



Report of the Fire, Building and Life Safety Code Applicability at the Riverview IRA

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EXECUTIVE SUMMARY

On Saturday March 21, 2009, a fire occurred in the Riverview Individualized Residential Alternative (IRA) operated by the Sunmount Developmental Disabilities Services Office (DDSO) and administered by the New York State Office of Mental Retardation and Developmental Disabilities (OMRDD) that led to the death of four residents and injury to one resident and two staff members.

OMRDD requested the New York State Office of Fire Prevention and Control (OFPC) to conduct an independent review of the design, construction, code applicability and operational features of the IRA to ensure they met applicable fire and life safety codes and to verify operation of fire protection systems.

This report¹ outlines the findings of that review with identified code violations, items warranting review and recommendations for future discussion and consideration.

During its inspection and review of each issue, OFPC came to conclusions that were used to develop its findings as reported in this Executive Summary.

Items OFPC found to be in violation of Code are identified as “Violations” and are set off in red italics in this manner throughout this Report.

Issues that OFPC believes warrant further discussion as a matter of public policy or improved operations are identified as an “Item for Review” and are set off in blue italics in this manner throughout this Report

Based upon site inspection and review of the available materials, OFPC did not identify any code violations in the design or construction of the Riverview IRA. Code violations that were identified were behavioral in nature, relating to required documentation or operations rather than the features of the “as built” structure.

Many of OFPC’s findings are reported as an “Item for Review” involving, policies, concerns or commentary that OFPC believes should be reviewed and deliberated by all interested entities in the hope that it leads to appropriate modifications of regulations, policies, operations and practices.

¹ A separate, yet concurrent, investigation was conducted by OFPC on the origin and cause of the fire; the results of that investigation are contained in a separate report.

Code Violations Identified

- ❖ *Final acceptance records for the fire alarm system do not meet the requirements of §901.2.1 of the Fire Code of New York State.*
- ❖ *Requiring, by contract, the alarm monitoring company to first attempt contact with the facility of alarm origin rather than immediately reporting the fire to the fire department is a violation of §401.3 of the Fire Code of New York State.*
- ❖ *The inaccurate device count and the failure of the inspector to fully document the testing of all components of the fire alarm/detection system creates a violation of §901.6.1 of the Fire Code of New York State.*
- ❖ *Obstructions or impediments in a path of travel that may hinder or interfere with its use during an emergency are a violation of §701 of the Property Maintenance Code of New York State.*

Items for Review

- *Fire protection system certification records are a critical component of a building's overall compliance documentation and must be accurate and complete to be useful. A formal training and certification program for individuals filing the records would help ensure the quality of required records.*
- *Utilizing other available programming options for the fire alarm system control panel would have allowed for the transmission of detection and other system devices "point by point". While it is not required by code or the alarm system monitoring contract between Sunmount DDSO and Albany Protective Service, the information would have been beneficial to the emergency services dispatcher, the fire department, and the investigation.*
- *With the Riverview IRA being considered by state regulations as a one- or two- family residence, many of the fire safety operational provisions of the Fire Code of New York State afforded to other residential and institutional occupancies are therefore not applicable.*
- *Further research at a national level needs to be conducted to evaluate and quantify the egress capabilities of persons that have mental, developmental, or physical disabilities or combinations thereof. This research also should include the capacity of staff to evacuate those who cannot self-preserve.*
- *To be most effective, an evacuation plan should be formatted and presented in the sequential manner expected to be employed at time of emergency.*

- *There is no program in place external to OMRDD to provide evaluation, audit or critique of drills in order to ensure that they are realistic, meaningful or reflective of actual operational capability.*
- *Fire safety educational programs, especially those intended to impart information critical to residential operations, evacuation procedures, general fire safety fundamentals for group residential living, as well as manual skills (use of fire extinguishers), should be instructor lead and interactive, rather than self-guided, to be of greatest impact and value.*
- *Given the serious consequence fire poses to a community residence, and the vital role staff has to ensure the safety of the residents, fire safety training must be given significant priority and should be presented by experienced fire safety professionals who are formally trained in educational methodologies.*
- *The vinyl material used as the porch ceiling permitted the fire to rapidly extend into the unprotected attic space. Original plans reference the soffit material to be aluminum and the porch ceiling to be exterior grade gypsum board. Had these components been constructed using the more fire resistive materials, the fire would have been slowed in its spread into the attic.*
- *The fire evacuation plan clearly establishes that evacuation should be made via the closest available exit. There was no consistent suitable explanation presented to OFPC as to why staff made the decision to initiate the evacuation of residents via the main doors of the building rather than the closer exit door located on Side D.*
- *The lack of complete documentation related to issues discussed at construction meetings and in DASNY Compliance Audits could lead the conclusion that the open issues, as identified on the job site, were not completed.*
- *The lack of a barrier wall in the attic between the two building areas did not contribute to the fatal outcome of this fire as all deceased victims were located on the main “common area” side of the structure and rather than within the sleeping area. However, the lack of the fire separation, as described in the building plans reviewed, directly contradicted OMRDD’s request for initial design of the building and its presence might have restricted the fire spread within the attic into the area over the sleeping rooms, thereby reducing the overall level of structural damage*
- *Based on information contained within the residents’ ISPs, specifically their self-preservation abilities, a structure meeting the requirement of Occupancy Group “I” as defined in the Building Code of New York State may have been more appropriate housing for some of the residents.*
- *The Building Code of New York State uses a tiered approach to fire protection requirements based on the abilities of the occupants. The Riverview IRA utilized many of these fire protection requirements that exceeded the requirements of current state regulations for a*

community residence licensed by OMRDD. However, a review of the abilities of the residents in this occupancy is cause for the recommendation that OMRDD either, consider the addition of further protection features to protect against fires within concealed spaces, attics and from the exterior, or apply the strict occupancy classification of the Building Code of New York State.

- *NFPA 13 provides for greater protection of this type of occupancy, especially for those clients that have very limited mobility or lack self-preservation abilities. Furthermore, NFPA 13 provides useful provisions for trading off passive fire protection (construction features) for active fire protection (sprinklers) as well as providing a needed level of fire safety in a global review of fire event probabilities.*
- *It is OFPC's recommendation that the determination for placement (location) of residents should be based upon their self-preservation abilities as determined in their Individual Service Plan (ISP) so that the structures in which they reside, more accurately reflect the occupancy use group(s) contained in the Building Code of New York State.*
- *Exterior fires are the most likely type of event that can overcome a 13D or 13R sprinkler system due to the likelihood of the fire extending into the roof system. Conceptually, there are five ways to prevent a fire event on the exterior of a building from becoming a fire event in an attic:*
 - *Limit all potential sources of exterior fires*
 - *Limit openings from the outside into the attic*
 - *Protect openings (eaves, soffits, and gables) to prevent a fire from extending into the attic*
 - *Construct the attic to reduce the development of fire*
 - *Provide fire suppression within an attic*
- *The Uniform Fire Prevention and Building Code, particularly as it applies to community residential facilities, should not be subject to modification by either agency regulation or other potentially less restrictive rule. Special considerations, such as may be contained in the Life Safety Code[®], should be limited to those which go above and beyond the requirements contained in the Uniform Fire Prevention and Building Code, and thereby serve as an overlay rather than a replacement.*
- *Surveyors completing the required Life Safety Code[®] assessments are generally not dedicated fire safety or code enforcement officials; nor do they typically have a background in fire protection or building codes beyond the scope of the survey.*
- *The current practices for fire and life safety inspection do not ensure objectivity; encourage uniformity in the inspection process, or lend to an unbiased, inspection.*
- *Inspectors performing regularly scheduled fire safety inspections are not singularly focused, fire safety/code enforcement officials, nor do they typically have a formal background in fire protection or building codes.*

- *In order to ensure consistency exists in any inspection process, it should be uniform in nature with the task carried out in a comprehensive and coordinated manner by an independent entity. A comprehensive inspection program, with adequate follow-up and a system to ensure the correction of violations would provide a more objective approach to fire safety inspections.*

CONCLUSION

Fire safety in community residences that are homes to persons with developmental disabilities is a complex, and at times daunting, challenge. Many of these individuals may be non-ambulatory, have seizure disorders, behavior problems, mental illness, visual or hearing impairments, or a combination of the above. And therefore, OFPC stresses that no single recommendation will resolve all the fire safety issues of community residences, including IRAs. The most logical and sound approach, however, is the implementation of a comprehensive policy review, while concurrently seeking improvement in programs that reduce the potential for a fire to occur, including independent fire and life safety inspections, all while enhancing fire protection and detection systems.

INTRODUCTION:

On Saturday March 21, 2009, an early morning fire occurred in the Riverview Individualized Residential Alternative (IRA) located in the Town of Wells, Hamilton County, New York. The New York State Office of Fire Prevention and Control (OFPC) conducted two distinct, yet inter-related operations: an investigation into the origin and cause of the fire by the Arson Bureau, and a concurrent inspection by the Bureau of Fire Prevention related to fire and building codes and general fire safety practices.

On site operations spanned four days as investigators and inspectors systematically reviewed the remnants of the structure, conducted interviews and gathered evidence. Off-site over the period of the next four weeks, an extensive review of added materials was performed, further examination of evidence carried out, and additional interviews conducted. The culmination of OFPC's inspection activities, research of the design and construction document/records and study of the myriad of related regulatory and code applicability are reflected in the publication of this Report.

FACILITY OVERVIEW:

The structure was a one story wood-frame group home, residential-style dwelling with a partial basement and accessible crawlspace. The building was constructed under the 2002 edition of the *New York State Uniform Fire Prevention and Building Code*.

The initial Building Permit was issued by the Dormitory Authority of the State of New York² (DASNY) on August 6, 2007 in which the occupancy classification was listed as a Group R-4 (Residential Care/Assisted Living Facility)³. A temporary approval for occupancy was issued May 5, 2008. A final Code Compliance Certificate was issued by DASNY on November 18, 2008.

The building was occupied as a community residence that, at the time of the fire, housed nine developmentally disabled residents, in seven bedrooms, along a double loaded corridor. Staff was on duty 24-hours a day to provide care for all residents. The staff provided medications, personal hygiene, food, and safety for all occupants as well as mobility assistance at varying levels for a segment of the residents.

² The Dormitory Authority is a public benefit corporation serving the citizens of New York State through construction and financing programs. It was created in 1944 by legislation; the purpose of the Authority is to finance and build facilities for higher education, health care providers, court facilities and certain nonprofit institutions and public agencies.

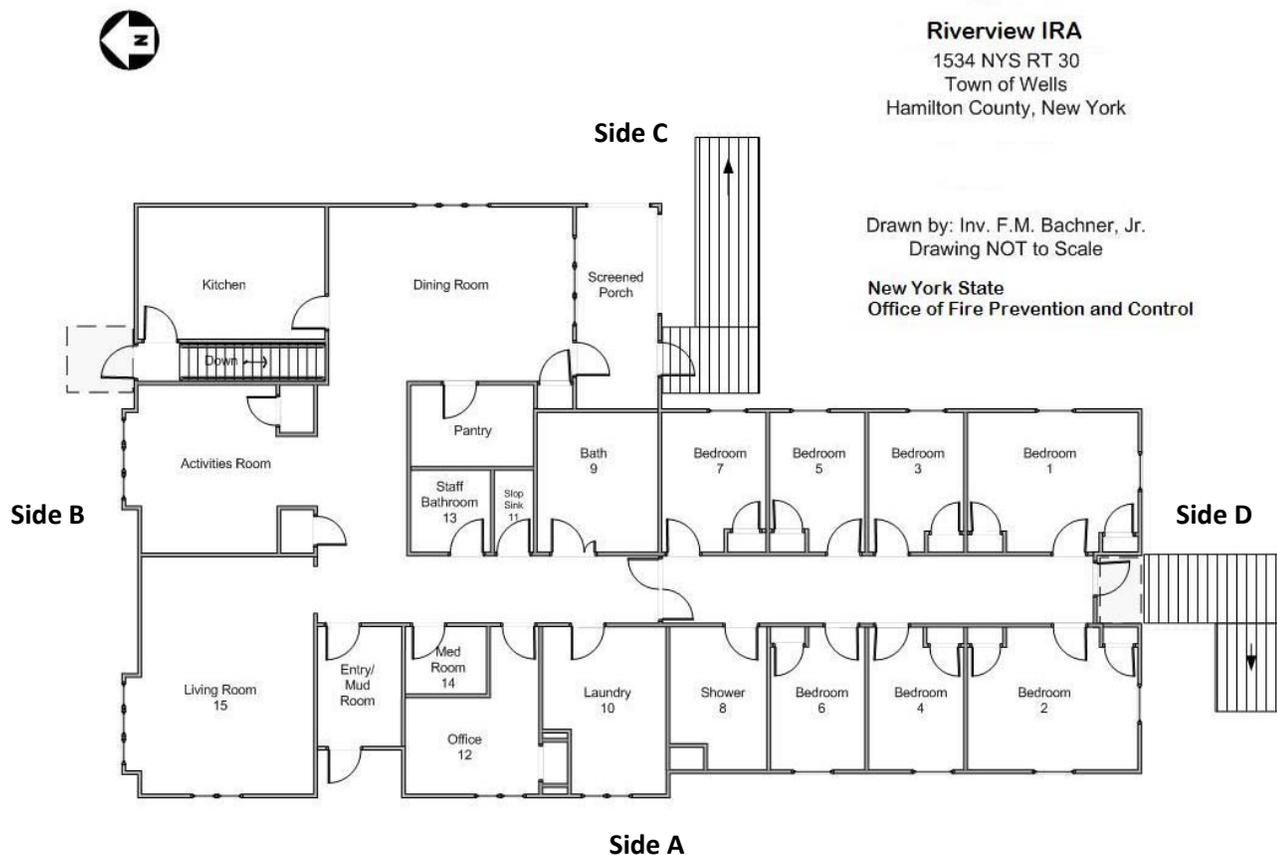
³ See discussion on R-4 occupancies in the Code Applicability section of this Report.

