MIAMIBEACH

City of Miami Beach, 1700 Convention Center Drive, Miami Beach, Florida 33139, www.miamibeachfl.gov

FIRE DEPARTMENT Fire Prevention Division
1680 Meridian Avenue, 2nd Floor
Tel: 305-673-7123 , Fax: 305-673-1085

March 16, 2010

RE: Nightclub Fire Safety

Dear Nightclub Owner/Operator:

During the next few weeks, thousands of people will be visiting the nightclubs/lounges in our city as we approach the Winter Music Conference, and Memorial Day Weekend. Therefore, I would like to take this opportunity to remind you of fire safety requirements in your establishment.

As shown below, there have been several tragic fires in nightclubs or similar venues in the U.S. and other countries in the last 20 years. These fires have resulted in numerous deaths, casualties, and costly property damages.

Happy Land Social Club, NY, USA	March 25, 1990	87 dead
Weierkang Club, Taiwan	February 15, 1995	64 dead
Ozone Disco Club, Phillipines	March 18, 1996	160 dead
Disco Dance Hall, Sweden	October 28, 1998	63 dead
Disco Dance Hall, China	December 25, 2000	309 dead
The Station Nightclub, RI, USA	February 20, 2003	100 dead
Cromagnon Club, Argentina	December 30, 2004	194 dead
Lame Horse Nightclub, Russia	December 4, 2009	154 dead
Santika Pub, Thailand	January 1, 2009	66 dead

Although the emphasis above is fire, it is not fire alone that can cause casualties in a nightclub. For instance, there were 21 deaths when patrons rushed to one exit after a fight broke out inside the E2 nightclub in Chicago on February 17, 2003. The club was overcrowded and had several code violations.

The Miami Beach Fire Department has been working with the nightclub industry for many years to prevent a potential tragedy here. A fire or other emergency in a nightclub could result in many injuries and possibly deaths adversely impacting our community in so many ways. We must continue to work together to ensure that we do not suffer the same devastating results as in other cities. We encourage you to make a commitment to fire safety by implementing the following ten (10) components as part of your safety program.

I. Fire Code Compliance
II. Fire Protection Systems
III. Building/Fire Permits
IV. Occupant Load
V. Interior Finish
VI. Inspections
VII. Employee Training
VIII. Enforcement
IX. Promoters/Performers
X. Technology Enhancements

The attached literature further explains these ten components. Please take a few minutes to review and study the attached documents. Our Public Education section is eager to assist you in conducting fire safety training for you and your staff.

During the next few months, we will be conducting annual fire inspections of each nightclub and bar lounge. Please contact Fire Protection Analyst, Robert Newmans, at 305-673-7123 to set up an appointment as soon as possible.

Sincerely,

Sonia Flores Machen, P.E.
Fire Marshal

MIAMIBEACH

FIRE DEPARTMENT
FIRE PREVENTION DIVISION

NIGHTCLUB FIRE SAFETY

PART I: Fire Code Compliance

The City of Miami Beach Fire Prevention Division enforces the Florida Fire Prevention Code-2007 as adopted by the State of Florida. The Florida Fire Prevention Code consists of NFPA 1 and NFPA 101, *The Life Safety Code*, and numerous other NFPA codes and standards.

The nightclub owner is responsible for complying with all the requirements as stated in the Florida Fire Prevention Code. Many of the deadly fires in recent history resulted due to one or several violations to fire code requirements. Please see list of fires below.

United States:

Rhythm Dance Hall, Nathez, MS	April 23, 1940	207 dead
Cocoanut Nightclub, Boston, MA	November 28, 1942	494 dead
Beverly Hills Supper Club, KY	May 28, 1977	165 dead
Happy Land Social Club, Bronx, NY	March 25, 1990	87 dead
The Station Nightclub, Warwick, RI	February 20, 2003	100 dead

Other countries:

Club Cinq, France	November 20, 1971	143 dead
Alcaha 20 Disco, Spain	December 17, 1983	81 dead
Weierkang Club, Taiwan	February 15, 1995	64 dead
Ozone Disco Club, Phillipines	March 18, 1996	160 dead
Disco Dance Hall, Sweden	October 28, 1998	63 dead
Disco Dance Hall, China	December 25, 2000	309 dead
Cromagnon Club, Argentina	December 30, 2004	194 dead
Santika Pub, Thailand	January 1, 2009	66 dead
Lame Horse Nightclub, Russia	December 4, 2009	154 dead

In addition, there were 21 deaths when patrons rushed to one exit after a fight broke out inside the E2 nightclub in Chicago on February 17, 2003. The club was overcrowded and had several code violations.

The nightclub owners and managers are responsible for fire safety in the establishment. In the Station fire above, the band manager pled guilty to 100 counts of involuntary manslaughter under a plea bargain with prosecutors facing up to 10 years in prison. Superior Court Judge sentenced him to 15 years in prison, with four to serve and 11 years suspended, plus three years probation, for his role in setting off the fire. The nightclub owners changed their pleas from "not guilty" to "no contest". One of the owners was sentenced to 15 years in prison, with four to serve and 11 years suspended, plus three years probation. The second nightclub owner received a 10-year suspended sentence, three years probation, and 500 hours of community service.

As of August 2008, nearly $175 million has been offered to the families of the victims of the fire by various defendants in settlement.

NIGHTCLUB FIRE SAFETY

An assembly occupancy is generally defined as an occupancy used for a gathering of 50 or more persons for deliberation, entertainment, eating, drinking, amusement or similar uses. Assembly occupancies might include the following: auditoriums, theatres, assembly halls, nightclubs, dance halls, drinking establishments, and exhibition halls among others.

Fire in assembly occupancies have shown to be some of the most deadly when the proper features, systems, and construction materials were not present. Nightclubs, theaters and auditoriums differ from office buildings, for example, because they contain a large number of people in one main space. NFPA code provisions mandate that a considerable number of safety systems and features be present in order to keep everyone safe should a fire occur. The level of safety is achieved through the combination of multiple safeguards that are provided.

The NFPA 101, *The Life Safety Code*, is the primary source for the requirements for nightclub and bar lounges. Committee of experts have developed many of these requirements in response to investigations and analysis of actual incidents. The code book is divided into two chapters, Chapter 13 addresses requirements for existing assembly occupancies and Chapter 12 addresses requirements for new assembly occupancies (new is defined as newly constructed or renovated as of January 1, 2009). If a nightclub is issued a certificate of occupancy as of January 1, 2009 and complied with the new chapter, the owner cannot change or lessen the requirements down to the requirements in Chapter 13.

The FFPC requirements are too many to list in this pamphlet. However, the major items in Chapter 13 – Existing assembly occupancies are listed below.

- Occupant load. The occupant load is the number of persons for whom means of egress and other provisions are required. This number cannot be exceeded for any reason. See Part IV for more details.
- Means of egress. The means of egress consists of the path leading to the exit, the exit door or exit stair, and the path from the exit leading to the public street. All means of egress components shall be in accordance with NFPA 101 Chapter 13 and Chapter 7. The means of egress components include doors, stairs, handrails, guardrails, etc. The main entrance capacity must be able to accommodate one-half of the total occupant load for existing and two-thirds for new nightclubs.

- Number of exits. Existing nightclubs must have at least two separate exits when occupant load is 600 or fewer. More exits are required if the egress capacity is not met with two exits. At least three separate exits are required when occupant load is more than 600 but fewer than 1000 people.

- Arrangement of exits. The main entrance/exit shall be of sufficient clear width to be able to accommodate one-half of the total occupant load. In new nightclubs, the main entrance shall accommodate two-thirds of the total occupant load. The common path of travel and dead-end corridors are limited to certain distances. Means of egress is not permitted through kitchens, storerooms, restrooms, closets, stages, or hazardous areas. The furniture layout plans showing means of egress must be approved by the Fire Marshal's office.

- Travel distance. Exits must be located so that the travel distance from any point in the nightclub to the nearest exit cannot be more than 200 feet.

- Discharge from exits. The path leading from the exit door to the public way (street, public alley) shall be clear and unobstructed at all times.

- Normal illumination. The means of egress must have continuous illumination at all times that the nightclub is occupied. The minimum illumination for floors and walking surfaces shall be at least 1 ft-candle (new stairs require 10 ft-candle).

- Emergency lighting. Emergency lighting shall be provided for at least 90 minutes in the event of failure of normal lighting. The emergency lighting system shall be arranged to provide the required illumination automatically due to failure of public utility, opening of circuit breaker or fuse, or manual acts.

- Exit Signs. All exit doors must have clearly visible, illuminated exit sign over the door or to the side of the door as indicated in the Code. Directional signs may be required to direct occupants to the nearest exit.

- Protection of Vertical openings. All vertical openings must be enclosed or protected as indicated in the Code to prevent fire spread to other levels.

- Protection of Hazard. Service equipment (boilers, large transformers, etc.), hazardous operations, storage rooms may require separation of at least fire resistance rating of 1 hour and/or sprinkler protection.

- Interior finish. Interior wall and ceiling finish materials shall be Class A or Class B in general assembly areas. Any changes to the interior finish must be approved by the Fire Marshal's Office. Please see Part V of this series.

- Fire Alarm System. See Part II of this series.

- Sprinkler System. See Part II of this series.

