day Tank and its fuel capacity. Obviously the FLSD should also know the types of emergency stairwells in the building.
- Regardless of the concept that is being activated, the Comprehensive FS/EAP states that fail-safe doors must be released upon activation of the EAP. This should be an "automatic" task performed by the FLS Director.
- False. The FLSD candidate who forgets to wear identifying apparel during the Comprehensive FS/EAP on-site exam will lose points on the test. His other certificates of fitness will not be compromised.
- False. The FLSD candidate is expected to know how to answer a Warden Phone during the on-site practical test; as well as know how to activate the two-way emergency communication system in the elevators.

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- 347. The FLS Director should have reported to the Fire Alarm Control Panel when informed of the suspicious package, not to the floor where the package was discovered.
- False. Candidates for the FLS Director Certificate of Fitness F-89 do not need to have any certificates. The F-91 is a consolidated Fire Guard Certificate of Fitness for high-rise buildings, which is not required to obtain the F-89.
- False. The FLS Director is responsible for overseeing the training of the building's FLS Wardens but may delegate the training to the Deputy FLS Director or an outside party holding the W-07 certificate of fitness for Fire and Emergency Drill Conductor.
- 350. The Examiner is correct. This is the oral part of the test to determine whether the candidate knows the functions of FLS Wardens and other members of the program. The answer that is graded by the Examiner is the spoken answer, not the written answer.
- 351. The FLS Director does not allow the additional 40 people access to the event floor. Doing so would be a violation of the Place of Assembly rules and there will exist the potential for a crowd disaster. This event was obviously overinvited.
- 352. True. There are too many incidents that will require the activation of the EAP. Having a script for every incident is impossible and would be time consuming. Ad-libbing will be required of the FLS Director during public address system announcements.
- 353. In-Building Relocating the occupants to an upper floor is the correct decision by the FLS Director because Chemical X is heavier than air. The FLS Director immediately shut down the outside air intake fans to prevent the intaking of Chemical X into the building.
- 354. True. The FLS Director does not have to give initial training to Deputy FLS Directors since they both undergo the same 31 hours of training. Refresher training is required.
- 355. The last directive given by the Authority Having Jurisdiction (AHJ) in a Unified Command Response should be followed by the FLS Director. It could very well be that circumstances changed within seconds that now require the Evacuation of the building.
- 356. Mr. Jones is correct. Because the fire safety program consists of volunteers, the FLS Director cannot force people to remain in the program. However, as a matter of courtesy Mr. Jones should remain a member of the program until a new person is assigned to the position.
- 357. False. The FLS Director oversees all the members of the program, including the FLS Building Evacuation Supervisor. Only the Authority Having Jurisdiction may override the decision of the FLS Director.
- 358. No. One of the FLS Director's tasks upon activation of the EAP is to recall the elevators in Phase I; hence the availability of elevators is automatically suspended upon the activation of the EAP. The FLSD has the authority to reactivate the use of the elevators in Independent Mode.
- 359. False. The purpose of Rescue Chairs is to assist people who cannot walk up/down the stairs. The Rescue Chairs have tracks that allow those people who are seated on them to be brought down the stairs faster than if not using the chairs. The person is Velcro-strapped at the forehead, chest, waist, and ankles (depending on chair design) before the chair is used to proceed up/down the stairs.
- 360. The Building design and construction type. The more reinforced the construction the lesser the structural damage that may be caused by an explosion.

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- 361. False. The role of the FLS Building Evacuation Supervisor has not changed, and the FLS BES continues to report to the Fire Alarm Control Panel.
- Building "B" is conducting an EAP (Non-Fire) Stairwell Familiarization Drill that is required every 3 years by Local Law 26 of 2004: Emergency Action Plan. Because this drill requires building occupants to enter the stairwell and proceed down to at least four floors; Floors 5 and below, exit the stairwell to the street or main lobby. They then reenter the building and return to their floor.
- 363. When a Total Evacuation is ordered, the occupants are directed to the Assembly Areas, not the In-Building Relocation Areas.
- 364. False. Local Law 26 of 2004: Emergency Action Plan for High-Rise Buildings does not mandate full building evacuation drills. Those properties that conduct full building evacuation drills do it on a voluntary basis.
- 1. There are no semi-annual EAP Drills (only annual Instructional Drills and every three years for the Stairwell Familiarization Drills); 2. Instructional Drills are conducted annually (not semi-annually); 3. "Guests" do not participate in drills; 4. It is during the Stairwell Familiarization Drill that occupants enter the stairwell (not during the Instructional Drills); and 5. Occupants are escorted down a minimum of four floors (not two).
- 366. The ADA is the Americans with Disability Act. The actions of FLS Directors are affected because the FLS Director needs to know the names and locations of building occupants, who have disabilities, provide special arrangements to accommodate them such as having the Service (Freight) elevator available to reach those individuals on the "People Needing Assistance List." Rescue chairs that allow people needing assistance to be brought down the stairs are optional but if available the FLS Director must ensure that they are available for use.
- 367. The FLS Director should not have implemented the Shelter in Place provision because it extended the exposure period for the building occupants. Because the damage to the property happened on the middle floors, the building could be unstable and subject to collapse. The Total Evacuation provision should have been implemented to prevent further harm to people.
- 368. The security officer is not a member of the EAP (Non-Fire) Brigade. The members of the EAP (Non-Fire) Brigade are the Property Manager, Director of Security and the Chief Engineer.
- When the property has a Comprehensive Fire Safety and Emergency Action Plan, the records must be retained for a period of no less than five (5) years.
- 370. When making any announcement during the on-site exam and in an actual FS/EAP activation, the FLS Director must state the title in full, that is: "Attention, Attention please. This is the Fire and Life Safety Director . . . "
- 371. All three scenarios require the activation of the EAP.
- A safe haven is a location where people gather to protect themselves from a hazard. A safe haven usually has the amenities needed to survive for an extended period, such as canned foods, water, medicine, etc.
- 373. The primary and alternate assembly areas may be covered or exposed.
- 374. The FLS Director was issued a violation because the list of people needing assistance is supposed to be part of the FS/EAP, and the FS/EAP should be at the Fire Alarm Control Panel.

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- 375. The FLS Director is correct. The FLS Director handles emergencies other than fire to ensure that the building occupants are protected from harm that might be caused by the hazard. Security concerns should be handled by the security director.
- 376. The person who did not go through metal detectors was the performer in the place of assembly.
- 377. There was no fire in the office building, there was an active shooter incident. Jack activated a manual pull station. The FLSD reprimanded Jack because he (Jack) put people's lives at a higher risk by activating a fire alarm during an active shooter incident when there was no fire. Fire alarms have a natural tendency to bring people out of hiding, which is not recommended in an active shooter incident.
- 378. The shooter was on the 10<sup>th</sup> floor, which facilitated floors 1-9 to avoid the shooter by evacuating. The shooter was a FLS Warden or Deputy FLS Warden because he signed in as he does "every morning". The shooting happened in a commercial office building since there are no FLS Wardens or Deputy FLS Wardens in hotels.
- 379. The FLSD was correct in refusing to go to the location of the victim. The FLSD is to report the Fire Command Station/Fire Alarm Control Panel on the Ground Floor. The victim was on a floor other than the Ground Floor. There could have been another emergency happening at the same time as the medical emergency, or not, as the FLSD must report to the FACP when he/she becomes aware of any emergency in the building.
- 380. People are Barricading during an Active Shooter incident. When barricading, the people should remain quiet, shut off the lights and remain hidden from the shooter, amongst other actions.
- 381. The 4<sup>th</sup> person waited for the EMTs and Paramedic outside the entrance to the building and escorted them to the victim's location, thereby increasing the victim's chances of survival.
- 382. There is one elevator in Bank B, which required the FLSD to make an announcement since it was the only elevator in that bank and had to be used on independent mode to address the medical emergency. The medical emergency was not happening on the Ground Floor, otherwise the elevators would not have been needed to be in readiness.
- 383. Joanna is correct. She has a Z-89 and has a confirmation date for her FLSD on-site exam, allowing her to be an Acting FLSD if her manager informs the FDNY. Joanna works in a high-rise shelter that has a Selective Fire Alarm System that requires microphones and warden phones. The fire alarm is activated on the fire floor, floor above the fire floor and floor below the fire floor in the shelter.
- Brian was found in his car. There was a snowstorm and carbon monoxide killed Brian when he turned on the ignition and remained inside the car while the car's tail pipe (muffler) was blocked by the accumulation of snow.
- People were Avoiding (evacuating) because of an active shooter incident. When Avoiding, the people should have their arms up, hands open and fingers spread apart so as to not be confused with the shooter; and to show that they are not a threat to the police officers who responded to the emergency.
- 386. The Automated External Defibrillator's (AED) pads were being placed on the victim's chest's upper right and lower left. The victim was unconscious otherwise the AED would not have been used. The person who activated the AED was certified in First Aid-CPR-AED; and it was not the FLSD.
- 387. The owners were seeking the Place of Assembly Certificate of Operation from the Department of Buildings. The sign indicated that 450 people could attend the lounge/bar because each person must be allowed 10 sq. ft. of space; and since there were no roof setbacks, the size of the roof was the same size as the Ground Floor, 4,000 sq. ft. (4,000 sq. ft. / 10 sq. ft. = 400 people).

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- 388. The active shooter incident did not happen in an office building, where the FLSD would have used the term "active shooter" as opposed to "gun shots". The shooting happened in a transient space, such as a shopping mall or hotel, where the term "gun shots" would have been more familiar to that population.
- 389. She was asking the NYPD for help, (who are trained in first aid/cpr/aed), but they must stop the shooter before they can help the wounded. They were not reprimanded as their actions were in line with the NYPD guidelines.
- 390. There is a Fire Escape in the building, which is exposed to the weather conditions and over time deteriorate to the point where the steps could fail.
- 391. Each of the five floors had a square footage of 10,000 sq. ft. as each fire guard is allowed to patrol a maximum of 50,000 sq. ft. Because the fire watch is 24/7, assuming that each fire guard works an 8-hour shift, then there must be 3 fire guards for each day; and because each floor is 10,000 sq. ft., there must be 3 for the first five floors and 3 for floors 6-10. Jamal patrolled floors 6-10, as David was already assigned Floors 1-5.
- 392. The FLSD was correct in activating a total evacuation of the building. Unless told otherwise, the FLSD must assume worst case scenario: that the 20-foot crack could in fact collapse the building. The FLSD activated the Emergency Action Plan (EAP).
- 393. The elevator began to stop on every floor automatically on Friday evening and ended on Saturday afternoon: The Jewish Shabbat. The waterflow switch activation would have overridden this special religious feature on the elevator because there is now a fire in the hospital.
- Within one year of the Letter of Acceptance of the Comprehensive Fire Safety and Emergency Action Plan, the FLSD should have executed the Stairwell Familiarization EAP Drill. The occupants walked a minimum of four floors via the stairwells. The people on floors Below Grade walked up the stairs.
- 395. The caller was Barricading. The purpose of placing furniture behind the door is to stop entry or delay entry when the shooter attempts to enter that room (allowing for a better chance of survival), slow the bullet, or stop the bullet when the shooter shoots through the door (also allowing for a better chance of survival).
- 396. The FLSD candidate failed the Elevator demonstration because he was supposed to activate Independent Mode after recalling the elevators in Phase I. Only in a fire emergency would Phase II be activated.
- 397. Samantha is correct. The candidate may take the three different components (classes) of the FLSD program at one school, two schools or three different schools.
- 398. The candidate failed the training portion of the FLSD on-site exam because the Examiner assumed the role of the FLS Warden, meanwhile she described the responsibilities of the FLS Brigade.
- 399. Ken died somewhere above the 24<sup>th</sup> floor. Cardiac arrest victims typically die when they suffer a medical emergency on FL-25 and up. One reason why Ken died was because it takes longer to get EMTs to higher floors.
- 400. The fire was in a commercial kitchen. When the fire suppression system (Ansul) in a commercial kitchen activates manually or automatically, electricity and gas to the commercial cooking equipment shut down.
- 401. The shooting happened in a hotel somewhere during the midnight hours, when the hotel had 1,000 guests who were sleeping in locked rooms that the shooter could not access and four employees working in the common areas that were accessible to the shooter. The three people killed were the members of the FLS Brigade, which consists of a minimum of three employees (Tom, the Front Desk Agent; Peter, the Bellman and Maria, the security officer). The

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shooter committed suicide and was the fourth victim. The Deputy FLSD was not killed because he was obviously alive when he made the announcement.

- 402. A tourniquet. Tourniquets are used to stop blood flow when a severe cut of the arms and legs exists. The tourniquet is applied at least two inches above the wound. It should never be removed until EMS shows up at the scene.
- 403. False. After failing the on-site exam twice under one Certificate of Completion Z-89, the candidate must retake the fire and EAP computer-based exams at FDNY Headquarters before he can take the on-site exam again. As of 2-1-18, candidates do not have to re-attend the classes after failing the on-site exam twice under one Certificate of Completion.
- 404. Stephanie helped Susan evacuate, hence delaying her actions to evacuate safely during the active shooter incident.
- Tom was talking to the active shooter, who after being shot, pleaded with the shooter not to shoot him anymore. Tom survived because the shooter walked away from Tom after Tom pleaded that he does not shoot him anymore because he was going to die anyway.
- The explosion was caused by a flammable self-activating chemical spray that Peter was using to kill roaches in his apartment. Peter did not die because he had just stepped out of the apartment when the explosion happened. Peter failed to shut off all sources of ignition before setting off the spray.
- 407. The Director of Security was fired because the package showed signs of being an explosive device. He failed to properly supervise the training of the staff who accept deliveries for building personnel. The package had misspellings, excessive stamps, oil stains and protruding wires, all signs of a suspicious package.
- 408. FLSD Alan was able to smell natural gas, which is naturally odorless, but a harmless chemical is added to it so that human beings can detect it when present. FLSD Alan immediately evacuated because natural gas can cause a fire/explosion.
- 409. There was a water main break on the street where the water is piped into the building. The break led to water contamination in the building. The building lacked a stove/microwave that could have been used to boil the water for drinking/cooking purposes.
- 410. Clinton is correct. Tenant companies may have a different plan than the building's plan when dealing with an active shooter incident. The FLSD must understand the tenant's plan in the event the active shooter incident happens on one of their floors.
- 411. The response was a Unified Command Response because multiple agencies addressed the emergency. The city program activated to address this emergency was the Citywide Incident Management System (CIMS). The steam pipe explosion was a major emergency because of the Unified Command Response (otherwise it would have been a Single Command Response). The Office of Emergency Management (OEM) coordinates and supports the response to the emergency. The Deputy FLSD was reprimanded by the FLSD because Con Edison, although not a city agency, is responsible for the city's utility systems and has the authority to order the FLSD/Deputy to take action to protect the building occupants.
- 412. Because the building is a high-rise, the fire alarm system is a selective FAS that automatically activates the fire alarm/strobe lights on three floors only, in this case: FL-2, FL-3 and FL-4. The action taken by the FLS BES was a partial evacuation (FL-2, FL-3 and FL-4 only) because people on FL-1 and FL-5 and above were not in the affected area, hence they sheltered in place. The fire happened during non-business hours because the FLS BES was on duty.

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- 413. A Recommended Action is the action that occupants are informed to take that would lead to a greater chance of survival in an emergency. For example, if there is a riot outside the building, the Recommended Action would be In-Building Relocation to the IBRAs. The Acceptable Action would be Shelter in Place and the Unacceptable Actions would be Partial Evacuation and Total Evacuation.
- The prospect of the family winning the lawsuit or the lawsuit even being entertained in a court of law is slim. The NYS Good Samaritan Law protects people who in the process of assisting others in need, inadvertently harm them.
- The building does not have a "13<sup>th</sup> Floor". The FLS BES was fired because he did not understand the building's Marketing floor numbers (non-sequential floor numbering system) in the building.
- 416. An Earthquake caused the Waterflow switch to activate when the Branch Lines on the Sprinkler System broke due to the building shaking. The building was completely empty of people, allowing the owner to lock the exit door to the street from the inside. Because there is no one in the building, the fire alarm system (building) must be on-line with the central monitoring station.
- 417. The FLSD was exercising Situational Awareness and was speaking with the EAP (Non-Fire) Brigade, which consists of the building's Director of Security, Property Manager and Chief Engineer.
- 418. The FLSD is correct. The Roof is not a safe means of escape during any emergency and is not recommended as an In-Building Relocation Area (IBRA), regardless of if the building is a high-rise (over 75 feet in height) or a low-rise (75 feet or less in height).
- 419. The emergency was an active shooter incident on FL-1, where the FACP is located. The FLSD Barricaded until it was safe. The action by the FLSD to Barricade (Hide) was correct because had he reported to the FACP; he would have increased the risk to his safety. If the FLSD is injured or dead, the risk to the occupants increases as there will be no one available to control, coordinate and communicate the emergency.
- 420. The person asked for (1) a size 10 envelope that only requires one stamp, but purchased 10 stamps to ensure that the envelope does in fact gets delivered and reaches Mr. Patterson; (2) The words "opened" and "only" are misspelled as "opined" and "ony"; and (3) the restriction indicating that only Mr. Patterson should open the envelope. All are features of a suspicious package.
- 421. The fire occurred in a hospital. Joshua closed the door to the patient room because the four patients were bedridden and could not evacuate on their own. Joshua could not enter the room to rescue the four patients because of the fire/smoke, he closed the door to the room to protect the rest of the hospital by containing the spread of the fire. Joshua was not prosecuted since his actions followed hospital standards.
- 422. The emergency is outside, where an airborne substance was released. Maxine failed to follow the FLSD's directive to In-Building Relocate and decided to self-evacuate via Stairwell X. Maxine was not allowed back in the building because she would contaminate the people who remained in the building in the In-Building Relocation Areas (IBRAs); and who were safe.
- 423. The distance that should be cleared ("Clear Zone") from the Danger Area where a suspicious package is discovered in the building, including floors above and below the floor where the suspicious package was found.
- 424. When there is an outside airborne substance that is toxic to humans, stair pressurization should not be activated by the FLSD. Stair pressurization brings 100% outside air into the stairs. The 10 people were killed when the outside substance was pressurized into the stairwells and they inhaled the poisonous substance. They could not re-enter from the stairwells because the fail-safe lock release system was impaired.

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- 425. Building "B" on York Avenue suffered \$100 million in damages because York Avenue in next to the East River, hence a greater likelihood that the river would overflow and cause severe damage to Building "B". Fifth Avenue is in the middle of Manhattan island. Building "A" on Fifth Avenue kept the water level in the basement low because they activated drain pumps.
- The role of the NYC Office of Emergency Management (OEM) is to establish roles and responsibilities among city, state, and other government agencies. Dan, the Deputy FLSD is correct. OEM activated the Citywide Incident Management System (CIMS). The National Incident Management System (NIMS) is activated by the Federal Government to address major catastrophic emergencies in the United States.
- 427. The FLSD who was working in a building in front of the riot notified the Building Manager and the General Manager who were in a building/hotel that were **not** on Madison Avenue between 40<sup>th</sup> and 41<sup>st</sup> Street. The Building Manager and the General Manager of the office building and hotel, respectively, were notified of the riot because they were within 200 feet (Neighboring Buildings) of the building located between 40<sup>th</sup> and 41<sup>st</sup> Street (which is where the FLSD was working and from where he made the calls).
- 428. Yes. If there is an immediate danger to the building occupants (i.e., active shooter), the occupants must be clearly informed of the actual emergency and the proper actions to take to protect themselves from the threat. The quicker people can make decisions, the greater the chances of survival. The FLSD should have clearly identified the emergency over the Public Announcement system.
- 429. The FLSD was correct in using all available means of communication to address the emergency. There is a greater chance that the message is delivered when multiple systems of communication are used to address the emergency. If only one system of communication is used, it can fail and the message does not get delivered, increasing the risk to the people.
- 430. Lola was watching a television show called "Power" starring 50-Cent. She was in a hotel watching the show on a smart television when there was an active shooter incident in the hotel. The show was interrupted because smart televisions can be used to deliver emergency messages to the guests, which is what the FLSD used (in addition to the FACP's PA system) to deliver the message about the active shooter. Lola barricaded and stayed in her room until the "all clear" was announced by the FLSD.
- They were students and faculty on a college campus when the notification was activated. Most college/university campuses are most populated during October. Colleges and universities administrators are required to notify the campus community of a dangerous situation on campus.
- 432. The building employee who was fighting (Confronting) an active shooter on FL-1 was the Deputy FLSD. We know that it had to be the Deputy FLSD because the FLSD was on the 10<sup>th</sup> Floor at the time of the confrontation and only the FLSD, Deputy FLSD and FLS Building Evacuation Supervisor may make announcements on the FACP. The FLS Building Evacuation Supervisor was not working because he would only be present during the building's non-business hours; and in this case he does not hold a NYS Security Guard License, which would have allowed him to cover a security post in the building during the building's business hours.
- 433. Matt works at Madison Square Garden as the 2008 Building Code classifies places of assembly by the Occupancy Use "A". Victor works at the Emporium Hotel as the 1968 Building Code classifies hotels by Occupancy Use "J-1".
- 434. Pam died because she was above the fire floor, and although the stair pressurization fans activated in both Stairwells "A" and "B", multiple doors to Stairwell "B" were opened simultaneously, hence decreasing the pressurization; thereby allowing smoke from the fire floor (FL-20) to spread into the stairwell, creating a chimney-like effect carrying smoke and toxic gases.

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- 435. The temperature inside the building was less than 76 Degrees Fahrenheit. This concept is known as the Stack Effect. When the temperature inside the building is lower than the temperature outside the building, smoke will drop to lower floors. When the temperature inside the building is higher than the temperature outside the building, smoke will spread up at a faster rate of speed.
- 436. A Backdraft is when pressurized gases explode through an opening that results in a fireball. The gases explode because there is a lack of oxygen in an enclosed area and oxygen is suddenly introduced via the opening or a door/window. Backdrafts happen during the Decaying phase of a fire, meaning only firefighters are present when the Backdraft (explosion) happens (civilians have already evacuated or in-building relocated).
- 437. A loved one. Because active shooter events are immediately made public via news/internet even as the incident is unfolding, loved ones generally call the person who works in the building to ask if they survived. Answering that call is critical for the mental well-being of loved ones/family members.
- 438. Madelene was telling the handyman to remove a door stopper (a device that would prevent the door from closing). The door was fire-rated, hence a door closer was installed on the door. If the door has a closer, it should not have a stopper. The door could have been an emergency stairwell door or a Guest Room door.
- 439. Thomas started work at 8a because fire safety team members are full-time employees who work a full day (typically 8 hours). He left at 4p because he was following the business hours of his Company, NOT the building's business hours. Thomas did not violate his responsibilities since he worked until his Company closed for the day at 4p. Searchers do not work for the owners; they work for the tenant Companies (Leaseholders).
- 440. I (In-Building Relocation), P (Partial Evacuation) and S (Shelter in Place) are unacceptable actions because they would lead to a higher risk of injury/death for the building occupants. T (Total Evacuation) is the Recommended action because if the explosion leads to building collapse, the FLSD should remove all the building occupants to the outside Assembly Areas.
- 441. The FLSD was speaking to the EAP Brigade (or Non-Fire Brigade), which consists of the Chief Engineer, Director of Security and Property Manager. The FLSD was activating the Emergency Action Plan (EAP) for an emergency that was happening outside the building, hence locking the doors so no one could access the building, etc.
- 442. 3% of the total number of Guest Rooms in a hotel indicates that there must be at least 3 portable audio/visual devices for every 100 Guest Rooms at the Front Desk to be issued to people with disabilities (visually impaired (blind)/hearing impaired (deaf). These devices are strobe lights and alarms (speakers).
- 443. The kitchen staff failed to boil the water before serving it after a water main break happened outside in the street. Water main breaks can lead to water contamination and if the water is consumed before boiling it, it could lead to illness.
- 444. Carbon Monoxide triggered the alarm. The gentleman thought it was a malfunction because he could not hear, see, smell, touch or taste Carbon Monoxide and went back to sleep. Carbon Monoxide (also known as the "Silent Killer") killed the couple because they were exposed to it for an extended period in an enclosed setting.
- The Authority Having Jurisdiction (AHJ) is the agency/agencies that respond to an emergency and which will oversee the response to the emergency. The Incident Commander (IC) will be the person in charge of the incident (i.e. FDNY Battalion Chief).
- An FLSD was working in the low-rise building because the fire alarm system consists of warden phones (two-way voice communication system) which forces the building to have FLSDs on staff. The emergencies happened during the

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building's business hours, which require the FLSD to be present in the building providing personal supervision. The FLSD should have activated the Total Evacuation concept because there is a greater chance of survival by totally evacuating the building (some occupants may survive the riot), versus In-Building Relocating, Sheltering in Place or Partially Evacuating the occupants, which will increase the risk of death to the occupants (99% risk) when the explosion happens and the building collapses. The FLSD activated the Emergency Action Plan (EAP).