ONSITE OBSERVATIONS AND DATA ANALYSIS

The onsite review and inspection of the building and its features was initiated, on Sunday March 22, 2009, by the Office of Fire Prevention and Control. To better determine the geometry of the building, Incident Management System coding was assigned for the purposes of orientation. The sides of the building are designated as follows: Side A is the front of the building facing State Route 30; Side B is to the left of Side A while facing the building from State Route 30; Side C is the opposite side of Side A facing the rear yard; and Side D is to the right of Side A while facing the building from State Route 30.

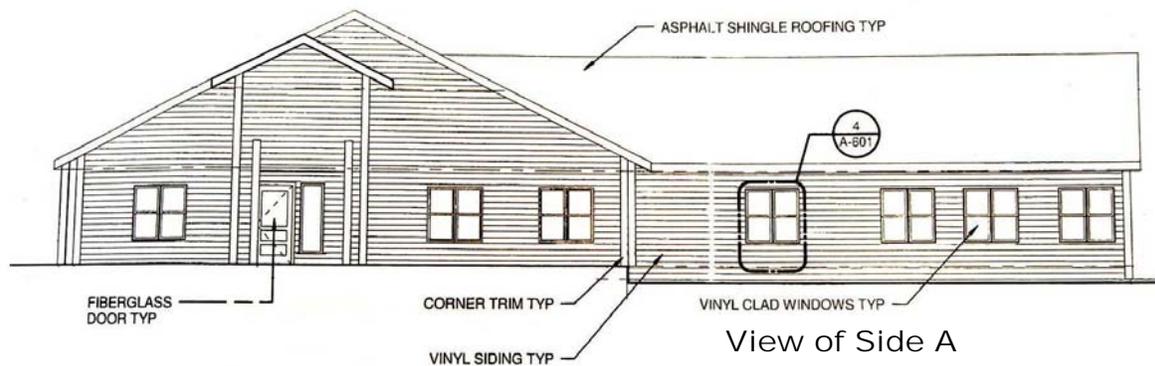
General Dimensions

The structure was one story with an eave height of approximately 10' completely around the building. The site is relatively flat, without much grade differential within 6 feet of the structure. The building footprint was "L" shaped and approximately 4,280 total square feet.



Layout

The Riverview IRA was divided into two separate areas: a common, “functional” space and a sleeping space. The common area, forming the larger leg of the “L” shape, was approximately 48’ x 54’ in size and included a living room, a semi-enclosed porch area, kitchen, pantry, dining area, bathing room, restroom, custodial room, office, mud room, activities room, laundry room and medication room. The sleeping space included seven sleeping rooms, with small storage closets in each, and a common shower room. The sleeping rooms were along a double loaded corridor, four rooms on the “C” side and three rooms on the “A” side. This leg of the “L” shape has a general dimension of 43’ x 33’.



NOTE: Illustration for orientation purposes only, not indicative of actual pre-fire conditions

Passive Fire Protection Features

All walls and ceilings throughout the building were gypsum wallboard, with exception of the exterior wall construction and ceiling of the semi-enclosed porch. Site review showed that all gypsum in the corridor and several of the separation walls inspected between the sleeping units were 5/8” on both sides of 2” x 6” wood frame nominal construction. Sample pieces of what was remaining of the ceiling appeared to also be 5/8” gypsum wallboard.

All rooms, with the exception of the living room and the activities room were separated from the rest of the building by a door.

- Sleeping rooms, Office, Pantry, Restroom - Non-listed, solid-core wood door, metal frame, standard striker, no closer, no sight glass.
- Custodial room, basement mechanical room - Non-listed, solid-core wood door, metal frame, standard striker, self-closer, no sight glass.
- Medication room - Non-listed, solid-core wood door, up and down dutch-style split door, metal frame, standard striker, no closer, no sight glass.
- Mudroom door - Non-listed, solid-core wood door, metal frame, standard striker, no closer, full wired glass window.
- Bathing room - Non-listed, solid-core wood door, additional ¼ leaf width with hidden lock bolts, metal frame, no closer, no sight glass.
- Corridor doors - listed, 90 minute double solid-core wood doors without astragal, alternate swinging, metal frame, self-closers, full wired glass window.

- Door to kitchen from first floor basement landing-45 minute door with wired glass window and automatic closer, metal frame, and standard striker.
- Door to fuel oil storage tank room in basement-3 hour metal door with metal frame and closer, standard striker.

Exterior doors were wood frame doors. Three of the four exterior entry doors were damaged beyond recognition. The only door that was intact for evaluation was a residential style, wood frame, fiberglass door with internal glass, located on Side B of the facility near the basement stairs.

A 90 minute fire rated double door was located within the corridor between the common areas and sleeping rooms. The two leaves swung in alternating directions. The doors were held open by magnetic hold-open devices that released upon the activation of the fire alarm system.

Complete fire stopping did not appear to be installed within the attic space⁴. Evidence of a partial wall did appear along the roof truss that spanned above the location of the corridor door. The investigation showed that a single layer of gypsum wall board of at least ½” was evident for at least 12” above the bottom chord of such truss. However, the cutouts within the gypsum for two pipes did not appear to be tight fitting to such pipes. There was no evidence that the gypsum wallboard or other material was in place, based on the absence of crumbled or waterlogged gypsum or the lack of evidence of any fasteners within the truss framing. The roof system of the facility was severely damaged due to the fire; OFPC’s inspection, however, did not disclose fasteners having had been applied to any truss members which would be a corollary of the application of the previously established use of gypsum wallboard as fire stopping.

While there was an apparent lack of fire stopping in the attic space between the main common areas and the sleeping area of the facility, it appears to have had no bearing on the outcome of this fire event. All fatalities were located within the main common areas, the same area in which the fire occupied first. Additional evidence to support this conclusion was the recovery of a survivor from within a sleeping room well after⁵ the main body of fire had been extinguished.

Exterior

The building was a one story wood frame structure situated on a poured concrete foundation, with an exterior sheathed with oriented strand board and covered with vinyl siding. The soffits were made of vinyl material which was used within all the eaves as well as the ceiling of the semi-enclosed porch. The windows appeared to be a double-pane style, with a mix of

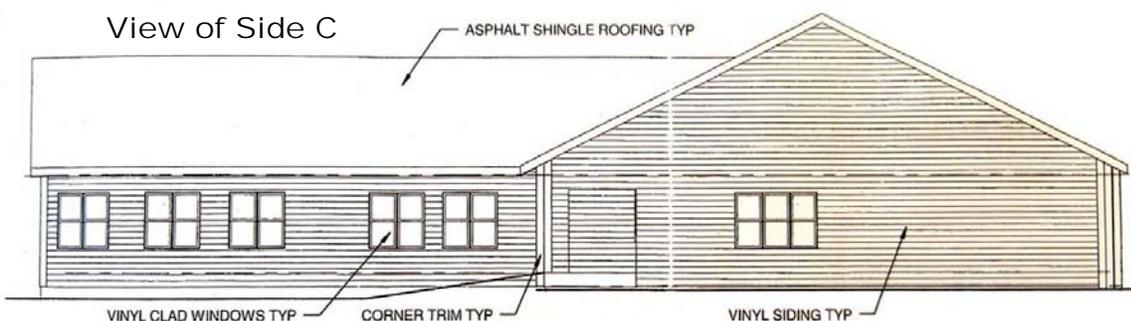
⁴ Additional discussion regarding this partition is located in Appendix A.

⁵ Discovery and subsequent rescue of this surviving victim occurred approximately 2.5 hours after initial activation of the fire alarm. See additional discussion on page 26.

double-hung and casement-style models. Two ramps made of synthetic decking material were attached to the building; one was located off of the porch area on the “C” side of the structure and one was located on the “D” side of the structure off of the exit door from the sleeping corridor. A portico was attached to the “A” side of the structure over the main entrance door to the mud room. This portico was designed to be high enough to allow a high-top transport van to pass under it. The IRA was located on the east side of State Route 30, on a level grade approximately 300’ from the highway and 15’ below highway grade.

Roof

The roof system was severely destroyed by the fire; however the roof appeared to have been built with two ridge lines. The entire roof system was built with wood trusses. The first ridge ran from Side A to Side C and spanned over the common area, terminating over the Side B wall and along the same wall that separates the common areas from the sleeping areas (where the corridor door was) in the front and over the covered porch in the rear. The second ridge started on Side D, and generally ran down the center of the sleeping area corridor, terminating into the roof system over the common area by overbuilt framing. The ridge over the common area was at a higher height than the ridge over the sleeping area but was difficult to determine the actual differential. A separate roof system (portico) is over the front door, supported by two wooden uprights, approximately 15 feet from the Side A entry door, and tied into the facility by laminated veneer lumber (LVL) wood beams. This roof system was architecturally blended into the main gable end of the facility roof but was separated by two layers of oriented strand board (OSB).



NOTE: Illustration for orientation purposes only, not indicative of actual pre-fire conditions

Fire Alarm System

The building was equipped with a Notifier Model NFS 320 (serial #SN1UA02764) alarm system which was a fully addressable fire detection system. All system components were also Notifier Brand products. The system utilized system smoke detectors, Notifier Model FSP-851 intelligent plug-in photoelectric smoke detectors, that covered all common spaces

and sleeping spaces within the structure, with the exception of heat detection, provided by Notifier Model FST-851 intelligent thermal detectors with 135 degree Fahrenheit factory preset, in the kitchen, laundry room, and shower room. The attic space was equipped with heat detectors, Notifier Model 5602, with a fixed alarm temperature of 194 degrees Fahrenheit and a 15 degree rate of rise threshold. These devices were installed in the attic based on an OMRDD requirement for coverage per every 1,000 square foot within attics⁶. The basement area was provided with smoke detection coverage in the common area and fuel storage room and heat detection in the mechanical room using devices of the same model as listed for the first floor. The building was equipped with a manual fire alarm using four Notifier Model NBG-12LX addressable pull stations, one near each exterior exit door. On-site investigation revealed that none of the manual pull stations were activated.

The fire alarm control panel (FACP) was located within the office with an annunciator panel, Notifier Model FDU-80 80 character liquid crystal display, located within the mud room, near the Side A (front) exterior door.

The fire alarm system was outfitted with a Notifier universal digital alarm communicator transmitter (UDACT) with two phone lines that were capable of transmitting fire, trouble, and supervisory signals.

Albany Protective Service provided central station⁷ monitoring for the fire alarm system and received the following signals on the date of the event:

<u>Time</u>	<u>Signal Received/Action Taken</u>
05:25:55 AM	Fire Alarm 'Fire Alarm' (Alarm)
05:25:57 AM	Viewed- Response [2 Seconds] ⁸
05:28:14 AM	Trouble 'General Fault Code' (Alarm)
05:28:30 AM	Comment- called premise sub notified me there was a fire...dispatched FD ⁹
05:31:40 AM	Supervisory-Low Battery 'Low Battery' (Alarm)
05:32:03 AM	Trouble 'Fault Code' (Alarm)

OFPC investigation showed that the power supply of the FACP was damaged during the fire. The two batteries within the FACP showed approximately 24.5 volts when a voltage reading was taken, under OFPC supervision, approximately 36 hours later.

⁶ 14 NYCRR635-7.3(v) at least one heat detector installed in accessible and usable attics at a ratio of one detector for each 1,000 square feet of floor space.

⁷ Central Station Service. The use of a system or a group of systems including the protected premises fire alarm system(s) in which the operations of circuits and devices are signaled to, recorded in, and supervised from a listed central station that has competent and experienced operators who, upon receipt of a signal, take such action as required by this Code.

⁸ Entry into computer log made by on-duty alarm operator.

⁹ Entry into computer log made by on-duty alarm operator.

An attempt was made during the investigation to obtain the alarm sequence information that is retained in the memory of the fire alarm control panel. The initial attempt to re-power the unit by an authorized service technician revealed that the power supply unit, Notifier model KAPS-24, was damaged. The technician made a second site visit with replacement parts including a new power supply. The fire alarm control panel was removed from the building and examined under OFPC supervision and controlled conditions. Upon removal of the existing power supply, it was noted that the main panel board was damaged by heat and water. A new power supply was attached to the panel, but it failed to restore the power. Further examination revealed that one of the memory chips was severely damaged on the main board. No event data was able to be retrieved from the fire alarm control panel.

Fire Alarm Installation

The fire alarm system cable, electrical hardware, raceway and the installation of system equipment were completed by Dow Electric. Technical assistance, panel terminations, programming, final testing and warranty was provided by NCC Systems, Inc. The final acceptance test for the system was conducted on 5/8/08 by Dow Electric under the supervision of DASNY representatives. Final acceptance certification reports¹⁰ document a final count of system components and included the following Notifier® brand products:

- NFS-320 Fire alarm control panel
- (2) PS12180 12 volt 18 amp batteries able to provide 24 hour back up and then operate full alarm condition for 15 minutes (Battery level output at 26.5volts)
- FDU-80 Remote LCD annunciator
- (4) NBG-12LX addressable pull stations
- (27) FSP-851 photoelectric addressable smoke detectors
- (4) FST-851 addressable 135 degree fixed temperature heat detectors
- (4) 5602 conventional 195 degree fixed temperature 15 degree rate of rise heat detectors
- (2) FMM-1 addressable monitor modules for sprinkler flow and tamper switches
- (1) FMM-1 addressable monitor module for attic heat detectors
- (1) FRM-1 addressable relay module for door holder release
- (1) FRM-1 addressable relay module for furnace shutdown
- (6) P4R selectable candela four wire horn strobes
- (14) SR selectable candela strobes

¹⁰ **FCNYS §901.2.1 Statement of compliance.** Before requesting final approval of the installation, the installing contractor shall furnish a written statement to the code enforcement official that the subject fire protection system has been installed in accordance with approved plans and has been tested in accordance with the manufacturer's specifications and the appropriate installation standard. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement.

- (2) DH150 flush mount 24vdc magnetic door holders
- UDACT digital communicator

However, on site-inspection by OFPC inspectors, the review of available documentation post event and conversations with a representative of NCC Systems raised questions regarding the type devices actually installed in bathrooms 9 and 13. Two addressable photoelectric smoke detectors are shown in original plans, but it appeared that addressable heat detectors had been installed in their place.