- Operating features. Several operating features are regulated by the Florida Fire Prevention Code, such as ignition sources, combustible materials, emergency plan, employee traning, etc. For example, fire caused by so-called "controlled" fire are well documented; therefore, control of ignition sources is also of crucial importance such as pyrotechnics, open flame, and cooking. Please see attached fire prevention standard prohibiting the use of pyrotechnics and open flame in nightclubs or similar venues.

NIGHTCLUB FIRE SAFETY

Among all structure fires, nightclub fires in the US are proportionately few in number. However, maximum or over-capacity crowds at popular nightclubs create the potential for high numbers of casualties in the event of a fire or other incident.

A common safety violation at nightclubs is locked, blocked or impeded exits. Management must make this a priority to ensure that the nightclub does not have this problem by inspecting all exit components prior to and routinely during operation.

The most common causes of fire at nightclubs and bars are incendiary, electrical, cooking, and smoking. Incendiary fires at nightclubs are nearly twice as frequent as those in all structures. (*source U.S. Fire Administration/Nightclub Fire in 2000*)

The highest deaths and casualties are often caused by lack of sufficient exits. Even if sufficient number of exits is provided, human nature is that most patrons will attempt to leave out of the same door in which they entered, rather than looking for other exits. Therefore, the majority of the crowd may rush to the front entrance. Sometimes the patrons become packed so tightly near the front door that the firefighters cannot enter. In The Station nightclub, several people fell in a pile in the main doorway, trapping everyone behind them inside.

PART II: Fire Protection Systems

The fire protection systems normally installed in nightclubs and bar lounges are sprinkler systems, fire alarm systems, and fire suppression systems. Each of these systems are designed based on NFPA codes and standards and must be maintained properly in order for the systems to function as designed.

In the State of Florida, all fire protection systems must be installed, inspected, and serviced by licensed contractors. The nightclub owner must hire only State licensed contractors for inspection and service as required by the Florida Fire Prevention Code.

Sprinkler Systems

Existing nightclubs or establishments of similar usage are required to have an automatic sprinkler system where the occupant load exceeds 300 people. New nightclubs or similar usage (built or renovated since 1/1/2009) are required to have an automatic sprinkler system where the occupant load exceeds 100 people.

The sprinkler system must be inspected and tested by a licensed contractor as indicated in NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems. The contractor must follow guidelines in SFM Rule 69A-46, Fire Protection System Contractors and Systems.

The contractor is licensed as a Fire Protection Contractor I or II issued by the State Fire Marshal's Office. Please check the SFM website for contractors with the proper license. http://www.myfloridacfo.com/SFM/bfpr/bfpr-search.asp

All deficiencies must be corrected as soon as possible. If the system is not operational, the contractor must notify the building owner, occupant, and Fire Marshal's office within 24 hours of the inspection date.

Fire Alarm Systems

A fire alarm system is required for nightclubs or similar usage where the occupant load exceeds 300 people.

The fire alarm system must be inspected and tested by a licensed contractor as indicated in NFPA 72, National Fire Alarm Code. The contractor must follow guidelines in SFM Rule 69A-48, Fire Safety Standards for Fire Alarm Systems.

The fire alarm contractors are licensed as EC or EF contractors issued by the Department of Business and Professional Regulation (DBPR). Please check the DBPR website for contractors with the proper license. www.myfloridalicense.com/dbpr/index.html

All deficiencies must be corrected as soon as possible. If the system is not operational, the contractor must notify the building owner, occupant, and Fire Marshal's office within 24 hours of the inspection date.

Please attached Fire Prevention Standard on fire alarm systems for additional information.

Fire Suppression Systems

The fire suppression system would be installed in the kitchen, if the nightclub provides food for normal operation. Each commercial cooking appliance must be protected with an automatic extinguishing system. The system is designed to discharge suppression agent through nozzles strategically placed over the particular cooking appliances. It is important that cooking appliances are not moved or relocated without the prior evaluation from the licensed contractor, and may also require a new fire permit.

This type of suppression system must be inspected every six (6) months in accordance with NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations. The contractor must follow guidelines in SFM Rule 69A-21, Fire Extinguishers and Pre-Engineered Systems.

The contractor is licensed as a Fire Equipment Class D issued by the State Fire Marshal's Office. Please check the SFM website for contractors with the proper license. http://www.myfloridacfo.com/SFM/bfpr/bfpr-search.asp

Fire Extinguishers

Fire extinguishers are required by code and must be maintained and service by a licensed dealer. The contractor must be licensed as Fire Equipment Class A, B, or C issued by the State Fire Marshal's Office. Please check the SFM website for properly licensed companies. http://www.myfloridacfo.com/SFM/bfpr/bfpr-search.asp

MIAMIBEACH

ANNUAL LIFE SAFETY SYSTEM INSPECTION/TEST REPORTS

RETURN COMPLETED CONTRACTOR FORMS TO:

MIAMI BEACH FIRE PREVENTION DIVISION
1680 MERIDIAN AVE.- SUITE 202
MIAMI BEACH , FL 33139
TELEPHONE: 305-673-7123
FAX : 305-673-1085

ATTENTION INSPECTOR: _____

The following lefe safety systems located that the following address have been inspected and or tested by contractors licensed to maintain each of the systems for proper operation, as required by the adopted codes/standards. Contractor certification forms for each of the applicable system must be attached to this sheet.

NAME OF BUILDING: _____

ADDRESS OF BUILDING: _____

TYPE OF OCCUPANCY (SPECIFIC USE): _____

NAME OF OWNER OR AGENT: _____

ADDRESS OF OWNER OR AGENT: _____

OWNER OR AGENT TELEPHONE : _____

LIFE SAFETY SYSTEM	FREQUENCY OF TEST	CURRENT SYSTEM STATUS (circle one)			REQUIRED TAGS PROVIDED (circle one)		CONTRACTOR CERTIFICATION FORMS ATTACHED (circle one)	
FIRE ALARM (NFPA 72)	ANNUALLY	N/A	OPERATIONAL	NOT OPERATIONAL	YES	NO	YES	NO
FIRE SPRINKLER (NFPA 13, 25)	ANNUALLY	N/A	OPERATIONAL	NOT OPERATIONAL	YES	NO	YES	NO
STANDPIPES (NFPA 14, 25)	ANNUALLY	N/A	OPERATIONAL	NOT OPERATIONAL	YES	NO	YES	NO
FIRE PUMP (NFPA 20,25)	ANNUALLY	N/A	OPERATIONAL	NOT OPERATIONAL	YES	NO	YES	NO
FIRE SUPPRESSION (NFPA 12, 12A, 17, 2001)	ANNUALLY	N/A	OPERATIONAL	NOT OPERATIONAL	YES	NO	YES	NO
HOOD SUPPRESSION (NFPA 96)	SEMIANNUALLY	N/A	OPERATIONAL	NOT OPERATIONAL	YES	NO	YES	NO
FIRE EXTINGUISHERS NFPA 10	ANNUALLY	N/A	OPERATIONAL	NOT OPERATIONAL	YES	NO	YES	NO
SMOKE GUARD/WON DOORS NFPA 105	ANNUALLY	N/A	OPERATIONAL	NOT OPERATIONAL	YES	NO	YES	NO

NOTE: A record/log shall be maintained for each of the systems listed above, and a tag or sticker shall be placed at the base of the system's control panel if applicable, showing the date, telephone number and name of the company performing the inspection and/or test.

_____ DATE

_____ SIGNATURE

The purpose of this FPS is to simply the requirements outlined in the Fire Alarm Ordinance adopted by Miami-Dade County.

Miami Dade Ordinance (08-27) amending Article III, Chapter 14 Code of Miami Dade County, Florida, related to maintenance requirements for Fire Alarm, and Sprinklers Systems was adopted on March 4th, 2008. This FPS provides Notice of Fire Alarm Policy Change for City of Miami Beach Fire Prevention Division effective January 1, 2009 to implement the abovementioned ordinance.

The purpose of the ordinance is to enhance the reliability of critical life safety systems primarily fire alarm and sprinkler systems, by increasing maintenance, and providing a runner service to reset, and repair non-functional systems. The building owner should note that improving reliability of life safety systems will significantly reduce the number, and length of required fire watch patrols, and reduce the number of nuisance alarms.

New Fire Alarm Systems:

- All new fire alarm systems must be certificated or placarded systems installed by a Listed company. A listing is obtained from a nationally recognized organization such as Underwriter's Laboratory (UL), Factory Mutual (FM), etc.
- The supervision of all new fire alarm systems, and new sprinkler systems installed in the jurisdiction of Miami Beach shall be by a listed Central Station or a listed Proprietary Supervision Station in compliance with the adopted edition of NFPA 72 that are in effect at the time of permit application.
- Service contract must be in place to provide all maintenance, service, and testing in accordance with the Listing and with NFPA 72. A service contract shall be in effect for the duration of the certification or placard providing all of the six elements of Central Station Service described in NFPA 72.
- Runner Service Agreement must be in place as part of the service contract above.
- Post a certificate or a placard within 36 inches of the main control panel.
- Exception for Existing Apartment occupancies installing a new fire alarm system: Central Station Monitoring is not required for buildings four (4) stories or less in height (FFPC-2007, NFPA 101, Section 31.3.4.3.5). However, system must be installed by a Listed contractor to ensure reliability of the system. The exception requires: a sign must be installed at each pull station reading "Local Alarm Only – In Case of Fire Call 911"; lettering 2 inches in height and 3/8 inch stroke width; red lettering on white background; sign located no higher than 4 inches above pull station; and one visual/audible appliance must be provided at approved location on outside wall.