- 447. The FLSD knew that there was a problem with the Fire Pump because the failure of the pump activated a Supervisory Signal on the FACP. The license that the FLSD requested to see was the Master Fire Suppression Piping Contractor License (MFSPC). The MFSPC works for a sprinkler/standpipe fire suppression company that concentrates on manufacturing, repairing, maintaining, testing, installing, inspecting, and servicing all components of fire suppression systems.
- 448. Fire Department of the City of New York [FDNY], New York Police Department [NYPD], Department of Transportation [DOT], Department of Design and Construction [DDC], Department of Environmental Protection [DEP], Department of Buildings [DOB], Department of Sanitation of the City of New York [DSNY], Department of Health and Mental Hygiene [DOHMH], Office of Emergency Management [OEM] and Department of Information Technology and Telecommunications [DoITT]. This was a major emergency because the response was a Unified Response (multiagency). The agency that "supported and coordinated" the emergency response was the Office of Emergency Management [OEM].
- The three missing words on the sign are "Thermal Insecticidal Fogging" to indicate that a fogging operation was in progress on the floor. The sign was posted at 8a, one hour before the start of the Insecticidal Fogging Operation and it was posted at the entry point to the area being fogged. The watch person, who was posted by the entry point (along with the sign) told Mary that because of the Insecticidal Fogging Operation project, she would not be allowed in her office. The licensed electrician shuts down electricity and all sources of ignition on the floor being fogged to avoid an explosion/fire at least one hour (8a) before the start of the project at 9a.
- 450. Felix died. Studies have found that when a person experiences cardiac arrest above the 25<sup>th</sup> floor of a building, the chance of survival is zero. One reason is the delay in getting EMTs to the victim's location. Because the three events happened at 8p on a Holiday, the building likely had a "skeleton" (minimal) staff, hence further delaying the EMTs time from arrival at the building to the victim's location (no escort, no elevator in readiness, no one available to provide first aid/cpr, no Automated External Defibrillator (AED) available, etc.). Although Jennifer was also experiencing cardiac arrest, her chances of survival are greater because she was on the 24<sup>th</sup> floor. John survived as it is less likely (compared to Cardiac Arrest) that an Epileptic seizure would lead to death, regardless of John's location in the building.
- 451. This building is a homeless shelter where total evacuation drills are typical. John could lose his job as he should have had all the occupants report to the first floor because of the cold temperature outside. (Shelter residents are not supposed to be evacuated from the building during fire drills when the outside temperature is above 90 Degrees (Code Red) or below 32 Degrees (Code Blue)). The shelter has a General Fire Alarm System that activates the alarm in the entire building. This building is a low-rise building (hence the total evacuation drill).
- 452. When an addressable fire alarm system requires that the programming/software be upgraded, it is typically because there are phantom points in the fire alarm system. Phantom points are present when the fire alarm company physically removes alarm initiating devices (i.e. smoke detectors) from the building. For example, there are 5 smoke detectors on FL-10. FL-10 is renovated and now there are only 4 smoke detectors on FL-10. There is one phantom point that needs to be removed from the programming/software since that smoke detector point number no longer exists in the building.
- 453. The candidate is correct. The FLSD on-site exam is premises related (or building specific), which means that the Examiner is to ask questions from the Comprehensive Fire Safety and Emergency Action Plan for that building. If the

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plan indicates that the building does not have a commercial cooking system, then those questions should not be asked of the candidate.

- The FLSD identified himself as the "FLSD." When the FLSD makes announcements over the public announcement system, he/she must identify themselves as the "Fire and Life Safety Director." The title is NOT to be abbreviated.
- 455. The FLSD received a fire alarm signal from the Heat Detector in the Conference Room. The type of Heat Detector that activated the fire alarm is the Rate of Rise Heat Detector, which activates when the temperature in a room rises at between 12-15 Degrees Fahrenheit per minute.
- 456. Contamination and exposure are being minimized by the FLSD when a chemical, biological or radiological incident is happening inside the building. The FLSD activated the Emergency Action Plan (EAP).
- 457. The action that the FLSD made to In-Building Relocate the building occupants from the perimeter windows to the In-Building Relocation Areas (IBRAs) when there was an outside airborne threat was correct. John didn't die because he was not in the area where the emergency was happening.
- 458. The Construction Site Fire Safety Manager is correct. Because the walls have yet to be installed, the Standpipe System must be Automatic Dry (air in the Riser) because if the Standpipe System is filled with water it would lead to freezing. The water in an Automatic Wet system must be maintained at no less than 40 degrees Fahrenheit. The CSFSM and the construction worker must consider the weather to arrive at their conclusions as to whether the system is wet or dry during the construction phase.
- 459. The FLSD is correct. The Chief Engineer is to follow directives from the FLSD whenever the EAP is activated. Frank is a member of the Non-Fire (or EAP) Brigade.
- 460. The error the FLSD committed was placing the elevators in Phase II. In a non-fire (EAP) emergency, the elevators are placed on Independent Mode after being recalled in Phase I. The shooter was able to enter FL-12 from Stairwell "A" because when the FLSD recalled the elevators, the fail-safe locks on the stairwell doors automatically released. The next available re-entry floor cannot be more than four floors above FL-12. The next re-entry floor is FL-17 since the property skipped the number "13" when numbering the floors. The building had more than 100 people above or below FL-1 or more than 500 in the entire building, requiring the FLSD to be on duty at the time of the shooting.
- 461. The FDNY rejected the Plan because Lamont cannot work the same shift in two separate buildings. Because the FLSD F-89 is a premises-related Certificate of Fitness, Lamont was supposed to immediately surrender to the FDNY his F-89 for 500 Fifth Avenue the Friday that he stopped working at 500 Fifth Avenue. The FDNY would have issued him a Q-89 (inactive FLSD). Furthermore, Lamont should have told management at 500 Fifth Avenue that his name must be immediately removed from that building's Plan. Note: When a situation like this one occurs, the FLSD must write a notarized letter to the FDNY Plan Examiner indicating that he/she no longer works in the previous building (500 Fifth Avenue) so that the Plan for the new building (300 Jamaica Avenue) gets approval (Letter of Acceptance) by the FDNY.
- The shooter committed suicide before the NYPD arrived on the scene, hence no weapons were discharged by the NYPD and no arrest was made. At least two people died, the shooter and at least one other person whom he killed . . . making this an active shooter incident, rather than just a suicide.
- 463. The 2008 Fire Code which was published on July 1, 2008, forced all buildings with fire alarm systems to be supervised by a Central Monitoring Station. On June 30, 2008, the building was not required to be supervised by a Central Monitoring Station; hence the manual pull stations did not have the diagonal white stripe. By June 30, 2009 the building was being supervised by a Central Monitoring Station hence the FDNY responded to the fire alarm (fire or no

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fire) because the operators at the Central Monitoring Station called 911. If the operators called 911, then the building was on-line.

- 464. The <u>Triangle Shirtwaist Factory Fire</u> in Manhattan in 1911 led to the deaths of 146 young ladies. They died because the owners of the factory thought the workers were stealing the clothes and decided to lock the doors from the inside requiring keys to unlock them. The <u>Cocoanut Grove Club Fire</u> in Boston, MA in 1942 led to the deaths of 492 people when a lightbulb set fire to material that was not flame-proofed. <u>The Station Nigh Club Fire</u> in West Warwick, RI in 2003 led to the deaths of 100 club patrons when the live band used pyrotechnics during the show, which set on fire untreated soundproof material on the walls.
- 465. The fires happened in the kitchens. The kitchen fire, where heat is commonplace, is the most prevalent fire in all of these four properties. The Ansul Fire Suppression Systems activated and extinguished the commercial cooking equipment fire.
- In the built environment, Passive Fire Protection (or Passive Barriers) are the floors, ceilings, walls and doors that protect people from the fire by serving as a barrier between the fire and the people. These systems do not involve any actions, hence the term "passive."
- 467. Because no one saw Ms. Thompson outside the building, then it must be assumed that Ms. Thompson never made it out and is still on FL-20 ("worst case scenario"). The FLS Warden, after going over the list of employees who signed in that day, notified the FLSD that Ms. Thompson was unaccounted for. The building occupants reported to the Assembly Area, which is a designated area that building occupants report to when a total or partial evacuation is ordered by the FLSD, Deputy FLSD or FLS Building Evacuation Supervisor.
- 468. The FDNY Inspector found that the roof was being used as a storage space. It is illegal to use the roof to store material in NYC. This is a low-rise building because there is no Roof Manifold, hence no Standpipe System. Standpipe Systems are mandated in high-rise buildings (buildings over 75 feet in height). The reason that there is a FLSD on duty is because the fire alarm system has warden phones for two-way voice communication in this low-rise building.
- 469. The emergency was happening in a hotel because the Guest Room phone was used to call 911. In hotels, when the guest uses the Guest Room phone (Landline) to call 911, the FLSD/Security gets a notification indicating where the caller is located (Room #). The hotel has one elevator only because the FLSD made an announcement to the entire property and told them that there would be no elevator service for the duration of the emergency (if there were two elevators there would not have been a need to totally disrupt elevator service). After being recalled in Phase I, the elevator was operated on Independent Mode because it was a non-fire emergency. Phase II is operated during fire emergencies.
- 470. Phillip holds the certificate of fitness S-95 for the supervision of fire alarm systems. To obtain the S-95 the candidate is not required to attend classes (they self-study the material). Phillip works in an apartment building with a fire alarm system. The operating hours of apartment buildings are 24/7.
- 471. The affected area is ALWAYS inside the building (even if the emergency is outside) as the FLSD is responsible for the safety of the building occupants, not pedestrians outside. The FLSD activated the In-Building Relocation concept for the whole building if he thought the entire building was at risk or the FLSD activated the In-Building Relocation concept in the affected area inside the building and Shelter in Place for the Rest of the Building (unaffected areas). The affected area was determined by the FLSD as the area where occupants might be harmed by the gas leak (for example: the entire building: FL-1 to FL-50 or part of the building: FL-1 to FL-10).
- 472. Because the FLSD used the term "active shooter", the shooting happened in a commercial office building. The term "active shooter" is used when you have non-transient populations who undergo drills and training and are familiar with the term "active shooter." "Gun shots" would have been used if the shooting were happening in a hotel.

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- 473. The four employees died because they did not act aggressively when they attacked the shooter. They attempted to harm the shooter with compassion, hence the shooter was able to discharge his weapon and kill the four people. The fifth person survived because that person did not make any attempts to participate in attacking the shooter and the shooter ran out of ammunition.
- 474. There are no Staffing Charts in R-1 spaces (Hotels), only in high-rise B spaces (office buildings). Staffing Charts do include the names of Buddies.
- 475. The NYPD responded to the building because a burglar alarm was mistakenly activated by a tenant in the building who forgot the burglar alarm passcode when they entered their office space. The tenant signed an agreement with a Central Monitoring Station to monitor their burglar alarm system. The person with the firearm was the Director of Security (a retired NYPD Sergeant), who identified himself to the NYPD. He was not arrested because he was authorized by the NYPD to carry a weapon and by the employer to carry his weapon while at work.
- 476. A Carbon Monoxide Detector activated a Supervisory Signal, where upon receipt, the Central Monitoring Station called 911, hence the response by the FDNY. Carbon Monoxide Detectors do not activate fire alarms or strobe lights, hence the FDNY did not see either of them in the active mode when they reached the floor where the emergency was happening. The emergency happened during the non-business hours of the building, therefore the FLS BES was on duty.
- 477. The FLSD should have available at the FCS four sets of First Responder Kits, each kit containing the building's floor plans, Building Information Cards (BIC) and Master keys/Access Cards. Three kits are assigned to the NYPD and one kit to the FDNY (or as necessary depending on the nature of the emergency).
- 478. Marketing (or Design) Floors are the numbers used to identify floors in any building, not the actual number of floors in a building. The FDNY allows building owners to skip numbers (non-sequential numbering) when numbering the building's floors. For example, a building with 20 Marketing Floors will only be 18 floors in height because the numbers "4" and "13" were not used (skipped).
- 479. Construction Floors are the actual floors of a building where every number is used to identify each of the 20 floors (sequential numbering). In this case if the building has 20 actual floors, the numbers 1-20 are used to identify all 20 floors (no skipping numbers).
- 480. The elevator system in this building is called a Destination Dispatch Elevator System. During the on-site exam, when the Z-89 holder activates Phase I, the doors blocking the Passenger Panels inside the elevators will unlock/open, giving the Z-89 holder access to the floor buttons. Destination dispatch technology uses advanced algorithms to optimize the flow of traffic within a multi-elevator building. By grouping passengers who share similar destinations into the same elevator, this system reduces travel and wait times when compared to traditional elevator systems.
- 481. The Deluge Sprinkler Systems has fused heads therefore the Branch Lines are dry. These systems activate in places where there could be a fast-moving fire. Typical places where Deluge Systems are installed are airplane hangars. A FLSD is not required.
- 482. Through-floor duct work exists when you have A/C units on a floor, but they service that and other floors. In order for the other floors to be air conditioned, the duct work is vertical and penetrates the floors. This is usually found in buildings that have Central Air Conditioning. The fear is that if the fans don't shut down and the smoke/fire dampers don't close, the smoke/heat may spread throughout the building, rather than just limited to one floor with a Packaged A/C unit.

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- 483. The Portable Fire Extinguisher (PFE) is red, indicating that it contains a chemical, not water. The chemical is Carbon Dioxide, which does not require a pressure gauge because CO2 creates its own pressure when contained.
- 484. A Sidewall Sprinkler activated in the Guest Room. Sidewall Sprinkler Heads are located on the wall instead of the ceiling, and release the water horizontally instead of down. There is no Plenum in the room because it has Sidewall Sprinkler Heads. Typically, a space that has Sidewall Sprinkler Heads does not have Plenums, otherwise Pendent Sprinkler Heads would have been installed.
- The FDNY Representative made a mistake. Candidates for Certificate of Fitness Exams must pay every time they apply for an exam at FDNY, 9 Metrotech Center in Downtown Brooklyn.
- 486. Mr. Polanco was not allowed to test because he is a certified instructor teaching the F-89 course and owns and operates Radiant Training & Consulting, LLC, an FDNY approved training school. His certificate is issued by the FDNY without testing.
- 487. The sign is posted on the outside of the building, comprised of red letters on a white background. The valve is located flush on the sidewalk opposite the sign. The cover has the word 'WATER". When the cover is removed, the valve can be closed/opened with a special wrench.
- 488. Because BOTH covers must be painted the same color, someone made a mistake at this FDC when it came to painting the FDC covers. The FLSD does not know what fire suppression system this building has based on the colors on the FDC. Because the color red is not used, we can assume that the building does not have a Standpipe System. The building either has a Sprinkler System (Green Caps) or a Combination System (Yellow Caps). Because the building does not have a Standpipe System, the building is low-rise.
- 489. The FLS Warden notifies the FLSD at the FACP from the peripheral phone on his floor. The FLSD cannot call a Warden Phone from the FACP.
- 490. The two dedicated telephone lines that transmit the fire alarm signal to the Central Monitoring Station (CMS) failed. If the lines are down, the CMS cannot receive any signals from the building's Fire Alarm System, even if the system/building is on-line.
- 491. Nick "played dead." Nick laid down on the floor amongst the dead bodies. The shooter did not shoot Nick because he presumed that Nick was among the dead. The fact that night clubs have distractions (music, dimmed lights, flashing strobes) helped Nick even more than in other spaces because the shooter is distracted. Note: "playing dead" is not an FDNY recommended action in active shooter incidents.
- 492. No. The FLSD simply followed medical emergencies protocol. Freight Operator Joe was misinformed when the FLSD instructed him to operate the car in Phase II. During non-fire emergencies, the elevators are operated on Independent Mode.
- 493. The sprinkler head did not fuse because it was not a sprinkler head. The sprinkler head-looking device was a camera installed in the office for security reasons. The fact that there are wires involved is indicative that it is a camera since sprinkler heads do not use wires to fuse/activate. In NYC, it is illegal to install devices that appear to be fire detecting or extinguishing devices when in fact they do not serve that purpose.
- 494. The Chief Engineer is correct. The colors used for Fire Suppression Systems are red (Standpipe), Green (Sprinklers), Yellow (Combination) and Silver/Aluminum (Dry Systems). The color black or uncolored is used for domestic water valves.

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- 495. The FLSD was on the Basement Level. The Basement is situated half-way down Below Grade, where there are windows allowing people in the Basement to see people on the sidewalk. The Cellar is fully Below Grade (no windows), the Sub-Cellar is fully Below Grade (no windows) and the Mezzanine Level is Above Grade (for example: Between FL-1 and FL-2).
- 496. The floor plan for the first floor Below Grade (Cellar) in any building is labeled A7 based on FDNY File Naming Convention. Floor plans are part of the Comprehensive Fire Safety and Emergency Action Plan and if the FLSD were to look at the Cellar Plan, it would be designated A7 by the Registered Architect (RA).
- 497. The FLSD received two calls from the Central Monitoring Station operator: One for the Trouble Signal and one for the Supervisory Signal. Because the building was off-line, the operator did not call the FLSD for the Fire Alarm Signal. The FLSD called the FDNY (911) because the building was off-line, and since no one told the FLSD that there wasn't a fire in the building, he assumed "worst case scenario" . . . that there was a fire in the building.
- 498. Sprinkler Systems Tamper Switches do NOT activate fire alarms, they activate Supervisory Signals. The occupants did not hear a fire alarm nor see the flashing strobe lights on FL-28, FL-29 or FL-30 since no fire alarm activated. They couldn't understand why the FLSD was making an announcement indicating that the fire alarm activation was being investigated. The FDNY did not respond because Central Monitoring Station (CMS) Operators do not contact the FDNY when they receive Supervisory Signals from their clients. The call from the CMS operator that was answered by Security Officer Smith was to inform the building's FLSD that they received the Supervisory Signal and wanted the FLSD to know of the signal. Security Officer Smith never told the FLSD about the nature of the call that he answered.
- 499. The S-14 Holder is not allowed to exit the building as the S-14 is a premise-related Certificate of Fitness providing continuous personal supervision to a building with a multi-zone Standpipe System. The FDNY Inspector was correct in ordering the S-14 Holder to return to the property because if there were a fire between 8p-9p, the S-14 must provide information and answer FDNY personnel questions about the building's multi-zone Standpipe System. If the FLSD was working pass the business hours of the building, then there had to be a situation where . . . (1) the FLS Building Evacuation Supervisor called out/no show for the 7p-7a shift, or (2) there was an event past 7p that lasted until at least 9p which consisted of more than 100 people above or below FL-1 (excluding FL-1), or (3) there was an event past 7p that lasted until at least 9p which consisted of more than 500 people in the entire building, including FL-1 and the Cellar, or (4) all situations.
- 500. The fire alarm activated either on FL-70 (the alarm activated on FL-70 and FL-69) or in the Cellar (the alarm activated in the Cellar and FL-1). The fire alarm only activates on two floors when the fire occurs on the highest floor or the lowest floor of the building that is below Grade.
- 501. The two people who helped Martha evacuate during the fire were her colleagues ("Buddies"). The two people who helped Martha work either the same schedule as Martha or report earlier to work than Martha or stay later at work than Martha. The Buddies must be present during the times that Martha is working.
- 502. The Chief Engineer who signed the logbook on the 4p to 12a shift is the person responsible for addressing the fire emergency that happened on his shift. Although the Chief Engineer reports to the Building Manager in the normal operation of the building, the F-89 holder who signs the logbook becomes the responsible person during the emergency.
- No. Because there was no one in the building after 11p, except the Deputy FLSD, the Deputy FLSD may lock the doors and leave the building. FLS BESs and F-89 Holders don't have to be in the building if there are no occupants in the building. The Deputy FLSD and the FLS BES may be reprimanded by their manager for abandoning their post and for not showing up ("no call/no show").

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- 504. Total Evacuation. Sheltering in Place, In-Building Relocation and Partial Evacuation would lead to absolute deaths. A Total Evacuation is necessary to protect as many people as possible in the building from dying, although some of the occupants may be killed by the rioters. The Total Evacuation concept increases the chances of survival.
- This is an office building since hotel business hours are 24/7. The Deputy FLSD works from 4p to 8p and since the business hours start at 8a, then the FLSD works from 8a to 4p (8 hours x 5 days). The Deputy FLSD is a part-time employee (less than 40 hours per week) and works Monday to Friday from 4p to 8p. There are at least three F-89 holders working in this office building: FLSD, M-F, 8a to 4p; DFLSD, M-F, 4p to 8p; DFLSD, Saturday and Sunday, 8a to 8p (12-hour shifts). All F-89 holders on-site tested.
- 506. DOHMH: Department of Health and Mental Hygiene.
- 507. DOT: Department of Transportation.
- 508. CIMS. Citywide Incident Management System describes the agencies and the emergencies that they are expected to address either via a Single Command Element (one agency response) or Unified Command Element (multiple-agency response). CIMS establishes roles and responsibilities and designates authority for city, state and other government entities; and non-profits (American Red Cross) and private sector organizations performing and supporting emergency response.
- The Deputy FLSD gave an "All Clear" announcement without the approval of the Incident Commander (IC), who arrived when 911 was activated. FLSDs, Deputy FLSDs and FLS BESs should not be announcing to the occupants that the situation has been resolved ("All Clear") until the IC confirms that the threat has been eliminated and informs the FLSD, Deputy FLSD or FLS BES to make the "All Clear" announcement to the occupants.
- 510. The FLSD is correct. The Fire Guard F-60 C of F holder cannot be posted more than 50 feet away from the torch operator, with an unobstructed view.
- The FLS BES is correct. A dedicated smoke control system is a series of fans (other than the HVAC fans) designed to come on when an automatic fire alarm is activated in the building. This system is designed to protect the occupants during a fire by controlling the spread of smoke in the elevator shafts, stairs, etc., thereby increasing the chances of survival of the building occupants. The fire alarm activated during the non-business hours of the office building ("B"), hence the FLS BES was on shift.
- The FLSD is stating that he has express elevators in his building that do not stop on 10 floors because there are no hoist way doors for elevator riders to come off the elevators. For example, Bank B services FL-1 (Blind Shaft for FL-2 to FL-11 (In Bank B, the elevators do not stop on these floors)) and then service FL-12 to FL-50.
- 513. The other people did not ask the street number/name because it is known in the industry that if you work at "9 West", you work on 57<sup>th</sup> Street in Manhattan: The Solow Building.
- 514. **Total evacuation, In-Building Relocation, Partial evacuation, Shelter in Place**
- The FLSD was speaking to the FLS Warden on FL-51 or FL-49, who also received the fire alarm activation. Because Warden Phones operate on a single telephone line, multiple calls cannot be answered simultaneously by the FLSD, hence the second caller is placed on "hold".
- The FLSD informed the occupants to use the Access/Convenience Stairs, which are NOT emergency means of escaping from a fire. These types of stairwells offer **no** protection from fire/smoke.