The change of device type in these rooms is permitted under the *Fire Code of New York State*, however the final acceptance report does not make any reference to this change, nor does the final device print out that was received from NCC Systems.

Violation

Final acceptance records for the fire alarm system do not meet the requirements of §901.2.1 of the Fire Code of New York State.

Item for Review

Fire protection system certification records are a critical component of a building's overall compliance documentation and must be accurate and complete to be useful. A formal training and certification program for individuals filing the records would help ensure the quality of required records.

Fire alarm system monitoring was provided to the system via Albany Protective Service through a contract with Sunmount DDSO. This contract required the company to be a UL listed monitoring service and compliant with the National Fire Alarm Code[®] (NFPA 72). Post incident analysis by OFPC revealed that the contract between the central station and Sunmount DDSO community sites stated that the central station was to call the facility to verify the alarm. If there was no answer or the incorrect verification code was given, the fire department was then to be dispatched.¹¹

In an interview with OFPC inspectors, a representative from Albany Protective Service stated that their system is capable of receiving addressable fire alarm signals from an alarm system so that a point by point listing of devices in alarm would be viewable by a dispatcher. However, most of the accounts monitored by Albany Protective Services where the alarm systems have been installed by independent contractors do not transmit in this expanded format. Typically, independent installer systems will only report a generic fire alarm, trouble

¹¹ "Specifications for the Monitoring of Digital Communicators at Sunmount DDSO Community Sites in Clinton, Franklin, Hamilton, and St. Lawrence Counties" Appendix B, section 1.4

alarm and/or supervisory signal. Due to the limited information received from this system, it is apparent that it was only set up to transmit these limited signals, and not to its full point by point capacity. The UDACT programming worksheet was located with the original owners manual on the premises and revealed the digital transmitter was programmed for “zone reporting receive/transmit communication”.

Violation

Requiring, by contract, the alarm monitoring company to first attempt contact with the facility of alarm origin rather than immediately reporting the fire to the fire department is a violation of § 401.3 of the Fire Code of New York State.

Item for Review

Utilizing other available programming options for the fire alarm system control panel would have allowed for the transmission of detection and other system devices “point by point”. While it is not required by code or the alarm system monitoring contract between Sunmount DDSO and Albany Protective Service, the information would have been beneficial to the emergency services dispatcher, the fire department, and the investigation.

Inspection & Testing of the Fire Alarm System

The system was first tested on June 15, 2008 by Life Safety Commercial Fire and Security Services. The inspection report is referred to as “quarterly” on the company supplied paperwork. The report notes testing completed for 4 pull stations, 6 heat detectors, 22 smoke detectors, 2 duct detectors, 8 strobes, 7 audio/visuals, 1 “FS” likely to indicate flow switch, and 2 “TS” likely to indicate tamper switches. The inspector notes on the bottom of his report that heat detectors were a “visual inspection only” and “Unable to gain access to all areas while on site. Some areas may have been missed.” Subsequent reports from tests conducted on September 12, 2008 and December 16, 2008 indicate the same number of system components and locations.

The number and locations of components listed on the test reports do not correspond to the acceptance test report list of components. None of the test reports reviewed by OFPC makes note of attic heat detectors. All reports refer to “duct detectors” in the mechanical room, however, such devices are not listed in the acceptance/certification list or building plans. No inspections are documented for one hallway, one bedroom, and one janitor’s room smoke

detectors¹². It is possible that the inspectors may have mistaken the remote relay modules for furnace shut down for duct smoke detection. Two additional heat detectors are noted in the test reports in locations that were described in the acceptance report as having smoke detectors, (see prior reference to these devices) yet no change order or repair order documentation has been produced to indicate or document this change.

Violation

The inaccurate device count and the failure of the inspector to fully document testing all components of the fire alarm/detection system creates a violation of §901.6.1 of the Fire Code of New York State.

Department of State Licensure

OFPC inspectors conducted a search of the Department of State Division of Licensing Services Database. A Statewide Alarm Installer license¹³ was located for both NCC Systems of Potsdam, NY that expires on 8/28/2009 and Life Safety Engineered Systems, Inc. of Buffalo, NY that expires on 6/30/2011.

The records relating to the installation and inspection of the fire alarm system were inaccurate and incomplete, both violations of the *Fire Code of New York State*. These records were submitted by employees of the above companies.

Fire Sprinkler System

A fire sprinkler system was installed within the building. The sprinkler system boiler plate stated the system was designed in accordance with NFPA 13D - *Standard for the Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes*¹⁴ which was supported by the building plans and an interview with the sprinkler engineer. The coverage of the sprinkler system included all of the common and sleeping spaces, with the exception of the porch area. The coverage included all closets and bathrooms, including the approximately four square foot fixed closets within the sleeping rooms. The basement was provided with sprinkler coverage with the exception of the crawl space, with the sprinkler

¹² **§901.6.2 Records.** Records of all system inspections, tests, and maintenance required by the referenced standards shall be maintained on the premises for a minimum of 3 years and made available to the code enforcement official upon request.

¹³ Article 6-D of the General Business Law requires that “On and after October 1, 1992, no person shall engage in the business of installing, servicing, or maintaining security or fire alarm systems or hold himself out as being able so to do unless he is licensed therefore pursuant to this article. ...”

¹⁴ The scope of NFPA 13D is further described on page 39.

heads being provided at the bottom of the floor joists. The riser was located on the Side B basement wall, near the inlet of the municipal water service. The municipal water main was 4" at the wall and then reduced to 2" prior to the tee for domestic water and the sprinkler riser. The 4" water main was equipped with a butterfly valve for shut down, but not supervised. The system was outfitted with a 1" Wilkins Model 350 double check valve assembly with dual ball valve shut offs on either end. The system was monitored by the fire alarm system for water flow via a Potter flow switch and two Potter PTS-C supervisory devices connected to the ball valve handles on the check valve assembly.

All sprinklers in the basement had pendant style Viking Model VK468 sprinkler heads installed. All sprinklers in the common and sleeping spaces were sidewall style Viking Model VK450 sprinkler heads. The on-site inspection showed that all first floor sprinkler piping was located within interior walls. The piping was of CPVC material manufactured by Blazemaster. The attic space, basement crawlspace, and all exterior spaces were not provided with sprinkler coverage. The system was not a multi-purpose sprinkler system.

A sprinkler system flow test conducted on June 13, 2008, concluded that the sprinkler system had a static pressure of 80 psi and a residual pressure of 70 psi during the test. Per the specification plate on the system, a minimum of 44 psi of water pressure is required at the riser in order to maintain a flow rate of 37 gallons per minute from two sprinkler heads during system operation. This test demonstrates that there was sufficient water supply for the system to operate as designed.

During the fire, nearly all of the temperature bulbs within the sprinkler heads activated. Statements of on-scene emergency responders, water spray markings on the walls near the sprinkler heads, and the remaining structural elements and building contents provide evidence and support that the sprinkler system discharged water and continued to do so until the system was shut down by fire department personnel, approximately three hours after the initial alarm. OFPC inspection revealed that damage to the sprinkler system was limited to bending of the deflectors on some of the sprinkler heads in the dining area, kitchen, and the two sleeping rooms along the Side D wall. This damage was most likely caused by ceiling and roof material striking the sprinkler heads as it fell during the fire, however, there did not appear to be any significant obstruction of water flow as a result of this damage.

For the purpose of comparison with known recalls of sprinkler heads, six sprinkler heads were removed by OFPC from the following areas: reserve supply box at the basement sprinkler control, kitchen pantry, kitchen closet, bedrooms 3 & 5. None of the sprinkler heads removed from the facility was identified as being subject to recall.

Water Supply at the IRA

At the scene, the water main at street level is of 6" diameter and makes a connection to a fire hydrant that was located approximately 5' from the street end of the driveway to the IRA. This hydrant was added as part of the building construction project. The curb box shut off valve for the water line that runs to the building is upstream of the hydrant. From the hydrant, the water line that extends down the driveway to the building is reduced to 4". Just inside the basement wall, the water line is then reduced from 4" to 2" for building supply purposes that include the domestic water and water for the sprinkler system. While the fire hydrant was considered to be a private hydrant, the Town of Wells was depended upon for its maintenance.

The *Fire Code of New York State (FCSNY)*¹⁵ requires an approved water supply capable of supplying the needed fire flow for fire protection be provided to new premises. However, an exception to this requirement is provided for detached one- and two-family dwellings constructed in accordance with the *Residential Code of New York State*.¹⁶

There were no problems reported to OFPC regarding water supply at the scene during firefighting operations as firefighters used a combination of the previously noted hydrant and a mobile water supply, consisting of fire department tankers, to supply water during the fire.

To assist fire officers with a simple way to estimate needed fire flow (NFF) upon arrival at a fire, a nationally acceptable method, the quick-calculation formula, has been developed and taught by the United States Fire Administration's National Fire Academy. This formula is:

$$\text{NFF} = [(\text{Length} \times \text{Width})/3] \times \% \text{ of building involved in fire.}$$

The following demonstrates the application of the above NFF formula to for the Riverview IRA (known to be 4,280 total square feet):

$$\text{NFF} = [(\text{Length} \times \text{Width})/3] \times \%$$

$$4,280/3 = 1,426 * .5 = 713$$

(given the volume of the attic represents approximately ½ the volume of a standard floor in the building)

Therefore the **NFF = 713 gallons per minute (gpm)**

During firefighting operations, the municipal well pumps were operating at capacity (450 gpm) and were supplemented with water being drawn from the community storage tank. This combined delivery capacity provided sufficient initial Needed Fire Flow from the on-site water source.

¹⁵ §508.1 Required water supply

¹⁶ As the Riverview IRA was pursuant to 14 NYCRR 635-7.1

Community Water Supply

Water supply for the IRA was provided from a municipal source. OFPC inspectors met with representatives of the Town of Wells water department to discuss the municipal water system and its function and operation on the day of the fire.

The Town of Wells maintains two well sites for community water supply. The Town maintains an original well site with one pump and one well and a secondary site consisting of two wells and two pumps. The total capacity of all three pumps is 450 gallons per minute. These three wells feed the community's water storage tank which holds 500,000 gallons of water. The water system works as typical systems do. System usage causes the level in the tank to drop at which time radio transmitters send a signal to the well site activating the pumps thereby initiating tank replenishment.

On Saturday March 21, 2009, at approximately 0530 hrs, the level of tank replenishment by the well pumps appeared to level out, indicating a demand for water on the system greater than the usual use. As all other days on the graph show a steady refill of the storage tank during this time frame of the day, it can be concluded that the draw on the municipal system for firefighting operations was comparable to the output of the three pumps combined (450 gpm).

At approximately 0730 hrs, all three pumps were running in an attempt to refill the water storage tank, but for a period of time, the demand on the distribution system was greater than the refill capacity of the three pumps and there was a noticeable drawdown in the storage tank. The town water operator estimated that 23,000 – 24,000 gallons of water was used for fire suppression operations. The town does not have a digital water usage meter, but does maintain a graph of system demand, pump activity, and water storage tank level.

Means of Egress

The layout of the building allowed for unimpeded access to multiple exits throughout. Four exits were provided as follows: the main entrance on Side A; a door to the rear porch area and ramp on Side C; a door to a ramp on Side D; and a door that connects to a kitchen interior door and basement stair landing on Side B. The building did not have any dead-end corridors. The only common space location where two exits were not located from the room was the living room, where the common path of egress travel was no greater than 20 feet.

Each sleeping room had a window that appeared to have been large enough for emergency escape and rescue. Windows throughout the sleeping rooms, living rooms, and dining room were not greater than 24" off the finished floor.

During the post event inspection by OFPC, obstructions were noted within the facility:

- ❖ a patient lift in the bedroom corridor; and
- ❖ a treadmill within the mudroom obstructing access to a fire extinguisher and a fire alarm pull station

At the time of this report, OFPC cannot determine through staff interviews, whether these objects hindered egress and/or evacuation of residents at the time of the fire. Nevertheless, the obstructions were violations of the *Property Maintenance Code of New York State*.¹⁷

Violation

Obstructions or impediments in a path of travel that may hinder or interfere with its use during an emergency are a violation of §701 of the Property Maintenance Code of New York State.

Emergency Lighting and Exit Signage

Emergency lighting and exit signs were provided. The building lighting plan shows combination exit sign and emergency light units. The lighting schedule from the building plans reflects separate units and was corroborated during the on-site inspection. During the on-site observation, emergency light units were found along the means of egress throughout the first floor and the basement. According to the manufacturer specification sticker, all lights were rated for 1 ½ hours of operation.

Emergency light units were recovered from: the main entrance (mudroom) NW kitchen entrance; and the basement. While there was insufficient charge remaining in the battery, at time of removal, to determine if they were functional, there is no indication that these units failed to operate as designed and intended during the emergency. A statement by occupants that the emergency lights “came on and quickly went out” is likely attributed to smoke obscuration rather than failure of the units.

All exterior exit doors including the interior door from the mud room were marked with LED type exit signs, with internal battery back-up, that were independent of the emergency lights. OFPC noted exit signs continuing to operate on backup battery power as late as 30+ hours after the incident, including several signs that had experienced significant heat damage.

- The emergency light units were Genlyte Thomas Group LLC Cat No. 3401F units rated for 1 ½ hours of use with a date code of 1207.
- The exit lights were Astra Lite Series lights, model TP-U-R-W-EM. These lights were equipped with LEDs and a NiCad battery back-up.

¹⁷ **§702.1 General.** A safe, continuous and unobstructed path of travel shall be provided from any point in a building or structure to the public way.

Fire Extinguishers

Fire extinguishers were located throughout the building in close proximity to the fire alarm pull stations. Fire extinguishers were located: just inside the mud room on Side A; near the exit door from the sleeping corridor on Side D; near the exit door from the dining room on Side C; near the rear exit from the kitchen to Side B; and at the base of the basement stairwell. All extinguishers were 10 lb. ABC dry chemical type. During the fire event, two fire extinguishers were discharged; one by a staff member in the dining area and the other by a fire department member in the area of the Side D exit door.