Plan Review (Permitting):

- A permit will be issued to a contractor licensed in the State of Florida to install Fire Alarm system and listed by an approved third party verification agency (FM approval or UL.) to install Central Station Service Alarm System (submit copy of Listing), or
- A permit will be issued to a contractor licensed in the State of Florida to install Fire Alarm System, who may not be a Listed contractor, but shows on the plans that the installation will be performed by a Listed contractor. There must be a note on the plans documenting this process.
- Note on the plans indicating that the system is UL listed or FM approved and monitored by a listed central station or listed proprietary supervising station; or note must list signage requirements for exception granted under Section 31.3.4.3.5.

Inspection

- For all Central Station Service Fire Alarm System, a posted certification or placard must be provided at the time of Final Fire Inspection. No Final Fire Inspection shall be approved without proper proof and documentation. A posted U.L. fax-back acknowledgement will be accepted pending receipt of an original U.L. certification. The certification of placard shall be required to remain continuously in effect for the life of the system or until replaced by a new system.
- Runner Service information by the main panel or main entrance. (see details below)
- Service contract showing service for same time period as the time of certification.
- Documentation of UL/FM monitored central or proprietary supervising station.

Existing Fire Alarm Systems:

- Existing fire alarm systems and sprinkler systems not required to be monitored at the time of installation would not be required to be monitored by the Miami-Dade Ordinance 08-27.
- All existing systems monitored by a Central or Remote supervising station need not change to a Listed Central Station unless upgrades as required.
- All existing fire alarm systems and sprinkler systems must have a runner service agreement by 9/15/2009 (extended to 12/31/2009).
- All existing fire alarm systems must be tested and maintained by a licensed contractor in accordance with NFPA 72.
- Modification to an existing system does not constitute compliance with the Central Station requirements of this FPS. Replacement of existing system with a new fire alarm system would require compliance with this FPS. (See FPS NEWC-S14 for guidance on upgrade requirements)

Runner Service Agreement:

A Fire Alarm Runner Service agreement must be executed between owner and fire alarm company for all protected premises to include repair and restoring of the fire alarm system, including resetting, and silencing of all equipment transmitting fire alarm or supervisory signals to and off site premises location.

The Fire Alarm Runner is a technician who is qualified and licensed to inspect, test, and maintain fire alarm systems. The Fire Alarm runner service must be available to respond to the protected premises at any and all times within two (2) hours of notification of the runner service of any alarm or supervisory signal, and within four (4) hours of notification of any trouble signal.

The Fire Alarm Runner shall restore the fire alarm system to complete working order. In the event the runner cannot restore the fire alarm system to complete working order, the building, structure or occupancy may be subject to certain limitations, conditions, and restrictions including fire watch requirement, as determined by the authority having jurisdiction.

The owner shall conspicuously post at the main entrance to the alarm user's premises, a notice stating: **(1)** The name of an individual or alarm company able, and authorized to enter the premises, and deactivate the alarm; **(2)** Emergency telephone numbers by which those individuals can be reached at all times; **(3)** The names and address of the alarm user. The information must be kept current, and failure to update this information within forty eight (48) hours of any change constitutes a violation of this section.

Miami Dade Fire Department conducted a survey of approximately 100 alarm contractors to identify contracting options that will meet the requirements of the ordinance. Some contractors offer a Basic Cost Plan, which lists various services on a set fee schedule and payment is due only when service is provided. Other contractors offer a Full Service Plan, which provides for scheduled maintenance and testing, repairs, and runner service with labor included. It is believed that costs for contractual pre-negotiated services will be lower than services outside of a contract. Building owners are encouraged to shop for quotes from several licensed contractors to obtain competitive pricing.

References:

Florida Fire Prevention Code 2007 Edition
NFPA 72, The Fire Alarm Code, 2002 Edition
Miami-Dade County Code, Chapter 14

Sonia Flores Machen, P.E.
Fire Marshal

1/1/09
Date Issued

TOPIC: **Fire Alarm Systems Upgrades** STANDARD NO: NEWC-S14
 Revision 0

The purpose of this FPS is to identify when an existing fire alarm system has to be upgraded to a new fire alarm system and when work requires a fire alarm permit. A new fire alarm system has to comply with Miami Dade County Code, Section 14-66 as summarized in FPS NEWC-S13.

All work performed on a fire alarm system must be performed by a State of Florida licensed contractor in accordance with NFPA 72, *The Fire Alarm Code*, and the listing requirements. Some work can be done without a fire alarm permit and some work requires a fire alarm permit issued by the Miami Beach Fire Department.

When are permits required?

A fire alarm permit IS NOT required:

- When the contractor is replacing a damaged initiating device or notification appliance with same kind of device or appliance. For example, a damaged smoke detector can be replaced with the same kind of detector, same voltage demand, and no new wiring without obtaining a permit.

A fire alarm permit IS required:

- When the contractor is replacing the MAIN PANEL with the same kind of panel or a different panel.
- When the contractor changes the sequence of operations or programming essential to the evacuation of the occupants.
- When the contractor relocates, adds, or deletes any component of the fire alarm system.
- When the contractor has to rewire any part of the fire alarm system.
- Any work requiring upgrading to a new system as described below.

When to upgrade to a new fire alarm system?

An existing fire alarm system may remain in operation when installed in accordance with the Fire Alarm Code at the time of installation and remains functional, effective, serviceable, and operational. However, existing fire alarm systems would be required to be upgraded to a new fire alarm system in the following cases:

- Any upgrade, renovation, addition, repair, or modernization of any existing Fire Alarm System which includes the replacement of the master control unit with anything other than the same make, and model as the existing master control unit. (Note: replacing a "motherboard" in kind is not considered an upgrade to the system)

- The addition of a fire alarm control panel which will provide or replace any of the function of the existing master control unit, except notification (booster panels), shall be required to have the complete fire alarm system in compliance with all the requirements for new installations.

- The addition of any component that will make the existing system non-compliant. For example, system must be resettable at one main control panel.

- If an upgrade renovation, addition, repair or modernizations are greater than one-half of the entire fire alarm system measured in components or square footage of the building it is protecting.

- Any existing fire alarm system determined by the AHJ to be inoperable for any reason. For example, obsolete parts that cannot be replaced, and system is therefore, not serviceable and inoperable.

- A fire alarm system which has caused more than four nuisance alarms within any three hundred sixty-five (365) days period.

- Existing fire alarm systems not meeting a minimum sound pressure level of at least 15 dBA above the average ambient sound level, or 5 dBA above maximum sound level having a duration of at least sixty seconds, whichever is greater, measured 1.5 meters above the floor in the occupiable area.

- Existing fire alarm systems not meeting the minimum sound level in sleeping rooms or areas with all intervening barriers closed. The minimum sound level is 70 dBA, or 75 dBA for systems installed after 2002.

References:

Florida Fire Prevention Code 2007 Edition
NFPA 72 2002 Edition
Miami-Dade County Code, Chapter 14

Sonia Flores Machen, P.E.
Fire Marshal

7/1/09
Date Issued

Miami Beach Fire Department
FIRE PREVENTION DIVISION
STANDARDS

TOPIC: **Portable Fire Extinguishers**

STANDARD NO: NEWC-S06
EXINSP-S01
Revision 1

This Fire Prevention Standard replaces Revision 0 on the same subject.

The Florida Fire Prevention Code (FFPC)-2004 became effective January 1, 2005 and it consists of NFPA 1-2003 Edition and NFPA 101-2003 Edition. The new FFPC has changed the requirements for fire extinguishers.

NFPA 101-2003 still does not require fire extinguishers in all occupancies. However, NFPA 1, Section 13.6 states that fire extinguishers are required in all occupancies, except one and two family dwellings. This requirement applies to both new and existing buildings. There are no exceptions and no *grandfather clause*. Therefore, the new FFPC-2004 requires fire extinguishers in all existing and new occupancies.

The guidelines below will be followed in order to enforce this new requirement:

Zone Inspectors – Existing Buildings:
The Fire Inspector will require the installation of fire extinguishers during the annual fire inspections, certificate of use (CU) inspections, occupant load inspections. You can approve the CU without the extinguishers and write a notice of violation (NOV). Please give the owner 90 days to comply. A permit is not required for the installation of fire extinguishers. During the re-inspection, you will verify that the right fire extinguisher was selected and installed within the correct travel distance.

New Construction – Plan Review:
The Fire Protection Analyst (FPA) will require the installation of fire extinguishers during all new plans submitted. New submittals must be rejected if the plans do not show fire extinguishers. The plans shall indicate the type of extinguisher, location, and how it is to be mounted based on NFPA 1 and NFPA 10. The FPA will check that the type of extinguisher is adequate and travel distance meets code.

When revisions to existing permits (projects already under construction) are submitted, then the FPA will make a note on the computer and inform contractor of the fire extinguisher requirement. However, the plans will not be rejected on that basis alone.

New Construction – Inspections:
During the next inspection of any type, the FPA will inform the general contractor of this new requirement and document it on the Building permit in the computer. This will give the

contractor and architect time to incorporate the installation of the fire extinguishers in the building.