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- 517. The Ycua Bolanos Supermarket Fire, Asuncion, Paraguay in 2004. The Security Guard kept people from leaving without paying by closing the doors during the fire.
- The fire happened in a hospital, where lateral evacuations are the norm. Only when the FDNY orders the Total Evacuation of the hospital will the occupants use stairwells. The business hours of a hospital are 24/7 and the FLSD was working because the hospital's fire alarm system consists of Warden Phones. Hospitals without Warden Phones do not require FLSDs.
- 519. Crime, Fire, Building Damage.
- Based on the FLSD's assessment of the emergency/threat, he/she must then determine what is the <u>Affected Area</u> (area in close proximity to the threat, where people are at risk of injury/death. These people should be In-Building Relocated, Partially Evacuated or Totally Evacuated) and the <u>Rest of the Building</u> (the area other than the Affected Area, where people are safe from the threat. These people should Shelter in Place).
- The problem is that when a Total Evacuation is ordered by the FLSD, the occupants report to the Assembly Area(s) which are located outside of the building, NOT the In-Building Relocation Areas (IBRAs), which are located inside the building. IBRAs are used when the In-Building Relocation concept is activated by the FLSD, Deputy FLSD or FLS BES.
- The police officer killed the Director of Security, who was armed, and who decided to go to the shooter's location and confront the shooter. When the Police Officer didn't get a response to drop the weapon, the Police Officer shot and killed the Director of Security. It is a fact that the Police Officer killed the wrong person since Cindy saw the active shooter kill three people on the 12<sup>th</sup> Floor at the same time that the Police Officer discharged his weapon. It is common practice for pedestrians (non-law enforcement personnel) to not confront the active shooters and to leave that task to the NYPD.
- 523. The fire happened at One Meridian Plaza in Philadelphia, PA in 1991. The engineer took the elevator to the floor where the fire alarm was activated, which was a mistake. Members of the Fire and Emergency Preparedness staff and Fire Brigade should never take an elevator to the floor where the fire alarm activates . . . since it is not known if there is in fact a fire on the floor of alarm activation. He encountered a heavy smoke condition and was lucky to survive the fire.
- 524. Since the building has no roof setbacks (every floor is the same size), then the size of the roof is the same size as the Main Lobby (FL-1), 2,000 sq. ft. Because the number of people allowed on the roof is 1 per every 10 sq. ft., the number of attendees cannot exceed 200 people (2,000 sq. ft./10 sq. ft. = 200 people).
- 525. The FLSD did not report to the FCC because his co-worker told him that the fire was on the first floor, where the FACP is located. Had the FLSD reported to the fire floor, he could have been injured or killed. The FLSD reported to the Alternative Location, which is a location other than the FCC, where the FLSD can operate to coordinate, control and communicate the emergency. The Alternative Location is listed in the Comprehensive Fire Safety and Emergency Action Plan.
- The woman is a Licensed Master Fire Suppression Piping Contractor (MFSPC) who removed the sprinkler heads to have them tested to ensure that the sprinkler heads activate at the correct temperature. The test is conducted 50 years after the installation of the sprinkler system; hence the building is at least 50 years old.
- 527. The fire was caused by a welder who was conducting hot work in the building using a flammable gas. The Fire Guard holding the Certificate of Fitness F-60 for Hot Work Operations, who must have an unobstructed view of the Hot Work Operator and who must not be posted more than 50 feet from the hot work operator, was able to extinguish the fire with a portable fire extinguisher.

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- 528. The building is a one-story building. The elevators did not recall because one-story buildings typically have no elevators.
- The fire alarm was intentionally activated by a person tampering with a sprinkler head. If a person intentionally damages a sprinkler head and fuses it, the water flow switch activates the fire alarm. The water that is immediately released from the sprinkler head has a terrible odor, and of course, the only person who is <u>W-E-T</u> is the person who intentionally activated the sprinkler head. The person who activated the fire alarm should be easily identified by the FLS Warden, Deputy FLS Warden and Searchers as that person smells terrible and is wet.
- The candidate must have passed the CBT exams (N-85 and Z-89) by October 20 of that year since the School Diplomas are valid for 9 months from the last of the two courses (Fire Component or Non-Fire Component). Since the candidate attended and passed the Non-Fire/EAP Component on February 20, then the candidate has 9 months from 2/20 to complete the FDNY CBTs and be issued a Certificate of Completion Z-89. The latest that the candidate may take the On-site Test is October 20 of the **following** year since the Certificate of Completion Z-89 has a 1-year life.
- There is an active shooter on campus. They are college students that are mandated to provide the college administration with their cell phone numbers/email addresses so that they may be informed of an emergency on campus when the college participates in the Higher Education Act.
- Tony failed the on-site test in the building where he's a part-timer. When a C of F F-89 Holder has one C of F and wants to get a second one in another building, then the person must on-site test in the second building. If the person fails the on-site test, then the FLSD Certificate for the first building is automatically suspended and the person must take the R-58 20-question remedial test at FDNY. If the person fails the R-58, then the original certificate of fitness F-89 is revoked by the FDNY and the person must re-start the entire certification process.
- 533. The two documents that must be revised to reflect the additional three floors are: 1) Certificate of Occupancy (COO) and 2) Fire Safety and Evacuation Plan or Comprehensive Fire Safety and Emergency Action Plan. The fire suppression system that was installed when the building became a high-rise (more than 75 feet in height) was the Standpipe System (fire hose system), which is required to be installed in all high-rises, regardless of the use of the building.
- 534. The Ladder Truck (or Ladder Company). These firefighters are trained to rescue occupants who are trapped in buildings. The firefighters in the Engine Truck (or Engine Company) are trained to fight the fire upon arrival at the scene of the fire.
- The person was shaken by bed shakers, which are devices designed to shake the bed when the fire alarm activates. The person is both blind and deaf, hence the tactile system of a bed shaking allows the person to know that there is a fire emergency. The person was on the bed in a hotel when the fire alarm went off. Bed shakers recognize the sound of the fire alarm and immediately begin to shake the bed to let the person know of the fire alarm activation/emergency.
- The elevator bank servicing the fire floor did not recall the elevators to FL-1 because there is a Sky Lobby in the building. A Sky Lobby is a floor where people have to transfer from one bank of elevators to another to reach their destination. The Sky Lobbies exist on floors other than FL-1 and floors Below Grade. The elevator bank servicing the higher floors recalled to the Sky Lobby, hence they did not recall to FL-1 because FL-1 (Grade Level) can never be a Sky Lobby.
- 537. The Chief Engineer is correct. A Basement is a floor Below Grade Level that is half-way below the street (Grade) level and has windows. The Cellar is a floor Below Grade Level that is completely below the street (Grade) level and does NOT have windows.

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- 538. The dead person is the active shooter. The person who made this statement to the FLSD was the Incident Commander (IC) from the NYPD after the active shooter was shot by the NYPD, and subsequently died. The FLSD must wait for the IC to inform the FLSD to make the all-clear announcement in all emergencies where the Fire or Emergency Action Plan is activated by the FLSD.
- The fire alarm did not activate because the building has a mini-Class E System. These fire alarm systems are manual and the fire alarm has to be manually activated by the FLSD, Deputy FLSD or the FLS BES. The fire was reported to the FDNY by a pedestrian who saw the fire from outside. There was no one on the fire floor, otherwise those people would have informed the FLSD, Deputy FLSD or FLS BES of the fire. Mini-Class E Systems are not required to be approved by the FDNY.
- The fire is on FL-25, hence the fire alarm is activated on FL-25 (fire floor), FL-26 (floor above the fire floor) and FL-24 (floor below the fire floor). The occupants on FL-24, FL-25 and FL-26 opened two stairwell doors on each floor, hence Security Officer Anthony received six notifications (two doors were opened on each of the three floors). The last two doors opened on FL-20. The occupants on FL-24, FL-25 and FL-26 In-Building Relocated to FL-20 (where the last two doors were opened). The In-Building Relocation concept in a fire emergency states that occupants go down the stairs a minimum of three floors from their current location. Because all the numbers are being used consecutively to identify the floors and the re-entry floors are every fourth floor [FL-32, 28, 24, 20, 16, 12, 8 and 4] . . . then the re-entry floor used by the occupants from FL-24, FL-25 and FL-26 was FL-20. The last two doors that opened on FL-20 were opened by the occupants from the stairwell side to re-enter on FL-20 from FL-24, FL-25 and FL-26.
- He is the responsible person for servicing portable fire extinguishers, which he must service every year when the tags on the extinguishers expire. He visited every floor because there has to be at least one extinguisher on every floor in the common areas, as well as some base building rooms have portable fire extinguishers. He holds the Certificate of Fitness W-96 for portable fire extinguisher servicing.
- Refrigerating Systems Operating Engineers holding the Certificate of Qualification Q-01 (or Q-99), who are not holders of the Certificate of Fitness Fire and Life Safety Director F-89 must attend and pass the <u>Building Operation</u> Maintenance and Recordkeeping Course to be able to renew their Q-01.
- 543. When a fire alarm system is going to be out of service for more than 8 hours in a 24-hour period for the purpose of repairs, etc., the FDNY must be notified by the Impairment Coordinator. The Impairment Coordinator title is assigned to a staff member by the owner. The Impairment Coordinator title may be assigned by the owner to the Fire and Life Safety Director F-89.
- 544. The FLSD called the FDNY Borough Dispatcher in the Bronx, hence the building is located in Bronx County. Each of the five boroughs has their own Borough Dispatcher number.
- 545. The Certificate of Fitness Holder B-03 supervises Auxiliary Radio Communication (ARC) Systems. ARCs are required in high-rises built after December 31, 2014, as mandated by the Building Code to allow the FDNY to better communicate amongst themselves in an emergency in the building. The ARC System is designed for FDNY communication, consisting of a Transceiver (base station) connected to a building-wide antenna system with a radio console in the building lobby.
- Brian is correct. Brian's building requires FLSDs because the fire alarm system has Warden Phones. All buildings with fire alarm systems with two-way voice communication systems (Warden Phones) require FLSDs, regardless of whether the building is a high-rise (over 75 feet in height) or low-rise. Richmond County is also known as the borough of Staten Island, which is part of NYC.
- 547. Fire Towers are always considered the Primary Stairwell for the occupants to use to In-Building Relocate, Partially Evacuate or Totally Evacuate because it is a fireproof enclosure. Fire Towers are enclosed interior exit stairways that are

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accessed through an open exterior balcony or naturally ventilated vestibule. The 1968 Building Code eliminated the mandate for buildings to have Fire Towers.

- Maria is correct. Although Alberto has many certificates of fitness, only his experiences as a Building Evacuation Supervisor (BES) and as a Coordinator of Fire Safety C of F F-80 will be considered by FDNY. Because a minimum of 18 months of experience is required for Alberto to become an FLSD candidate, today he is not qualified to become an FLSD (he only has 17 months of verifiable experience).
- FLSD Shaniel is correct. FLSD Patrick only has the authority to implement the **T**otal Evacuation (or **I**n-Building Relocation, **P**artial Evacuation or **S**helter in Place (TIPS)) concepts in the building where he works as an FLSD. Although he has a responsibility to notify his Neighboring Buildings of the fire or non-fire emergency in HIS building, he does not have the authority to direct FLSDs in Neighboring Buildings to take any actions as far as the implementation of the Comprehensive Fire Safety and Emergency Action Plan in their buildings.
- 550. The FLSD consulted with the Building Manager, Director of Security and Chief Engineer (the three building employees who make up the Non-Fire (EAP) Brigade); and was preparing to activate the Emergency Action Plan.
- 551. The S-56 is the Construction Site Fire Safety Manager, who is the responsible person for ensuring that the construction site workers are adhering to Rules and Code regulations, including enforcement of the "No Smoking" policy. The Deutsche Bank Fire in August 2007 led to the introduction of the S-56 after it was found that the construction workers cut the Standpipe Riser, which contributed to the deaths of two NYC firefighters during the fire at 130 Liberty Street.
- 552. Yes, the FLSD made an error. Typically Fire Escapes are not used as primary means of egress, unless it is a last resort.
- 553. The FLSD was conducting the <u>Emergency Action Plan Instructional</u> Drill, where he did not use the word "fire" in his presentation since this drill focuses on non-fire emergencies.
- 554. It is recommended that when a suspicious package is discovered that an area of 300 feet should be cleared of people. The FLSD activated the Emergency Action Plan.
- There were no repercussions to Jasmine since she is a volunteer. Volunteers have the right to say "no" since they are not being compensated for their actions to help others, even though she is listed in the Comprehensive Fire Safety and Emergency Action Plan.
- Because the EMTs arrived at a Gate (Gate 5), the medical emergency is happening at a construction site, where entry points are identified as "Gates" instead of "Entrances". The person who suffered the injury was a construction worker. The Construction Site Fire Safety Manager S-56 oversaw the incident and most likely wrote the Incident Report.
- 557. Gabrielle Giffords, a US Representative was shot and wounded by an active shooter, who proceeded to kill 6 and wound 13 people on January 8, 2011. Patricia Maisch is the woman who stopped the shooter by wrestling the magazine (bullets) away from the shooter. The shooter was arrested.
- The FLSD activated the Inquiry Tone (in some properties, this switch may also be labeled "EAP Tone" or "Alert Tone"). All the occupants died, including the FLSD since he informed the people to Shelter in Place (Unacceptable action) rather than ordering a Total Evacuation (Recommended action).
- 559. The Director of Security secured the doors to the building as designated in the Comprehensive Fire Safety and Emergency Action Plan. Because the FLSD's wife was exposed to the airborne threat, he is not to let her in the building. If he does let her in, he will be exposing the occupants to the threat. She died.

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- 560. Distance and Barrier is how the FLSD protects the building occupants from the threat. By distancing the people from the threat = Chances of survival increase. By placing a Barrier (wall/floor/ceiling/door) between the people and the threat = Chances of survival increase.
- The FDNY inspector was there for the Place of Assembly inspection. The inspector asked the FLSD for the architectural drawing of the cafeteria (hence the commercial cooking system), which he has to compare to the actual cafeteria space (ex. tables and chairs on the drawing must correspond with the actual tables and chairs in the Cafeteria). The inspector also asked for the Place of Assembly Certificate of Operation for the cafeteria. For the Place of Assembly Certificate of Operation to be required and the occupancy sign to be conspicuously posted, the space (in this case the cafeteria) must hold 75 or more people.
- The Department of Environmental Protection (DEP) showed to your building because there was a water contamination issue. Accident Investigation is a core competency of the NYPD and a gas leak is a core competency of Con Edison.
- The FLSD is correct. When multiple agencies respond to an emergency, it is a Unified Command Response, where the agencies co-locate at one command post and jointly set incident objectives. Usually, by mutual agreement, multiple incident commanders (ICs), will each concentrate on their core competencies to address the emergency.
- The <u>Affected Area</u> and the <u>Rest of the Building</u>. The people for whose safety the FLSD is responsible for are the people **INSIDE** the building **at the time of the emergency**, regardless of whether the emergency is inside or outside the building.
- John was not allowed to test because he arrived at FDNY Headquarters at 9 Metrotech Center after 3:00 p.m. on the date of the test. The FDNY may deny a candidate the ability to take the test when the candidate arrives late. The candidate has to reschedule the test and arrive on time on the new test date.
- John did not report to the FCS because the emergency was not affecting him or the people inside the building. John is only to activate the fire safety plan or the emergency action plan if the emergency is affecting building occupants, including John. John was safe because there was distance between the emergency that he became aware of and himself. Distance between the threat/emergency and the people determines whether the people are going to be affected by the threat/emergency.
- 567. The people authorized to activate the fire safety plan or the emergency action plan are the Fire and Life Safety Director, the Deputy Fire and Life Safety Director(s) and FLS Building Evacuation Supervisor(s). ABC Central Monitoring Station is a tenant company at 300 Park Avenue West. The central station operators hold the Certificate of Fitness F-40. There are two operators on every shift.
- The smallest floors in the building are FL-41 to Roof. The window washers' rig on the Roof level serves from the highest floor to FL-41. This is based on window washers' rigs on FL-40 that serves FL-40 to FL-10 and on FL-10 that serves FL-9 to FL-1.
- The problem is that sprinkler heads activate independently of one another by the heat caused by a fire or other heat-producing devices. The only sprinkler head that should have activated was the one he put the lighter to. No other sprinkler head should have activated since there was no heat available to activate the rest of the sprinkler heads.
- 570. The fire most likely happened in the kitchen in the hospital. In hospitals, kitchen fires make up 39% of the fires between 2009 and 2013.

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- 571. They are both incorrect. Fire Drills must be conducted quarterly for the first two years of a new construction, followed by every 6 months. Once the date is selected for the Fire Drills, then the dates for the Non-Fire/EAP Drills must be different dates for the Instructional EAP Drill and the Stairwell Familiarization EAP Drills.
- The FLSD is correct. Guests do not participate in Place of Assembly areas fire drills because they are not present during the normal business hours of the property . . . they arrive just to see the shows.
- 573. The FLSD is incorrect. Email should not be used as the primary means of communicating with the commercial building occupants during a fire emergency. The one-way voice communication system on the FACP should be the primary means of communicating with the building occupants.
- 574. The Automated External Defibrillator (AED) is being used by a certified person on a patient. AEDs determine whether the patient's heartbeat is correct and inform the rescuer to shock the heart ("Shock Advised") if the heartbeat is not normal. The location of AEDs must be known to all occupants in the building via the posting of a sign at the lobby desk; and only those people who are certified should use the AEDs.
- 575. Because natural gas is odorless and cannot be detected, a harmless chemical is added so leaks are detectable. The chemical's odor is distinct and unpleasant that many people compare to the smell of rotten eggs.
- 576. The Smoke Detector Cleaning Companies, Central Monitoring Station Companies, Commercial Cooking Systems Cleaning Companies, Fumigation/Thermal Insecticidal Cleaning Companies and Portable Fire Extinguisher Servicing Companies have in common the Company Certificate of Operation issued by the FDNY. If the Company the building has a contract with is not listed on the FDNY website, then the building is conducting business with an illegitimate company.
- 577. The gas detector activated a Supervisory Signal that does NOT activate an alarm in the building. The Central Station Operators called FDNY when they received the gas detector supervisory signal. The detection of flammable gases in the building may lead to fires, explosions, or other life safety emergencies.
- The fire spread because the Heat Ventilation & Air Conditioning (HVAC) System failed to stop the air handling units, and the fire/smoke dampers failed to close. HVAC can spread the fire throughout the floor if it does not shut down the fans and the fire/smoke dampers don't close. Superheated gases/smoke/heat get transferred to other areas of the floor via the HVAC air duct system that breaks through fire rated walls.
- 579. Underwriters Laboratories (UL), among others, is a testing organization in the United States that tests product for production, sale and use. All components of the fire alarm system, sprinkler system and standpipe system must be listed by UL to ensure that they will function as designed on a daily basis and during an emergency.
- The Security Guard is correct. The alarm-initiating devices in a fire alarm system are the: smoke detectors, heat detectors, manual pull stations and waterflow switches. The siren and strobe lights are notification devices (they tell the occupants of the emergency).
- The FLSD must manually activate the floor below the fire (alarm, strobe lights and announcement) and alert those individuals on the floor below the fire that there is a fire emergency on the floor above their floor. The people will be In-Building Relocated or Partially Evacuated if the fire happens on FL-4 to Cellar in a high-rise building with a Selective Fire Alarm System.
- The FDNY responded to an Unnecessary fire alarm activation. The FDNY's respond proved unnecessary. The smoke from the cigarette did not implicate fire safety concerns.

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- The FDNY is issued the 1620 key, which is a citywide key that allows them to recall elevators in all buildings in the City of New York. The FDNY generally does not ask the FLSD or FLS BES for their 2642 key to recall elevator banks.
- The Construction Site Fire Safety Manager holding the Certificate of Fitness S-56 informed the construction crew to evacuate to the Mustard Point (meeting point outside the construction site) due to an emergency at the construction site. In the built building, the Mustard Point is called the Assembly Area, where people re-group after a Partial or Total Evacuation is ordered by the FLSD.
- 585. The Computer-Based Test consisting of the Fire Component of the program allows the candidate to use up to 186 minutes to complete the 120-multiple-choice questions exam. A countdown clock appears on the screen showing how many minutes are available to complete the test.
- The building owner was not issued FDNY Summonses because all the FDNY calls were made by callers other than the Central Monitoring Station Operators. The FDNY only issues summonses when they respond to unnecessary and/or unwarranted fire alarm activations reported by the Central Station, not pedestrians, who may call 911 at any time to any building.
- 587. In many buildings, co-workers might not want you to pass the test for a variety of reasons. The candidate passed the on-site exam by studying the Sprinkler System Riser Diagram. The Riser Diagram illustrates the entire sprinkler system: location of FDCs, Fire Pumps, Sprinklered floors, Gravity Tanks, etc. By studying the Riser Diagram, the candidate was able to understand and find the different components that comprise the building's sprinkler system.
- Outside Stem & Yoke Valves (OS&Y) must be locked in the open position. If in the locked position, then the water will be blocked, potentially keeping the water from reaching the fire floor . . . allowing the fire to spread. To keep these valves open, they are chain/padlocked in the open position or a Tamper Switch is installed on the system to alert the FLSD that someone attempted to close the valve via a Supervisory Signal to the FACP.
- The Upper Check Valve below the Gravity Tank prevents water from going into the Gravity Tank when the FDNY connects to the Fire Department Connections (FDC) outside of the building. The secondary water from the fire hydrant outside is fed to the standpipe/sprinkler riser and the water goes up the Riser and it is stopped by the Upper Check Valve so that the water does not enter the Gravity Tank and the water is eventually released on the fire floor.
- 590. The BES is correct. A Backdraft is an explosion that happens when oxygen is suddenly introduced to a fire. A Rollover occurs when ignited fire gases, or incomplete burned fuels, rise to the ceiling and spread out horizontally.
- This person is the Fire and Life Safety Warden, who is a full-time employee and works the operating hours of the Company for which they work (ex: M-F, 9a to 4p). FLS Wardens are NOT present during all the operating hours of the office building (B) (ex: M-Sa, 8a to 10p)
- 592. The five people were found in the corridor (Exit Access) that leads from any occupied portion of a building to the stairwell. They were overcome by smoke because they delayed their response to the fire alarm activation.
- 593. The FLSD is correct. A camera with the physical appearance of fire protection equipment (smoke detector) but that does not perform a fire protection function is illegal and must be removed. The Building Manager is wrong on this issue.
- 594. The business hours of a commercial office building cannot be covered by FLS Building Evacuation Supervisors, only the non-business hours of the building. A Certificate of Fitness Holder F-89 holder should have been available to address the fire alarm activation during the business hours of the building.