Chart 1

Fire Extinguishers in the Riverview IRA

<u>Location of Extinguisher</u>	<u>Manufacturer</u>	<u>Type</u>	<u>Serial #</u>
1. Dining Room porch door	Kidde	ABC Dry Chemical	L3178071113
2. Kitchen next to door from side B entrance	Buckeye	ABC Dry Chemical	YZ887858
3. Sleeping room corridor by South door	Kidde	ABC Dry Chemical	A3173070
4. Basement - to the right of stairwell	Buckeye	ABC Dry Chemical	YZ887853
5. Front entrance in Mudroom	Buckeye	ABC Dry Chemical	YZ887833

Fire extinguishers had received monthly visual inspections in accordance with the requirements set forth in the *Fire Code of New York State*¹⁸ from June of 2008 until February of 2009. The initials that appear on the inspection checklist are “FS”. All extinguishers were assumed to have been purchased new for the building as there was no documentation of required six year inspections.

¹⁸ Fire extinguishers shall be inspected either manually or by means of an electronic monitoring device/system at a minimum of 30-day intervals.

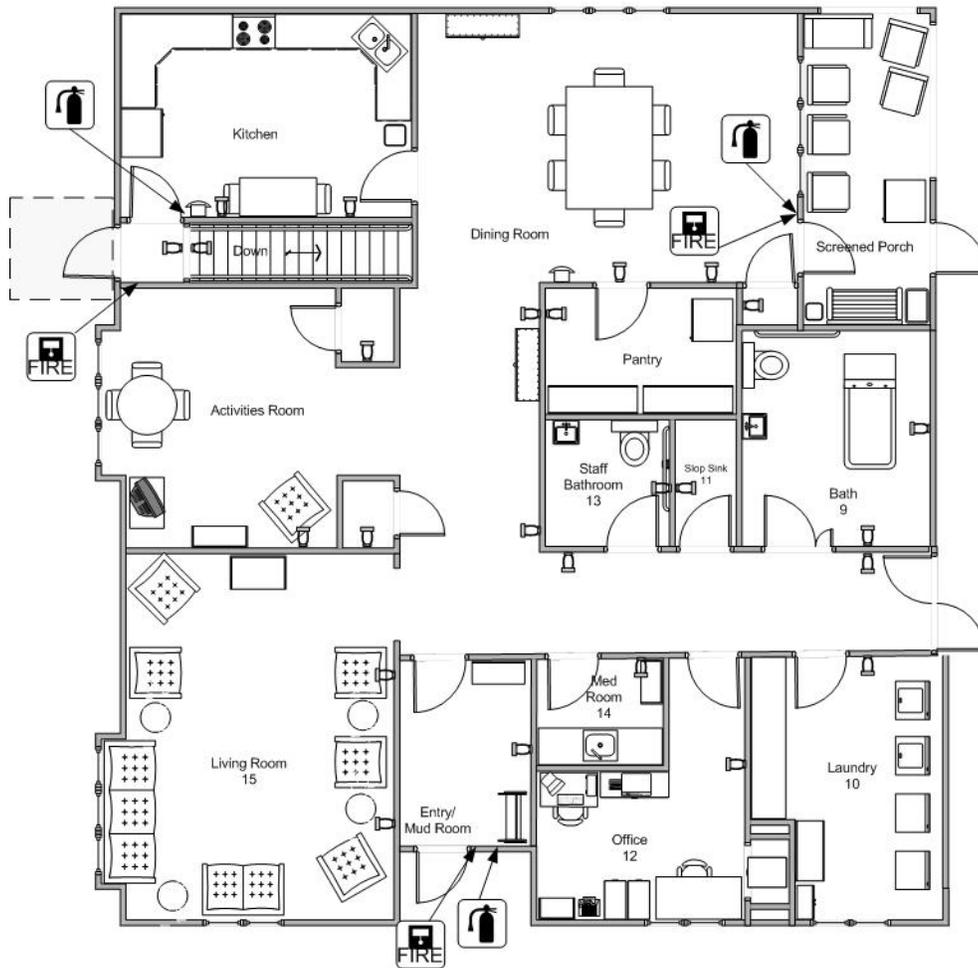
New York State
Office of Fire Prevention and Control

March 21, 2009

Sunmount DDSO Riverview IRA
1534 NYS RT 30
Town of Wells
Hamilton County, New York

North End of Building
Drawing 2 of 3

Drawn by: Inv. F.M. Bachner, Jr.
Drawing NOT to Scale



Key to Symbols

- Fire extinguisher
- Storage Bin
- Garbage can
- Telephone
- Sprinkler Head
- Fire alarm pull station

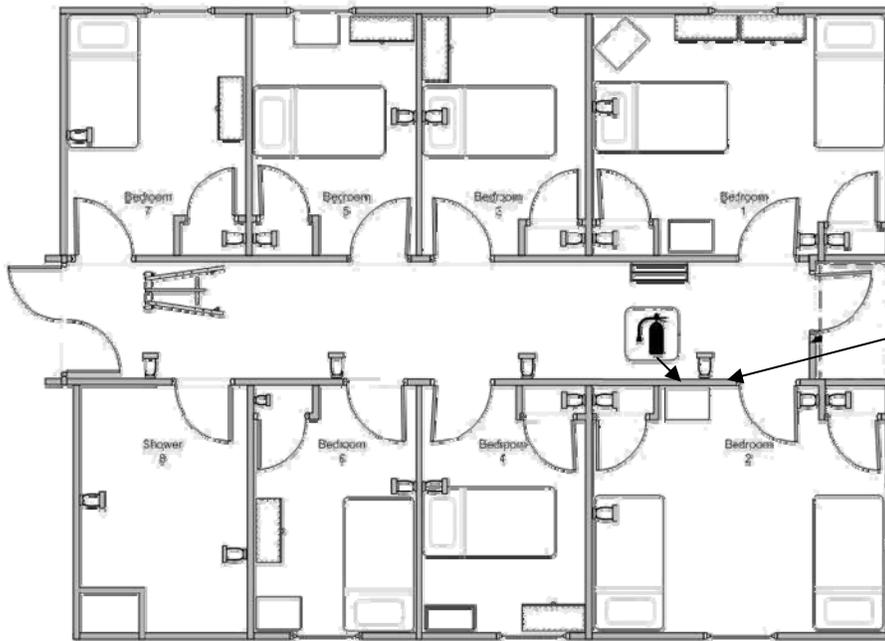
New York State
Office of Fire Prevention and Control

March 21, 2009

Sunmount DDSO Riverview IRA
1534 NYS RT 30
Town of Wells
Hamilton County, New York

South End of Building
Drawing 3 of 3

Drawn by: Inv. F.M. Bachner, Jr.
Drawing NOT to Scale



Key to Symbols

- Fire extinguisher
- Sprinkler Head
- Handicap lift
- Fire alarm pull station

OPERATIONAL MATTERS

Emergency Preparedness Planning and Training

Properly designed and implemented fire safety programs are a first line defense in fire prevention. They ensure that persons having responsibility for fire safety understand what actions are required when a fire emergency occurs and that the fire and life safety systems in the facility are tested and inspected in accordance with fire code requirements.

A good fire safety plan has three main elements:¹⁹ the first of which is prevention. Evaluating the structure for fire hazards and taking steps to reduce or eliminate those hazards benefits everyone in the long run. The second element of the plan is evacuation. Fires can spread with incredible speed. The ability for the occupants of any structure to quickly leave the danger zone is the best means of ensuring their safety in case a fire does break out. The third element is fire fighting. This is the final element because, although individuals can fight very small fires, the limited capacity of portable fire extinguishers means that emphasis must always be placed on alerting and evacuating the building as the first priority in any fire emergency. With the adoption of a fire safety and evacuation plan, it is necessary to explain the plan to each employee upon initial assignment of job duties. The employee must receive all information needed for their safety.

For the purpose of evaluation within the context of this Report, the fire and evacuation plans, drills and staff training will each be reported on separately.

Item for Review

With the Riverview IRA being considered by state regulations²⁰ as a one- or two- family residence, many of the fire safety operational provisions of the Fire Code of New York State afforded to other residential and institutional occupancies are therefore not applicable.

Resident Conditions

The excerpts below are quoted from the Residential Habilitation Plans and Individual Protective Oversight Plans, developed pursuant to 14 NYCRR 633.10, for the residents living in the Riverview IRA at the time of the fire, as reviewed by OFPC:

¹⁹ The *Fire Code of New York State* contains specific items fire safety and evacuation plans must address.

²⁰ 14 NYCRR 635-7.1 and the *Residential Code of New York State* §102.2.1.

- Resident #1: *“does not respond to the fire alarm while awake or asleep. ... will be provided with staff assistance/prompting to ensure her safety. ... will be supervised while in the safe area to ensure her safety.” ... has a tendency to wander away from a group and staff should be aware of this tendency.”*
- Resident #2: *“has no self-protective skills and staff will monitor her activities to assure that she is protected as needed.” “... is repositioned periodically throughout the day in conformance with OT and PT recommendations to ensure her comfort and safety. When being repositioned /moved a hooyer lift will be used for her comfort and safety.”*
- Resident #3 *“will at times stand up when the alarm goes off, but does not attempt to leave the residence. When asleep ... needs physical prompting to wake up and assistance from staff to remain in a safe area. She will be provided assistance from staff to assure her safety.”*
- Resident #4 *“is non-self preserving and requires total support for fire and emergency evacuation. He would need supervision to remain in the safe area.”*
- Resident #5 *“Fire and evacuation training will be provided periodically for both ... and staff. ... requires total support during evacuation. She is not able to evacuate independently and staff assistance is needed for her safety. ... will remain at the safety area with supervision until it is safe to return to the residence. ... utilizes her wheelchair for evacuations.”*
- Resident #6 *“uses a walker in the residence. She will use a wheelchair for transportation and for long distances.”*
- Resident #7 *“requires verbal to physical prompting to exit the IRA during an evacuation. He will remain in the safe area with supervision.”*
- Resident #8 *“requires verbal to physical prompting to exit the IRA. She requires supervision at the safe area to remain there.”*
- No reports or plans were located for resident #9 in the documentation available to OFPC at the time of this report.

The methodology that is used to assist in evaluating fire and life safety concerns is the nationally recognized NFPA-Evacuation Difficulty Score “E-score” approach which includes a determination of the capability of the residents of the home to meaningfully participate in responses to emergency situations (self-preserve).

The E-score for the Riverview IRA was documented as “Impractical” as contained in the Fire Safety Survey Report – 2000 Life Safety Code, dated May 15, 2008²¹ and completed by the OMRDD Division of Quality Management. However, there were no E-Score worksheets available reflecting each specific resident to document how this rating was derived.

Item for Review

Further scientific research at a national level needs to be conducted to evaluate and quantify the egress capabilities of persons that have mental, developmental, or physical disabilities or combinations thereof. This research also should include the capacity of staff to evacuate those who cannot self-preserve.

²¹ Contained in Appendix C

Fire and Evacuation Plans

The Fire Evacuation Plan for the Riverview IRA offered many statements that were contradictory, including when to use a fire extinguisher and when to begin evacuation.

The RACE acronym is mentioned in the plan, but the specific evacuation steps are introduced only after fire extinguisher use is discussed. RACE is a common acronym used to describe actions to be taken during a fire, specifically in the health care industry. The acronym stands for:

Rescue or Relocate, this means that the staff member should *first* attempt to remove anyone from an area where a fire is immediately threatening their life while not risking their own safety.

Alarm, which means that the next course of action would be to notify the other occupants and the fire department that there is a fire emergency within the building. In the case of a building equipped with a fire alarm system that automatically notifies an off-site communications center, activating the alarm system will notify both the occupants and the fire department simultaneously.

Confine, which means that actions should be taken to limit the spread of the fire. Confine can be as simple as closing doors during an evacuation to limit the spread within the facility.

Evacuate, and then consider using an extinguisher.

According to the evacuation plan established for the IRA, the evacuation of the building should take place immediately and the use of a fire extinguisher should be limited to times when the fire is small and contained and the staff member has been trained in the use of the extinguisher.

The plan identified the IRA's designated "safe area" to be the "left side of the parking lot farthest point from the house as you are exiting" and it was to this location that staff was expected to be capable of evacuating residents to in the event of fire.

Item for Review

To be most effective, an evacuation plan should be formatted and presented in the sequential manner expected to be employed at time of emergency.

Fire Drills

Documentation of fire drills for the IRA was located and recovered during post fire inspection. Fire drills were performed monthly on each shift during 2008 as well as January and March 2009. No records of fire drills were recovered for the month of February 2009.

As part of a review for compliance with the Life Safety Code[®], each resident is evaluated on how they react to the fire alarm during periodic evacuation drills. During each drill, the simulated fire location, number of exits used, and patient response to the alarm and action taken were all noted on reports. Resident responses noted on reports regarding response to alarm ranged from independent action taken, to physical prompting required by staff members. Action taken by residents also ranged from a few independent actions to totally dependent on staff members for evacuation. The majority of residents located in this IRA, according to drill reports, required direct staff assistance to facilitate their safety. Many residents were only able to walk with a walker or were wheelchair bound. Drill reports also indicate that drills conducted after dark would typically use only one exit as opposed to drills conducted during the day when multiple exits would be used. This appears to be consistent with the procedures as contained in the fire evacuation plan for night evacuation; however, this practice may have lead to staff and residents to becoming accustomed to this approach and failing to make use of other exits.