New Construction – Inspections:
If the contractor is asking for a temporary certificate of occupancy (TCO) now and has not been informed during the inspection above, then the TCO can be approved without the fire extinguishers since the permit was approved without the fire extinguishers. The FPA will include this in the punch list to be completed at certificate of occupancy (CO).

New Construction – Inspections:
If the contractor is asking for a CO now, then the CO can be approved without the fire extinguishers since the permit was approved before this new requirement. The FPA will write an NOV for the installation of fire extinguishers and give the owner 90 days. The zone inspector will follow up.

Sonia Flores Machen, P.E.
Fire Marshal

7/8/05
Date Issued

Miami Beach Fire Department

FIRE PREVENTION DIVISION

STANDARDS

TOPIC: Backflow Preventers Testing

STANDARD NO: NEWC-S018
EXINSP-S05
Revision 0

This FPS will establish the testing requirements for backflow preventers installed in a fire protection water main.

Backflow Preventers are not required by the Fire Code. However, most sprinkler designers use the backflow preventer as the main shut off valve required in NFPA 13. If they choose to do so, the backflow preventer must be accessible and visible from the street.

Florida Dept of Environmental Protection (FDEP) requires public water systems to establish a cross-connection control program to detect and prevent cross-connections that create or may create an imminent and substantial danger to public health. Customers shall provide approved backflow preventers next to the service connection for the containment of their premises.

Protection requirements of the water supply are based on American Water Works Association (AWWA), Florida Building Code, and Miami-Dade County Ordinance O#06-158.

Miami Beach Public Works department is responsible for establishing and enforcing the Cross Connection Control Program. The Fire Prevention Division will assist Public Works in enforcement of this program by identifying non-compliant inspection/testing of these devices.

Backflow preventers must be certified at installation and annually by a certified backflow preventer tester. The individual must complete a training program approved by FDEP and then pass a test administered by Miami Dade County Trades Qualifying Board (CTQB). Contractors testing the backflow preventers in fire lines MUST be a fire sprinkler contractor as licensed by the State Fire Marshal's Office in addition the contractor must possess the tester certification. The contractor must have both licenses/certifications.

The contractor must conduct the inspection and testing of the backflow preventer as indicated in NFPA 25, Section 12.6 and must conduct the testing certification as required in the Miami-Dade County Ordinance. The contractor must install a tag on the device documenting annual certification.

New installation:
The Fire Protection Analyst must get a copy of the certification before final approval of the sprinkler system and send it to Public Works Department. The certification is a separate document from the NFPA 13 forms.

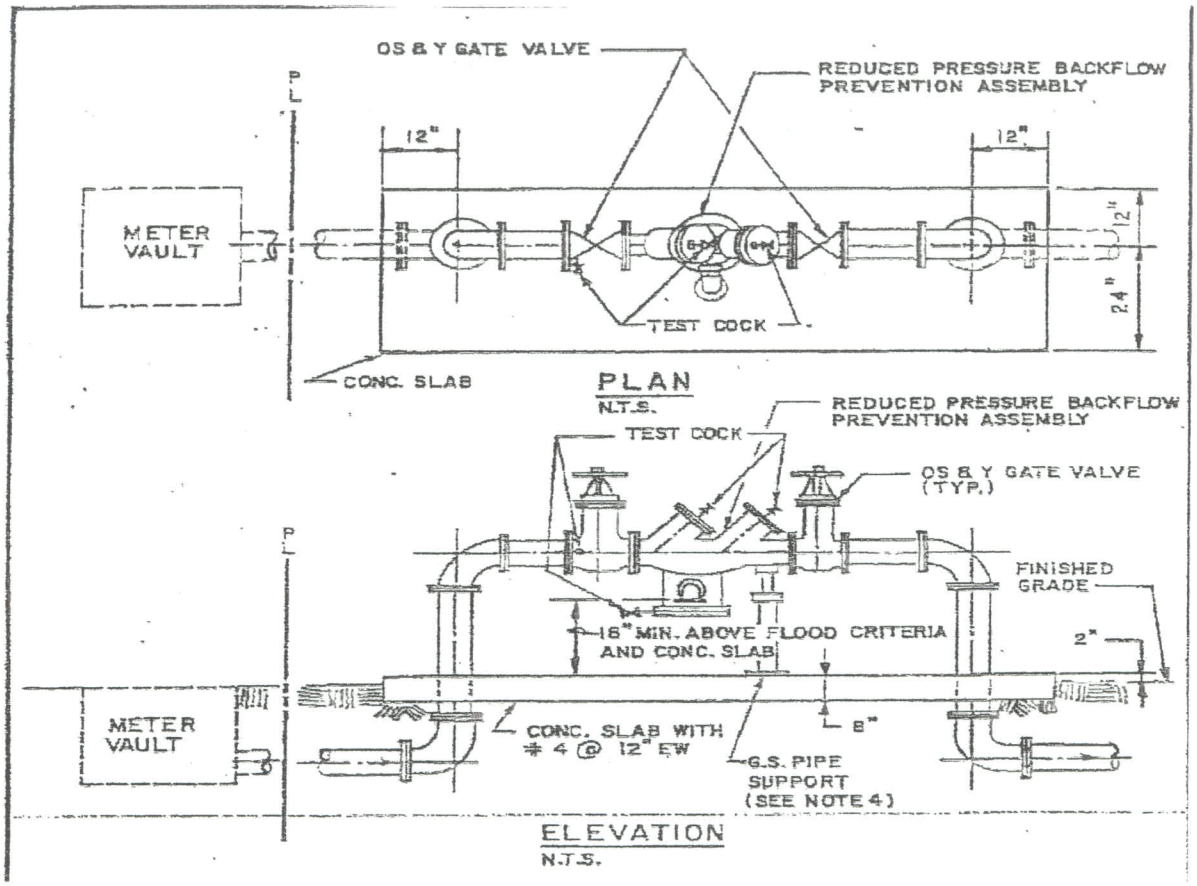
Existing installation:
The Fire Inspector must check for the annual testing certification (separate document) in addition to the sprinkler system NFPA 13/25 annual certification. If the backflow preventer has an expired certification (annual) or no certification, then write a deficiency notice (not NOV) to the owner based on Miami-Dade County Code Chapter 110. The owner or representative should sign the notice to acknowledge receipt. The fire inspector will forward the notice to Public Works Department. Personnel in Public Works are authorized to enforce the requirements of Chapter 110 and imposed penalties accordingly. If the domestic backflow preventer is next to the fire main, then the fire inspector can check for the tag on that backflow preventer as well as a courtesy to Public Works Dept. If it has no tag or it is expired, then the fire inspector can include that information in the deficiency notice described above. If the fire main device is okay, but the domestic device does not have proper certification, then send an email only since we have no jurisdiction over domestic lines.

Miami Beach Fire Department

FIRE PREVENTION DIVISION

STANDARDS

NOTE: Send documents to Percival Balgobin, Backflow Preventer Coordinator, Public Works Department or send emails to pbalgobin@miamibeachfl.gov.
Customer can use sample inspection form attached or form supplied by contractor.



Sonia Flores Machen, P.E.
Fire Marshal

8/31/09
Date Issued

PART III: Building/Fire Permits

Each commercial building must have a Certificate of Occupancy (CO) issued by the Building Official specifying the occupancy classification for that building or space. In the City of Miami Beach, each place of business must also have a Certificate of Use (CU) and an occupational license – now called Business Tax Receipt (BTR). The CUs and BTRs designate the kind of business permitted to operate in the building or space, which must be congruent with the classification of occupancy (CO).

A nightclub or bar lounge must have all three documents in order to operate in Miami Beach along with all other appropriate State and County documents. The nightclub owner is responsible for obtaining the certificates/license and renewing these documents accordingly. If a new nightclub is opening in a space where another nightclub was previously operating, then the owner must still make sure that the space is legally approved by the Building and Fire Departments for the nightclub. We have already experienced situations where the new owner assumed that he could open since there was an existing nightclub, and later discovered that the space never had a CO for assembly occupancy.

The nightclub owner must obtain building and fire permits for any renovation work in the building or space. Even if the work seems to be minor in value, it may require a building permit. For example, building a new bar or relocating the bar to another location would require a building permit. Any renovation work done may affect the furniture layout and occupant load calculations. The owner must hire licensed contractors to do any work in the building or space. By obtaining a building permit, the contractor will have to show that he has the correct license and insurance requirements. In addition, a building permit will require that City inspectors are called to conduct inspections throughout the project.

PART IV: Occupant Load/Overcrowding

The occupant load is the total number of persons that might occupy a building or portion thereof at any one time. This is the worst case scenario or the maximum probable number of occupants at any given time. The occupant load is the number of persons for whom means of egress and other provisions are required and shall be determined on the basis of the occupant load factor in NFPA 101, Table 7.3.1.2.

During normal operations, occupancy of certain areas may not occur or are modified based on furniture layout. The occupant content is also calculated based on Table 7.3.1.2 but it takes into account the normal use and furniture layout in order to calculate the maximum number of occupants. The occupant content is the actual number of total occupants permitted to occupy a floor area in accordance with the maximum capacity of the exits serving that space and calculated area. The occupant content may be the same as the occupant load or may be a lower number depending on furniture layout and exit capacity.