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- 595. The FLSD received a Trouble Signal indicating that there was an issue with the fire alarm system being partially or wholly out of service. The Central Station operator contacted the FLSD, who in turn contacted the contractor company that services the fire alarm system for that building so that the Trouble Signal can be corrected.
- 596. The detector that triggered the fire alarm in a high-ceiling space was the Beam Smoke Detector. Beam Smoke Detectors "see" the helium in a balloon as smoke and activate the fire alarm. This detector has a point number and may be disabled by the FLSD if the event involves the selling of helium balloons.
- 597. The Outside Stem & Yoke Valve is being discussed. When the Stem portion is raised (visible), the valve is open. These valves must always be in the open position.
- 598. The Pressure Tank contains one-third air and two-thirds water. If the water or air pressure is incorrect, a supervisory signal will be announced at the FACP. A supervisory signal will be generated to the FACP and the Central Monitoring Station if there is a problem with the tank's water level, air pressure or water temperature.
- 599. During the fire emergency, the building collapsed when terrorists detonated a truck full of explosives in the Cellar's garage. The building collapsed . . . killing all its occupants, including the FLSD.
- 600. The FLSD triggered the fire alarm on FL-1, FL-2 and Cellar. The FLSD triggered the Central Station Trip Switch on the FACP (otherwise known as the "Silent Trip Switch") to contact the Central Station. The FLSD informed the occupants on Floors 1, 2 and Cellar to Partially Evacuate (and FL-3 to FL-50 to Shelter in Place). Anytime there is a fire on FL-4 to Cellar in a High-Rise building, the occupants on the three affected floors are informed to evacuate, but because it is not the entire building, then it is a Partial Evacuation.
- 601. Because the building has Roof Setbacks on FL-12, FL-25 and FL-40, then the building has to have window washers' rigs on all three Roof Setbacks since setbacks recede making the building floors smaller at each setback level. The FLSD should have answered . . . "Floor 25" to the window washer's question.
- 602. When the FLSD called the Central Station to go "off-line", he informed the operators to take "off-line" (or disregard) the manual pull stations only, which means the smoke detectors, heat detectors and waterflow switches remained on-line. Because it was the smoke detector that triggered the fire alarm, the Central Station operator called the FDNY Borough Dispatch Office. The ADT operators hold the Certificate of Fitness F-40 for Operators of Central Station Signaling Systems. The period selected exceeded 8 hours . . . a building cannot go off-line for more than 8 hours. The Deputy Fire and Life Safety Director took over the 4p-12a shift since the business hours of the building are from 8a to 12a.
- 603. The FLSD must provide documentation for any Place of Assembly that can hold 75 or more people, hence the restaurant. Inspector Stewart was given to review the Place of Assembly Certificate of Operation and the Architectural Drawing of the restaurant to complete his inspection.
- The fire drill took place at a construction site where the area where the construction workers re-group is called the Mustard Point. The construction workers participated in the drill. The person who scheduled and supervised the fire drill was the Construction Site Fire Safety Manager holding the citywide Certificate of Fitness S-56.
- 605. This fire drill happened at a homeless shelter where the fire drills require all the participants to evacuate the building. The people who participated in the fire drill were all the building occupants (staff and residents of the homeless shelter). After the fire drill, they signed-in when they returned to the building to determine who remained inside their units and did not participate in the fire drill. The person who scheduled and supervised the fire drill was the Coordinator of Fire Safety and Alarm Systems in Homeless Shelters holding the premises-related Certificate of Fitness F-80.

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- These individuals play an essential service for their employers in an emergency and they are known as Office Employees Critical Operations Staff members. No, some Companies might have these individuals. Some Companies do not have these individuals. When you look at the Comprehensive Fire Safety and Emergency Action Plan, there is a chart that lists these individuals and the floor and Company who employs them in your building.
- 607. The Waterflow Switch triggered the fire alarm in the building. Because there is typically one water flow switch per floor in a sprinklered building, you are only informed of the floor where the fire alarm activated . . . not where on the floor the fire alarm activated from. Water flow switches are automatic alarm initiating devices. Yes, the elevators recalled in Phase I since water flow switches are programmed to recall elevators.
- I am the Fire Guard for Homeless Shelters holding the citywide Certificate of Fitness F-02. I have to patrol the shelter at least one time every hour and F-02 holders are present in the shelter 24/7 when the shelter holds more than 15 people for a period of more than 30 days in a calendar year.
- A car on the highway was on fire and because there were no sources of water available, the water from the 750-gallon tank inside the Engine Company (Truck) was used to extinguish the car fire.
- When there is a non-fire, outside emergency affecting the entire building, the occupants are to be informed to In-Building Relocate to the In-Building Relocation Area (IBRA) on their floor and away from the glass window façade. When the FLSD informed the occupants to conduct a Total Evacuation, he brought the occupants to the outside hazard. They all died.
- 611. Scott, the Property Manager, and member of the EAP Brigade, was using Hindsight Bias (otherwise known as "Monday Morning Quarterbacking"). Scott should NOT be critiquing the actions of the FLSD since Scott was not present during the emergency and the activation of the EAP.
- The emergency is a Water Main Break happening outside of the building. The FLSD informed all the floors from the second floor and up to Shelter in Place and remain where they are. The FLSD called 311 and the Department of Environmental Protection (DEP) responded to the water main break. Water main breaks typically happen during the Winter Season.
- 613. Whenever the candidate/FLSD makes an "all-call" announcement to the entire building . . . the candidate/FLSD must include the stairwell speakers. On the FACP this candidate used for the on-site exam, the speaker buttons were separate buttons that needed to be activated when he made the all-call announcement. For example, he/she should have activated the "Stairwell A Speakers" and "Stairwell B Speakers" buttons.
- Residential apartment building dwellers receive the Fire Safety Guides and Notices every year from the Landlord. There is no one available to activate the fire plan. If the residential building did have a fire alarm system, then the Certificate of Fitness Holder S-95 for the Supervision of Fire Alarm Systems is responsible for maintaining the fire alarm system, but not responsible for activating the fire plan.
- 615. The FLSD is correct. Fire-rated doors have door closers on them to keep the door closed at all times (except when passing through the door). Devices that will keep the fire-rated door from closing are illegal and must be removed immediately.
- When a building connects to another building via a bridge and the second building has a separate address, then the FLSD, Tony, must have two Fire and Life Safety Director Certificates of Fitness F-89, each with the address of each of the two buildings. Tony cannot work the same shifts in two different buildings. The owners were issued a Notice of Violation because there was no FLSD overseeing the second building. Tony only had one F-89 with one address.

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- 617. Because the building does not have Roof Setbacks, all the floors are the same size. If 20 people are allowed on the Roof, then it means that the square footage of the Roof is 200 square feet (1 person for every 10 square feet). Since there are no Roof Setbacks, the size of FL-1 is 200 square feet (same as the Roof).
- The Whitney Museum of American Art must have at least one floor Below Grade . . . and because I had to climb steps to enter FL-1, then the floor Below Grade is called a Basement (Basements are half-way underground). Because Basements are half-way underground and half-way above-ground (Grade Level), then people entering FL-1 must climb up steps from outside.
- In 1992, Rodney King was in a car chase in Los Angeles, CA. When the COPs (Constables on Patrol) got to him, he was beaten by the police officers. When the COPs went on trial for beating Mr. King, the jury acquitted them all of all charges. The Los Angeles Riots (or Rodney King Riots) ensued after the verdict was read. The riots lasted six days. Sixty-three people died, over 2,000 people were injured and property damage exceeded \$1 billion.
- 620. The automatic fire alarm-initiating device that activated the fire alarm was the water flow switch. Water flow switches only tell the floor number of the fire and are programmed to activate the action of elevator recall. In this building, the sprinkler heads activate at the pre-set temperature of 160 degrees Fahrenheit.
- 621. People who are certified by the American Red Cross in First Aid/CPR/AED and who are listed in the Comprehensive Fire Safety and Emergency Action Plan are volunteers and therefore may say "no" to a request for their assistance by the FLSD. The person was not disciplined as they are volunteers who may say "no" to a request for help. If the person is being paid by the Company, then they must follow Company policy and cannot refuse to help people in need if the Company policy mandates that they help people suffering from medical emergencies.
- Although not a Fire Code requirement, and FLSD who wishes to train the evening workers (porters and matrons) in an office building is being pro-active in ensuring that that they know what to do in the event that they discover a fire or smoke condition during their evening shifts. In many office buildings, these are the only people in the building during the evening hours.
- 623. The title of the person who created this fire drill schedule is the Coordinator of Fire Safety and Alarm Systems in Homeless Shelters holding the Certificate of Fitness F-80. The title of the person who reviewed and approved the schedule was the Shelter Director. In most homeless shelters the Shelter Director is in charge of the day-to-day operations of a Homeless Shelter. These drills took place in a Homeless Shelter where fire drills must be conducted monthly on each work shift: 8a-4p, 4p-12a and 12a-8a.
- An Active Shooter incident just happened. The person was dead and unable to answer their cell phone, hence the 37 voicemails from friends and family.
- The Department of Homeless Services allows homeless shelters to allow homeless people to enter their shelters during weather related emergencies: When the temperature is below 32 Degrees Fahrenheit (cold) or above 90 Degrees Fahrenheit (hot).
- 626. In low-rise buildings (buildings 75 feet or less in height), the fire alarm systems typically installed are known as Interior (or General) Fire Alarm (IFA) Systems designed to activate the fire alarm in the entire building regardless of the floor where the fire is located. For example: In a five-story building the fire is on FL-2, but the fire alarm will activate on FL-1, FL-2, FL-3, FL-4 and FL-5. The people who evacuated when they heard the fire alarm in the entire building were all the tenants, visitors, employees, and quests.
- 627. The system that activated when the fire alarm sounded was the dedicated smoke control system. Dedicated Smoke Control Systems increase the chances of survival by (1) removing the smoke from the fire floor, (2) pressurizing the floor above the fire floor with 100% outside air and (3) pressurizing the floor below the fire floor with 100% outside

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- air . . . thereby preventing the smoke from spreading up or down to the next floors. The alarm initiating devices that activate dedicated smoke control systems are smoke detectors and waterflow switches.
- The distance of 375 feet is greater than the height of the office building in feet. I walked that distance when the FLSD informed the occupants to conduct either a Partial Evacuation or a Total Evacuation of the building occupants in response to a fire or non-fire emergency. The distance that I walked was to get to the Assembly Area, where all the occupants re-grouped and a head count was conducted.
- 629. The column on the north side of 53<sup>rd</sup> Street between Lexington Avenue and Third Avenue, which is load bearing, was reinforced because of fears of a terrorist attack (explosion) that could destabilize that column, which could lead to building collapse since it is a load-bearing column. The terrorist attacks on the World Trade Center Towers on September 11, 2001, in NYC was the catalyst for these changes at 601 Lexington Avenue.
- 630. The Lever House Building is located on Park Avenue and 53<sup>rd</sup> Street. The Lever House is the second building built in NYC with a glass curtain wall. The person being chased by the gunman entered Lever House and survived because the lobby is made of bullet resistant glass.
- The building has a "Mini Class 'E/B' Fire Alarm System." The Mini Fire Alarm Systems are manual systems where fire alarms must be activated by a person instead of being automatically dispatched to the Central Monitoring Station. The building typically does not have automatic alarm-initiating devices such as smoke detectors, heat detectors and waterflow switches (or manual alarm pull stations). The FDNY does not issue Letters of Approval for Mini systems.
- The FLSD candidate did not have on the building's Identifying Apparel, which is typically a hat, armband, or vest. The candidate MUST have the identifying apparel on them when they meet the FDNY Examiner on the day of the on-site exam to avoid losing points on the exam.
- 633. The FLSD is supposed to report to the Alternative Location to activate the Plan as indicated in the Comprehensive Fire Safety and Emergency Action Plan whenever the main Fire Alarm Control Panel (FACP) area is compromised. If the entire building is compromised, the FLSD should report to the Primary Assembly Area and remain there until he is told by the Incident Commander (Authority Having Jurisdiction (AHJ)) to return to the building and continue with his responsibilities . . . not go home.
- Once the Certificate of Completion Z-89 expires in one year . . . it cannot be renewed. The candidate must **reschedule** and pass the two FDNY exams: N-85 for the Fire Emergency (120 Questions) and the Z-89 for the Non-Fire/EAP Emergency (55 Questions) to receive a new Certificate of Completion Z-89, which will be valid for another year. If the candidate allows the Certificate of Completion Z-89 to expire another year after the original expiration date, the candidate has to return to Radiant and start the classes and pass the two exams at Radiant and the two exams at FDNY at 9 Metrotech Center to receive a new Certificate of Completion Z-89.
- 635. The signal that the FLSD received at the FACP was a Supervisory Signal originating from Carbon Monoxide Detectors. Natural Gas Detectors also trigger Supervisory Signals to the FACP. Supervisory Signals are received by the Central Monitoring Station and their operators holding the Certificate of Fitness F-40 call the FDNY Borough Dispatch Office. The FLSD informed the entire population of the building to conduct a Total Evacuation as the Carbon Monoxide (and/or Natural Gas) was spreading throughout the entire building.
- 636. FDNY Captain Jones agreed with the FLSD, not the Property Manager. Although the Property Manager is in charge of the daily operations of a building, and who does not hold a Certificate of Fitness Fire and Life Safety Director F-89, he is not authorized to tell the FLSD whether the EAP should be activated in a building when an emergency exists that could injure or kill the occupants.

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- 637. The waiter was terminated because there was a fire in the commercial cooking system and he activated the manual Actuation Switch. The FDNY responded to the building as sub-systems (or non-water-based fire suppression systems) are tied to the building's fire alarm system and the Central Monitoring Station notified the FDNY. The diners did not pay their checks because they evacuated the restaurant when the fire alarm was activated by the waiter. The person who arrived the next morning to place the commercial cooking system's fire suppression system back in service was the Master Fire Suppression Piping Contractor (MFSPC), an employee of the Sprinkler/Standpipe Contractor. NOTE: A placard stating, "The fire extinguishing system must be activated prior to using a portable fire extinguisher" must be posted in the kitchen. The actions of the waiter to activate the fire suppression system was correct . . . but because the diners evacuated without paying, the waiter was terminated.
- 638. The occupants did not follow the directions of the FLSD to use Stairwell A . . . and instead decided to use an Access Stair (also known as "Convenience Stairs"). Access Stairs are not protected stairs as they typically do not have walls or doors. An Access Stair on FL-56 does NOT service FL-1, but will service several floors above and/or below FL-56.
- 639. FL-25 in this building is known as a Sky Lobby. The person had to take Passenger Elevators (PEs) 1, 2, 3 or 4 to FL-25 and then transferred on FL-25 to PEs 5, 6, 7 or 8 to get to FL-38. There are at least two elevator banks in this building. Elevator Bank A has four PEs (Nos. 1-4) because I had to transfer to No. 5 to get to FL-38. PEs 5, 6, 7 and 8 are in Elevator Bank B.
- 640. FDNY Captain Petersen inserted the 1620 Key in the Purge Switch at the FACP to activate purging AFTER he was told that the fire was completely extinguished. Post Fire Smoke Purge Systems are activated to clean out the toxic air left behind after the fire is extinguished . . . and when there are no windows to open. In a fire emergency, Purging is conducted under the supervision of the FDNY.
- 641. The building is an older building that does not have Central Air Conditioning or Package Units on the floors. This building has window air conditioning units that are not interfaced with the Fire Alarm System . . . hence the Heat Ventilation Air Conditioning (HVAC) did not shut down and the fire and smoke dampers did not close. These air conditioning units must be shut down by a person at the unit or via a remote-control device.
- 642. The building engineer did NOT leave the building between 4p and 6p because the Heat Ventilation Air Conditioning (HVAC) system was in operation. If the HVAC is in operation ("on"), the Refrigerating System Operating Engineer (RSOE) holding the Certificate of Qualification Q-01 is not authorized to leave the building, hence he remained inside the building until HVAC ended at 6p, at which time he went home.
- If a building does not have a Post-Fire Smoke Purge System tied to the FACP, then the windows in the building open. Building must have a natural means of ventilation (windows) or a mechanical means of ventilation (fans). The Post-Fire Smoke Purge System is activated AFTER the fire is extinguished and under the supervision of the FDNY to clean the air in the room of fire origin after the fire is extinguished. This system does NOT protect people from the fire/smoke . . . it cleans the air after the fire is extinguished.
- The candidate has two keys in his pocket to be able to release Passenger Elevators 2, 3 and 4 for occupants to use during the examination. He had 2642 keys. There were four keys at the Fire Command Center during the test as buildings are required to have a minimum of six keys at all times at the Fire Command Station.
- 645. The Plan that is being discussed is the possible activation of the Emergency Action Plan (EAP) for a non-fire emergency. Ed, the Chief Engineer, is responsible for shutting down the Outside Air Intake Fans in the building when Peter, the FLSD, determines that the lives of the people in the building are at risk of injury or death and decided to activate the EAP.

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- The person who called the FLSD is the contact person in a neighboring building (possibly the Property Manager, FLSD, Chief Engineer or Director of Security). The distance between the buildings is within 200 feet as neighboring buildings are within 200 feet of one another. The FLSD was contacted because a gas leak might lead to an explosion/building collapse that could affect the FLSD's building.
- 647. The person knows that there are 37 people because the Company has a system of accounting for their employees, for example an "Employee Sign-In System". Today 38 employees came to work. Jack, the employee who is missing, is assumed to still be inside the building in the Affected Area. The FLSD was contacted from the Assembly Area, where the people who evacuated reported to . . . to be accounted for. Once the FLSD was informed by the Fire Warden that Jack was missing, the FLSD forwarded that information to the FDNY so that the Ladder Company personnel could rescue Jack from the fire.
- The FDNY had a difficult time locating the location of the fire because 280 Park Avenue has a "throat" (or Bridge) connecting that building to the building west of it. The fire was in the building behind 280 Park Avenue.
- The Central Station Operator called the FDNY Borough Dispatch Office since the FDNY has the core competency to address fire emergencies. The fire occurred on Staten Island . . . 718-494-4296 is the Staten Island (Richmond County) FDNY Borough Dispatch Office telephone number.
- 650. The Plan being activated is the Emergency Action Plan (EAP) in an office building. The EAP is being activated by the Building Evacuation Supervisor (BES) since the time of the emergency, 7a, is not part of the building's business hours, where FLSDs and Deputy FLSDs (F-89 holders) would be working between 8a and 6p. The emergency was happening outside the building hence securing all the entry doors to the building so no one could come inside the building. Rich, the Director of Security, and his security team secured the doors.
- 651. The *Canadian Medical Association Journal* conducted a study that found that people experiencing cardiac arrest and who live in a residential high-rise building above FL-25, died. There is an inherent delay in reaching patients when the patients are on the higher floors of a building.
- 652. Orange lights on top of lamp posts are indicators that at that intersection there is a fire alarm box to contact the FDNY and the NYPD. These public fire alarm boxes were useful when homes/residences did not have telephones and when there were no personal cell phones available for use to contact the FDNY/NYPD. The orange lights are on top of lamp posts so people can see where they are from a distance. The FLSD dispatched the "Fire Alarm Box Runner" to activate the FDNY to respond to that intersection and be directed to the fire. These fire alarm boxes have a unique ID number that identifies to the operator the intersection from where the alarm was activated.
- The security guard working at the Ycuá Bolaños Supermarket fire in Asuncion, Paraguay in 2004 tried to prevent customers from leaving the building by closing the doors, allegedly to keep customers from leaving the supermarket without paying for their merchandise. 300 people died and 500 people were injured in this fire.
- 654. Great White decided to use pyrotechnics during their live performance at The Station Nightclub in West Warwick, RI in 2003. The club had installed polyurethane on the walls and ceiling to control the sound coming out of the club. They never treated the polyurethane never went through a flame retardant treatment. The pyrotechnics hit the polyurethane and set the club on fire. 100 people died because the club environment is transient, which leads to unfamiliarity, darkness, lack of sufficient exit doors, overcrowding, lights flashing, sound and drinking by the clubgoers. Situational awareness decreases with unfamiliarity.
- 655. Mr. Smith was allowed in the building because there were no procedures in place to let security know when someone's employment is terminated. Mr. Smith committed and active shooter incident, where he killed the department manager that terminated him. After killing the manager, Mr. Smith committed suicide. Two people were dead.

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- 656. Since the owner owns all five hotels, he requested a waiver from the FDNY to be an FLSD in each of the hotels. An FDNY waiver is required to have more than two Certificates of Fitness T-89s (or F-89s) at the same time. The owner officially works five different schedules in all five hotels, for example: Hotel 1: Mondays 8a-4p, Hotel 2: Tuesdays 4p-12a, Hotel 3: Fridays 4p-12a, Hotel 4: Saturdays 8a-4p, Hotel 5: Sundays 8a-4p. Of course in reality there are other T-89s working these shifts and the owner does not have to be present in the hotels.
- 657. The emergency was either a Carbon Monoxide or Natural Gas leak. When the detectors recognize these two items . . . they trigger a Supervisory Signal that gets transmitted to the Central Station. The building is likely to be a low-rise since the FLSD totally evacuated the building (a common practice in low-rise buildings). The FDNY responded when the Central Station Operators called the FDNY Borough Dispatch Office.
- A building that is 75 feet or less is a low-rise building. A building that is over 75 feet is a high-rise building. The number 75 is determined by the reach of the ladder on the Ladder Company (Truck). The Ladder Company is the truck that has the ladder to reach low-rise building fires.
- 659. The FLSD called the central station at 8a and asked that ONLY the manual pull stations, that were being tested, be off-line. The F-40 holders would only disregard the manual pull stations activation between 8a and 2p . . . and NOT call the FDNY. Which means that smoke detectors, heat detectors and waterflow switches remained "on-line" and the Central Station operators WOULD call the FDNY if these three alarm-initiating devices activated in the building.
- 660. A fire drill or EAP drill. When drills are conducted the FLSD must keep track of the number of participants.
- Halon 1211 and Halon 1301 are not allowed to be produced or imported into the United States. The Clean Air Act banned Halon on January 1, 1994, because Halon is an ozone-depleting substance.
- 662. The FDNY did not respond to the fire when the FLSD activated the Central Station Trip Switch as the system/building was off-line.
- An MR-L is a Machine Room-Less elevator . . . an elevator that does not have an Elevator Machine Room (EMR). This would include elevators that service from the Cellar to the Sidewalk outside and are under the control of an operator who is standing on the sidewalk in front of the building. Since MR-Ls are called out in the Fire Safety and Evacuation Plans (hotels) and the Comprehensive Fire Safety and Emergency Action Plans (office buildings) . . . the candidate must know if the building has any MR-Ls.
- 664. The BES did not take the building off-line . . . so he was correct in informing the FLSD that the building was online. A BES who worked on Saturdays from 8a to 4p was terminated on Friday at 6p. The FLSD was not informed of the firing and the BESs name remained on the list of people with the Central Station who are authorized to take the building off-line. The FDNY did not respond because the BES who was fired took the building off-line for 8 hours and the BES nor the FLSD were aware that the building was off-line . . . hence the FDNY was not notified by the Central Station of the fire alarm.
- The employee immediately called 911. The absence of the white diagonal stripe on the manual pull station was indicative that the fire alarm system was not being supervised by a central station company.
- 666. Total flooding carbon dioxide fire extinguishing systems must not be installed to protect hazards within normally occupied areas. They had to be removed and replaced by July 1, 2013. The idea is that if the people cannot evacuate the area . . . there is a probability that they could die because carbon dioxide displaces oxygen to extinguish the fire.
- 667. The active shooter event happened at Irving Plaza in New York City. The weapon got into the concert venue via the Stage Door, where the performers, entourage, employees, and stagehands enter the property. The alleged shooter is rapper Troy Ave.