The requirement for fire drills is driven by CMS certification guidelines. The Fire Safety Survey Report filed for this facility requires drills under 42 CFR 483.470(i) *Evacuation Drills* which states:

- (1) *The facility must hold evacuation drills at least quarterly for each shift of personnel and under varied conditions to-*
 - (i) *Ensure that all personnel on all shifts are trained to perform assigned tasks:*
 - (ii) *Ensure that all personnel on all shifts are familiar with the use of the facility's emergency and disaster plans and procedures.*
- (2) *The facility must-*
 - (i) *Actually evacuate clients during at least one drill each year on each shift:*
 - (ii) *Make special provisions for the evacuation of clients with physical disabilities:*
 - (iii) *File a report and evaluation on each drill:*
 - (iv) *Investigate all problems with evacuation drills, including accidents and take corrective action: and*
 - (v) *During fire drills, clients may be evacuated to a safe area in facilities certified under the Health Care Occupancies Chapter of the Life Safety Code.*
- (3) *Facilities must meet the requirements of paragraphs (i) and (1) and (2) of this section for any live-in and relief staff that they utilize.*

Each resident's behavior during a fire drill is documented twice: first in their response to the alarm and then in their action at the safe area. This is done using one of the following "Response Codes" as listed on the OMRDD fire drill report form:

I - INDEPENDENT - Independently responded to the alarm and exited the residence to the safe area and stayed at the safe area.

V - VERBAL - Required verbal prompts to respond to the alarm and exit to the safe area. Required verbal prompts to stay at the safe area.

M - MODEL - Able to follow the example of others to evacuate to the safe area. Follows the example of others and remains at the safe area.

P - PHYSICAL PROMPTS - required physical prompts to respond to the alarm and exit the residence. Required physical prompts to remain at the safe area.

D - DEPENDENT - Is totally dependent on the staff for their safe evacuation.

R - RESISTIVE - Resisted or refused evacuation. Refused to stay at the safe area/attempted to re-enter the residence.

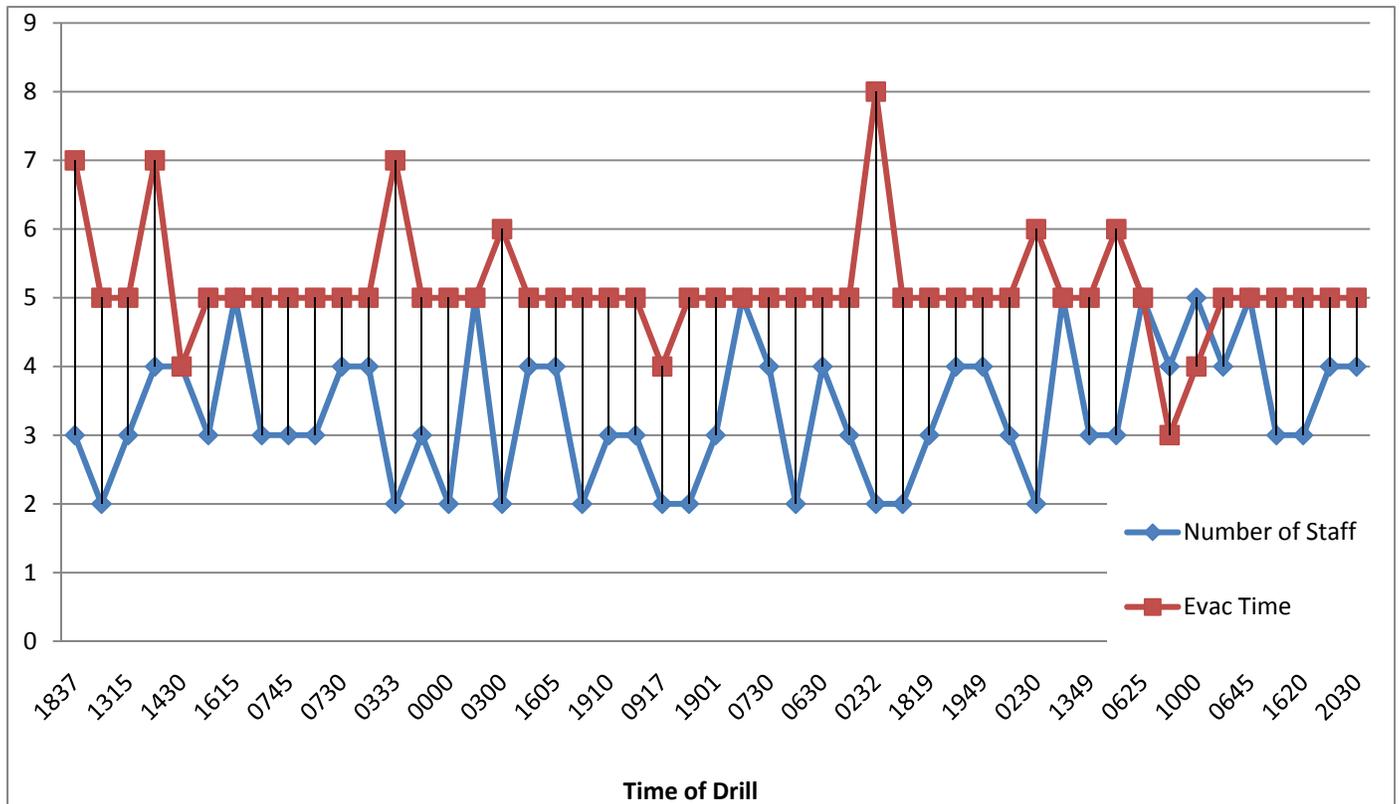
OFPC identified conflicting information in fire drill reports it reviewed. An example of this included recording the action of a resident, during a single drill, as being “Dependent” in their response to the alarm and then “Independent” in their action at the safe area. Based upon strict application of the above definitions, this would appear to be implausible.

A review of all documented fire drills conducted in the Riverview IRA since time of occupancy, in May 2008, indicates that staff report evacuation times to the established “safe point” ranging from three minutes to a maximum of eight minutes.

Chart 2

Fire Drill Performance

Time of Recorded for Total Evacuation vs. Number of Staff Participating



It is noted that on the morning of the fire, the fire alarm activated at 0525 hrs. and the assistant fire chief arrived on the scene approximately eight minutes after alarm activation²², yet at that time, the evacuation had not been completed. There were no residents outside the structure or assembled at the designated safe area. It was only with the assistant fire chiefs help that the first residents were removed from the structure to the designated safe area.

Item for Review

There is no program in place external to OMRDD that provides evaluation, audit or critique of drills in order to ensure that they are realistic, meaningful or reflective of actual operational capability.

Fire Extinguisher Use

Sunmount DDSO provides employees with annual fire safety in-service training. The training document available to, and reviewed, by OFPC inspectors consists of four pages and outlines “Firefighting” as a topic area. The training document states:

“Sunmount employees are not trained to fight fires. Fire fighting should ONLY be done if: The RACE principle has been completed

- *The fire is small and confined to one area*
- *You can fight the fire with your back to a safe exit*
- *The extinguisher you use is rated for the type of fire*
- *You have had training in the use of the extinguisher”*

The training document further outlines the instructions for fire extinguisher operation and defines the fuel classes of fires.

The statements made in the in-service training document provided by Sunmount DDSO are contradictory. The statement that “*Sunmount employees are not trained to fight fires*” is then followed with “*fire fighting should only be done if the RACE principle has been completed.*” If employees are not expected to use extinguishers, this statement should not be included in the training information. Furthermore, instructions are given regarding extinguisher use and fuel types, suggesting that an employee should know about extinguishers.

Employees are instructed within the facility fire evacuation plan that: “*In the case of a small containable fire, e.g. fire on the stove, in a trash can etc. staff should use a fire extinguisher to attempt to extinguish the fire to prevent it from turning into a larger fire. Even if the fire is*

²² It should be noted that inconsistent information is provided in staff accounts as to whether the evacuation was initiated prior to, or upon, alarm activation.

contained/extinguished the alarm should still be pulled and the evacuation should proceed and the residence should be inspected by fire personnel prior to going back into the house.”

The statement found in the training document, along with directions from the Riverview IRA fire evacuation plan lead to the conclusion that employees were provided with fire extinguishers and expected to use them in the event of a small fire.

Portable fire extinguishers are not required by the *Residential Code of New York State* or the *Fire Code of the State of New York* for one-or two-family residences. However, they are required by OMRDD regulation, and by placing fire extinguishers within the IRA, the requirements of 29 CFR 1910.157 Portable Fire Extinguishers become applicable. Furthermore, by referencing firefighting efforts using extinguishers in fire safety training and the facility fire evacuation plan, it can be surmised that fire extinguishers are provided for employee use. When providing extinguishers for employee use, 29 CFR 1910.157 (g) “Training and education” then becomes applicable. Subsection (g)(1) requires that the “employer shall also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting.” ...“The employer shall provide the education required in paragraph (g)(1) of this section upon initial employment and at least annually thereafter.”

Interviews conducted with staff on duty at the IRA the morning of the fire revealed the use of a fire extinguisher. The staff member who used the extinguisher stated that it was discharged in the “direction of the door to the porch”, however this was done with the fire being located outside the door and an admission that the door was not opened, thereby rendering the attempt ineffective. Additionally, there are questions as to whether the fire had already progressed beyond a point where it was appropriate for staff to use portable fire extinguishers, especially when the evacuation had yet to be completed.

Fire Safety Training for Staff

Sunmount DDSO provides employees with fire safety training as part of an overall “new employee” initial training program. The time committed to fire safety has steadily decreased over the years, to approximately 90 minutes. The initial training utilizes curricula and materials prepared by the individual DDSO (region) without the benefit of a standardized statewide syllabus.

Annual in-service fire safety training is not consistent throughout the OMRDD organization, with some DDSOs expecting the individual facility managers to develop training materials and then to present to the staff under their supervision, while other service offices provide the managers with a “train-the-trainer” type foundation. The Sunmount Safety Department reported that managers within its service area are provided a package of fire safety information to use to conduct the annual fire safety training.

A statewide standardized curriculum should exist to ensure that all staff working in community residential facilities has a solid fire and life safety foundation, subject to additional operational issues related to the specific facility at which they may be assigned. Additionally, specialty programs should be developed and available for supervisory staff given the nature of their overall management duties.

Despite a train-the-trainer groundwork or having materials provided, there exists a natural degradation in quality and effectiveness of the message in each subsequent level it is distanced from a subject matter expert.

Items for Review

Fire safety educational programs, especially those intended to impart information critical to residential operations, evacuation procedures, general fire safety, fundamentals for group residential living, as well as manual skills (use of fire extinguishers), should be instructor lead and interactive, rather than self-guided, to be of greatest impact and value.

Given the serious consequence fire poses to a community residence, and the vital role staff has to ensure the safety of the residents, fire safety training must be given significant priority and should be presented by experienced fire safety professionals who are formally trained in educational methodologies.

INCIDENT ACTIVITIES

Fire Development & Growth

The fire started on the exterior of the building on the semi-enclosed porch located on Side C. The fire had immediate fuel available from items located on the porch as well as the exterior wall of the structure. The fire grew in intensity and traveled upward, reaching the vinyl soffit along the edge of the roof line while simultaneously feeding on the vinyl material comprising the porch ceiling. It then made its way into the soffit and through porch ceiling into the attic. Once the fire reached the attic, it traveled throughout all areas of the open space. The fire eventually reached the gable ends of both ridgelines, and then began to work downward into the structure. Heavy fire damage was noted to all of the roof structure, porch and dining room areas, as well as the bedroom located on the Side C/ D corner of the building.

Item for Review

The vinyl material permitted the fire to rapidly extend into the unprotected attic space. Original plans reviewed by OFPC reference the soffit material to be aluminum and the porch ceiling to be exterior grade gypsum board. Had these components been constructed using the more fire resistive materials, the fire would have been slowed in its spread into the attic.

On Duty Staff Accounts

The night shift at the Riverview IRA included two staff members. Their assigned shift was 2330 hrs until 0730 hrs. By the accounts of both staff members, the shift was routine up until the fire event. During conversations with OFPC, one staff member stated that some residents required lifting from their beds and placement into wheelchairs to effectuate the evacuation. These individuals were then moved down the hallway to the mud room that was directly off of the front exit door. One staff member reported taking the time during the evacuation to answer the telephone which turned out to be the fire alarm central station calling to verify the nature alarm. Both staff members made additional trips from the mud room down the sleeping corridor to continue evacuation of additional residents. One staff member suffered shoulder injuries from physically dragging some of the remaining residents from their rooms to the mud room. In interviews, one staff member made note of the deteriorating conditions in the sleeping corridor by referencing that smoke started to form at the ceiling and got progressively worse during the evacuation and subsequent trips down the corridor and also

made reference to the lights going out, including the emergency lights.²³ Both staff members were met at the exterior door from the mud room by the Wells Fire Department assistant fire chief, who assisted in removing four residents from the building, before making the decision to cease search and rescue operations.

Item for Review

The fire evacuation plan clearly establishes that evacuation should be made via the closest available exit. There has been no consistent and suitable explanation presented to OFPC as to why staff made the decision to initiate the evacuation of residents via the main doors of the facility rather than the closer exit door located on Side D.

Fire Department Operations

When the Wells Fire Department assistant fire chief arrived, his first action was to open the exterior front door to the building. He was met at the door by the two staff members that were attempting to evacuate residents. The assistant chief assisted in removing four persons²⁴ from this area and was made aware that five other people were still located within the building. He then stated that conditions in the front entrance deteriorated and the attic of the building was heavily involved with fire. A determination was made that due to the fire involvement of the building, and questions of the integrity of the attached portico on side A of the facility, that an interior fire attack would not be made; search and rescue operations terminated and resources were deployed for an exterior fire attack.

Additional assistance was received from Hope, Speculator, Lake Pleasant, and the Northville Fire Departments.

Later in the incident, in coordination with the Town of Wells DPW, a front end loader was employed to remove the portico from the structure. The mud room of the structure was entered only after the portico was removed and one victim was located in this area. It was determined that this victim²⁵ was still alive, and a medivac helicopter was requested for transport at 0739 hrs.

During the removal of that victim, a New York state trooper was taking initial photographs of the scene. One of the other victims, initially believed to be deceased, was photographed from the exterior of Side A through the bedroom window where the resident slept. It was at this

²³ OFPC believes smoke obscuration to have contributed to the loss of effectiveness of the emergency lighting.

²⁴ These four victims survived.

²⁵ This victim ultimately died in enroute to the hospital.

time that the victim²⁶ was determined, by the trooper, to be alive and a second rescue was initiated. A second helicopter was ordered for transport at 0742 hrs.