The occupant load number is reviewed during building plan review and adequate code provisions determined based on that number. The occupant content number is calculated during the occupant content permit phase after the owner has installed all furniture. The occupant content sign is approved by the Fire Marshal and must be posted in a conspicuous place.

Overcrowding conditions exist when the maximum number indicated on the occupant content sign is exceeded. The fire inspectors routinely check for overcrowding conditions during operating hours. If there is an overcrowding, a citation carrying a $200 or $500 fine will be issued to the owner. This fine will be increased substantially this year to discourage this practice. In addition, the Fire Marshal's office will begin suspending the business license/certificate of use for repeat violators.

Any changes to the furniture layout or square footage available must be approved by the Fire Marshal's office. The owner can apply for new occupant content permit in the Building Dept.

It is imperative that the personnel stationed at all doors monitor closely the number of people inside the club at all times. There must be someone counting people going in and people going out to determine the number of occupants inside. The employees and performers must also be added to the count prior to opening.

The personnel shall never allow the maximum number to be exceeded. If the club has reached maximum capacity, then the patrons should not be allowed to enter. The personnel shall hold the doors until enough people have exited the club.

In the event that the maximum number has been exceeded for whatever reason, then management must take immediate action to correct the situation.

PART V: Interior Finish

Several of the fires listed in Part I were a result of unapproved interior finish inside the nightclub. The Florida Fire Prevention Code has specific requirements for interior finish (wall, ceiling, and floor) in assembly occupancies. Existing nightclubs or bar lounges must comply with interior finish requirements as stated in NFPA 101, Chapter 13. New nightclubs constructed or renovated as of January 1, 2009, have to comply with the interior finish requirements in Chapter 12.

Interior finish is the exposed surfaces of walls, ceilings, and floors within buildings. Fire testing of materials is conducted for the purpose of evaluating flame spread and smoke development characteristics. Interior finish must comply with NFPA 101 and must be classified as Class A, B, or C depending on the location in the nightclub. The classification of the interior finish shall be that of the basic material used by itself or in combination with other materials when installed in combination.

Furnishings, Decorations, and Scenery are also regulated to ensure limited flame spread in an assembly occupancy. Fabrics and films used for decorative purposes, all draperies and curtains, and similar furnishings shall be in accordance with NFPA 101.

In some cases, the required flame spread or smoke development classification of existing surfaces of wall, partitions, columns and ceilings may be achieved by applying approved fire-retardant coatings. Such treatment must be applied by an approved third party company and the product used shall be tested, listed and labeled for application to the material to which they are applied. In other words, the treatment product must be approved for the specific material being treated; that is, not all materials can be treated. Fire-retardant coatings shall possess the desired degree of permanency and shall be maintained so as to retain the effectiveness of the treatment under the service conditions encountered in actual use.

It is the owner's responsibility to maintain the interior finish as approved. Some changes to the interior finish may require a building permit depending on the extent of the work. However, any change, regardless of how minor, to the interior finish materials does require approval by the Fire Marshal's office. This includes seasonal decorations for Halloween, Christmas, New Year's Eve, etc.

Controls based on flame spread characteristics; evaluation of existing interior finish is sometimes difficult. Where flame spread characteristics cannot be readily determined, the questionable material should be removed or treated with approved flame retardants. Where treatment cannot reduce flame spread to the required limits, material should be removed.

The purpose of interior finish requirements is to slow the flame spread across these surfaces and minimize smoke generation in order to allow additional time for occupants to relocate or evacuate the building.

Miami Beach Fire Department

FIRE PREVENTION DIVISION

STANDARDS

TOPIC: Interior Finishes | STANDARD NO: NEWC-S15

 | Revision 0

This Fire Prevention Standard (FPS) will help simplify the process for evaluating and complying with interior finish, contents, and furnishings provisions set forth by the FFPC - 2007 edition, NFPA 101 - Chapter 10 shall apply to new construction and exiting buildings.

The minimum requirements established in Section 10.2 - Interior Finishes and Section 10.3 - Content and Furnishings, must be specifically referenced in the applicable Occupancy Chapters in order for same to be required.

Plan Review (Permitting):

The architect of record must clearly identify the interior finish, contents, and furnishings provisions set forth by the FFPC. The architect must identify the type of interior finish to be used (i.e., carpet) and the rating (Class I) on the plans for each area. The fire plans examiner will confirm the rating with the requirements in FFPC.

Inspections:

Prior to the Final Inspection, the Contractor must submit the following documentation:

1. Manufacturer's material specifications and/or successful test results from a qualified testing laboratory, which demonstrates compliance with the applicable Standards listed below.
2. A complete binder with samples of all materials used separated by specific rooms or areas with the flame retardant certificate or specification mentioned above.
3. A Certified Letter from the Architect of Record which states that materials included in the binder are all inclusive at the time of Certificate of Occupancy and are in compliance with the requirements of NFPA 101 – Chapter 10.
4. For small jobs, the fire inspector will conduct a flame test (NFPA 705, *Recommended Practice for a Field Flame Test for Textiles and Films*) of random sample of materials. For major jobs, the owner/contractor must contract a third party company licensed and experienced in conducting field testing for interior finish requirements. The field testing is necessary to ensure that the material specified in the plans is the same material installed with the proper rating. Please note that the NFPA 705 test is limited to fabrics and film.
5. If the rating for interior finish or furnishings is achieved by application or treatment using a flame retardant coating, then the architect of record must provide the following documentation: 1) specification of product identifying a listing or certification by a nationally recognized agency; 2) documentation from the agency showing the final rating to be achieved on the specific material; 3) documentation on applicator's certification or experience; and 4) letter stating architect witnessed that application method complied with manufacturer's specification.
6. A photo album of each typical area/room of the building which clearly each interior elevation. The color photos must clearly show all materials installed at the time of final acceptance. This will serve as a record of the building interior finishes for future inspections.

The Occupancy Chapters contain the specific Classification requirements for the Interior Finishes. The Classification of interior finish specified shall be that of the basic material used by itself, or in combination with other materials, if used as such. The Classifications for each material and application must be based on the Standards listed in the Table below.

Fire Retardant Coatings applied by the manufacturer or in the field shall be tested, or shall be listed and labeled for the application to the material to which they are applied and shall comply with the requirements of NFPA 703, *Standard for Fire-Retardant – Treated Wood and Fire-Retardant Coating of Building Materials*. Fire-Retardant coatings shall be maintained so as to retain the effectiveness of the treatment as specified in the original certification.

Section 10.2 Interior Finishes
All new and existing Occupancy Chapters require that the Interior finish shall be in accordance with Section 10.2, which specifies the minimum Testing and Classification requirements for Walls and Ceilings and Floor Finish.

Section 10.3 Contents and Furnishings
Section 10.3 consists of three basic parts: 10.3.1 Draperies, 10.3.2.1 Upholstered Furniture, and 10.3.2.2 Mattresses.

The requirements of Section 10.3.1 (Draperies) must be met in the following Occupancy Chapters: New and Existing Assembly, New and Existing Educational, New and Existing Day-Care, New and Existing Health Care, New and Existing Ambulatory, New and Existing Detention and Correction, New and Existing Residential Board and Care, New and Existing Hotels.

The requirements of Section 10.3.2.1 (Upholstered Furniture) must be met in the following Occupancy Chapters: New and Existing Health Care, New and Existing Ambulatory, New and Existing Detention and Correction, New and Exiting Residential Board and Care.

The requirements of Section 10.3.2.2 (Mattresses) must be met in the following Occupancy Chapters: New and Existing Health Care, New and Existing Ambulatory, New and Exiting Detention and Correction, New and Exiting Residential Board and Care.

Table of Testing Standards – NFPA 101

Interior Wall and Ceiling Finishes	NFPA 225, *Standard Method of Test of Surface Burning Materials* ASTM E 84, *Standard Method of Test of Surface Burning Materials* UL 723, *Standard Method of Test of Surface Burning Materials*
Textile Wall and Ceiling Coverings & Expanded Vinyl Wall and Ceiling Materials	NFPA 265, *Standard Methods of Fire Test for Evaluating Room Fire Growth Contribution of Textile Coverings on Full height Panels and Walls* NFPA 286, *Standard Methods for Fire Test for Evaluating Contribution of Wall and Interior Finish to Room Fire Growth*
Interior Floor Finishes	ASTM D 2859, *Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.* (for carpet and carpet like interior floor finishes) (or) NFPA 253, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
Cellular Foamed Plastics	NFPA 286, *Standard methods of Fire Test for Evaluating Contribution of Wall and Ceiling interior to Room Fire Growth.* NFPA 1715, *Standard for Fire Test of Interior Finish Material* UL 1040, *Standard for Fire Test of Insulated Wall Construction* FM 4880, *Approval Standard for Class I Insulated Wall or Wall and Roof/Ceiling Panels; Plastic Interior Finish Materials; Plastic Exterior Building Panels; Wall/Ceiling Coating Systems; Interior or Exterior Finish Systems.* UL 1975, *Standard for Fire Test for Foamed Plastics Used for Decorative Purposes.*
Draperies, Curtains and other loosely hanging furnishings	NFPA 701 – *Standard Methods of Fire Test for Flame Propagation of Textiles and Films.*
Components of Upholstered Furniture	NFPA 260 , *Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered furniture* *ASTM E 1353, Standard Test Method for Cigarette Ignition Resistance of Components of Upholstered Furniture.*
Moc-up Composites of Upholstered Furniture	NFPA 261, *Standard Method of test for Determining Resistance of Moc-up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes* ASTM E 1352 *Standard Test Method for Cigarette Ignition Resistance off Moc-up Upholstered Furniture Material Assemblies*
Mattresses	16 CFR 1632, *Standard for Flammability of Mattresses and Mattress Pads.* ASTM E 1590, *Standard Test method for Fire Testing of Mattresses* (Only when the requirements of 10.3.4 are specifically referenced elsewhere)

Sonia Flores Machen, P.E.
Fire Marshal

7/1/09
Date Issued

PART VI: Inspections

As required in NFPA 101, Section 13.7.1, the owner shall inspect the means of egress to ensure it is maintained free of obstruction, and correct any deficiencies found, prior to each opening of the building to the public. The owner shall prepare and maintain records of the date and time of each inspection on approved forms, listing any deficiencies found and actions taken to correct them.