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- The property manager did NOTHING! The security guard was not informed that the building has an every-4-floor re-entry system where the doors are unlocked on the stairwell side of the door. Floors 4, 8, 12, 16 and 20 are openable (never locked) from the stair-side of the door in every stairwell in the building since these are the re-entry floors in the event that smoke spreads into the stairwell . . . the people inside the stairwell may reach a re-entry floor, open the door without the use of a key, and escape from the stairwell. The re-entry system is not fail-safe.
- 669. After completing the classes at Radiant, the candidate must take the CBT exams at FDNY within 9 months of completing the courses (Radiant certificates have a 9-month expiration period). The candidate must take the on-site exam within one year of receiving the Certificate of Completion (COC) (COCs have a one-year expiration period).
- 670. On January 8, 2011, Patricia Maisch decided to confront the shooter when the shooter dropped the loaded bullet magazine to the ground after shooting Representative Giffords and the people attending the meeting. The shooter was arrested by the police. He killed six people and wounded 13 people.
- 671. The 2008 Building Code classifies these spaces as "A": Assembly. Places of Public Assembly that have a warden phone require FLSDs to be in the building. The alarm-initiating device that is likely to be installed in high-ceiling spaces is the Beam Smoke Detector (BSD). BSDs are designed to project an invisible beam across the place of assembly allowing the fire alarm to activate sooner (when the smoke breaks the beam) rather than later (when the smoke has to reach the ceiling).
- When the FLSD quits/gets terminated from a building, he/she must surrender the Fire and Life Safety Director Certificate of Fitness F-89 to the FDNY. The surrendering must happen as the FLSD C of F is premises-related, which means it can only be used in one building in New York City. It is not a citywide C of F. When the C of F F-89 is surrendered, the FDNY issues the person a C of F Q-89, which is indicative that the FLSD is NOT employed. Once the person seeks employment and is hired by another office building . . . then they take the on-site exam and the Q-89 converts to an F-89.
- 673. The FLSD is correct. The Destination Dispatch Elevator System (DDES) allows elevator numbers to be used more than once, which is not the case with the traditional elevator system. DDES allows numbers to be re-used as long as the Elevator Banks have a different letter to identify them. For example: A1, A2, A3 and A4, then B1, B2, B3 and B4, then C1, C2, C3 and C4. In the traditional elevator system the numbers would have been consecutive: 1-12.
- 674. 601 Lexington Avenue has double-decker elevators (one elevator with two platforms/people stand on top of one another). To go to different floors, people must enter the same elevator on the Cellar Level or FL-1. They pick up the elevator at the Cellar Level to go to even-numbered floors and on FL-1 to go to odd-numbered floors.
- 675. The FLSD candidate failed the Fireman's Service Elevator Recall Phase II section of the on-site exam when he was not able to find the Passenger Panel inside Passenger Elevator (PE) No. A3 to activate Phase II. No one informed the FLSD candidate that the building has a Destination Dispatch Elevator System where the Passenger Panels are behind doors in every elevator. He did not see the Passenger Panel in PE A3 and could not activate Phase II. He failed.
- The school staff was correct in asking the student to re-pay, re-sit and re-test. School diplomas are valid for only 9 months after the conclusion of the course. If the student waits to take the school exam more than 9 months, then they have to re-pay, re-sit, and re-test to acquire a new school graduation diploma.
- 677. The fire happened on the Cellar Level. Because there are no floors below the Cellar, then the fire alarm activated on the Cellar Level and FL-1 only . . . and those are the two floors that FLSD made the announcement to. The building has one floor below Grade: the Cellar. (Note: the same happens when the fire is on the highest floor: the fire alarm activates on the highest floor and the floor below the highest floor only). If the fire alarm activates on any other floor . .

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- . then the fire alarm will activate on all three floors (or two floors and the FLSD has to manually activate the floor below the fire floor).
- 678. The emergency was an active shooter. Because it was not a fire alarm activated by a fire alarm initiating device, the fail-safe doors/locks did not release automatically. In active shooting emergencies the FLSD has the option of releasing the fail-safe doors/locks manually . . . in this case the FLSD decided NOT to release the fail-safe doors/locks.
- 679. An active shooter. In active shooter emergencies the Service Elevator is held on FL-1 with the doors closed for the NYPD to use to reach the floor where the active shooter is located in the building. The FLSD must ensure that the Service Elevator is placed on Independent/Manual mode for NYPD use.
- 680. When the temperature inside the building is cooler than the temperature outside . . . smoke has a tendency to go down. When the temperature inside the building is warmer than the temperature outside . . . smoke has a tendency to go up. The difference in temperature inside the building and outside is known as The Stack Effect.
- 681. Winter. During the cold months there is a tendency for water main breaks, where the pipes under the streets and avenues break because of the frozen ground . . . bringing water up to the street and flooding surrounding buildings. 911 was activated because the flood caused a dangerous condition (sidewalk collapse). Had the emergency not been severe then 311 would have been activated. The response was a unified command response because several city agencies responded to this emergency, including the Department of Environmental Protection (DEP), the FDNY, the Department of Transportation (DOT) and the NYPD.
- During the EAP section of the on-site exam, the candidate placed the elevator in Phase II, rather than on Independent/Manual mode. In EAP emergencies, the elevators are placed in Independent/Manual Mode after recalling them in Phase I. The other mistake the candidate made was that he only recalled one bank of elevators instead of ALL the elevators. In EAP emergencies, ALL the elevators in the building are recalled in Phase I and placed on Independent/Manual Mode for use by emergency responders.
- 683. When a fire alarm activates in the building, the FLSD reports to the Fire Command Center and then Acknowledges the fire alarm. The order should have been: (1), (3), (2), (4), (5), etc.
- The active shooter incident happened at the P&L office building because the FLSD used the term "active shooter", which occupants of office buildings (non-transient spaces) understand its meaning because of training and drills. The term "gun shots" would have been used in the place of public assembly and the hotel (transient spaces), where the occupants might be more familiar with the term "gun shots" rather than the term "active shooter".
- 685. The emergency was NOT a fire. In fire emergencies, the FLSD must instruct the occupants to In-Building Relocate at LEAST three floors down from their present location. The FLSD would have told the fire floor, floor above the fire floor and floor below the fire floor to In-Building Relocate. Because the occupants only went one floor down from the floor of the emergency, then it was a non-fire emergency (EAP) that was happening. The FLSD made the "all-clear" announcement when he was told to do so by the incident commander (the Authority Having Jurisdiction (AHJ)).
- The occupants in the rest of the building ALWAYS Shelter in Place (remain where they are) because they are safe where they are. Occupants in the Rest of the Building NEVER In-Building Relocate, Partially Evacuate, Totally Evacuate or Isolate . . . they ALWAYS Shelter in Place. Occupants in the Affected Area either In-Building Relocate, Partially Evacuate, Totally Evacuate or Isolate, but NEVER Shelter in Place. People died.
- 687. The FLSD was correct in activating Phase I in each Elevator Bank, but he failed to activate and record Phase II incar operation. He did not do a complete test of the elevators. He was subject to an FDNY investigation because the FLSD used the 1620 key, which is a key issued to FDNY members only. The FLSD should have used the 2642 key, which is an elevator industry key, of which there should be a minimum of six (6) 2642 keys at the Fire Command Center.

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- 688. The Times Square area covers 42<sup>nd</sup> Street to 50<sup>th</sup> Street between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue. The 112 people who used Stairwell "A" died because the FLSD activated the pressurization of Stairwells "A" and "B". When stairwells are pressurized, they bring 100% outside air **into** the stairwells. When the FLSD pressurized the stairwells, he brought the outside airborne substance into the stairwells. At least 112 people died in the building when the FLSD brought together the deadly airborne substance and the people in Stairwell "A".
- 689. Exterior sprinkler heads are installed at the window level on floors to form a curtain of water that keeps the fire from spreading from the floor of fire origin to upper floors via the windows. Windows are fragile and are blown out by the fire allowing the fire to spread to the upper floors of a building.
- 690. The fire likely happened on FL-7 and above. 35% of fires that happen in office buildings occur on FL-7 and above. 31% between FL-2 and FL-6, 25% on FL-1 and 10% in Basements and Cellars based on the National Fire Protection Association (NFPA) Report published in 2016.
- 691. The person quoted did NOT know the space in which he was in because it is a transient place (you go/stay for a short period of time). This active shooter incident happened at Irving Plaza in the Union Square area of Manhattan on May 25, 2016. One person died and three people were injured, including the alleged shooter.
- 692. The FDNY looked at the Elevation Diagram of the Building Information Card (BIC) to determine the location (stairwell) of the Standpipe Riser. The BIC was at the Fire Command Center, accessible to the FDNY. The building was issued a violation order because the FLSD was not present in the building during business hours, which is when the fire happened.
- 693. The fire happened on July 20, 2011, at the North River Wastewater Treatment Plant on the Hudson River and 135<sup>th</sup> Street. Richmond County is also known as Staten Island.
- 694. An active shooter. The people Confronted the shooter and attacked him. They all survived because they convinced one another that by confronting the shooter they would all survive. The shooter was arrested by the NYPD.
- 695. The hospital installed the plastic covers over the manual pull stations to avoid malicious (or unintentional) fire alarm activations via the manual pull stations by the psychiatric patients. The FLSD is correct: the manual pull stations remained the double-action type, even though the plastic cover must be lifted. The hospital has FLSDs because the fire alarm system has warden phones. Any building that has warden phones must have FLSDs working. Since the business hours of a hospital are 24/7, the FLSD and Deputy FLSDs cover the hospital 24/7.
- 696. The FLSD was talking to the restaurant manager. Fires in kitchens are the most common fires (40%). Training for the kitchen staff must be conducted every six (6) months (semi-annually) to refresh them on the actions that they should take to prevent fires and to assist the diners should there be a fire. The FLSD covered the following topics (amongst others) during the training session: (1) actuation of the fire suppression system automatically (fusible links) or manually (actuation switch on the wall), (2) using the "K" portable fire extinguisher as a secondary fire suppression system, (3) keeping the exit access (corridors) free of obstructions, keeping their sleeves tight around their wrists while cooking, etc.
- 697. On February 26, 1993, terrorists parked a truck packed with explosives (bombs) and detonated it in the underground garage of the North Tower (Tower 1), hoping that the North Tower would crash into the South Tower (Tower 2), bringing down both towers. The explosion caused severe structural damage to the lower portion of the building. Smoke spread 110 floors within 5 minutes because of the Stack Effect (cold outside/warm inside). Six people were killed and more than 1,000 people were injured from smoke inhalation. Although the stairwells were pressurized, smoke did spread into the stairwells. Over 50,000 people were evacuated that day.

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- 698. Single letters of the alphabet are used to identify the stairwells: A, B, C, D, E, F, etc. When all the single letters are used, then double letters are used, starting with "AA". The building has 27 stairwells (A-Z, and AA).
- 699. The FLSD contacted NYPD SHIELD. NYPD SHIELD addresses private sector businesses on both an industry-specific and a geographic basis. Security Directors and FLSDs should contact NYPD SHIELD at 718-615-7506 or online at nypdshield.org to apply for free membership and to schedule active shooter training sessions. The active shooter training sessions are free of charge.
- 700. When an active shooter is inside the building, the FLSD shares with the occupants the location of the shooter. The occupants then decide whether to Avoid (Run), Barricade (Hide) or Confront (Fight) the shooter based on their location. When the shooter is outside, the FLSD directs the building occupants to In-Building Relocate to their floors' In-Building Relocation Areas (IBRAs) and remain there until the "all clear" announcement is issued by the FLSD.
- 701. The Sprinkler System in the parking garage is Non-Automatic: Dry. It is dry because if the pipes had water . . . the water could freeze. The primary water source is the fire hydrant so the FDNY had to get to the parking garage and connect to the available fire hydrant(s) to put water in the Non-Automatic Sprinkler System to extinguish the car fire.
- 702. The Engine Company (Truck) contains a 750-gallon water tank to extinguish fires where there is no water source, such as a highway.
- 703. The fire happened in a supermarket in Paraguay. The security guard was concerned about people not paying for their products during the fire and was asking for receipts and blocked the exit doors. 300 people died and 500 people were injured.
- 704. Nothing. The person operating the elevator continued to operate the elevator on Independent Mode as the elevator did not recall to FL-1 because it does not service the floor in alarm. If the elevator serviced the fire floor, then Phase I would have overridden Independent Mode and the elevator would have reported to FL-1.
- 705. A Backdraft. The explosion known as a Backdraft happens when Oxygen is introduced to a fire that is decaying because of a lack of Oxygen. FDNY members are trained to avoid Backdraft situations.
- 706. The FLSD candidate looked at the Plot Plan on the Building Information Card (BIC). The BIC's Plot Plan identifies all the stairwells that service FL-1 and their locations: North, South, East, West, Core, Northeast, Northwest, Southeast or Southwest part of the building.
- 707. On July 20, 2012, twelve moviegoers were killed in an active shooter incident inside a movie theater while "The Dark Knight Rises" (Batman) played on the screen. The shooter had a handgun, a semi-automatic rifle, and a shotgun. The shooter was arrested and convicted.
- 708. The FLSD reported to the designated alternative location because the area of the Fire Command Center on FL-1 was dangerous. The FLSD was concerned about his safety/risk and decided to activate the Plan from the designated alternative location. The missing words are: "Command", "Communicate" and "Control" the emergency, regardless if it was a fire or EAP emergency.
- 709. Occupants who are in the area identified as the Rest of the Building are safe and should be informed to Shelter in Place, which has no controlled movement of the occupants. They stay at their current locations. The people in the Rest of the Building ALWAYS Shelter in Place and the people in the Affected Area MUST be informed to Totally Evacuate, Partially Evacuate, In-Building Relocate or Isolate, but should NEVER be told to Shelter in Place.
- 710. The fire is on FL-70. When the fire alarm activates on the highest floor (or the lowest floor) of a high-rise building, the Selective Fire Alarm System activates the fire alarm on two floors only (no alarms activate on an empty roof), hence FL-70 and FL-69. The FDNY had to go up 50 floors to Construction Floor 50 to reach the fire on Marketing Floor 70.

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The building did not use 20 numbers when numbering the floors making the building taller (70 Floors) than what it actually is (Construction Floors): 50. The building has one floor Below Grade (Cellar) and 50 floors Above Grade (i.e.: Marketing Floors: FL-1 to FL-20 and FL-40 to FL-70. Floor Numbers 21 to 39 are NOT used).

- 711. Situational Awareness. The less you know about what is happening in your surroundings, the greater is the probability that mistakes will be made during the emergency.
- 712. Hot work operations in NYC require the presence of TWO people, not one. One person holding the G-60 and ANOTHER person holding the F-60. Although Peter had both certificates of fitness, he was not allowed to conduct the hot work operations project because he was alone, and hot work projects require two people to be present, a G-60 Holder and an F-60 Holder.
- 713. The responsible person is the Coordinator of Fire Safety and Alarm Systems holding the Certificate of Fitness F-80 for Homeless Shelters. The manager's title is Shelter Director, who is responsible for the day-to-day operation of a homeless shelter. At 2:45a, 10:45a and 6:45p, the Coordinator took the building off line with the central monitoring station. At 2:55a, 10:55a and 6:55p, the Coordinator or Deputy Coordinator recalled the elevators in Phase I to prevent the occupants from using the elevator and forcing them to use the emergency stairwells as a transportation system. At 3a, 11a and 7p, the Fire Guard holding the Certificate of Fitness F-02 for Homeless Shelters activated the fire alarm via a manual pull station. These fire drills were conducted in a homeless shelter in New York City.
- 714. The building is 100 feet or more in height, which was not required to be sprinkled prior to 1984, when all new construction had to be sprinkled. This building was built prior to 1984 and was never sprinkled. Local Law 26 was introduced in 2004 as the Emergency Action Plan, which amended Building Code sections 27-228.5 and 27-929.1 to retroactively require sprinkler protection for existing office buildings measuring 100 feet or more in height by July 1, 2019. Owners were given 15 years to sprinkler their buildings, from July 1, 2004, to July 1, 2019.
- 715. The Rules of the Fire Department of the City of New York. The Rules are published by the FDNY to amend the Fire Code.
- 716. The Ball Drip Device. To ensure that the piping between the lower check valve and the Fire Department Connection remains dry when not in use, the piping is equipped with an automatic ball drip device. This automatic ball drip device drips water to empty the piping between the check valve and the Fire Department Connection. Water dripping from the automatic ball drip device indicates one of two things: either there is water in the piping because a hose was recently connected to the Fire Department Connection, either for an emergency or for the 5-year hydrostatic testing; or there is water in the piping because the check valve is faulty and is allowing water to flow into the piping. The Ball Drip device is found in the Cellar (Below Grade level).
- 717. Tom works for the sprinkler/standpipe company, for which the building owner or representative has a contractual agreement. Tom placed red tags on the green Control Valves on every floor to indicate that the building's sprinkler system is fully impaired. Green is the color that identifies sprinkler systems.
- 718. The FLSD is correct. The person designated by the FLSD to conduct the monthly inspections of the portable fire extinguishers could be anyone who knows what to look for during the quick check inspection. It does not have to be a certificate of fitness holder. What went wrong with Security Guard Tony's inspection is that he only checked the portable fire extinguishers in the common corridors and forgot to check the ones inside the base building rooms (Mechanical Equipment Rooms (MERs), Elevator Machine Rooms (EMRs), Fire Pump Room, Emergency Generator Room, etc.). There are no Fire Guards F-01 holders in the building because there is no impairment and the F-01 is only required when there is an impairment of the sprinkler, standpipe or fire alarm systems.
- 719. The concept being implemented is In-Building Relocation, where there is a controlled movement of the building occupants from an endangered area to a safe area. The people were located in the Affected Area, where there was a

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high risk to their safety and relocated to the Rest of the Building (unaffected area). The Emergency Action Plan was being implemented by the FLSD, Deputy FLSD or the FLS Building Evacuation Supervisor (FLS BES).

- 720. When an AED was brought to the rescuer, David, the first thing that the rescuer does is to turn ON the AED . . . and follow the prompts from the AED. David should not have removed the pads from the victim as pads are one-time-use devices. The pads should have been left on the victim.
- 721. Dalton should not have used child pads (for 1 to 8 years old) on an adult (John is 27 years old) because the shock would not be sufficient to stabilize the heartbeat. The reverse is true, you may use adult pads on children.
- 722. The FLSD forgot to issue the FLS Warden, Deputy FLS Warden and the FLS Male and Female Searchers the identifying apparel. The identifying apparel is something that the team members wear in the event of a fire emergency. The identifying apparel is typically a hat, vest, or armband. They could not be identified by the floor occupants because they did not have on their identifying apparel because the FLSD forgot to issue it to the trainees during the training session. The training ended at 11a as initial training on fire emergencies lasts one hour, 10a to 11a.
- 723. The event was Hurricane Sandy. This hurricane killed 233 people.
- 724. It is a suspicious package emergency and the FLSD activated the Emergency Action Plan. Suspicious packages are characterized by excessive stamps, powdery substances, unusual addresses, etc. The package must be isolated and the area cordoned off for the NYPD response.
- 725. The person holds a Certificate of Fitness F-89 Fire and Life Safety Director. Because the building is mixed-use, the tenants are a hotel and a hospital. Because the hotel is open 24/7, the F-89 holder is working 24/7 and because the building also has a hospital, this building has a Comprehensive Fire Safety and Emergency Action Plan, requiring F-89 holders instead of T-89 holders.
- 726. The FLSD candidate failed to press the "FL-19 Speaker" button. In this building the Selective Fire Alarm System only triggers the fire alarm automatically on two floors: The fire floor (FL-20) and the floor above the fire (FL-21). Because this building's fire alarm only activates on two floors, the building was built prior to July 1, 2008. Buildings built AFTER July 1, 2008, when the NYC Fire Code was updated, must install a fire alarm system that triggers the alarm on three floors: The fire floor (FL-20), the floor above the fire (FL-21) and the floor below the fire (FL-19).
- 727. The Stack Effect is the differences in temperature between outside the building and inside the building. Because it was 89 Degrees Fahrenheit outside, then the inside of the building was colder (air conditioning was running). When it is colder inside the building than outside the building, smoke has a tendency to spread downward from the fire floor. When the temperature outside is lower than inside the building, smoke has a tendency to spread up above the fire floor.
- 728. The responsible person in an impairment situation of the sprinkler, standpipe and fire alarm system is the Impairment Coordinator. The Impairment Coordinator title is assigned by the building owner. In hotels and office building, the IC title could be assigned to the Fire and Life Safety Director F-89, in construction sites is the Construction Site Fire Safety Manager S-56, in a homeless shelter is the Coordinator of Fire Safety and Alarm Systems F-80 and in other buildings is the person assigned by the owner. If the owner does not assign the title of Impairment Coordinator to a staff member, then the owner assumes the title of Impairment Coordinator.
- 729. Paul did not use the correct key. Buildings and hotels have the 2642 elevator industry key to activate Phase I and Phase II Elevator Recall. The 1620 key is issued to FDNY personnel. The Call Cancel button did not function because Phase II was activated by Paul without first activating Phase I. The elevator took Paul to FL-20, where he died due to the extensive smoke condition on FL-20 when the elevator doors opened.
- 730. When the Certificate of Completion expires and then expires another year, the candidate has to return to the training school and retake all the classes. The candidate is sitting at Radiant.

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- 731. Elevators are generally not required in facilities under three stories or with fewer than 3,000 square feet per floor, unless the building is a shopping center or mall; the professional office of a health care provider; or a public transit station.
- 732. A central concept under the Americans with Disabilities Act (ADA), a federal law passed in 1990, is that no individual may be discriminated against on the basis of disability with regards to the full and equal enjoyment of the goods, services, facilities, or accommodations of any place of public accommodation by any person who owns, leases, or operates a place of public accommodation. Public accommodations include most places of lodging (such as hotels), recreation, transportation, education, and dining, along with stores, care providers, and places of public displays. Security Guard Hugh violated the blind man's rights under the ADA by removing him from the building. Security Guard Hugh should have known that the building's "No Pet" policy does not apply to people with visual disabilities who have guide dogs. Security Guard Hugh violated the ADA.
- 733. The Front Desk Agent asked the guest if he would need special assistance should there be an emergency in the hotel. The Front Desk Agent informed the Fire and Life Safety Director of the presence of this guest who will need assistance in an emergency. The guest's name was added to the "List of People with Special Needs" for the duration of his stay at the hotel.
- 734. The person is blind. A person walking about with a red and white cane is blind. He is on the "List of People with Special Needs" for the duration of his stay at the hotel.
- 735. In a hospital. In hospitals the evacuation is not vertical, it is lateral. The patients are moved by the staff to the other side of the floor, protected by the fire-rated doors in the corridors. A vertical evacuation in a hospital is conducted when informed to do so by the Incident Commander.
- 736. Yes, the FLSD should activate the Emergency Action Plan (EAP) because the people on FL-32, FL-39, FL-45 and FL-52 could be in danger and should be considered the Affected Area (even though the glass fell to the outside) and In-Building Relocate the occupants on these floors to their floor's or to other floors' In-Building Relocation Areas (IBRA). The occupants in the Rest of the Building will be informed to Shelter in Place (the action that is ALWAYS taken in the Rest of the Building).
- 737. The class of fire is an electrical fire. A chemical is used to fight this type of fire.
- 738. The class of fire is a cooking media fire in a commercial kitchen. A wet chemical is used to extinguish this type of fire.
- 739. NFPA 704 diamond signs are required to be posted in battery areas with a minimum of 55 gallons of corrosive material. This is a sulfuric acid-specific sign. The building has an Uninterruptable Power Supply (UPS) to protect a computer room (as an example) from losing power in the event that the building loses primary power. The UPS battery system switches on instantaneously so that there is no down-time or absence of power when primary power is lost in the building. A building with a UPS system, but no emergency generator, will lack power if the UPS system fully discharges.
- 740. The Coordinator of Fire Safety and Alarm Systems holds the Certificate of Fitness F-80. The Fire Guard for Homeless Shelters holds the Certificate of Fitness F-02. The fire alarm activated in the entire building (FL-1 to FL-5) as that is how Interior Fire Alarm Systems (IFA) are programmed. The Coordinator did not make an announcement as IFAs typically do NOT have voice communication systems (mics or warden phones). Everyone in the homeless shelter understands that if they hear the fire alarm and see the flashing strobe lights, they must execute a Total Evacuation (all people must exit the homeless shelter).
- 741. The Construction Site Fire Safety Manager (CSFSM) holding the Certificate of Fitness S-56 informed the construction worker to stop smoking. The CSFSM will ensure that fire safety regulations are followed at the construction site until the Page **62** of **84** / radianttraining.com / info@radianttraining.com / 212-213-3434

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building is completed. The S-56 is a citywide certificate of fitness and he will be assigned by his employer to another construction site once the building opens for business.