Firefighters then returned to the mudroom and noticed movement under some debris, from which they determined that there was another victim who remained alive and a third rescue was initiated. The third helicopter to transport this resident was ordered at 0805 hrs to transport this victim²⁷.

The other two victims were recovered from the structure after being pronounced dead by the Hamilton County coroner.

²⁶ This victim survived.

²⁷ This victim died enroute to the hospital.

POST FIRE DOCUMENTATION INSPECTION/ANALYSIS

OFPC inspectors conducted a review of documentation provided by OMRDD and DASNY related to the original design and subsequent construction activities of the Riverview IRA. The following areas of discussion result from matters identified in a combination of construction site meeting minutes as well as notes taken by DASNY Quality Assurance Inspectors²⁸ during routine site visits.

First Floor Attic Fire Separation

Several discussions took place during the construction meetings regarding a proposed fire separation between the common and sleeping corridors of the facility. The commentary from the reports states that the separation was an OMRDD program request as opposed to a design or Code requirement. Several notes mention what the separation should “look like”, but there is not definitive confirmation from the documentation provided that the separation was ever completed.

Evidence of “As Built” Condition

OFPC investigators and OMRDD facilities maintenance staff members had several conversations regarding the fire separation. Staff members stated that the fire separation in the attic space between the sleeping corridor and the remainder of the building was discussed during construction meetings. During the course of these meetings, it was determined that the fire separation was not a code requirement, though OMRDD thought that it was a good idea. The fire separation in the attic space was framed in, but the sheetrock was never installed due to impracticality at that point in the construction process. Facility maintenance staff verified that it was not installed by stating that he was in the attic space of the structure within a week prior to the fire and could look down it from end to end along the corridor.

Item for Review

The lack of a barrier wall in the attic between the two building areas did not contribute to the fatal outcome of this fire as all deceased victims were located on the main common area side of the structure and rather than within the sleeping area. However, the lack of the fire separation, as described in the building plans reviewed, directly contradicted OMRDD’s request for initial

²⁸ The specific excerpts of these meeting minutes and inspection notes are located in Appendix A

design of the building and its presence might have restricted the fire spread within the attic to the area over the sleeping rooms, thereby reducing the overall level of structural damage.

Sprinkler System

Several discussions are recorded as having taken place during the construction meetings regarding the location and scope of the sprinkler system within the structure. The commentary focuses around whether or not sprinkler piping and heads were installed per manufacturer's requirements. Concerns noted on the first floor were documented as closed on inspection reports. Basement installation concerns revolved around whether or not the location was to include a finished ceiling and whether the specified materials would be acceptable to install without a ceiling assembly. Several of the sprinkler concerns in the basement were documented as rectified, while other notes do not include any indication of completion.

Conclusion

No further documentation has been located to confirm that the outstanding sprinkler codes compliance issues were corrected. While this did not have any bearing on system performance during the fire event, it is noted that according to supplied documentation that some open codes compliance issues were pending regarding the sprinkler system, particularly in the basement. The sprinkler head placement and application of escutcheon plates to the pendent heads is indicative that the installer prepped the heads for location below a ceiling. NFPA 13D states in Section 4-2.4 *"In basements where ceilings are not required for the protection of piping...residential sprinkler heads shall be permitted to be positioned in a manner that anticipates future installation of a finished ceiling."* However, due to the placement of building services equipment such as piping and ductwork, it would be unlikely that a ceiling could easily be installed at a later date.

While it is important to note the lack of available documentation that records final disposition of noted deficiencies, the sprinkler system as designed and installed, performed to its expectation given the fire condition within the facility.

Item for Review

The lack of complete documentation related to issues discussed at construction meetings and in DASNY Compliance Audits could lead the conclusion that the open issues, identified on the job site, were not completed.

CODE APPLICABILITY:

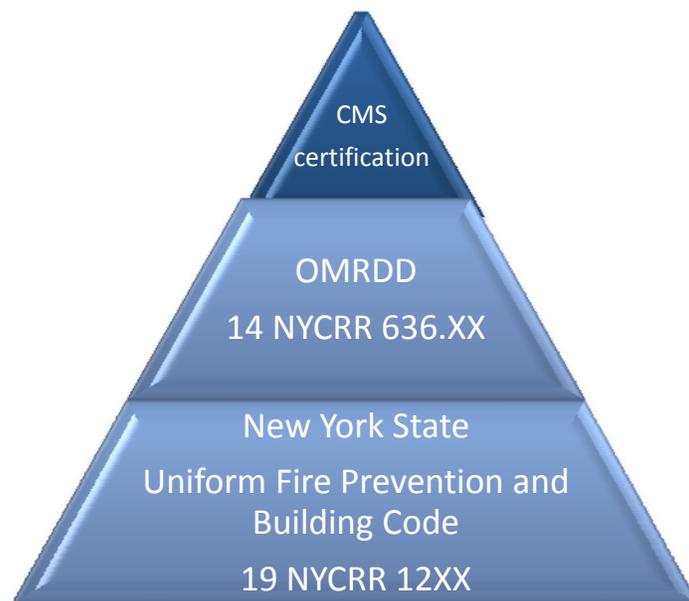
As a community residence subject to licensure by the New York State Office of Mental Retardation and Developmental Disabilities (OMRDD), several building and fire codes and other regulations guide the design, construction and operation of the facility. They include:

- ❖ The *Uniform Fire Prevention and Building Code* and *State Energy Conservation Construction Code*, including administrative requirements promulgated by the Secretary of State. These requirements are based on the Executive Law and found in Title 19 of the NYCRR.
- ❖ Regulations promulgated by the Commissioner of the Office of Mental Retardation and Developmental Disabilities. These requirements are based on the Mental Hygiene Law and are found in Title 14 of the NYCRR.

An overlay of regulation results from the certification and participation in programs administered by the United States Department of Health and Human Services (HHS) and the Centers for Medicare and Medicaid Services (CMS) as the facility participates in the federal Intermediate Care Facility/Mental Retardation program (ICF/MR).

The pyramid illustrates the layers of regulation for community residential facilities that are intended to build upon the foundation of the Uniform Fire Prevention and Building Code²⁹.

It should be noted that many of the applicable provisions of the Life Safety Code[®], as required by CMS, may be effectively be achieved through compliance with more restrictive provisions contained in the Uniform Fire Prevention and Building Code.



²⁹ The *Uniform Fire Prevention and Building Code* is comprised of eight individual documents: Building Code of New York State, Fire Code of New York State, Residential Code of New York State, Mechanical Code of New York State, Fuel Gas Code of New York State, Plumbing Code of New York State, Existing Building Code of New York State, and the Property Maintenance Code of New York State. These documents are incorporated by reference in 19 NYCRR 1220. The *Uniform Fire Prevention and Building Code* is required statewide under Executive Law Article 18.

For the purposes of the administration and enforcement of the Uniform Fire Prevention and Building Code by the authority having jurisdiction (OMRDD), 14 NYCCR 635.7.1 establishes the following occupancy classifications or designations to community residences (including all IRAs):

- (a) A facility serving 1-14 persons
 - (1) Where the facility is located in a one or two family dwelling, either:
 - (i) Residential Code; or
 - (ii) Classification R-3 if the facility does not comply with the requirements of the Residential Code.
 - (2) Classification R-2 where the facility is located in a multiple dwelling.

The 2002 edition of the *Residential Code of New York State* (RCSNY) Section R102.2.1 specifically addresses community residences within its scoping through a state modification. This modified segment was necessary to provide consistency with the aforementioned requirements within 14 NYCRR Part 635 regarding the classification of such a structure. The requirements contained within the RCSNY for one- and two-family residences are further subject to the additional features as provided for in Title 14 and through CMS requirements as applicable, to include certain criteria of the of the Life Safety Code.[©]

Code Requirements for Fire Alarm System

The *Residential Code of New York State* does not require a manual fire alarm or an automatic fire detection system in one- and two-family dwellings. However, 14 NYCRR 635-7.2³⁰ and Center for Medicare/Medicaid Services (CMS) certification requires compliance with Chapter 32 of the Life Safety Code[©] published the National Fire Protection Association. Additionally, 14 NYCRR 635-7.3 establishes specific criteria for automatic fire detection and alarm devices for the purpose of obtaining an operating certificate.

Chapter 32, Section 2.3.4.1 of the 2000 edition of NFPA 101 Life Safety Code[©] requires “A *manual fire alarm system shall be provided in accordance with Section 9.6*”. Section 2.3.4.2 requires *immediate occupant notification from the system in accordance with Section 9.6.3*. Smoke alarms are required in accordance with Chapter 32 Section 2.3.4.3.1 for *all levels including basements but excluding crawl spaces and unfinished attics. Additional smoke alarms shall be installed for all living areas as defined in 3.3.119*. Furthermore, smoke alarms are offered as an exception to this section if the building is equipped throughout with an approved automatic sprinkler system. Chapter 9 Section 6.1.4 states that *the alarm system*

³⁰ (ii) Supervised community residence initially certified or granted certification of need and approval for construction subsequent to September 1, 1985 and individualized residential alternatives (IRAs) housing nine or more persons: chapter 32 (new) or 33 (existing), Residential Board and Care Occupancies, of the NFPA 101 Life Safety Code, 2000 edition, or chapter 18 (new) or 19 (existing) Health Care Occupancies of the NFPA 101 Life Safety Code, 2000 edition.

shall be installed, tested, and maintained in accordance with NFPA 70, National Electric Code[©] and NFPA 72 National Fire Alarm Code[©].

Code Requirements for Fire Extinguishers

Since this property is regulated as a one- or two-family dwelling, portable fire extinguishers were not required within it pursuant to the *Uniform Fire Prevention and Building Code* or contained within the specifically referenced chapter of the Life Safety Code[©]. However, OMRDD regulations³¹ require fire extinguishers in all facilities except family care homes and IRAs for eight or fewer persons.

Code Requirements for Sprinkler System

The *Residential Code of New York State* does not require an automatic sprinkler system in one- and two-family dwellings less than three stories above grade. However, 14 NYCRR 635-7.2 and CMS guidelines require compliance with Chapter 32 (New Residential Board and Care Facilities³²) of the Life Safety Code[©] published the National Fire Protection Association. Section 32.2.3.5.1 requires that all facilities be protected throughout by an approved automatic sprinkler system in accordance with 32.2.3.5.2, with quick response or residential sprinklers to be provided.

Section 33.2.3.5.2 establishes that where an automatic sprinkler system is installed, for either total or partial building coverage, the system shall be in accordance with Section 9.7 and shall activate the fire alarm system. Section 9.7 would generally require a NFPA 13³³ designed sprinkler system, however Exception #2 to 33.2.3.5.2 states:

*“In slow and impractical evacuation capability facilities, an automatic sprinkler system in accordance with NFPA 13D, Standard for the Installation of Sprinkler Systems in one and two Family Dwellings and Manufactured Homes, with a 30 minute water supply, shall be permitted. All habitable areas and closets shall be sprinklered. Facilities with more than eight residents shall be treated as two family dwellings with regard to water supply.”**

* Treating facilities with more than eight residents as two family dwellings with regard to water supply is only referenced in NFPA 13D, 1999 edition if a water supply is used as a multipurpose piping system. If a facility’s water supply services the sprinkler system and the domestic system at the same time for more than one dwelling unit, 5 gallons per minute (gpm) of water must be added into the sprinkler system flow requirements by the system engineer. Water supply calculations provided sufficient supply for this facility.

³¹ 14 NYCRR 635-7.3(h)(4) requires at least one fire extinguisher accessible on each floor

³² See further discussion in this section as to applicability of Chapter 32 to the Riverview facility.

³³ An NFPA 13 designed sprinkler system provides sprinkler protection in all areas of the structure to include concealed spaces such as attics as well as mechanical areas.

RESIDENTIAL vs. INSTITUTIONAL OCCUPANCIES

This segment of the report is intended to provide guidance for contemplating potential building features for group homes in various situations.

One-and two-family dwellings, as regulated by the *Residential Code of New York State*, are equipped with basic fire safety building features such as, single-station smoke alarms, emergency escape and rescue windows from bedrooms, and fire separations from garages and attached dwelling units. They typically are not equipped with building fire safety features provided for multiple-family or institutional occupancies pursuant to the *Building Code of New York State (BCNYS)*.

Variables in Occupancy Classification

When discussing buildings where people sleep, the following attributes are contemplated when considering code compliance:

- ❖ Alertness of occupants- Having the capability to recognize an emergency
- ❖ Self-Preservation- Having the ability to react to an emergency in a rational manner to a point of safety. This is generally correlated with the level of care.
- ❖ Number of occupants- How many people are within the building, calculated in groups of those alert and those that can self-preserve

The main problem with buildings where people sleep is that the specific capabilities of the occupants are always changing due to aging, permanent or temporary ailments, and disabilities.

The BCNYS, based on the model *International Building Code*, classifies buildings where people sleep into two major categories, Residential and Institutional. Both of these categories have several subgroups, based on the three aforementioned attributes.

Regarding levels of care, the BCNYS determines that “personal care” is the responsibility for the safety of the patients within the location but that it is not nursing, custodial, or convalescent care.

Table 1

Residential Occupancies of the Building Code of New York State

Occupancy Type	Alertness of Occupants	Type of Care	Self-Preservation Abilities	Number of Occupants
R-1-Transient	No limitations	None	Yes	Unlimited
R-2-Non-Transient	No limitations	None	Yes	Unlimited
R-3- 1 & 2 family	No limitations	None	Yes	Unlimited
R-4- Assisted Living	Mental disability, age, similar reason	Personal care	Yes	5 to 16

Table 2

Institutional Occupancies of the Building Code of New York State

Occupancy Type	Alertness of Occupants	Type of Care	Self-Preservation Abilities	Number of Occupants
I-1- Treatment	Mental disability, age, similar reason	Personal care	Yes	Over 16
I-2- Medical	Limited due to mental, physical, psychological reasons	Nursing	No	Over 5
I-3- Detention	No limitations	None	No	Unlimited
I-4- Day-care (young and old)	Age	Personal care	Yes	Unlimited

To accurately identify the appropriate occupancy type, the above tables list the qualifiers. “Self-Preservation” is discussed in two recognized Codes:

- ❖ BCNYS 308.2- “The occupants are capable of responding to an emergency situation without physical assistance from staff.”