The owner shall implement an inspection program that includes daily and weekly inspections. The attached forms will guide the owner or management on the items to inspect.

The daily inspection can be assigned to different supervisory employees instead of the same person to provide a "fresh" look each day. The manager on duty must still conduct his/her inspection to ensure that the exit doors are unlocked and unobstructed.

The weekly inspection can be assigned to management staff to ensure that someone with authority is checking the major items as well as providing a quality check on the daily inspectors.

The fire department conducts several inspections throughout the year. A fire inspector responds to any complaints generated by the public to ensure that fire code hazards are eliminated. A fire inspector also conducts annual inspections and checks that fire code requirements are met. Before a new nightclub opens for business, a fire inspector must conduct a CU inspection. Finally, the fire inspectors conduct night inspections during operating hours during weekends and holidays.

A fire inspector will conduct an annual inspection of the nightclub and write a notice of violation upon identifying any code violations. The owner must be present during the inspection or designate staff members to be present. The violations identified must be corrected as soon as possible and within the time frame specified by the fire inspector. If the violations are not resolved, then the fire inspector will take the case to the Special Master proceedings. The Special Master may then impose fines in order to encourage compliance as soon as possible.

MIAMIBEACH

FIRE PREVENTION DIVISION
RECOMMENDED DAILY NIGHTCLUB CHECKLIST

Business Name_____ Address_____
Number of Exits_____Date_____ Checked by_____

While not intended to be an all inclusive list, the following items should be checked on a daily basis:

OCCUPANT LOAD	YES	NO	LOCATION
1. Is Occupant Load posted in a conspicuous location?			
2. Do you have a reliable means of counting and trained staff at the door?			
3. Are there crowd managers present? (1 Crowd Manager for every 250 persons is required)			
EGRESS ARRANGEMENT			
1. Do aisles & access ways have adequate widths?			
2. Are aisles clear & unobstructed?			
3. Are aisles & access ways clear of "Trip Hazards"?			
4. Are exit signs visible from anywhere in the club?			
5. Are exit signs lit properly?			
EXITS & EXIT DOORS			
1. Are exits clear & unobstructed? Check the path to the exit door, the exit stair (if applicable), and the path all the way to the public street or alley.			
2. Are exits clear of "Tripping Hazards"?			
3. Do exit doors have approved/required hardware?			
4. Do doors require less than 15-lb. force to release latch?			
5. Are exits lit properly?			
FIRE ALARM & OTHER FEATURES			
1. Is Fire Alarm panel clear?			
2. Are drapes/decorations flame retardant?			
3. Are fire extinguishers visible, accessible, and charged?			
STAIR ENCLOSURES			
1. Are stairs clear & unobstructed?			
2. Are stairs free of "Trip Hazards"?			
3. Are handrails firmly attached?			
4. Are doors self-closing & self-latching?			
5. Are stairs lit properly?			

COMMENTS/CORRECTIONS:

MIAMIBEACH

FIRE PREVENTION DIVISION
RECOMMENDED WEEKLY NIGHTCLUB CHECKLIST

Business Name_____ Address_____

Number of Exits_____ Date_____ Checked by_____

While not intended to be an all inclusive list, the following items should be checked on a weekly basis or when any changes have been made to the nightclub:

OCCUPANT LOAD	YES	NO	LOCATION
1 - 3 (See Daily Checklist)			
4. Is the furniture layout the same as shown on approved plans? Note: any changes must first be approved by Fire Marshal's Office			
EGRESS ARRANGEMENT			
1 - 5 (See Daily Checklist)			
6. Are exit signs mounted firmly?			
7. Do emergency lights work when test button is pushed?			
8. Are emergency lights mounted firmly?			
EXITS & EXIT DOORS			
1 - 5 (See Daily Checklist)			
6. Do emergency lights work when test button is pushed?			
7. Are emergency lights mounted firmly?			
8. Are corridor walls and ceilings intact?			
FIRE ALARM & OTHER SYSTEMS			
1 - 3 (See Daily Checklist)			
4. Are smoke detectors clear & unobstructed?			
5. Are strobes/horns clear & unobstructed?			
6. Are fire sprinklers clear & unobstructed?			
7. Has fire pump been tested?			
8. Are fire extinguishers visible, accesssible, and charged? Tags show inspection within last 12 months?			
9. Is kitchen hood system clear and unobstructed? Stickers / tags current?			
10. Has emergency generator been tested? Stickers / tags current?			
STAIR ENCLOSURES			
1 - 5 (See Daily Checklist)			
ELECTRICAL			
1. Are all circuit breaker panels and junction boxes covered?			
2. Have all extension cords been eliminated? (extension cords are not to be used in place of permanent wiring)			
OPERATION			
1. Have potential ignition sources been prohibited (i.e., pyrotechnics, open flame)?			
2. Has the Fire Marshal's Office approved any smoke effect, special lighting?			
3. Is the interior finish code compliant and approved? Note: Any changes to interior finish must first be approved by Fire Marshal's Office.			
4. Have seasonal drapery/curtains/decorations been treated & flame-tested?			
5. Have all employees ben trained and drills conducted on fire safety and evacuation?			

TOPIC: **Concealed Life Safety Equipment** STANDARD NO: NEWC-S19

Recently, we have seen architects attempting to use concealed fire alarm appliances and concealed emergency lighting fixtures. In the projects that have installed these devices, we have already witnessed that the equipment does not work as intended. Both products are listed by a nationally recognized laboratory to meet the respective code requirements. However, the function to "rotate" the device or expose the device has proven unreliable even during the new construction testing. This function will become worse over time in the existing building.

Emergency lighting:
The emergency lighting fixture is installed hidden behind a panel, which matches the wall finish. Upon power loss, the panel must rotate to expose the light fixture in order to provide the required illumination. We have tested these fixtures and the panel has failed to rotate. We have submitted a complaint to the manufacturer to determine the cause of the failure. As the AHJ, I am not authorizing the use of these fixtures since the rotating mechanism has been unreliable. This policy is based on the following sections of Florida Fire Prevention Code – 2007 Edition.

NFPA 1, Uniform Fire Code, Section 1.4.2 states the specific requirements of this Code shall be permitted to be altered by the AHJ to allow alternative methods that will secure equivalent fire safety, but in no case shall the alternative afford less fire safety than, in the judgment of the AHJ, that which would be provided by compliance with the provisions contained in this Code.

NFPA 1, Uniform Fire Code, Section 1.4.6 The AHJ shall approve such alternative construction systems, materials, or methods of design when it is substantiated that the standards of this Code are at least equaled. If, in the opinion of the AHJ, the standards of this code shall not be equaled by the alternative requested, approval for permanent work shall be refused.

NFPA 101, The Life Safety Code, Section 7.1.10.1 addresses means of egress reliability, and states that means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in case of fire or other emergency.

NFPA 101, The Life Safety Code, Section 7.9.2.3 states that the emergency lighting system shall be arranged to provide the required illumination automatically in the event of any interruption of normal lighting. Section 7.9.2.7 states that the emergency lighting system shall be either continuously in operation or shall be capable of repeated automatic operation without manual intervention. Section 7.8.2.1 states that illumination of means of egress shall be from a source considered reliable by the AHJ.

Fire Alarm Appliances:

The fire alarm notification appliances (horn, strobes) are installed behind a hidden panel, which matches the wall or ceiling finish. The occupant would not see any appliances in a building that does have a fire alarm system. When the fire alarm is activated, the panel must first rotate 180 degrees to expose the appliance. Failure of proper full rotation will render this appliance ineffective to provide the proper audible and visual requirements stated in the code. The rotating mechanism has already shown unreliable during initial installation and would become worse over time in an existing building. As the AHJ, I am not authorizing the use of these fixtures since the rotating mechanism has been unreliable. This policy is based on the following sections of The Florida Fire Prevention Code – 2007 Edition.

NFPA 1, Uniform Fire Code, Section 1.4.2 states the specific requirements of this Code shall be permitted to be altered by the AHJ to allow alternative methods that will secure equivalent fire safety, but in no case shall the alternative afford less fire safety than, in the judgment of the AHJ, that which would be provided by compliance with the provisions contained in this Code.