- 742. This fire drill was conducted at a homeless shelter where the participants sign in after a total evacuation fire drill is conducted. The Coordinator of Fire Safety and Alarm Systems holding the Certificate of Fitness F-80 oversaw the fire drill. The Fire Guard for Homeless Shelter F-02 activated the manual pull station for the fire drill. The participants totally evacuated and went to the Assembly Area, from which they returned to the homeless shelter.
- 743. The sprinkler head of the quartz bulb-type fused when it reached its pre-set temperature. The occupants were NOT in-building relocated . . . they were evacuated when the waterflow switch triggered the fire alarm. Total Evacuations are conducted in low-rise buildings (75 feet and under) and in this case because it was 4a, the FLS Building Evacuation Supervisor (BES) was in charge of fire safety. This low-rise building was built after 1984 because it is sprinklered. All Class E (1968 Building Code) / (now Class B: 2008 Building Code) buildings built after Local Law 16 of 1984 was introduced in New York City, must be sprinkled. The BES did not attend classes at Radiant as BESs are taught the operation of the Fire Alarm Control Panel (FACP) and how to activate the Fire Safety and Evacuation Plan or Comprehensive Fire Safety and Emergency Action Plan by the Fire and Life Safety Director F-89.
- 744. This fire alarm activated in a hotel and the alarm originated in a guest room. This fire alarm system is known as a Pre-Signal Fire Alarm System, where the central station operators call the hotel first . . . and if informed that there is in fact a fire . . . then they will call the FDNY. If the central station operator is informed that there is no fire . . . then the FDNY is NOT notified by the central monitoring station. This system avoids unnecessary/unwarranted FDNY responses to hotels in New York City.
- 745. The FLSD is authorized to silence the fire alarm and reset the fire alarm system when it is confirmed that there is no fire (false alarm) and the building is off-line with the central monitoring station.
- 746. The FLSD activated the Emergency Action Plan when there was a main water break that led to sidewalk and street collapses. The Cellar and FL-1 were In-Building Relocated to the next available re-entry floor.
- 747. The Occupational Safety and Health Act (OSHA) of 1970.
- 748. First Responder Kits. These kits are not mandated by any laws or codes. The following is included in these kits: Floor plans, BICs, walkie-talkies, access cards, master keys and other items that first responders might be able to use when responding to an emergency in your building.
- 749. The active shooting incident happened in Colorado at the premiere of Batman's "The Dark Knight Rises" on July 20, 2012. Twelve people were killed and more than 50 people were injured. The shooter was arrested.
- 750. The FLSD was training the FLS Building Evacuation Supervisor in an office building. The FLS BESs do not work in hotels or homeless shelters because these two properties do not have non-business hours. The training took place in an office building that has non-business hours, which are the hours that the FLS BES is assigned to work.
- 751. Mark may do the fire drills under the supervision of Paul, the FLSD. Paul is correct. Mark holds a Fire and Non-Fire Emergency Drill Conductor Certificate of Fitness F-07, a premises related certificate for that office building.
- 752. A Backdraft. A Backdraft is an explosion that occurs when oxygen is introduced into a room full of hot gases. FDNY personnel could be harmed/killed by a Backdraft if they open a door or window to the room of fire origin.
- 753. The person graduated from the FDNY Academy on Randall's Island.
- 754. The FLSD is speaking to the EAP Brigade (or Non-Fire Brigade), which consists of three people: The Property Manager, the Chief Engineer, and the Director of Security.

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- 755. A size 10 envelope only requires one stamp. Four stamps and no return address are indicative of a suspicious package that needs to be further analyzed. The FLSD is preparing to activate the Emergency Action Plan. FL-1 is the Affected Area and the occupants will be Partially Evacuated and the occupants in the Rest of the Building will be Sheltered in Place.
- 756. Biological. It is also difficult, costly, and produced in small scales. It is odorless and tasteless, and the symptoms could be delayed for hours, days and weeks. The crisis could persist for weeks or months.
- 757. The people in the Affected Area are NEVER told to Shelter in Place by the FLSD
- 758. Paul said to Scott, "No problem, we'll get it done." Paul is a member of NYPD Shield and he contacted NYPD Shield at 718-615-7506 or nypdshield.org and arranged for NYPD Officers to conduct the Active Shooter Training Session for FREE.
- 759. John was missing the Citywide Certificate of Fitness for Sprinkler Systems S-12. John must have the MFSPC license and the Certificate of Fitness S-12 (and the Citywide C of F S-13 for Standpipe Systems) to conduct maintenance, testing and inspections of sprinkler and standpipe systems.
- 760. The FLSD activated the Emergency Action Plan (EAP) in the building . . . the emergency was other than a fire. The activation of the EAP mandates that all the elevators in the building be brought down to the lowest terminal landing in Phase I and then placed on Independent/Manual mode.
- 761. The In-Building Relocation Area or IBRA. The IBRAs are located on floors and when a floor does not have an IBRA, then a stairwell must be designated to reach another floor's IBRA. IBRAs are used during In-Building Relocations of the occupants in response to the emergency. Fire and EAP drill presentations in B properties are also conducted in the IBRAs.
- 762. When the Emergency Action Plan is executed by the FLSD, the Rest of the Building (if applicable) **ALWAYS** Shelters in Place. If you are safe, stay where you are.
- 763. The FLSD was using coded language instead of plain English. Coded language is understood by a limited number of people. If coded language is used, then the occupants will be prevented from understanding what is happening . . . which can lead to them not understanding that there is an emergency, leading to unnecessary injuries and deaths.
- 764. The person with a corporate title (ex. Senior VP of Facilities Management) is in charge of operations during normal times. When there is an emergency in an office building, the person in charge of the emergency is the FLSD, Deputy FLSD or Building Evacuation Supervisor (BES). The owner, property manager, chief engineer, director of security or others are NOT in charge of emergencies, unless they are FLSDs.
- 765. The candidate received an email and attached to it was the Certificate of Completion. He passed the N-85 test (Fire Emergency) and the Z-89 test (Non-Fire Emergency); and cleared all the paperwork with the FDNY. The candidate can now have his manager schedule the FLSD on-site exam to become a Certificate of Fitness Holder Fire and Life Safety Director F-89.
- 766. The FDNY Supervisor turned the key switch from "Normal" to "Purge." There was a fire and it was extinguished and the supervisor THEN turned the key switch and selected the floor to purge. Post-Fire Smoke Purge Systems exist in high-rises where the windows do NOT open. The purpose of purging is to clear the toxic air left behind after a fire, not to protect the people in the building.

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- 767. The Canadian Medical Association Journal published a study that showed that people who suffered from cardiac arrest in high-rises on FL-26 and higher did not survive because of delays in reaching the patient by Emergency Medical Services (EMS).
- 768. The FLSD is correct. There are no legal statutes that indicate that FLSDs must be certified in First Aid/CPR/AED. Even when the FLSD is certified in First Aid/CPR/AED, the FLSD reports to the Fire Command Center, not to patients. The FLSDs are neither expected nor required to personally provide patient care.
- 769. When a building volunteers to purchase and provide AEDs (Automated External Defibrillators) for people suffering from medical issues, ALL the base building employees must know where the AEDs are located; and provide a sign at the main lobby desk indicating their locations. They must be placed in common areas where keys are not required to access the AEDs.
- 770. The NYPD will be directed to use the entrance at 840 West 47<sup>th</sup> Street because it has access to Service Elevator (SE) #17. In active shooter events, the SE will be used by the NYPD and it should be waiting for their arrival on FL-1 with its doors closed.
- 771. The security guard is correct. Although the plaza is outside, it is within the building's property line. The property line separates private property from public property (sidewalks/streets). The security guard is allowed to enforce the "No Smoking" policy in the plaza, even though it is outside (but within the property line).
- 772. An Atrium. A public Atrium is typically located inside private property, but it is open to the general public to use during the operating hours of the Atrium. Atriums must be sprinklered, have manual pull stations, exit doors that are unlocked during the operating hours, strobe lights, etc. in the event that there is fire in the Atrium. Some buildings with public Atriums include the following properties: IBM at 590 Madison Avenue, Bank of America at 1 Bryant Park, Park Avenue Atrium on 53<sup>rd</sup> Street between Maison Avenue and Park Avenue, 601 Lexington Avenue at 53<sup>rd</sup> Street, 120 Park Avenue at 42<sup>nd</sup> Street, the Winter Garden at Brookfield Place west of One World Trade Center, and others.
- 773. The building is a low-rise building. In low-rise buildings the FLSD evacuates the entire building (Total Evacuation) whenever the fire alarm activates in the building. This low-rise building has a warden phone system, hence the presence of the FLSD/Deputy during the business hours of the building. If there was no warden phone, then the FLSD would not be required in this low-rise building.
- 774. Diego is correct. New York City has low-rise buildings (75 feet or less in height) and high-rise buildings (over 75 feet in height). There are no mid-rise buildings in NYC. The building where Thomas works is a high-rise building because it has three Elevator Banks (for example: the low-rise Bank A services FL-1 to FL-10, the mid-rise Bank B services FL-1 and FL-11 to FL-30 and the high-rise Bank C services FL-1 and FL-31 to FL-50).
- 775. Photoluminescent Markings and Signs. LL26 of 2004: Emergency Action Plan, introduced because of the terrorist attacks on the World Trade Center in 2001 states that office buildings must install Photoluminescent ("glow-in-the-dark") signs in the corridors to direct the occupants to the emergency stairwells. The signs cannot be higher than 18 inches off the floor. The stairwell door frames and handles have photoluminescent markings. When inside the stairwells: the outline of all the landings, the handrails, the steps, and the Risers must have photoluminescent markings enabling the occupants to effectively use the stairwell transportation system in the building. The photoluminescent markings and signs must be inspected annually by the FLSD.
- 776. Shelley is suffering from panic. The Certificate of Occupancy (COO) which states the Occupancy Load (the number of people allowed per floor) was ignored. The COO is issued by the Department of Buildings (DOB) and indicates that the building complied with all the applicable laws and all necessary approvals were received from other city agencies.

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- 777. Patrick is correct. The property has a hospital and therefore a Comprehensive Fire Safety and Emergency Action Plan requiring an FLSD with the F-89. A Fire Safety and Evacuation Plan would require an FLSD with the T-89. If the property were a hotel-only, then the T-89 would be required in the hotel. The property has 49 floors above Grade (not 50) because they did not number the floors consecutively, they skipped FL-13.
- 778. Based on the 2008 Building Code, Brian works in a Group Occupancy "A": Place of Assembly. Based on the 1968 Building Code, Hank works in a Group Occupancy "A": High Hazard building built between 1968 and 2008. In the 2008 Building Code, all buildings in Group Occupancy "A" are Places of Assembly and all buildings in Group Occupancy "H" are High Hazard.
- 779. The FLSD failed to inform the NYPD that the building has a bridge(s) to another building. The active shooter crossed the bridge to the other building, where he continued to kill people and was later confronted and killed by the NYPD.
- 780. Sarah. No one should open doors without first checking in a safe manner to see if it is safe/unsafe to use that emergency stairwell. By feeling heat by touching the door with the back of one's hand, a person can detect whether there is heat/fire behind the door. If the door is hot, then the occupants should seek an alternative exit system.
- 781. The person informing the FDNY was a Fire Brigade member, who was on FL-22 and safe. One of the tasks of the Fire Brigade is to stay on the floor below the fire to direct the FDNY to the fire location and inform them of floor conditions.
- 782. Alternative Location. The emergency is likely happening on FL-1, where the Fire Command Center is located. The FLSD proceeded to the alternative location when he **felt** that FL-1 was compromised by the threat and his safety was at risk.
- 783. Yes. When a person holds three (3) or more Certificates of Fitness F-89s, the person is subject to on-site exams to renew the F-89s for **each** location every three (3) years upon expiration of the C of Fs.
- 784. The NYC Boilers, Inc. workers exited at 3a, by 4a Carbon Monoxide, generated from the boiler, reached the Main Lobby and killed the FLS Building Evacuation Supervisor and the tenant. Carbon Monoxide cannot be seen, smelled, heard, tasted, or touched by people. Prolonged exposure, in this case one hour, led to the two deaths. The FACP was beeping because Carbon Monoxide detectors initiated a Supervisory Signal to the FACP. The FDNY discovered the two bodies when the central station operator called the FDNY Borough Dispatch Office and the FDNY responded to the building.
- 785. The name of the device that is installed underneath the Gravity Tank on the Roof level is the Check Valve. The water was going up the Riser located in the Stairwell. As the water from the Fire Hydrant went up the Riser, it closed the Check Valve so that the water was directed to the hose opened by the FDNY to fight the fire.
- 786. These are the colors of the tags that indicate the level of the impairment of the sprinkler/standpipe system. The Master Fire Suppression Piping Contractor (MFSPC) installs these tags on the Sprinkler/Standpipe Riser valves. Green is installed in the sprinkler control room only.
- 787. When there is a Combination Sprinkler/Standpipe System in a building the color of the covers should be Yellow. Green is for a sprinkler-only system. The sign is supposed to have red letters on a white background.
- 788. None. The Fire Code states that unnecessary/unwarranted fire alarms must be initiated by automatic alarm initiating devices, not manual pull stations, for a FDNY Summons to be issued to the property owners. Only one unnecessary/unwarranted fire alarm activation/FDNY response is allowed in any three-month period from an automatic alarm initiating device.

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- 789. The candidate lost points or failed the Fire Scenario because he made an assumption that the central station operators called the FDNY Borough Dispatch Office (Step 4). During the on-site exam, the candidate CANNOT make assumptions. The candidate should have stated the following for Step 4: "I notified the Fire Department by calling 911".
- 790. The Blue Angel Nightclub, which was located on East 54<sup>th</sup> Street between Madison Avenue and Park Avenue, caught on fire. The fire was attributed to faulty wiring behind the stage set. The fire spread killing seven patrons and injuring six patrons. The deaths and injuries were attributed to smoke inhalation. This fire led to the introduction of Local Law 41 of 1978, which forced clubs to have emergency lighting, sprinklers and fire alarm systems, to protect the patrons.
- 791. Private clubs are classified R-1 (formerly J-1 in the 1968 Building Code), like Hotels, because the club members are allowed to stay/sleep in the club. Because the club is classified by the Building Code as R-1 (2008 Building Code) then a Fire Safety and Evacuation Plan is required.
- 792. The candidate filed a complaint against the FDNY examiner because he felt that the examiner did not provide a fair environment or opportunity. He had to send the email within 24 hours of completing the on-site exam for the complaint to be reviewed by the FDNY's Public Certification Unit. The wording on the line should be a "description of the specific issue in detail."
- 793. Tim is correct. Only one candidate may be scheduled to take the on-site exam at 4p, Monday to Friday. Two candidates are allowed to take the on-site exams in the mornings, Monday to Saturday.
- 794. The Stairwell Familiarization EAP drills mandate that participants walk down a minimum of four floors from their current location or to the next available re-entry floor (but not less than four floors down). The next drill is in three years.
- 795. The manager forgot to notarize the letter. Letters that are written in pen/ink must be notarized by the person who completes and signs the letter. Notarization of the letter by a Notary Public Officer of the State of New York is indicative that the content of the letter is truthful.
- 796. ADA: Americans with Disabilities Act was passed in 1990 by the Federal Government to ensure that people with disabilities enjoy all the goods and services that able-bodied people enjoy. It is a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public.
- 797. The FLSD is correct. It is unlawful (illegal) to install and maintain any fire protection system or device that has the physical appearance of fire protection equipment, but does not perform a fire protection function. The camera MUST be removed or replaced with a camera that does not have the appearance of a fire protection device.
- 798. The car/vehicle was parked at the fire hydrant. The car blocked the FDNY from accessing the fire hydrant, so they caused damage to the car/vehicle in order to access the fire hydrant to connect to the building's Fire Department Connections (FDC). There must be a separation of 15 feet between a fire hydrant and a parked car/vehicle.
- 799. The FLSD did five things at 8a: 1) Signed in the FLSD Logbook to indicate that he is covering the 8a to 4p shift, 2) Checked the FACP for power, 3) Checked the FACP for Trouble Signals, 4) Checked the FACP for Supervisory Signals and 5) Did a Lamp Test (checked the Lamps (LED Lights)). After concluding with this task, he proceeded to do his corporate title work until 4p.
- 800. About 96% of the fires are extinguished or controlled when sprinklers are installed in the built environment.
- 801. The elevator Erick was riding recalled to FL-1 because an automatic alarm activated on a floor that the elevator Erick was riding stops on.

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- 802. The fire was in the commercial kitchen and the switch that was activated was the Actuation Switch for the fire suppression system (Ansul System). The chef activated the Actuation Switch. The electricity and natural gas to the commercial cooking system were interrupted.
- 803. Thomas jumped onto a Roof Setback on Floor 46. In this commercial office building there are Roof Setbacks because the floors get smaller as the building gets taller.
- 804. In New York City it is required that a building have a Swing Door, a door that is pushed out to the street, whenever there is a revolving door. In other words, a building CANNOT just have a revolving door at an entry/exit point.
- 805. All died because the building had a Carbon Monoxide leak. The Carbon Monoxide Detector activated. The FLSD received a supervisory signal at the Fire Alarm Control Panel (FACP), which he simply acknowledged. The FDNY did not respond because the building was off-line with the central monitoring station.
- 806. There was an emergency in the hotel and the smart television program that the person was watching was interrupted for the emergency message to appear on the screen to inform the guest that there was an emergency in the hotel. The guest could not understand the English-language message because he only spoke/understood French.
- 807. The FDNY requires that the "No Smoking" signs be posted conspicuously in English. An additional sign in another language is allowable, as long as there is a sign in English.
- 808. The red square is indicative that the portable fire extinguisher may be used on flammable liquids and gases, gasoline, oils, paint, lacquer and tar. Carbon Dioxide, Halon and Dry Powder is the content of the extinguisher.
- 809. She forgot to go back outside to the Phase I switch and return it to the "Normal/Off" position. If the Phase I switch is left in the "Fireman's Service/On" position, then Independent Mode will not function.
- 810. The fire happened in an office building because they had to damage the doors. In hotels, the doors are always available and functional 24/7. There was no one in the building when the FDNY reached the property. The fire happened during the non-business hours of the building when the building was closed and there was no one in it, hence they damaged the doors to gain access to the property.
- 811. The Licensed Master Plumber was NOT allowed to do the work on the sprinkler system. He is not allowed to test, maintain, repair/replace the sprinkler system. The Licensed Master Fire Suppression Piping Contractors (MFSPC) are authorized to test, maintain, repair/replace the sprinkler system.
- 812. Local Law 26 of 2004 (LL26/2004), the Emergency Action Plan (EAP) states that buildings 100 feet or higher that were built before 1984 and never sprinkled, had to be sprinklered by July 1, 2019. The charge of \$17,458.03 was billable to the tenant for the installation of the sprinkler system on their floor. This building was built before 1984 and is 100 feet or more in height and not sprinkled until the LL26/2004 deadline of July 1, 2019.
- 813. Whenever there is an impairment of the fire alarm system, standpipe system or sprinkler system, then a fire watch must be put in place, and if not, then the building has to be evacuated/emptied of all occupants . . . there is no one in the building.
- 814. On January 8, 2011, a shooter opened fire into a crowd of people outside a Safeway supermarket where elected official Gabrielle Giffords was holding a constituent meeting. He shot her and she suffered permanent injuries. The shooter killed six people and injured 13 people.
- 815. Kirk showed the VP his Refrigeration System Operating Engineers (RSOE) Q-01 Certificate of Qualification. George is a maintenance/handyman who works for Kirk. George is not a RSOE holding a Q-01.

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- 816. The group of employees went to the Roof and walked to the building next to theirs via the Roof. The stairwell that was used was in the building next door, which they had never seen or used. There is no alleyway (a separation between two buildings), which allowed them to access the Roof of the building next door. The building is a high-rise because the Ladder Truck was not used to secure the safety of the group of employees who went to the Roof.
- 817. The FLSD candidate tested at FDNY Headquarter at 9 Metrotech Center in Brooklyn. He tested for the N-85 Fire and the Z-89 Non-Fire and passed both exams. However, he has failed to provide FDNY with the Verification Letter for Fire and Life Safety Director Application. He has 45 days to respond to the First Notice of Non-Completion.
- 818. FLSD on-site exams have been discontinued on Fridays. They are administered Monday to Thursday in the morning or at 4p, and on Saturdays in the morning.
- 819. The on-site exams administered at 4p, Monday to Thursday, only allow one candidate to test. Two candidates may on-site test at the same time when the test is administered in the morning, Monday to Thursday and Saturdays.
- 820. Inspector Barry issued the violation because the property stored a snow blower below Grade in the Cellar. Portable fueled equipment must be stored at Grade Level (FL-1).
- 821. The FLSD candidate must attend the courses at Radiant: Fire Emergency, Non-Fire/EAP Emergency, and the Active Shooter/Medical Emergency Preparedness courses. Take the two exams at Radiant, and the two exams at FDNY to get a new Certificate of Completion to be able to take the FLSD on-site exam.
- 822. On December 31, 1994, a fire at the Southside Regional Medical Center (SRMC) in Petersburg, Virginia, killed four patients and injured three firefighters and several nurses. A nurse discovered the fire, but did not close the door to the room of origin which allowed smoke to fill the corridor very quickly. Three patients in rooms adjacent to the fire room died from smoke inhalation, and one patient in the fire room died from a combination of smoke inhalation and burns.
- 823. An Auxiliary Radio Communication (ARC) system must be installed in high-rises effective December 31, 2014. The ARC eliminates "dead spots", spots in the building where there is no radio communication because of the infrastructure of the building: concrete and steel construction.
- 824. There is an impairment (out of service condition) in the building. Either the sprinkler, standpipe or fire alarm system in the building is impaired. The building is located in Bronx County.
- 825. On October 26, 2014, 127 conference members became ill after eating banquet dinner at Redwood City's Hotel Sofitel. Many people projectile vomited in the lobby and had to be rushed to the hospital. It was confirmed that it was caused by norovirus (food-related virus).
- 826. The worst riot to occur in the United States took place in Los Angeles in 1992. The riot first started in South Los Angeles and then eventually spread out into other areas over a 6-day period within the Los Angeles metropolitan area. The riots started on April 29 after a trial jury acquitted four Los Angeles Police Department officers of assault and use of excessive force. The mostly white officers were videotaped beating an African American following a high-speed police pursuit. Thousands of people throughout the metropolitan area in Los Angeles rioted over 6 days following the announcement of the verdict. In total, 63 people were killed during the riots, over 2,000 people were injured and estimates of property damage topped \$1 billion.
- 827. Yes. Even though the fire alarm system/FACP does not have a Warden Phone, which would require the presence of the FLSD, the property requires the presence of the FLSD because it is a high-rise property.
- 828. The Office of Administrative Trials and Hearings (OATH) is where property owner representatives go to argue Notices of Violations issued by the FDNY. OATH is located at 66 John Street in Downtown Manhattan. Owner representatives must attend the OATH hearings.