- ❖ Life Safety Code® (NFPA 101), 2003 edition Section 3.3.191- “Self-Preservation. The ability of a client to evacuate a day-care occupancy without the direct intervention of a staff member.”

Item for Review

Based on information contained within the residents’ ISPs, specifically their self-preservation abilities, a structure meeting the requirement of Occupancy Group “I” as defined in the BCNYS may have been more appropriate housing some of these residents.

BCSNY §308.1 Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which people are cared for or live in a supervised environment, having physical limitations because of health or age are harbored for medical treatment or other care or treatment, or in which people are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

*BCSNY §308.3 Group I-2 - This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a **24-hour basis of more than five persons who are not capable of self-preservation**. [emphasis added] This group shall include, but not be limited to, the following:*

- *Hospitals*
- *Nursing homes (both intermediate-care facilities and skilled nursing facilities)*
- *Mental hospitals*
- *Detoxification facilities*

A facility such as the above with five or fewer persons shall be classified as Group R-3 or shall comply with the Residential Code of New York State in accordance with Section 101.2.

Based on the above information, community residences, if defined by the *Building Code of New York State* exclusively, would be considered:

- ❖ Occupants not under detention without the ability for self-preservation - **Group I-2**
- ❖ 5, but < 16, occupants, all can respond to an emergency without staff - **Group R-4**
- ❖ More than 16, all can respond to an emergency without staff - **Group I-1**

In order to understand why occupancy group R-4 would not be appropriate, it is necessary to understand the definition of R-4 occupancies and its reference to “residential care/assisted living facilities” in the BCNYS:

BCSNY §310.1

“R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff.”

“Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 except as otherwise provided for in this code or shall comply with the Residential Code of New York State in accordance with Section 101.2.”

BCSNY §310.2

*“Residential Care/Assisted Living Facilities - A building or part thereof housing persons, on a 24- hour basis, who because of age, mental disability, or other reasons, live in a supervised residential environment that provides personal care services. **The occupants are capable of responding to an emergency situation without physical assistance from staff.** [emphasis added] This classification shall include, but not be limited to, the following: residential board and care facilities, assisted living facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug abuse centers and convalescent facilities.*

Additional information regarding Residential Board and Care facilities can be found within the definitions as set out in 2000 edition of the NFPA 101 Life Safety Code®.

3.3.134.13 Occupancy, Residential Board and Care - *“A building or portion thereof that is used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the purpose of personal care services.”*

3.3.145 Personal care - *“The care of residents who do not require chronic or convalescent medical or nursing care.”*

It becomes evident that the self-preservation ability of the persons occupying a structure has great significance in appropriately classifying it for design, construction and operational purposes.

Comparison of Code Requirements

A review of the Riverview IRA design plans and the onsite inspection by OFPC, post incident, confirmed that the building features in Table 3 were added, or proposed to be added, equal or above those which were required by the BCNYS for residential care/assisted

living facilities (R-4) or institutional occupancies (I-1 and I-2), despite the fact that the Riverview IRA was regulated by the *Residential Code of New York State*.

Table 3

Comparison of Building Features by Occupancy

Building Feature	R-4 Compliant	I-1 Compliant	I-2 compliant
13D sprinkler system	No	No	No
Automatic fire detection	Above	Yes	Yes
1-hour corridor	Above	Yes	Yes
20-minute doors	Yes	Yes	Yes
Corridor fire doors	Above	Above	Above
2,000 s.f. fire blocking (proposed)	Above	Above	Above
Fire extinguishers	Yes	Yes	Yes
Heat detection in attic	Above	Above	Yes
Manual Pull Boxes	Above	Yes	Yes
Unprotected wood frame	Yes	Yes	No

In essence, the building features within this building met the requirements of all three occupancies, with the exception of the sprinkler system and the type of building construction.

In reviewing the egress evacuation score and individual service plans for the nine residents of the Riverview IRA, the proper occupancy classification of this facility under the *Uniform Fire Prevention and Building Code* (without modification by 14 NYCRR 635-7.1) would have been a Group I-2 because some of the residents were not able to self-preserve in an emergency condition.

Title 14 of the NYCRR is not clear regarding which chapter(s) of the Life Safety Code should be applied for the purposes of certification of Supervised Community Residences and IRAs housing 9 or more persons.

The Riverview IRA was certified by OMRDD as meeting the requirements contained in Chapter 32 of the Life Safety Code[®] as a Residential Board and Care Occupancy. Had OMRDD elected to review the Riverview IRA as a Health Care Occupancy, it would have

then have done so based on the requirements contained in Chapter 18 of the Life Safety Code[®] and several of the building features identified in Table 3 would have had to be provided, including an NFPA 13 sprinkler system.

While the Riverview IRA was not certified as a Health Care Occupancy, the manner in which it was being used, based on the self-preservation abilities of the residents living there, leads to the conclusion that it may have been more accurately aligned with the definitions and applicability statements as contained in the Life Safety Code[®].

14 NYCRR 635-7.2(a)(1)(ii) states:

*Supervised community residence initially certified or granted certification of need and approval for construction subsequent to September 1, 1985 and individualized residential alternatives (IRAs) housing nine or more persons: chapter 32 (new) or 33 (existing), Residential Board and Care Occupancies, of the NFPA 101 Life Safety Code, 2000 edition, **or** [emphasis added] chapter 18 (new) or 19 (existing) Health Care Occupancies of the NFPA 101 Life Safety Code, 2000 edition.*

This conclusion is further supported by the Life Safety Code[®] definition of Residential Board and Care vs. Health Care Occupancy:

Chapter 18 of the Life Safety Code[®] specifies criteria for New Health Care Occupancies and defines a Health Care Occupancy as:

3.3.134 Occupancy, Healthcare – “An occupancy used for the purposes of medical or other treatment or care of four or more persons where such **occupants are mostly incapable of self-preservation due to age, physical or mental disability**, [emphasis added] or because of security measures not under the occupants’ control.”

The Annex to the Life Safety Code[®] is not a part of the requirements of the document but is provided to give the user explanatory material. The Annex further defines Health Care Occupancies by giving examples of what is included in this occupancy category - wherein “*Limited care facilities*” are listed. The formal definition of Limited Care Facility is:

3.3.117 Limited Care Facility – “A building or portion of a building used on a 24-hour basis for the housing of four or more persons who are incapable of self-preservation because of age; physical limitations due to accident or illness; or limitations such as mental retardation / developmental disability, mental illness, or chemical dependency.”

Items for Review

The Building Code of New York State uses a tiered approach to fire protection requirements based on the abilities of the occupants. The Riverview IRA utilized many of these fire protection requirements that exceeded the requirements of

current state regulations for community residences licensed by OMRDD. However, a review of the abilities of the residents in this occupancy is cause for recommendation that OMRDD either consider the addition of further protection features to protect against fires within concealed spaces, attics and fires from the exterior or apply the strict occupancy classification of the Building Code of New York State.

It is OFPC's recommendation that in determining the placement (location) of residents more consideration should be based upon their self-preservation abilities as determined in their Individual Service Plan (ISP) so that the facilities in which they reside more accurately reflects the occupancy use group(s) contained in the Building Code of New York State.

The Uniform Fire Prevention and Building Code, particularly as it applies to community residential facilities, should not be subject to modification by either agency regulation or other potentially less restrictive rule. Special considerations, such as may be contained in the Life Safety Code[®], should be limited to those which go above and beyond the requirements contained in the Uniform Fire Prevention and Building Code, and thereby serve as an overlay rather than a replacement.

Explanation of Sprinkler Systems

Sprinkler systems are available in three levels and scoped (designed) in the following three ways:

NFPA 13D - A “dwelling” system, with the purpose of providing for life safety of occupants in detached one- and two-family dwellings and townhouses (with adequate fire separation). These systems are purely for life safety, meaning that the design is to limit a fire proximate to the dwelling occupants, i.e. same room or egress path, to allow sufficient time for safe egress. The system is designed for a two sprinkler head design, about 26 gallons per minute, combined, and is not intended to, but often does, provide property conservation.

NFPA 13R - A “residential” system, with the purpose of providing for life safety of occupants in residential buildings; including apartments, dormitories, and other locations where self-preservation of occupants is possible. These systems are purely for life safety, meaning that the design is to limit a fire proximate to the dwelling occupants, i.e. same room or egress path, to allow sufficient time for safe egress. The system also requires additional

coverage outside of the occupied space, such as attics when used for storage or HVAC equipment, storage rooms, and garages. The system design is based on the geometry of the building, but could be based up to four sprinklers operating, approximately 50 gallons per minute, combined. and is not intended to, but often does, provide property conservation.

NFPA 13 - The base system provides both life safety and property conservation. The system protects every space within the building unless other passive methods are used, such as non-combustible attic spaces or attics utilizing fire-retardant treated wood.

The Riverview IRA had an NFPA 13D system designed, but the sprinkler layout matched that of both NFPA 13D and NFPA 13R.

Item for Review

Exterior fires are the most likely type of event that can overcome a 13D or 13R sprinkler system due to the likelihood of the fire extending into the roof system. Conceptually, there are five ways to think about how to prevent a fire event on the exterior of a building from becoming a fire event in an attic:

- ❖ *Limit all exterior fire sources*
- ❖ *Limit openings from the outside into the attic*
- ❖ *Protect openings (eaves, soffits, and gables) from allowing fire to pass into the attic*
- ❖ *Construct the attic to prevent the development of a fire if subjected to such conditions*
- ❖ *Provide fire suppression to control a fire within an attic*

RECOMMENDATIONS FOR PROTECTING AGAINST ATTIC FIRES

It is not realistic to eliminate all fires from starting on the outside of a building because of vegetation, trash, outside HVAC equipment, electrical fixtures and human factors, such as smoking. Therefore, to prevent an exterior fire from spreading into the attic space from the outside, protecting openings is a viable solution and may include: the use of fire retardant treated wood, known as FRTW³⁴, gypsum, or thick boards. The issue with protecting eaves is that there is no prescriptive protection standard that provides for the openness of the attic insofar as energy efficiency and ventilation requirements.

NFPA 13, the sprinkler standard for Group R-4 and I occupancies, requires a full coverage sprinkler system including canopy type roofs, porches, and attics. NFPA 13 also recognizes

³⁴ This product is impregnated with chemicals to inhibit the wood from burning when exposed to direct flame contact.

passive fire protection in place of sprinkler coverage, such as use of non- or limited-combustible products in certain spaces. Specific to attics, the use of FRTW for roof decks and structural members (rafters, trusses, joists) coupled with the use of insulation with certain fire spread properties would allow such a space to not be protected with a sprinkler system. The basic premise is that an event that causes something to burn within the attic, such as electrical, lightning, outside fire, will likely not progress significantly since the attic cannot support combustion, therefore the fire remains localized. The use of this exception may be beneficial in locations where sprinkler protection is not feasible because of the need for a dry or antifreeze sprinkler system. A drawback to the use of this design alternative is the increased cost of materials and less structural bearing capacity of FRTW. Specific to the Riverview IRA ‘model’, the use of this exception could allow the protection to be provided in future projects without major re-design as changes would likely include the use of FRTW or steel trusses and FRTW roof decking.

Use of NFPA 13 has other benefits, besides the protection of attics. The area of origin of the fire in the Riverview IRA is statistically small, compared to other fire sources in similar occupancies. Cooking, trash, and electrical are the three largest sources of fire events in these occupancies³⁵. NFPA 13D and NFPA 13R do not require sprinkler protection in combustible shafts or cableways and do not require protection of exterior porches or decks. Since the three largest sources could be attributed to areas not provided with sprinkler protection, i.e. exterior grilling, trash containers outside near the building, electrical wire runs, NFPA 13 may be more appropriate for providing protection in facilities that have residents with significant mobility impairments.

Using the Riverview IRA as an example, a cursory review indicates the following are upgrades to the current model and would provide the equivalent increased protection of an NFPA 13 sprinkler system:

- ❖ Use of FRTW/Steel roof structure and decking or temperature resistant sprinkler coverage.
- ❖ Protection of exterior porches and front overhang, accomplished by sidewall heads with minor design changes to the front overhang.
- ❖ Additional water requirement, from 260 gallons to approximately 2000 gallons of storage when within a non-municipal water supplied area, no real change for areas served by municipal water systems.
- ❖ Installation of a fire department connection.
- ❖ Installation of a ceiling in the basement and crawlspace.

Regarding the type of building construction, the only part of the Riverview IRA building model that didn’t meet the protected wood-frame building requirements, for I-2 occupancies, is the uncovered floor joists in the basement. The installation of a gypsum wallboard ceiling

³⁵ NFPA Report “Structure Fires in Medical, Mental Health and Substance Abuse Facilities”, February 2009.

of specified thickness would have met this requirement, as well as provided the surface for the NFPA 13 sprinkler protection.

Item for Review

NFPA 13 provides for greater protection of this type of occupancy, especially for those clients that have very limited mobility or lack self-preservation abilities. Furthermore, NFPA 13 provides useful provisions for trading off passive fire protection (construction features) for active fire protection (sprinklers) as well as providing a needed level of fire safety in a global review of fire event probabilities.

FACILITY INSPECTIONS

There are two separate and distinct processes used to determine code compliance of facilities that fall under the regulatory oversight of the Office of Mental Retardation and Developmental Disabilities (OMRDD).

The first process is actually a survey completed as part of a facility's certification pursuant to the requirements as set forth by OMRDD regulations³⁶. The regulations contain the requirements for both certification and recertification by OMRDD as a participant in the U.S. Department of Health and Human Service's Medicare and Medicaid programs as they are administered by the Centers for Medicare & Medicaid Services (CMS.) To qualify for Medicaid reimbursement, ICFs/MR must be certified and comply with Federal standards, referred to as Conditions of Participation, found in Federal regulations at 42 CFR Part 483, Subpart I, Sections 483.400- 483.480, in eight areas, including management, client protections, facility staffing, active treatment services, client behavior and facility practices, health care services, physical environment and dietetic services.