NFPA 1, Uniform Fire Code, Section 1.4.6 The AHJ shall approve such alternative construction systems, materials, or methods of design when it is substantiated that the standards of this Code are at least equaled. If, in the opinion of the AHJ, the standards of this code shall not be equaled by the alternative requested, approval for permanent work shall be refused.

NFP 101, The Life Safety Code, Section 9.6.1.4 states that all systems and components shall be approved for the purpose for which they are installed. Section 9.6.3.1 states that occupant notification shall be provided to alert occupants of a fire or other emergency.

The design professional or owner may appeal this policy to the Miami Dade County Fire Prevention and Safety Appeals Board.

Sonia Flores Machen, P.E.
Fire Marshal

9/16/09
Date Issued

Miami Beach Fire Department

FIRE PREVENTION DIVISION

STANDARDS

TOPIC: **Storage Over Doors**

STANDARD NO: EXINSP -S07
Revision 0

This FPS is to address storage found over exit doors during inspections. This policy is intended to protect occupants and firefighters.

Any storage over exit doors or above the means of egress shall be removed immediately since the storage will impede egress in the event of a fire. There shall not be any shelves along the wall over any exit door or any exit access door. Shelves on the wall must terminate at least 24 inches away from the door frame on each side. No shelves and no storage over the door would be permitted in any building. In the event of a fire, the shelves/storage can fall and block the means of egress or fall on occupants while attempting to evacuate. In addition, the potential of falling debris presents a safety hazard to firefighters going inside to rescue occupants and/or to execute fire suppression action.

The Florida Fire Prevention Code-2007 Edition, NFPA 1, Section 14.4.4. states:

> There shall be no storage above any component of the means of egress unless it is on a separate floor or mezzanine constructed in accordance with the Florida Building Code.

Although not specifically stated in the Code, the inspector must address storage over windows in the same manner as doors. Firefighters use windows for ventilation, rescue, etc. Any storage falling in front of windows will hinder firefighting operation and could cause injury to firefighters.

Sonia Flores Machen, P.E.
Fire Marshal

9/16/09
Date Issued

TOPIC: **Locking Devices** STANDARD NO: EXINSP-S10

This Fire Prevention Standard will clarify the code requirements for doors in the means of egress in existing mercantile, business, and assembly occupancies. The exceptions described below attempt to provide security protection and still comply with the Life Safety Code.

(A) All doors in the means of egress must have a knob, lever, or push bar to release a latch or lock in a single motion (No key, no tools, no special knowledge from the egress side).

Mercantile: NFPA 101, Section 37.2.2.2 and 7.2.1.5
Comply with (A):

> Exception: Main entrance ONLY can have a key operated lock on the door (the reason for this is that the doors would be unlocked for business operation). The locking device is of the type that is readily distinguishable as locked. There shall be a readily visible, durable sign on the door that reads: THIS DOOR TO REMAIN UNLOCKED WHEN THE BUILDING IS OCCUPIED (1 inch lettering). The same logic applies for a thumb-turn deadbolt lock, but a sign is not required. When the establishment is closed for operation, any occupant (staff) inside must have a key immediately available.

All other exit doors must follow (A) requirements. In a Class C mercantile, if the owner has installed a thumb-turn deadbolt lock for added security, then it can remain if it complies with one of the options below:

- The handle releases the latch and deadbolt lock with one single motion (i.e., as in hotel rooms)
- There is no other latch on the door (the door handles cannot have a latching mechanism). This hardware will only require one single motion to release the locks/latch since the door is just pushed open after unlocking the deadbolt.

Note: Panic hardware can be installed on any door instead of above hardware, if desired.

Business: NFPA 101, Section 39.2.2.2 and 7.2.1.5
Comply with **(A):**

> Exception: Main entrance ONLY can have a key operated lock on the door (*the reason for this is that the doors would be unlocked for business operation*). The locking device is of the type that is readily distinguishable as locked. There shall be a readily visible, durable sign on the door that reads: THIS DOOR TO REMAIN UNLOCKED WHEN THE BUILDING IS OCCUPIED (1 inch lettering). The same logic applies for a thumb-turn deadbolt lock, but a sign is not required. When the establishment is closed for operation, any occupant (staff) inside must have a key immediately available.

All other exit doors must follow (A) requirements.

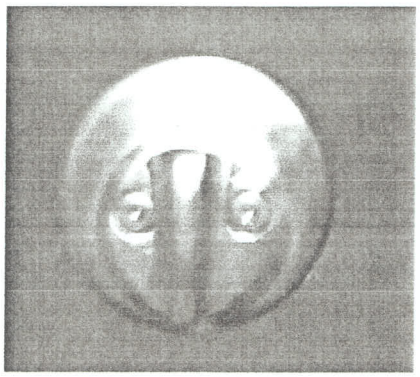
Assembly: NFPA 101, Section 13.2.2.2 and 7.2.1.5

Comply with **(A)**:

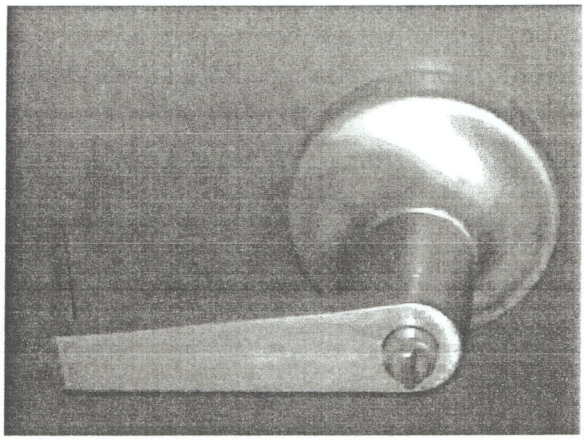
Exception: IF the Occupant load is 600 or less persons (*300 for occupancies under Chapter 12*), then the Main entrance (single door or single pair of doors) ONLY can have a key operated lock on the door (*the reason for this is that the doors would be unlocked for business operation*). The locking device is of the type that is readily distinguishable as locked. There shall be a readily visible, durable sign on the door that reads: THIS DOOR TO REMAIN UNLOCKED WHEN THE BUILDING IS OCCUPIED (1 inch lettering). When the establishment is closed for operation, any occupant (staff) inside must have a key immediately available.

IF the door above still has a latching mechanism, then it must have a panic hardware to release the latch.

All other doors must comply with (A). If the area has an occupant load of 100 or more, then any door in the means of egress must be equipped with panic hardware or fire exit hardware. No other locking/latching devices allowed.



Deadbolt with thumb-turn



Lever with thumb-turn

NOTE: Any other locks/latching mechanism not described in this FPS must be removed.

Sonia Flores Machen, P.E.
Fire Marshal

3/4/2010
Date Issued

MIAMIBEACH

ANNUAL SELF- CLOSING HARDWARE AND LATCH INSPECTION REPORT

RETURN COMPLETED FORM TO:

MIAMI BEACH FIRE PREVENTION DIVISION
1680 MERIDIAN AVE.- SUITE 202
MIAMI BEACH , FL 33139
TELEPHONE: 305-673-7123
FAX : 305-673-1085

ATTENTION INSPECTOR: _____

All doors leading to a stair enclosure or a horizontal exit, and all doors opening into an enclosed corridor shall be equipped with approved self-closing hardware and latches to keep the door closed and prevent the spread of smoke and fire.

All doors required to have self-closing hardware and latches located at the following address have been inspected and/or tested **by the building maintenance engineer** for proper operation as required by the adopted code/standards at the time of the installation. All fire door assemblies must be visually inspected and functionally tested annually. (NFPA 101& NFPA 80) The annual test concluded that the self closing hardware and latches are:

Please circle one: **OPERATIONAL** **NOT OPERATIONAL (*)**

NAME OF BUILDING: _____

ADDRESS OF BUILDING: _____

TYPE OF OCCUPANCY (SPECIFIC USE) _____

NAME OF OWNER OR AGENT: _____

_____

OWNER OR AGENT TELEPHONE : _____

PERSON PERFORMING TEST: _____

JOB TITLE: _____

(*) LIST DEFICIENCIES AND REQUIRED CORRECTIONS: _____

_____

_____

_____

NOTE: Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction. Locks that are maintained locked electronically and and will unlock during a power failure or fire alarm are the only type of electrical locks acceptable.

_____ _____

SIGNATURE: DATE

MIAMIBEACH

ANNUAL EXIT DOOR LOCKS INSPECTION/TEST REPORT

ELECTRICALLY OPERATED DOOR LOCK SYSTEMS

RETURN COMPLETED FORM TO:

MIAMI BEACH FIRE PREVENTION DIVISION
1680 MERIDIAN AVE.- SUITE 202
MIAMI BEACH , FL 33139
TELEPHONE: 305-673-7123
FAX : 305-673-1085

ATTENTION INSPECTOR: _____

All electrically operated door locks and associated components located at the following address have been inspected and/or tested **by the building maintenance engineer** for proper operation as required by the adopted codes/standards. All electrically operated door lock systems must be visually inspected at least monthly and functionally tested annually. (NFPA 101 & NFPA 80) The annual testing of the doors concluded that the lock systems are:

Please circle one: **OPERATIONAL** **NOT OPERATIONAL (*)**

NAME OF BUILDING: _____

ADDRESS OF BUILDING: _____

TYPE OF OCCUPANCY (SPECIFIC USE) _____

NAME OF OWNER OR AGENT: _____

_____

OWNER OR AGENT TELEPHONE : _____

PERSON PERFORMING TEST: _____

JOB TITLE: _____

) LIST DEFICIENCIES AND REQUIRED CORRECTIONS: _____

_____

_____

_____

NOTE: Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction. Locks that are maintained locked electronically and and will unlock during a power failure or fire alarm are the only type of electrical locks acceptable.