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- 829. The FLSD is correct. COVID-19 led the FDNY to suspend mandated fire and EAP drills, but it reinstated them on May 1, 2023. All hotels, commercial office buildings, and homeless shelters must re-instate the fire and EAP drills, if applicable, effective May 1, 2023.
- 830. The Assistant Director of Security is correct. The Department of Buildings (DOB) determines when a structure can be re-occupied by the occupants after an incident happens in that structure.
- 831. One of the most important items that the FLSD must provide to the Incident Commander is the Building Information Card (BIC). BICs allow the IC to be able to learn the building "at-a-glance"/quickly because of the way the BIC is designed. Reading the paragraphs in the Fire Safety and Evacuation Plan or Comprehensive Fire safety and Emergency Action Plan is time-consuming and delays actions by the first responders.
- 832. The area is known as the Affected Area. In this area four concepts may be implemented by the FLSD: Total Evacuation, Partial Evacuation, In-Building Relocation, and Isolation. This area NEVER Shelters in Place.
- 833. The FLSD is correct. Corridors (also known as the "Exit Access") that lead to stairwells (also known as the "Exit"), must be at least three feet wide with no obstructions or impediments. The linen bins are an obstruction to a successful evacuation of the staff working on the Cellar level in the event there is a fire. The hotel was issued a Violation Order by the FDNY for blocking the means of egress.
- 834. Sprinkler heads activate independently. All the sprinkler heads should not have activated . . . only the one he placed the lighter to. When sprinkler heads activate because of a fire . . . no one gets wet as the people evacuated when they discovered the fire and BEFORE the sprinkler heads fused.
- 835. All the doors on all floors in Stairwell A were open for an extended period. The Roof fan that pressurizes stairwells rotation-per-minute is not affected by opened doors. The pressurization fans always rotate at a particular rotation per minute. Hence, when all the doors are opened . . . pressurization fails. Some people in Stairwell A may have died from smoke inhalation.
- 836. A Curtain Wall is a glass "wall" surrounding a building, a very common architectural feature in today's building designs. Curtain Walls are not load-bearing, which means they do not support the building. The glass panes are attached to the floor plates. The United Nations Secretariat Building was the first building in New York City with a Curtain Wall (1951). The second was the Lever House at 390 Park Avenue at 53/54th Street (1952).
- 837. Steel typically melts at 2,500 Degrees Fahrenheit. What the FLSD saw being sprayed on the steel beams and columns was concrete. Concrete is non-combustible. It is sprayed on steel to keep the steel from melting. The sprayed on concrete can usually be seen inside emergency stairwells.
- 838. There was an emergency in the building that was affecting the entire building. The FLSD ordered a Total Evacuation. The occupants walked more than the height of the building in feet to reach the Assembly Area. The idea is that if a person is farther away than the height of the building . . . the person will be safe should the building collapse. The NYC Department of Buildings Certificate of Occupancy states the official height of buildings.
- 839. The Service Elevator operator picked them up using the Service Elevator, which in most buildings' services all floors. He picked up Kris first because she was on the highest floor. The emergency was a non-fire emergency/Emergency Action Plan activation by the FLSD. The emergency was affecting the entire building. The building has Warden Phones because there was an FLSD present. Kris was on Floor 7, the highest floor, so she was picked up first. Kylie was on Floor 2 and was picked up last.
- 840. The FLSD activated the EAP. He selected the Affected Area, which he had to tell to Partially Evacuate, In-Building Relocate or Isolate. Because he informed the people in the Affected Area to NOT execute the Total Evacuation concept, then the building had to have a Rest of the Building. He then informed the Rest of the Building to Shelter in Place. The Rest of the Building ALWAYS Shelters in Place.

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- 841. The property management team decided to protect the FLSDs, who are not allowed to carry firearms, by providing them with Company-issued bulletproof vests. At the time of the shooting, the FLSD was wearing a bulletproof vest, which saved his life.
- 842. The responding officer. The DOS should know how to identify himself to the first responders. He should also be instructed to comply with officer instruction when law enforcement arrive on scene. The DOS, even though he has a pistol carry permit, must know that he has to follow the direction of on duty officers. Retired law enforcement must always follow the direction of on duty in uniform officers in a challenging situation.
- 843. An active shooter incident. The person was Avoiding (Running).
- 844. The FLSD met with the Fire Brigade in the hotel (R-1). The number of people who met was four (4): The FLSD and the three members of the hotel's Fire Brigade. In hotels they meet to train/fire drill for one hour, on every shift, every three months.
- 845. The fire drill was conducted at a high school. Schools evacuate during fire drills.
- 846. The building has more than 1,000 sprinkler heads. Six spares are required when the building has between 1-300 sprinkler heads; 12 spares are required when the building has between 301-1,000 sprinkler heads; Twenty-four (24) spares are required when the building has more than 1,000 sprinkler heads. The spare sprinkler heads must be kept in the Sprinkler Control Room, not at the FCC. There is only one wrench to replace the sprinkler heads that fuse (activate) or that are loaded (defective).
- 847. The FLSD is correct, not the Chief Engineer. A Water Mist Fire Extinguishing System was installed in the Computer Room on Floor 8. The Water Mist Fire Extinguishing System releases the water into tiny particles, which extinguish the fire without damaging the computers. This system would be called out in the Comprehensive Fire Safety and Emergency Action Plan.
- 848. Emergency generators must be tested for 30 minutes every month under operating temperature conditions and at not less than 30 percent of the emergency power system nameplate kilowatt rating, or under loading that maintains the minimum exhaust gas temperatures as recommended by the manufacturer. All three: Peter, Charles and Brian can conduct the test.
- 849. He displayed to the FLSD the Certificate of Fitness W-96: Fire Extinguisher Servicing. He was there a year ago and today to replace the tags on all 37 portable fire extinguishers. The portable fire extinguisher tags expire yearly.
- 850. FDNY Inspector James Smith has been assigned to conduct the FLSD On-Site Exam at the candidate's property. When the exam is administered in the morning, Monday to Thursday, or Saturday, the inspector/examiner typically arrives between 10a and 12p. When the exam is administered Monday to Thursday in the afternoon, the inspector/examiner typically arrives at 4p. FLSD On-Site Exams are not administered on Fridays.
- 851. The fire was caused by the Hot Work Operator holding the Certificate of Fitness G-60 for Torch Use of Flammable Gas. The Fire Guard possesses the Certificate of Fitness F-60, Fire Guard for Torch Operations. 30 feet is the maximum distance between the Fire Guard's post and a portable fire extinguisher during torch use of flammable gases.
- 852. Yes, there was a fire in the kitchen. James activated the Actuation Switch to activate the commercial cooking system's fire extinguishing system (also known as an Ansul System). The distance between the commercial cooking system and the Actuation Switch is between 10-20 feet. The person who was in that kitchen sometime in the past six months was the Licensed Master Fire Suppression Piping Contractor (MFSPC), who confirmed that the commercial cooking system's fire extinguishing system should function as designed.

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- 853. The first action by the FLSD, whether certified in First Aid/CPR/AED or not, is to report to the Fire Command Center (FCC). The FLSD reports to the FCC on all emergencies. Another First Aid/CPR/AED certified individual should approach and assist the person who collapsed.
- 854. The FLSD is correct. Lithium-Ion battery fires cannot be extinguished using a water-based portable fire extinguisher.
- 855. The person left a hotel (Group R-1) and his name was removed from the List of People with Special Needs. The person has a disability that requires someone to assist him in the event of an emergency in the hotel. His name will reappear on the List of People with Special Needs when he returns next year and stays in the same hotel.
- 856. Jeff did not have to re-take the FLSD On-Site Exam at 310 Park Avenue since he passed the exam in the past. He simply converted his Q-89 (unemployed FLSD) back to an F-89 for 310 Park Avenue.
- 857. The FLSD called 718-430-0200 to report to the Bronx FDNY Dispatch Office an impairment in his building. The impairment is of the standpipe, sprinkler, or fire alarm system. The building with the impairment is located in Bronx County.
- 858. The Licensed Master Fire Suppression Piping Contractor (MFSPC) removed red tags from every floor's sprinkler system control valve (painted green). Because the red tags were placed on the sprinkler system's control valves . . . then the sprinkler system was impaired (out of service). The MFSPC removed white discs from the green Fire Department Connections outside.
- 859. The fire was on the commercial cooking system in the kitchen. The commercial cooking system's fire extinguishing system (Ansul System) activated . . . which causes the natural gas and the electricity to shut down in a commercial cooking system.
- 860. In the fire in the Ycua Bolanos supermarket in Asuncion, Paraguay, which was caused by a faulty barbecue chimney that leaked hot flammable gases into the ceiling, which ignited . . . 300 people died and 500 people were injured.
- 861. The primary issue was the lack of sprinkler protection. Other factors that contributed to the 100 deaths were the consumption of alcohol, unfamiliarity with the club and darkness/music.
- 862. In the EAP activation, the elevators are recalled in Phase I with the 2642 key. After recalling the elevators in the Bank, the FLSD candidate placed an elevator in Independent/Manual Mode. Independent/Manual Mode did not function because the candidate did not return the Phase I Recall switch to the "Normal/Off" position. Independent/Manual Mode does not function if the Phase I key switch is not returned to "Normal/Off".
- 863. The tenant was killed because he traveled with the active shooter's gun in his hand. The NYPD mistook him for the shooter when they told him to drop the weapon and he did not. The NYPD shot and killed the innocent tenant.
- 864. The FLSD On-Site Exam was administered on November 13<sup>th</sup>, one day prior. Complaints to the FDNY may be made by the FLSD candidate within one day of the administration of the exam. The FDNY will investigate the complaint and determine if the complaint was legitimate.
- 865. Brian, the Licensed Master Plumber is not authorized to do inspections of the one-zone Standpipe System because he does not possess the citywide Certificate of Fitness S-13 for Standpipe Systems.
- 866. The Chief Engineer is correct. When the Stem part of an Outside Stem and Yoke (OS&Y) Valve is visible, it is indicative that the valve is open, not closed. The FLSD candidate and the FLSD were wrong. When the Stem is visible . . . the valve is open. When the Stem is not visible (flush) . . . the valve is closed.
- 867. There is an Impairment (out of service condition) of the Standpipe System or Sprinkler System or Fire Alarm System. Since the area impaired does not exceed 50,000 square feet, then Tom could do the patrol of FL-2 and FL-3, comprising

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of 37,000 square feet, for the first four hours of the impairment. Tom does not need to hold the Certificate of Fitness for Impairment Citywide F-01.

- 868. The purchase of the hats (or vests or arm bands) is as follows: one hat for the FLSD(s), one hat for the Deputy FLSD(s), one hat for the FLS BES, 50 hats for the FLS Wardens (1 per floor), 100 hats for the Deputy FLS Wardens (2 for each floor because there is a Deputy FLS Warden for every 7,500 square feet or part of), 100 hats (50 x 2) for the Male Searchers because there are two Male Restrooms per floor, 100 hats (50 x 2) for the Female Searchers because there are two Ladies' Restrooms per floor, and 6 hats (3 for the 8a-4p shift and 3 for the 4p-12a shift) for the FLS Brigade. Total hats: 359.
- 869. George is correct in ordering two more keys to bring the count to six. The problem is that the building does not have 1620 keys, they should have six 2642 keys. The 1620 key is for FDNY personnel. The 2642 is the elevator industry key of which the FLSD must have no less than six keys at the Fire Command Center.
- 870. The FDNY Inspector is responsible for ensuring that the curtain went through a fire-retardant treatment. By comparing the numbers, he is verifying that the curtains were treated. The treatment prevents the curtains from catching on fire as it now has a protective coating covering the entire curtain. The Company that did the treatment is NYC-based as a certificate of fitness holder conducts the treatment: C-15 C of F.
- 871. The EXIT sign was not lit. All other components of the sign are correct. The signs must be lit so that they are visible to people even in smoke conditions. The signs may have arrows. The signs with no arrows are posted above the exit doors to the stairwells on every floor and above the doors leading out of the building on FL-1.
- 872. Fail-Safe Door Release. Whenever an automatic fire alarm activates from a smoke detector, heat detector or waterflow switch, whenever elevators recall in Phase I and when the "Door Release" switch on the Fire Alarm Control Panel (FACP) is activated . . . Fail-Safe Doors will release.
- 873. 24. If the building has re-entry every four floors, then the re-entry floors are 4, 8, 12, 16, 20, 24, 28, 32, 36 and 40. The sign is posted on the stair side of the door in Stairwell B. If the sign is posted on Floor 21, then it has to identify the re-entry floor above and below FL-21, hence FL-20 and FL-24.
- 874. The Property Manager is correct. The Certificate of Occupancy (COO) is the document that states the occupancy loading (the number of people allowed on fl-35). The DOS/Deputy FLSD did not know that the occupancy loading number originated from the COO because it also appears in the Comprehensive Fire Safety and Emergency Action Plan (FS/EAP). The number is transferred from the COO to the FS/EAP.
- 875. The tenants were informed to use Stairwell C because it is a Fire Tower. Typically, no one dies from smoke inhalation in Fire Towers because it consists of two doors separated by an open balcony on every floor. The stairwell is behind the second door. Stairwell C will be used by the building occupants to In-Building Relocate, Partially Evacuate or Totally Evacuate. The 1968 Building Code eliminated the mandate for the installation of Fire Towers if the buildings were fully sprinklered. Hence, buildings constructed before 1968 have Fire Towers.
- 876. The Certificate of Fitness Holder S-56: Construction Site Fire Safety Manager, conducted the drill at a construction site, a building that is being built. The Mustard Point is the re-grouping area after a Partial or Total Evacuation is ordered at a construction site. In a built building, the Mustard Point is known as the Assembly Area.
- 877. The FLS Warden (or Deputy FLS Warden). He did not sign in, which is required of FLS Wardens and Deputy FLS Wardens in Group B properties, because he was leaving a short time later. He was absent for the day.
- 878. The instructor is correct. It does not matter whether the student will be working in a hotel (Group R-1), commercial Office building (Group B), high-rise Homeless Shelter with Warden Phones (Group R-1) or a hospital with Warden Phones (Group I). All candidates for the FLSD Program **must** attend the Fire Emergency Course, EAP/Non-Fire Emergency Course and the Active Shooter/Medical Emergency Preparedness Course.

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- 879. 12. The hotel must have 3% of portable smoke detectors of both audible and visual design when there are no ADA guest rooms. For every 100 guest rooms = 3, hence 400 = 12.
- 880. Local Law 26 of 2004 . . . Emergency Action Plan. This law was introduced after the terrorist attack on the World Trade Center towers in New York City in 2001. LL26 informed all building owners that if their building was 100 feet or higher, and not sprinklered because it was constructed before LL16 of 1984 was published (LL16/1984 forced all new buildings to be sprinklered), to install sprinkler protection by July 1, 2019. Those buildings had 15 years to install sprinklers (July 1, 2004, to July 1, 2019) based on LL26/2004. The building's height is 100 feet or higher.
- 881. David is correct. The two conditions that exist that allowed David to silence **that** fire alarm and reset the FACP, are:
  (1) The building is off-line with the Central Monitoring Station, and (2) It has been confirmed that it is an unwarranted/unnecessary alarm (false). After making his announcements indicating the false alarm, David can silence the fire alarm and reset the FACP. Since the system is off-line, the central monitoring station is NOT calling FDNY.
- 882. The Fire Department Connections (FDC) located on the outside of the building to bring water into the building from the fire hydrant. The colors of the caps (covers) are as follows: Green = Sprinklers, Red = Standpipe, Yellow = Combination Sprinkler/Standpipe, and Silver = Non-Automatic (Dry).
- 883. Because the Licensed Master Plumber (LMP) showed to the building, then it was a residential building. LMP are restricted and cannot be assigned to Group B and Group R-1 properties, but are recognized to do work in residential buildings (Group R-2) with 30 sprinkler heads or less without a Booster Pump.
- 884. Thomas is correct. Phase I cannot be overridden by any other features the elevator might have as part of their design. Even an elevator being operated on Independent/Manual mode, will recall to Floor 1 when the fire alarm activates from an automatic alarm initiating device from a floor that the elevator stops on.
- 885. The FLSD candidate will be tested on Floors 1-20, which is the hotel (Group R-1) section of this 46-story building. Because Floors 21-45 are residential apartments (Group R-2), where people live, the FLSD candidate will not be tested on those floors as residential floors/buildings are not required to have FLSDs. The FLSD candidate will not be tested on Floor 46 as it is a place of public assembly (Group A).
- 886. The Waterflow Switch triggered the fire alarm on FL-10. Waterflow Switches only state the floor number where the fire is located. They do not identify a location on the floor where the fire is because there is typically only one Waterflow Switch per floor in sprinklered buildings. The height of the building is 100 feet or more, which were mandated to be sprinklered by July 1, 2019, by LL26 of 2004: Emergency Action Plan.
- 887. Brian the porter is correct. They were pointing to the wall (or floor or ceiling or door). The building's walls, floors, ceilings, and doors are known as passive barriers because they protect people from harm without taking any action.
- 888. In Active Shooter situations, the FLSD is not mandated to release the fail-safe locks from the FACP. Because the FLSD did not release the fail -safe locks, the people were trapped in Stairwell C, allowing the shooter to murder them. The 17 people who survived discharged Stairwell C on the street level, and discharged to the public walkway (outside) or to the Main Lobby (FL-1) and then proceeded to go to the Assembly Area. The people in Stairwells A and B discharged on Floor 1 since fail-safe locks affect all the stairwells.
- 889. The building has a Multi-Zone Standpipe Systems consisting of multiple Gravity Tanks serving different sections of the building. The building is a high-rise (over 75 feet), because all high-rises must have Standpipe Systems. One Gravity Tank is definitely on the Roof to service Floors 40-70. The people (likely the Engineering Dept.) have the Certificate of Fitness S-14 for Multi-Zone Standpipe Systems, providing personal supervision 24/7.
- 890. The Gravity Tank on the roof is a mixed-use tank providing water to the Standpipe System and for Domestic use of water (other than the Standpipe System). For example, the tank contains a total of 20,000 gallons of water. 8,000 gallons are for Domestic use and 12,000 gallons are for the Standpipe System (Fire Reserve). Because people are using Page **74** of **84** / radianttraining.com / info@radianttraining.com / 212-213-3434

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the domestic water (bathrooms, kitchens, etc.), the gallons deplete inside the tank, and when the water level goes down to 12,000 gallons, the tank is refilled to 20,000 gallons of water. The tank can never have less than the required amount of water for the Standpipe System: 12,000 gallons.

- 891. Ben, the FLS BES is correct. Drapes must not be placed over exit doors, or otherwise be located to conceal or obstruct an exit. Even if the drapes would only be blocking the exit door for only six hours, it is illegal to obstruct the exit door for any period of time. George (Deputy FLSD) and Ben (FLS BES) are both working on Saturday because the event planners invited more than 100 people, requiring George to come in on Saturday (non-business hours) and work the event.
- 892. The building was constructed under the 1968 Building Code because of the wording on the sign. What is the matter with the sign? The words "... instructed otherwise." were reversed on the sign. The words should read "... otherwise instructed," according to the 1968 Building Code.
- 893. This person is a member of the FLS Brigade. This FLS Brigade member exchanged the information with the firefighters while on the floor <u>below</u> the fire floor. He waited for the arrival of the firefighters, exchanged information with them, and then reported to the Fire Command Center for additional instructions from the FLSD.
- 894. Peter is correct. When a building has cross-over smoke detectors: when the first smoke detector detects smoke, it will trigger a Supervisory Signal to the Fire Alarm Control Panel (FACP). When the second smoke detector detects the smoke, THEN will the fire alarm activate.
- 895. The fire was on Staten Island. This is the number to the FDNY Borough Dispatch Office for Staten Island (aka Richmond County).
- 896. Certificates of Occupancy (COO) dated after June 1, 2016, must be compliant with the requirement of installing the room number identification sign at the base of the frame of the door to easily identify the room number in situations where smoke might obscure the eye-level room identification sign.
- 897. When the contractors mistakenly removed the fire escape, they removed a system of transportation that the building had in place in the event of a fire (or other) emergency. The Department of Buildings shut down the building and informed all the dwellers that they would have to vacate the building until the fire escape is re-installed. The risk of injury/death increased for the residents when the fire escape was removed because now, they only had one internal stairwell to use in the event of an emergency.
- 898. Valve-Regulated Lead Acid (VRLA) batteries. The batteries are typically installed to protect computers from shutting down should there be a loss of power in the building. Uninterruptable Power Supply (UPS) batteries eliminate the absence of power or down-time that emergency generators usually give (1-10 seconds). Because these batteries contain chemicals, then the sign should read (sample): "VRLA Battery System, High Voltage, 300 volts, 250 amps." UPS systems are identified in the Comprehensive Fire Safety and Emergency Action Plans.
- 899. The sign is posted where a commercial cooking system is installed (restaurants). The portable fire extinguisher's travel distance is 30 feet. The sign is posted because in the "real world", restaurant employees tend to seek and use the portable fire extinguisher rather than activate the fire extinguishing (Ansul) system . . . to not activate the fire alarm and disturb the diners.
- 900. The National Fire Protection Association (NFPA) published a report that indicated that in hospitals (facilities that care for the sick), between 2009 and 2013, 39% of fires happened between FL-2 and FL-6.
- 901. The Chief Engineer is correct as Actuation Switches must be installed at between 10 and 20 feet from the commercial cooking equipment. Actuation Switches are used to manually activate the fire suppression systems in commercial kitchens.

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- 902. The remaining 10,000 gallons of water are for Domestic Use, which is use of water in a building for OTHER than sprinklers and standpipes. The Certificate of Fitness Holder S-14 for Multi-Zone Standpipe Systems must be present in the building at all times to explain the system to the FDNY.
- 903. He looked up at the lamp post and saw an orange light on top of it. That is how the intersection with the fire alarm pull box is identified. He activated the pull box and informed the operator of the fire and building address.
- 904. The Fire Guard is correct. Persons conducting a Fire Watch for Impairment cannot do other tasks, they are only allowed to conduct the Fire Watch.
- 905. The FLSD prevented Paul from conducting the hot work project because there MUST be a separate person holding the Certificate of Fitness F-60: Fire Guard for Torch Operations. One person with the two certificates is unlawful.
- 906. When charging more than five (5) Lithium-Ion batteries, the room must have ventilation and a self-closing door.
- 907. Besides the Fire Emergency course, candidates must also attend and pass the EAP/Non-Fire Emergency course and the Active Shooter/Medical Emergency course in order to be able to schedule the FDNY N-85 and Z-89 exams.
- 908. Richard is correct. Emotional-support dogs could be of **any** breed and must be allowed in the building if the owner of the dog identifies the dog as an emotional-support animal. Only dogs may be identified as emotional-support animals, as well as service animals, which are dogs that conduct a task for the owner.
- 909. There is an active shooter on FL-20. The FDNY arrived at the building before the NYPD because of the manual pull station activation. The NYPD must neutralize the shooter before the FDNY responds to FL-20 to address the fire alarm and determine if there is a fire.
- 910. The plan approved by the FDNY for this property is a Fire Safety and Evacuation Plan. These Plans do not include Emergency Action Plan (EAP) emergencies; therefore the candidates receive T-89s. If the property had a Comprehensive Fire Safety and Emergency Action Plan, then the candidates would have received F-89s.
- 911. The FDNY knows when a fire hydrant or Fire Department Connections (FDCs) are not functioning because they have a white disc on them. White discs indicate a full impairment.
- 912. The signs with white letters on red backgrounds are found INSIDE the building. Signs with red letters on white backgrounds are found OUTSIDE the building. The signs are made of metal as sprinklers and standpipes are water-based fire suppression systems.
- 913. Fire Safety Personnel hold the Certificate of Fitness F-03/04 for places of public assembly (ex: concert halls). Their primary objective is to prevent fires during the concert and to assist the concertgoers in evacuating the place of assembly should there be a fire emergency.
- 914. Thomas made the entry in the logbook. Thomas holds the RSOE Q-01. Jim is not an engineer (no Q-01), and Anthony, the FLSD, does not hold a Q-01.
- 915. The FDNY is correct. When FLSD Comprehensive on-site exams are administered at 4p Monday to Thursday or on Saturday mornings, there is OT that is charged by the FDNY to compensate the examiners. The invoice is likely to be between \$750.00 and \$1,000.00.
- 916. The building's fire alarm system is an Interior Fire Alarm (IFA) system that requires that the fire alarm tone be manually activated from the FACP. There is an FLSD in this building because it is a high-rise building (over 75 feet in height), even though the IFA does not have a mic.

