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This is a project that I decided to do, that is collecting documents and paper trail on how to perform pyro or any special effects in a theater safely. It involved me consulting 3 different people, each of which that represent the different areas in which the safety procedures need to be met. One cannot work without the other, and if any one of the procedures is not followed, the entire production goes without it use. I interviewed three people; Jim skely from the Public theater, Jean gilus from NYCCT, and J&M effects. Jim is the Director of theater projects and safety, and his role in my interview, was being the venues perspective in terms of safety. If effects wanted to happen, he was the one to sign for it. Jean is the Fires safety personnel in NYCCT, and his roles is the safety inside the building in case of fires or emergencies. He is the one that is the medium between the buildings and the FDNY in case they arrive. J&M are the people that are essentially the performers in this idea. They are the ones supplying or performing the effect is the deem it too much for any singular person to do so. The objects I would be getting, would have hopefully, have been all the permits and licenses that relate to pyro and effects, from handling to storing them. It also includes any requirements somebody might need, since with any logical thought, these needs would be passed through the FDNY. A lot of companies that came up in my searches were; NFPA, OSHA, and the FDNY, all of which completely necessary. NFPA, is the National Fire Protection Association, OSHA being the Occupational Safety and Health Association, the FDNY being the Fire Department of New York City. All of these have their rules pertaining to effects and doing pyrotechnics, the FDNY in particular, takes direct charge in anything involving fire or explosives within the city. OSHA and NFPA are the overall safety regulators, that set the safety standards, the NFPA being the open standard for fire regulations in the country.

I start with my trial of interviews with the Public theatre. Being in an established venue helped in my understanding on what actually happens within them, and Jim Szekely was an important part of that process. As the safety director of the public theater, Jim is the one that makes sure all of the productions in the theater meet their safety standards. When special effects are involved, there is a few he needs to do. He fills an intent form that he shows the FDNY, who then will acknowledge it, and inspect the venue. The intent form goes with an entire checklist: from the owner's signature, to the permit for public place of assembly. These are all criteria required from the FDNY, because they take the likelihood of any kind of explosives or open flames inside an establishment very seriously. The owner's signature for example, is the building owner's consent to the performance of said effects in their building, while the public place of assembly permit, makes sure the building will comply with a predetermined capacity. This among other things in the form lets the FDNY know that the facility is knowledgeable about their performances.

I went on to interview Jean Gilus, who is the fire safety director of NYCCT. Jean is the person that assists the FDNY when they arrive to the building in case of emergencies. He is present for all performances that happen at the school, and makes sure emergency plans are followed and practiced, fire alarm system is working properly and reviews what it is a production would want to do within the facility. He is a holder of a f-85 certificate of fitness, which has given him the required training to be a Director. To perform any kind of Special effects in his proximity, he needs to be informed of the effect, and consults in a private materials list whether or not the amount of the effect is in capable hands of the performers. With any effect, regardless, he must consult with the FDNY, since any trigger of the fire alarms from the building's system will call an unnecessary visit from the FDNY. His certificate can replace f-25 and f-28 COFs and must complete a active shooter and medical emergency preparedness course to obtain one.

For the pyrotechnic there are multiple things they are required to have to be one. He would need to already have experience with the three classes of Pyro A,B, and C documented in the e-18, 19, and 27 respectively. The application will make the person a certificated pyrotechnician in the state of New York. This is required and in case of emergency as well, one would also need to have insurance covering up to \$1,000,000. This if hired by a company, is what a pyro technic would bring to a venue, which all covers the use of smoke or open flame on a stage.

There is a myriad of documents that I have found corresponding to the use of pyro in any venue. An example of an owner's letter to the city of NY to clarify the use of pyro is one necessary document. A certificate of public place of assembly is also necessary, so the Fire department and the DOB know the building complies with its codes. Copies of those with certificates of fitness cards, who are trained to handle the small flames or smoke (usually the fire safety director, but if it is a bigger effect a technician will be hired to do so). A site diagram, or plot so the FDNY know exactly where the exits are for the venue. Also general liability insurance is also needed for the FDNY, so they know the potential costs of damages. This comes from a letter of intent/Permit application issued to and by the FDNY explosives unit. They are a specific branch of the FDNY that manages the use, and storage of explosives, in this case the use of open flames, smoke, and blank cartridges in a venue. The NFPA code that pertains to my research is specifically and wholly within the code 1126 of the NFPA code. NYC data that I found, is mostly in particular consents, such as the letter of intent, and owner's consent. Another form of code one must comply with is the New York State Penal Law #450. The OSHA code that is specific to the OSHA code 1910 subpart E for means of egress, G for occupational health and environmental control, H for hazardous materials, I for personal protection and L for fire protection.

If I were to have wanted to use fog in the Vorhees theater I would have filed a letter of intent to the explosive's unit of the FDNY. I would have consulted with Jean of my use of fog in the theater, so somebody would be able to manage the fire sprinkler system. It would be deactivated for the duration of the show, and the letter will advise the FDNY of the use of fog during the show hours. The person manning the fire system will be the security desk, since they are the closest means of safety. They will be advised by Jean or somebody with comms inside or an actual emergency (or an actual fire) so they could

reactivate the fire system within the theater. If one were to do fire or pyro, one would still need to write the letter of intent, encompassing the duration of the show, the description of the effect and the requirements (certificates and permits). After the FDNY has deemed the theater safe when they come for an inspection of the venue, the venue has the OK to go on with their performances, so long as they follow their own protocol.

“UNITED STATES DEPARTMENT OF LABOR.” *Occupational Safety and Health Administration*, www.osha.gov/SLTC/pyrotechnic/display.html.

“NFPA 1126.” *NFPA 1126: Standard for the Use of Pyrotechnics Before a Proximate Audience*, www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1126.

“Licensing and Other Provisions Relating To Fireworks.” *NY State Senate*, 2 Mar. 2019, www.nysenate.gov/legislation/laws/PEN/P4TWA405.

“Department of Labor.” *New Pyrotechnic Licensing Requirements - New York State Department of Labor*, www.labor.ny.gov/workerprotection/safetyhealth/New_Pyro_Lic_Requirements.shtm.

Jean Gilus

Jim Szekely

Gylnn Borders