_____ _____

SIGNATURE: DATE

MIAMIBEACH

ANNUAL EMERGENCY LIGHTS INSPECTION/TEST REPORT

RETURN COMPLETED FORM TO:

MIAMI BEACH FIRE PREVENTION DIVISION
1680 MERIDIAN AVE.- SUITE 202
MIAMI BEACH , FL 33139
TELEPHONE: 305-673-7123
FAX : 305-673-1085

ATTENTION INSPECTOR: _____

The emergency lights at the following address are powered by:

Please circle one: **EMERGENCY GENERATOR** **BATTERY PACKS**

The emergency lights located at the following address have been inspected and/or tested for proper operation as required by the adopted code/standard. All emergency lighting shall be functionally tested once each month for a minimum of 30 seconds. An annual test shall be conducted for a 1 - 1/2 hour duration. (NFPA 101 - 7.9.3) The annual test concluded that the emergency lights are:

Please circle one: **OPERATIONAL** **NOT OPERATIONAL (*)**

NAME OF BUILDING: _____

ADDRESS OF BUILDING: _____

TYPE OF OCCUPANCY (SPECIFIC USE): _____

NAME OF OWNER OR AGENT: _____

ADDRESS OF OWNER OR AGENT: _____

_____

OWNER OR AGENT TELEPHONE : _____

NAME OF CONTRACTOR: (If used) _____

ADDRESS OF CONTRACTOR _____

CONTRACTOR TELEPHONE : _____

PERSON PERFORMING TEST: (print) _____

JOB TITLE: _____

(*) LIST DEFICIENCIES AND REQUIRED CORRECTIONS: _____

_____

_____

_____

NOTE: Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

_____ _____

SIGNATURE: DATE

PART VII: Employee Training

New employees should receive an orientation training before starting a regular shift, and current employees should receive refresher training on several topics - fire safety, nightclub fire history, evacuation plan, crowd management, and fire extinguisher use.

Fire Safety. The employees should be trained in identifying fire hazards during the course of performing their duties. Any possible ignition sources (frayed wiring, extensive use of extension cords, smoking, cooking, etc) should be eliminated. Excessive combustible loading (trash, boxes, etc.) should be removed and discarded properly.

Nightclub fire history. The employees should be aware of the fire experience (see Part I) in assembly occupancies, particular nightclubs.

Evacuation plan. There should be a diagram of the facility identifying all the exits and fire protection equipment. Each employee should be assigned specific duties during an emergency. The assigned evacuation task should be practical based on the normal duties of his/her job. Certain employees can be responsible for opening the exit door near their work station and be able to maintain the door open to facilitate occupants to exit. Other assignments can be making announcements, directing occupants to the exits, etc. The employees shall be trained and drilled in the duties they are to perform in case of a fire, panic, or other emergency to effect orderly exiting.

Crowd managers. Each nightclub shall have at least one trained crowd manager at all times of operation. Where the occupant load exceeds 250, additional crowd managers shall be provided at a ratio of 1 manager for every 250 occupants.

Fire extinguisher. The employees shall be trained in the use of fire extinguishers. The employees shall activate the fire alarm (if not already sounding), contact 911 and help evacuate the occupants first. However, a well trained individual can use a fire extinguisher for small fires effectively.

PART VIII: Enforcement

The nightclub owners shall establish enforcement guidelines to ensure that employees are following all safety procedures.

The first step is to develop a written safety plan in order to provide the information to employees. The plan should be specific as to the safety rules that every employee must follow.

The second step is to develop enforcement or disciplinary action to ensure that employees follow the safety plan. There must be a serious, but fair, consequence when employees violate any of the safety rules and procedures. The safety plan will not be effective if the employees do not follow it.

The fire department is responsible for enforcing the Florida Fire Prevention Code. The fire inspector will issue notice of violations (NOV). The owner must take these notices seriously and correct any deficiencies as soon as possible. If the owner does not comply, the fire inspector will forward the case to the Special Master for further action. The SM can impose fines up to $1,000 a day for non-compliance.

In addition, the fire inspector can issue citations for overcrowding conditions, locked, blocked or impeded exits as described in the City Code.

PART IX: Promoters/Performers

The owner is responsible for communicating safety procedures to promoters and performers. These rules must be stated in the contract.

Promoters should be aware of the crowds that the particular performer will attract and thoughtfully evaluate the capacity that the nightclub can handle. They should make adjustments in order to prevent overcrowding conditions (i.e., limit ticket sales, cover charge, advertisements, etc.)

Please see attached prohibition of pyrotechnics and open flame in nightclubs. All performers must adhere to these guidelines.

Management shall not continue to do business with a promoter or performer who violates the fire safety rules.

Miami Beach Fire Department

FIRE PREVENTION DIVISION

STANDARDS

TOPIC: Pyrotechnics in Assembly Occupancies

STANDARD NO: EXINSP-S12
Revision 0

In the City of Miami Beach, any and all pyrotechnic displays and flame effects require a fire permit issued by the Fire Marshal's Office. The applicant must submit proper documentation to show that the display will comply with all the requirements of NFPA 1126, *Standard for the Use of Pyrotechnics before a Proximate Audience*, and/or NFPA 160, *Standard for Flame Effects Before an Audience*.

Specific types of assembly occupancies, such as nightclubs and bar lounges, have particular concerns unlike other types of assemblies. The use of pyrotechnics have proven to be deadly in recent history as shown below.

02/20/2003:	Nightclub fire in Rhode Island, USA. 100 dead, 200+ injured
12/30/2004:	Nightclub fire in Buenos Aires, Argentina. 194 dead, 600+ injured
01/01/2009:	Nightclub fire in Bangkok, Thailand. 66 dead, 200+ injured
12/04/2009:	Nightclub fire in Perm, Russia. 154 dead, 130 injured

There are many variables that contributed to these fatalities in each case. However, the environment and operation of nightclubs and bar/lounges are similar and warrant special precaution and fire prevention requirements. Therefore, pyrotechnic displays and/or open flame are not permitted in these types of assembly occupancies. This measure includes sparklers i.e., ice fountains) fastened to champagne bottles carried by waiters or stationary at the bar; candles throughout the establishment; flamed desserts (i.e., cherries jubilee); or any other device or feature that presents a readily ignition source.

These policy and requirements are based on the Florida Fire Prevention Code, NFPA 101-The Life Safety Code, American Pyrotechnics Association (APA) information, United Nations (UN) identification number.

Sonia Flores Machen, P.E.
Fire Marshal

3/15/2010
Date Issued

PART X: Technology Enhancements

The requirements stated in the Florida Fire Prevention Code are *minimum* requirements for an acceptable level of safety. The code requirements are different for new and existing buildings to avoid hardship on existing buildings owners by imposing new requirements. However, more stringent requirements are developed based on fire experience and actual results. There is no prohibition for an owner to implement requirements beyond the minimum requirements. The following is a list of recommendations that can enhance the level of safety in your establishment.

Sprinkler Systems

Install an automatic sprinkler system even if not required by code. Currently, the Florida Fire Prevention Code mandates sprinkler system for existing nightclubs having an occupant load over 300 people, and for new nightclubs having an occupant load over 100 people. An existing nightclub with 300 occupant load or less can benefit greatly from the installation of a sprinkler system. However, the national standard as stated in the NFPA 101 is to require a sprinkler system for all nightclubs with an occupant load of 100 persons or more.

Sprinkler systems save lives, reduce property damages, and reduce business interruption. Unfortunately, people believe the myths about sprinkler systems rather than obtaining the correct information.

> *Myth 1: The water damage from sprinkler is worse than a fire*
> The truth is, a sprinkler will control a fire with a tiny fraction of the water used by fire department hoses, primarily because it acts so much earlier. Automatic systems spray water only in the immediate area of the fire and can keep the fire from spreading, thus avoiding widespread water damage.
>
> *Myth 2: Sprinklers go off accidentally, causing unnecessary water damage*
> Accidental water damage caused by automatic sprinkler systems is relatively rare. One study concluded that sprinkler accidents are generally less likely and less severe than mishaps involving standard home plumbing systems. Most documented incidents have been a result of poor maintenance or careless physical damage to the system.

Fire alarm systems

Install fire alarm system even if not required by code. Currently, the Florida Fire Prevention Code mandates a fire alarm system for existing nightclubs or bar lounges with an occupant load more than 300 persons. An existing nightclub with 300 occupant load or less can benefit greatly from the installation of an alarm system.

Upgrade fire alarm to connect music shut down and lighting systems. In the past, the sound system was not connected to the fire alarm system to "shut down" upon an alarm activation. If the sound system does not shut down, then the occupants may not hear the fire alarm activation. In addition, lighting should switch to full illumination levels upon activation of the alarm.

Communication

Implement good communication system for employees during hours of operation. A radio or phone system with the use of earphones can improve communication between management and employees in the event of an emergency. Install emergency phones (dialing 911 only) in remote areas depending on size of club so employees are able to contact the fire department immediately.