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- 917. Yes. Buildings on roads that the FDNY's Engine and Ladder trucks cannot enter because the road is too narrow must be sprinklered.
- 918. James was found in the corridor/hallway on the 37<sup>th</sup> floor. The Exit Access is the part of the means of egress that "leads from any occupied portion of a building, structure or premises to an Exit (Stairwell)." The FDNY personnel from the Ladder Company/Ladder Truck found James, as they prioritize rescuing people trapped in building fires.
- 919. The door which discharged directly to 24<sup>th</sup> Street had a delayed egress system that failed. The delayed egress system, which allows a door to remain locked for as many as 15 seconds during normal hours, failed. The delayed egress system should have been disabled when the fire alarm activated and the door should have swung open when the panic bar was activated. The eight dead were crushed to death by the force of the people behind them.
- 920. The Lever House is the second building built in NYC with a glass exterior (1952). The FLSD is correct in his statement. Glass is non-load bearing (glass cannot hold up a building). The glass panes are attached to the floor plates, creating a glass exterior wall or Curtain Wall.
- 921. None. Peter is in an apartment/residential building, where people **live**. Apartment/residential buildings are classified as Group R-2 by the 2008 Building Code. Hotels are classified Group R-1 (temporary stay), Homeless Shelters are classified Group R-1 (temporary stay) and commercial office buildings are classified Group B.
- 922. The FLSD is correct. It is "unlawful to install or maintain . . . a device that has the physical appearance of fire protection equipment but that does not perform a fire protection function."
- 923. No. Manual pull stations do NOT shut down Heat, Ventilation and Air Conditioning (HVAC) systems.
- 924. Neither! The people who are allowed to perform those tasks are Certificate of Fitness Holders S-98: Fire Alarm Systems Inspection, Testing and Service Technicians (Citywide). These individuals typically work for fire alarm system companies.
- 925. No one cares as Jockey Pumps do not fight fires. Even if you have a Jockey Pump in the building, it is NOT called out in the Fire Safety and Evacuation Plan or Comprehensive Fire Safety and Emergency Action Plan. Jockey Pumps "operate when there is a slight drop in pressure due to the leakage within a system or pressure surge." The FDNY Inspector will not ask the FLSD candidate during the On-Site exam if the building has a Jockey Pump.
- 926. Butterfly Valves. These valves are open when the yellow "Butterfly" is vertical (in the direction of the pipe) and closed when the butterfly is perpendicular to the pipe.
- 927. The candidate is taking the Certificate of Fitness F-80 exam for Coordinator of Fire Safety and Alarm Systems in Homeless Shelters. The F-80 mandates that candidates attend a class, and test at the school and at the FDNY. Because he was not given the Frequency Charts, then it was not the F-89 (N-85) and he has not taken the (Z-89) or the S-56 because he is working in an occupied building (S-56 is for Construction Site Fire Safety Manager), and it is not the Refrigeration System Operating Engineer Q-01 because the Q-01 is a Certificate of Qualification (not a Certificate of Fitness).
- 928. It was a Residential building, as Master Plumbers do not conduct work in hotels or office buildings. They are limited to Residential buildings with 30 sprinkler heads or less. The person who greeted the Master Plumber was the building's superintendent.
- 929. Pendant sprinkler heads of the quartz bulb type or fusible links type MUST be installed whenever there is a drop-down artificial ceiling. If uprights are installed . . . then the water will stay in the Plenum. The Plenum is the space between an actual ceiling and an artificial ceiling, which hides air conditioning duct work, pipes, etc. The cover plates on the sprinkler heads are white as they cannot be painted, even though the ceiling was painted blue. Paint on the cover plates could prevent the sprinkler head from fusing (activating) at the correct temperature . . . making it inoperative.

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- 930. The Master Fire Suppression Piping Contractor (MFSPC) is correct. If the building has between 1 and 300 sprinkler heads . . . then you must have a minimum of six spares for every type of sprinkler head. Since the building only has two sprinkler heads that activate at different temperatures . . . then there have to be six spares that fuse at 130 degrees Fahrenheit and six spares that fuse at 150 degrees Fahrenheit. The building has 12 spares (6 at 130 degrees and 6 at 150 degrees).
- 931. Gates and barriers must be openable by the FDNY Citywide Standard 1620 Key. The FDNY must have access to the building to control and extinguish the fire. The FDNY cannot leave after arriving because they could not get into the building. If the 1620 Key cannot open gates and barriers, then the FDNY will forcibly enter the building . . . causing property damage to the entry doors.
- 932. It is illegal to overcrowd a space where the means of egress will be impeded or obstructed should there be an emergency. The total number of people allowed (staff and visors) cannot be more than the Occupancy Load indicated on the Certificate of Occupancy for the premises. The FDNY has the authority to terminate the event, vacate the premises, or enforce lawful occupancy.
- 933. The event planners approved the client's request to place curtains over the EXIT doors for the duration of the event. This action is illegal as EXIT doors cannot be blocked so that they are not visible to the occupants. The FLSD informed the event staff that the curtains that are blocking the EXIT doors must be removed so that the emergency EXIT doors are visible in the event of a fire or other emergency.
- 934. The 1968 Building Code required that the elevator lobby (landing) emergency signs state: "In case of fire, use stairs unless otherwise instructed." The 2008 Building Code changed the wording to read: "In fire emergency, do not use elevator, use exit stairs." The building was built between 1968 and 2008. After the word "instructed" it should have stated "by the Fire Department." The top of the sign cannot be installed more than six (6) feet from the floor.
- 935. The property manager is correct. The monthly 30-minute test of the emergency generator may be conducted only by the following people: (1) FLSD, (2) Q-01, (3) Electrician or holding a special electrician's license from the Department of Buildings (4) stationary or high-pressure boiler operating engineer or (5) a registered design professional (people who are authorized to do or practice a specific design profession (architects/engineers)).
- 936. The water that is being referred to is the water in the Gravity Tank that will be used for sprinkler and standpipe protection in the building. The FLSD called the sprinkler and standpipe company (contractor) to address the temperature problem as the water temperature in fire protection systems must be no lower than 40 degrees Fahrenheit. The licensed Master Fire Suppression Piping Contractor showed up to the building to address the temperature problem and resolve the problem.
- 937. The FDC cap color should be yellow as the building has a combination sprinkler/standpipe system. The red cover needs to be painted/replaced with a yellow cover to indicate a combination sprinkler/standpipe system. It is not uncommon to see wrong colors or faded colors on FDCs.
- 938. Smoke shafts. Buildings that are fully sprinklered are exempt from the smoke shaft requirements. Since 1984, all new construction in NYC must be sprinkled, hence one would have to go to buildings constructed before 1984 to find smoke shafts.
- 939. The Director of Security is correct. Although the building is a low rise, the fact that the total gross area exceeds 100,000 square feet requires the installation of an emergency generator. Emergency Generators protect people in buildings when there is a loss of electrical power by providing power to life safety systems.
- 940. The 1994 Clean Air Act, a federal law, prohibits the production and importation of <u>Halon 1211</u> and <u>1301</u>, a fire extinguishing agent described as a "clean agent" as it leaves no residue after being discharged.

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- 941. Because the "gasoline container" diagram and the "electrical cord" diagram are crossed out, but the "trash bin" diagram is not crossed out . . . then it means that the portable fire extinguisher is water-based (Class A Fires). The container's color is silver.
- 942. Only one fire guard is required per hot work operation. However, there are four fire guards because the operation is taking place on the Roof and on a floor where there is an opening to the floor below the hot work operations floor that is within 35 feet of the torch operator. For example there is a fire guard on the Roof and the floor below the Roof. There is a fire guard on FL-45 and FL-44 because there is an opening that is within the 35-foot radius of the location of the hot work operator between FL-45 and FL-44.
- 943. A loss of power/electricity in a building does not endanger the occupants. The EAP should not have been activated by the FLSD as occupants' lives were not at risk. The FLSD should just have used the public address system to inform the occupants to shelter in place, not evacuate. If Con Edison personnel had informed the FLSD that the building would not get power for four (4) days, then the FLSD should have ordered the occupants to evacuate, but not because there was emergency, but because the building would not have normal power for four days. A loss of power is an inconvenience, not an emergency.
- 944. The FLSD is looking at the Elevation Diagram of the BIC. The Elevation Diagram is the top diagram that shows vertical blue lines for the elevators and vertical green lines for the emergency stairwells. On the left side of the diagram are the floor numbers and on the right side are Roof Setbacks (if the building has any).
- 945. The FLSD made an entry in Box 10 using a marker or label. Because the BIC is laminated with factual information about your building, then temporary considerations must be made in Box 10 using a marker or label. Once the construction ends on March 20<sup>th</sup>, then the entry in Box 10 is removed.
- 946. Neither. The Emergency Action Plan (EAP) program records must be retained for a period of no less than five (5) years. The Fire Safety program records are retained for a period no less than three (3) years. When the property has a Combined Logbook, then records are retained for no less than five (5) years. The Logbook ends on December 31, and is retained for either three (3) years (Fire) or five (5) years (EAP).
- 947. Yes. Because the FLSD candidate only studied the BIC, he was not aware of the location of the Assembly Areas, which are NOT listed on the BIC. FLSD candidates must study the Comprehensive Fire Safety and Emergency Action Plan or the Fire Safety and Evacuation Plan AND the BIC, but NEVER the BIC only because the BIC has limited information, when preparing for the On-Site Exam.
- 948. The FLSD is correct. Persons holding the Refrigeration System Operating Engineer Certificate of Qualification Q-01 are NOT authorized to test the sprinkler system's waterflow switches. The RSOE must also have the Certificate of Fitness for Sprinkler Systems Citywide S-12 in order to be authorized to test the waterflow switches every quarter.
- 949. Occupancy Loading (OL) is the terminology used to indicate how many people are allowed to be on each floor (individual floor occupancy). The official OL is indicated in the Certificate of Occupancy (COO) and transferred to the Comprehensive Fire Safety and Emergency Action Plans and to the Fire Safety and Evacuation Plans. The Plans indicate the total number of people in the building in the Daytime, Nighttime, and weekends. The FLSD candidate must know this data for the On-Site Exam.
- 950. The Emergency Planning and Preparedness Unit (EPPU) of the Bureau of Fire Prevention is the unit of the FDNY that receives, reviews, and accepts/approves Comprehensive Fire Safety and Emergency Action Plans and Fire Safety and Evacuation Plans. They may be reached via email at <a href="mailto:plans-in-mailto:pla
- 951. Local Law 26 of 2004 states that buildings with a height of 100 feet or more, that were built before 1984 and not sprinkled, mut be sprinklered by July 1, 2019.

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- 952. Peter is correct. Residential Fire Safety Guides and Notices only exist in Residential Buildings (Group R-2), where typically there are no FLSDs or BESs. Because Tom, the FLSD and Peter, the BES, are both working in the same building, 380 Wash Street is a Commercial Office Building (Group B) and has a Comprehensive Fire Safety and Emergency Action Plan. This is the Plan that both the FLSD and BES execute in a Group B property.
- 952. Local Law No. 41 of 1978 was introduced for the "protection of places of assembly." It requires emergency lighting, sprinklers, fire alarm systems, fire extinguishers, etc.
- 953. Brian passed the exam as he was detailed in explaining the stairwell. Tony failed the exam as he only knew that the building had a stairwell, and nothing else. The On-site Exam was administered Monday to Thursday at 10a, which is the only time that two candidates may take the On-site Exam at the same time.
- 954. Covid-19. The FDNY suspended the fire and EAP drills until they were reinstated on May 1, 2023. Covid-19 required the separation of the people to stay safe, and since fire and EAP drills group people together, risking the transferring of Covid-19 amongst people, the FDNY decided to suspend the "live" fire drills.
- 955. Yes, the FLSD is in violation of the Rules affecting the portable fire extinguishers. Portable fire extinguishers must be inspected every four weeks (monthly) and the FLSD is the responsible person who ensures that the portable fire extinguishers are inspected. However, no one from FDNY knew that the FLSD dated the tags "9/1/23" although he conducted the inspection on 9/25. FDNY Inspector Thomas did not issue a violation because the extinguishers were dated "9/1/23" when he inspected them. FDNY Inspector Thomas did not know and was not told that the FLSD conducted the actual inspection of the portable fire extinguishers the day before he arrived at the building on September 25, 2023. The FLSD can write either his initials or his name on the inspection tag.
- 956. Critical Operations Staff employee. The individual listed in the Comprehensive Fire Safety and Emergency Action Plan plays an essential service that the individual is required to perform for their employer even under emergency conditions.
- 957. No. Oxygen cannot be kept away from fuel (anything that burns) because Oxygen is in the air and envelopes all fuel at all times. Fire prevention is to keep heat away from fuel, not oxygen. Fuel and Oxygen are ever-present, but not the heat. If you keep the heat away, then the Fire Triangle will not be created. You need fuel, heat and Oxygen to create the Fire Triangle.
- 958. The fire went through the Incipient Stage, the Growth Stage, the Fully Developed Stage and is now at the Decay (Burnout) Stage. The fire is about to extinguish.
- 959. Yes. The Searcher is correct as the Sun's heat travels via electro-magnetic waves. Heat radiates in all directions, unnoticed until it strikes an object. In buildings with non-load bearing glass curtain walls . . . the Sun's heat can pass through the glass windows . . . igniting objects inside the building.
- 960. A Backdraft. It is an explosion that happens when Oxygen is introduced into a room full of hot gases. FDNY personnel must be aware of possible Backdrafts as the explosion may cause injury/death to FDNY personnel.
- 961. Yes. A Rollover occurs when ignited fire gases rise to the ceiling and spread out horizontally. A Flashover is a sudden, simultaneous ignition of everything in a room. This is the most dangerous stage of fire development. Hot gases rise to the ceiling, heat radiates downward and temperatures soar to as much as 1,000 degrees Fahrenheit. A Backdraft is when there is an explosion that happens when Oxygen is introduced into a room full of hot gases.
- 962. No. The activation of the Central Station (Office) Trip Switch would require the Central Monitoring Station to contact the FDNY as the building is on-line. The paper fire was extinguished in two seconds. No need to contact the Central Station/FDNY as it was a micro-fire (small in size) that did not endanger people.

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- 963. The Warden Phone at the FACP cannot be used to call a peripheral phone in the building. He spoke to no one on the 44<sup>th</sup> Floor or any other floor. The property is a Commercial Office Building (Group B) because a BES is on staff. Hotels (Group R-1) do not have BESs on staff.
- 964. Jerry is a Licensed Master Fire Suppression Piping Contractor (MFSPC) and also holds the certificate of fitness for sprinklers (S-12) and for standpipes (S-13).
- 965. Total Head is the amount of pressure that is used to discharge water from a Fire Pump. The Total Head is measured in Pounds per Square Inch or PSI. The higher the PSI rating . . . the greater is the pressure at which the water can be discharged from the Fire Pump.
- 966. The water is dripping from the Automatic Ball Drip Valve because the 5-Year Hydrostatic Test of the Fire Department Connections (FDC) is being conducted under the supervision of the FDNY Inspector. The FDNY Inspector does not work for the building nor is he a contractor of the building. The FDNY Inspector was there five years ago as the Hydrostatic Test is executed every five years.
- 967. No. The FDNY was supposed to go inside the building, to the Fire Command Center, to the floor where the fire alarm activated, inspected the floor to ensure that there was no fire, inform the FLSD to reset the FACP and signed the FLSD Logbook to indicate that they responded to the fire alarm.
- 968. None of the rooms listed. The Central Station Transmitter Box is typically found in the Telephone Frame Room (TFR) in the Cellar. This is the room that houses all the telephone equipment for telephone service for the building. The Central Station gets notified via telephone lines connecting the building and the central station, hence the TFR is typically where the transmitter is found.
- 969. Commercial Office Building Group Classification B (2008 Building Code) and E (1968 Building Code).
- 970. The item being referred to is a mirror. Mirrors cannot be installed in or adjacent to any exit in such a manner as to confuse the direction of exit. The FLSD is correct.
- 971. The property manager is correct. A blackout only requires an announcement by the FLSD, informing the occupants of the loss of electricity, and not the activation of the EAP. The FLSD should have informed the entire building to Shelter in Place (remain where they are). A blackout is not an emergency, especially in buildings with emergency generators. Con Edison would determine when the building would get power back. If Con Edison states that the building would not get electricity back for five days, then a controlled Total Evacuation would be executed . . . and the tenants would return when the building gets back power.
- 972. The main use of the property is a hotel (Group R-1), which does not require the presence of FLSDs because there is no warden phone and the hotel is a low rise. This hotel requires the presence of an S-95 holder since the fire alarm system does not have a Warden Phone for two-way voice communication. The hotel is a low-rise or 75 feet or less in height. The hotel is located between 8<sup>th</sup> and 9<sup>th</sup> Avenue as 100 numbers are assigned to buildings between avenues beginning with Fifth Avenue and going West (Between 5<sup>th</sup> and 6<sup>th</sup> Avenue: 1-100, between 6<sup>th</sup> and 7<sup>th</sup> Avenue: 101-200, between 7<sup>th</sup> and 8<sup>th</sup> Avenue: 201-300, between 8<sup>th</sup> and 9<sup>th</sup> Avenue: 301-400, etc.)
- 973. Two FLSDs are required per shift because there are two FACPs, one for each of the two buildings (that now make up one hotel).
- 974. NFPA Standard 72.
- 975. The hotel has Portable Warden Phones (PWP). The FLS Brigade reported to the Fire Command Center (FCC) to collect the PWPs and then proceeded to execute their tasks. The hotel has jacks on the walls on the same spot on every floor, where the FLS Brigade members plug the PWP to speak to the FLSD. Some of the hotels with Portable Warden Phones, as on 2024, are: The W Hotel Times Square, the Westin Hotel Times Square, and the Hotel St. James.

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- 976. Hugh does not work for a fire alarm company. If he did, then he would have held the Certificate of Fitness S-78 for Cleaning and Testing of Smoke Detectors Citywide. The Certificate of Fitness F-78 for Cleaning and Testing of Smoke Detectors allows the holder to work at the premises and must possess the necessary tools, instruments, or other equipment to clean and test the smoke detectors. Hugh is authorized to clean and test the smoke detectors in the building.
- 977. The Deputy FLSD is correct. This citation was known as a "Notice of Violation." Now is known as a "Fire Department Summons."
- 978. The Sprinkler Riser. High-rises (buildings over 75 feet) are required to have a Standpipe Riser. This building is a low-rise that does not require a Standpipe System . . . hence the pipe is the Sprinkler Riser, which provides water to all the floors. Buildings constructed after 1984 must be sprinkled.
- 979. No, it is not OK. FDCs cannot be obstructed. The FDNY must have immediate access to the FDCs in the event of a fire emergency. The clearance on FDCs is 36 in. in width, 36 in. in depth and 78 in. in height. The color of the FDC caps is green as the building is sprinklered, and because it is a low rise, there is no Standpipe System (red caps).
- 980. The construction workers cut the Standpipe Riser on the Cellar Level. The construction of the building was immediately terminated because if there is a fire, the FDNY would not be able to get fire hydrant water to the fire floor. This is why there is an S-56 holder at all construction sites, to ensure that the construction workers are not breaking rules and regulations relative to their safety while constructing the building.
- 981. The Waterflow Switch was disabled. When alarm initiating devices are disabled, then the fire alarm does not go off. The alarm initiating devices are smoke detectors, heat detectors, manual pull stations and in sprinklered building: waterflow switches. The lives of the occupants were at an increased risk since the audible fire alarm did not activate because the point number was disabled.
- 982. The sides of the building are not protected by scaffolding because the distance between the south wall and the north wall of the building and the walls of the neighboring buildings (south side and north side) is 12 inches or less.
- 983. Jack is correct. When the 2642 and 1620 keys are placed in the key switch inside the elevator and moved to the "HOLD" position, the Passenger Panel is disabled. The FDNY uses the 1620 key. FLSDs use the 2642 key, of which there must be six (6) keys at all times at the Fire Command Center.
- 984. No! Yes, waterflow switches recall the bank of elevators serving the floor where the waterflow switch activated.
- 985. The FLSD is correct. The building is in New York City. No matter who are the occupants of the building or what language they speak, the no smoking signs MUST be posted in English as the primary language, and then additional signs may be posted in other languages. The "No Smoking" signs cannot be obstructed, removed, or rendered illegible.
- 986. They all went home. This is a very likely scenario if a Total Evacuation is ordered on a Friday at 4:30p.
- 987. John holds the Certificate of Fitness F-03 for "Indoor Place of Assembly Safety Personnel." He works in a Place of Assembly such as Madison Square Garden, Radio City Music Hall, Barclay's Center, Metropolitan Opera House, Carnegie Hall, City Center, Town Hall, Yankees Stadium, City Field, etc. John is responsible for fire safety in an approved place of assembly. He ensures that the patrons are safe during the performances.
- 988. Sprinklers/Sprinklered
- 989. Charlie was the Fire Safety/EAP Director between 2004, when Local Law 26 of 2004: Emergency Action Plan, was introduced and 2014, when the Fire Code eliminated the title of "Fire Safety/EAP Director" and replaced it with "Fire and Life Safety Director." Charlie worked in a commercial office building (Group B) as LL26/2004 did not affect the hotel industry (Group R-1).

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- 990. The FLS Building Evacuation Supervisor (BES) was being trained by the FLSD. The training was the Initial training on non-fire emergencies, which lasts three hours. The training is taking place in a commercial office building (Group B) as there are no FLS BESs in hotels (Group R-1).
- 991. Conduction. Conduction is the passage of heat energy through or within a material because of direct contact.
- 992. The Director of Security is correct because Beam Smoke Detectors are designed for high-ceiling spaces so that the fire alarm activates earlier rather than later. The Beam Smoke Detectors are installed at about 30 feet from the floor in spaces like Madison Square Garden, which has a high ceiling. The Crowd Control Manager at Madison Square Garden is also correct.
- 993. David Polanco (aka Subway Rat) stopped singing because his microphone and speakers shut off. In places of assembly like Barclays Center it is required that the concert sound systems be muted during a fire alarm activation so that the patrons are able to hear the fire alarm. The installer of the fire alarm system will generally provide the installer of the sound system with a set of dry relay contacts to initiate a sequence of control that is well defined in the project specifications and acceptable to FDNY.
- 994. <u>Fire and Life Safety Director F-89</u>, <u>Coordinator of Fire Safety and Alarm Systems F-80</u>, and the <u>Construction Site Fire Safety Manager S-56</u>. There is an impairment of an installed and approved fire alarm system, sprinkler system or standpipe system requiring F-01 holders to patrol the premises hourly until the impairment is corrected. In homeless shelters, where there are F-02 holders who patrol the shelter hourly, F-01s are not required when there is an impairment.
- 995. The orange tags were placed on the sprinkler control valves by the Master Fire Suppression Piping Contractor (MFSPC). He placed orange tags because the sprinkler system has a critical deficiency which must be corrected within 30 days. Examples of critical deficiencies are: (1) the water level in the tank is not correct, (2) temperature is less than 40 degrees Fahrenheit in the Pump Room, (3) piping may be subject to freezing conditions.
- 996. There is an impairment of the sprinkler, standpipe or fire alarm system in the building. The red tag was given to the FLSD by the Master Fire Suppression Piping Contractor (MFSPC) to continually be reminded that the building has an impairment. Fire Guards holding the <u>C of F F-01 Fire Guard for Impairment</u> are working 24/7 until the impairment is corrected.
- 997. An impairment of one of the fire protection systems just ended (sprinkler/standpipe/fire alarm system). The standpipe system was impaired as the white discs were removed from the <u>red</u> FDCs. The Fire Guards holding the F-01 for Impairment, who were patrolling the building during the impairment, were sent home.
- 998. The door has the apartment number marking posted at the base of the door frame (top of the marking is not more than 12 in. from the floor) to facilitate firefighting and emergency rescue operations at the premises. The markings allow firefighters to quickly identify the unit and perform search and rescue operations. All residential buildings (Group R-2) must be in compliance with this Rule (Fire Rule 505-02) when the COO is dated after June 1, 2016.
- 999. The FLSD is correct. When the square footage of a floor exceeds 7,500 sq. ft., whether the building is sprinkled or not sprinklered, an additional DFW is required to protect the floor. Because each floor is 8,000 sq. ft. (more than 7, 500 sq. ft.), then two DFWs are needed per floor. Only one Fire Warden is required per floor.
- 1,000. The emergency lights, operated by batteries, shut down. Batteries protect the means of aggress for 90 minutes only.

Hope you enjoyed answering these 1,000 scenarios. Thank you.

Elvis Polanco, MS, CPP

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