The following outlines the relation of the Life Safety Code[®] to the facilities certified by OMRDD and also provides a basic overview of the survey process. This information was extracted from on the CMS website: http://www.cms.hhs.gov/CertificationandCompliance/11_LSC.asp

Life Safety Code Requirements

This page provides basic information about Medicare and/or Medicaid provider compliance with Life Safety Code (LSC) requirements and includes links to applicable laws, regulations, and compliance information.

The LSC is a set of fire protection requirements designed to provide a reasonable degree of safety from fire. It covers construction, protection, and operational features designed to provide safety from fire, smoke, and panic. The LSC, which is revised periodically, is a publication of NFPA, which was founded in 1896 to promote the science and improve the methods of fire protection.

The basic requirement for facilities participating in the Medicare and Medicaid programs is compliance with the 2000 edition of the LSC.

In most cases, the State Survey Agency (SA)³⁷ schedules the LSC survey to coincide with the health survey; however, the timing of the LSC is left to the discretion of the SAs. The SA determines whether the LSC survey³⁸ is to occur

³⁶ 14 NYCRR 635-1.2

³⁷ The Office of Mental Retardation and Developmental Disabilities is the State Survey Agency for New York State

³⁸ LSC surveys are conducted under the direction of OMRDD's Division of Quality Management (DQM).

before, after, or simultaneously with the health survey. Most States require an initial LSC survey before admitting patients prior to becoming operational. To assess facilities' compliance with the LSC and other Medicare and Medicaid fire safety requirements, the SA may enter into a subagreement or a contract with the State Fire Marshal's office or other state agency responsible for enforcing State fire code requirements. Under this agreement, the designated State fire authority generally agrees to:

- ❖ Survey all non-accredited hospitals, hospices, ASCs, SNFs, NFs, CAHs, RNHCIs, PACE Facilities and ICFs/MR in accordance with schedules the SA furnishes;
- ❖ Survey accredited hospitals selected for validation surveys or surveyed as a result of a substantial allegation of an unsafe conditions;
- ❖ Complete the appropriate Fire Safety Survey Report (Form CMS-2786);
- ❖ Prepare statements of deficiencies and review Plans of Correction (Form CMS-2567);
- ❖ Make recommendations to the SA regarding facilities' compliance with program fire safety requirements; and
- ❖ Use only qualified fire safety inspectors in the performance of these surveys.

Exemption for State Law - The LSC is not applicable where CMS finds that a State has in effect a fire and safety code imposed by State law that adequately protects patients in health care facilities, except for small ICFs/MR surveyed under the Residential Board and Care Chapters (Chapters 32 and 33). (See Section 1863 of the Act.)

The initial survey for the Riverside IRA was conducted on May 15, 2008 by a DQM associate architect. This fire safety survey was documented in "Fire Safety Survey Report – 2000 Life Safety Code Intermediate Care Facilities of the Mentally Retarded SMALL"³⁹. It covered requirements from the 2000 edition of the NFPA Life Safety Code[®] for new residential board and care occupancies. This initial survey was combined with other portions of the required survey and an amended operating certification was issued for the facility by OMRDD's Division of Quality Management (DQM) on May 30, 2008 and was due to expire on September 30, 2008.

Another review was conducted on February 4, 2009 during which a deficiency was noted in the operation of the corridor fire doors that was immediately corrected by facility maintenance staff.

³⁹ The full document is located in Appendix C

Periodic Surveys

OMRDD surveyors are required to visit each site that has been issued an operating certificate within a three year period from the last visit. The survey is unannounced and is conducted without the facility receiving prior notification. During the survey for recertification, the surveyor will choose specific program areas to review for compliance. These program areas may be chosen at random or based on previous deficiencies. However, during each recertification survey, the operational fire safety survey items are always reviewed.

The specific survey procedures for Life Safety Code[®] surveys, initial and recertification, of facilities subject to survey and certification inspections for Medicare/Medicaid are contained in the CMS *State Operations Manual Appendix I – Survey Procedures and Interpretive Guidelines for Life Safety Code Surveys*⁴⁰.

Training of Surveyors

CMS expects Life Safety Code[®] surveyors to successfully complete a Basic Life Safety Code[®] course, including a self-paced training on a CD-ROM as a prerequisite, an online basic surveyor training course and to have observed a Life Safety Code[®] survey.

Conversations with OMRDD Division of Quality Management staff indicated that the majority of surveyors employed or engaged by OMRDD are professionals from fields other than fire safety or building construction.

Item for Review

Surveyors completing the required Life Safety Code[®] assessments are generally not dedicated fire safety or code enforcement officials, nor do they typically have a background in fire protection or building codes beyond the scope of the survey. The survey conducted is very global, and includes all program areas such as sanitary conditions, staff training, and client care as well as the identified fire safety issues.

Annual Fire Safety Inspections

19 NYCRR 1204, the rules and regulations governing the administration and enforcement of the *Uniform Fire Prevention and Building Code* by State agencies, allows State agencies that own or control a building(s) to enforce the *Uniform Fire Prevention and Building Code* within those buildings, utilizing a method of designating code coordinators and code

⁴⁰ The full document is located in Appendix D

compliance managers⁴¹ within their own agency. Code coordinators are responsible for providing for fire safety inspections and inspections in response to complaints regarding conditions or activities allegedly failing to comply with provisions of the *Uniform Fire Prevention and Building Code* for the property.

The state regulations require each state agency to carry out a program of periodic fire safety inspections of buildings within its custody. OMRDD utilizes its own staff to fulfill this state requirement. Staff from the Sunmount Safety Department conducts these inspections for the facilities under its control, including the Riverview IRA.

Inspections are principally performed by Safety and Security Officers whose primary duties appear to be more a traditional security function rather than fire and life safety. A review of the criteria for appointment to these positions makes no mention of any type of fire safety background or experience. While on-the-job training is provided to the safety and security officer, there is no consistent or uniform fire safety program applied throughout the state.

The required inspections are conducted using a pre-printed check list for inspectors. The check list covers some topic areas of the *Property Maintenance Code of New York State* along with some items of the *Fire Code of New York State*; however, it is by no means comprehensive.

Information provided by OMDD safety staff indicates that a part of the inspection process is a review of required documentation related to fire drills and trainings; however the Safety and Security Officers do not conduct or audit either function.

OFPC had the opportunity to interview safety staff of a Developmental Disabilities Service Offices (DDSO) other than Sunmount and it became apparent that each DDSO generally functions independent of each other, with no identifiable oversight from OMRDD in regard to their fire and life safety programs.

Correction of Fire Safety Violations

In a conversation with a safety department representative from Sunmount DDSO, it was reported that should a violation be identified at a facility under its jurisdiction, a copy of the inspection report noting the violation would be transmitted to the facility supervisor for correction with a copy provided to the Sunmount facilities department. The safety department would not receive any feedback regarding the correction of standard violations,

⁴¹ Code compliance managers are authorized to issue construction permits and code compliance certificates for work undertaken by a State agency which is subject to provisions of the Uniform Code. Managers shall also be responsible for providing for the review of requests for construction permits, for inspections during the process of construction, and for inspections in response to complaints regarding work which is subject to the Uniform Code.

nor would they conduct a re-inspection to verify whether the violation had been abated. However, it was reported that should a serious violation⁴² be identified, the safety department inspector would not leave the facility until it had been corrected.

The present fire inspection system appears to lack a compliance verification or enforcement mechanism, instead relying on individual facility managers to ensure violations are corrected⁴³.

An annual fire safety inspection of the Riverview IRA had not been completed at the time of the fire given its opening in May of 2008. However, in conversations between OFPC inspectors and staff of the Sunmount DDSO Safety Department, it was reported that an inspection was expected to be completed sometime during 2009.

Items for Review

The current practices for fire and life safety inspection do not ensure objectivity, encourage uniformity in the inspection process, or lend to an unbiased, inspection.

Inspectors performing regularly scheduled fire safety inspections are not singularly focused, fire safety/code enforcement officials, nor do they typically have a formal background in fire protection or building codes.

In order to assure consistency exists in any inspection process, it should be uniform in nature and the inspection tasks carried out in a comprehensive and coordinated manner by an independent entity. A comprehensive inspection program, with adequate follow-up and a system to ensure the correction of violations would provide a more objective approach to fire safety inspections.

⁴² There was no clear or consistent definition of “serious” provided, rather it is left to the discretion of the individual inspector.

⁴³ State agencies are required to correct all code violations within a reasonable amount of time after their discovery. Violations not corrected within sixty days require preparation of a correction plan.

Appendix A

EXCERPTS OF MEETING MINUTES AND DASNY REPORTS

Items Related to Attic Fire Separation

A review of construction meeting notes from February 14, 2008 listed as “Construction and Site Visit Notes #9” under General Discussion refers to a “fire separation” on page 4.

- 1. The fire separation is now being referred to as a smoke barrier with a 1-hour fire rating.*
- 2. DASNY determined a new stud wall will be built in the attic directly above the corridor doors on the first floor.*
- 3. The attic partition will be created with 2x4's over the wall between the bathroom and the respite room and with 2x6's over the wall between the laundry and shower rooms to reflect the same wall thickness indicated on the first floor.*
- 4. Some installed framing will have to be removed by the General Contractor to allow sheetrock to pass by the perpendicular intersecting walls.*
- 5. Basement Crawlspace Separation – OMRDD expects the smoke barrier to extend into the wall between the crawlspace and the basement areas.*
- 6. BDA was asked to provide a section detail through the entire building showing the smoke barrier requirements from the attic to the basement.*

This discussion is inconsistent with what was observed during site observation and with an interview conducted of an OMRDD facilities manager.

On 3/31/2008, a Quality Assurance Report was issued from DASNY following a 3/20/2008 site visit. The report under Item 1 states “Confirm proper completion of 1-hour rated smoke barrier wall (OMRDD program request) per A/E direction/sketches. Copy required A/E sketches to DASNY CCU. Confirm proper fire stopping of penetrations per approved submittals. Listed assemblies specific to conditions are required.”

No further reference is made in DASNY reports as to the disposition of the 1-hour smoke barrier wall.

Items Related Sprinkler System Installation

Section 15501 of the DASNY project manual states on page 1 *“install fire protection systems in accordance with NFPA 13D, Standard For The Installation Of Sprinkler Systems In One and Two Family Dwellings and Manufactured Homes.”*

The first mention of the sprinkler system in the construction notes was in a 30% review meeting on May 9, 2005. It was noted under the fire protection section of the report that *“It was agreed to add sheetrock for basement ceiling due to sprinklers in the area. It was noted this can be argued against based on one’s interpretation of NFPA, but it has been required on other DASNY projects and should be included here as well.”*

The next note on the sprinkler system is from construction notes on December 13, 2007. *“The fire protection contractor has been roughing in piping throughout the building. The fire protection subcontractor noted there are conflicts between indicated pipe routing and building framing.”*

On January 3, 2008 another construction meeting was conducted and commentary was made on the sprinkler system. *“The fire protection subcontractor has issued one RFI. The RFI asked how the contractor was to proceed now that he has realized there is no ceiling in the basement. BDA responded by asking for further information from the subcontractor and a statement as to whether the CPVC piping being used can be installed exposed as installed.”*

On January 9, 2009, a DASNY Code Administrator made the following statements and/or observations about the sprinkler system in a quality assurance construction quality report dated 2/6/2009.

Item #1: “Blazemaster installer card required... Have copies of installer certifications on site.”

Item #2: “Inconsistent with project requirements... Confirm contractor provides a complete submittal for Blazemaster CPVC piping including manufacturer “Design and Installation Guide”. Confirm proper installation per manufacturer installation requirements...”

Item#3: “Not installed per listing... Verify sprinkler and CPVC piping in basement is installed in accordance with the Blazemaster Design and Installation Guide, “C. Unfinished Basement” (p.5-9), including but not limited to the following:

- Per Item #3 on page 7, the maximum temperature rating of the sprinkler is 155 degrees. Please confirm you do not have any heat sources such as unit heaters,

diffusers, uninsulated piping/ducts near basement sprinklers which would require intermediate temperature sprinklers (177 degree).

- Confirm sprinklers are installed for maximum 12' spacing in accordance with Item #3 on page 7.

- Confirm sprinkler deflectors are installed a maximum of 1 ¾" below the bottom of wood joists in anticipation of future ceilings in accordance with Item #3 on page 7. I would add that the deflector should be installed at 1 ¾" below the joists (to reduce the amount of fusible element recessed in the ceiling if ceiling is added.)

Note: the submitted/approved Viking model VK 468 Freedom Residential Pendent sprinklers is 1 ½" from frame to deflector.

-Confirm branch lines support devices offset the pipe at least 1 1/2" from the solid wood joists, in accordance with Item #8 on page 9.

On January 24, 2008, another site visit was conducted and the following observations/comments were made regarding the sprinkler system.

"Routing and code compliance issues with the sprinkler system installation have been resolved. It has been determined the PVC piping can be run exposed with certain conditions in the basement. The main piping is required to run above the bottom of the floor joists in the floor joist space.

The sprinkler subcontractor has been giving drilling guidelines for his use in determining allowable locations to drill through the LVL beams. The guidelines were provided by the LVL beam manufacturer. It was noted the installation is essentially the same as indicated in the Contract Documents.

Two additional heads are required for the system; one in the basement stairway because of the added stairwell door, and one in the closet off the Living Room not indicated on the sprinkler floor plans.

The GC asked that the sprinkler contract complete the work on the first floor so gyp-board installation can begin".

The DASNY Quality Assurance Report issued on 2/6/2008 also listed the following items for the sprinkler system.

"Item #4 Not installed per listing... Confirm the submitted/approved Viking Freedom Residential Horizontal Sidewall VK 450 sprinklers are installed 4"-6" from the ceiling as required per listing...

Item #5 Not installed per listing... Based on the hydraulic calculations the maximum coverage area of the approved VK 450 sidewalls is 16'x20' (8' to each side and 20' forward throw) at 4"-6" deflector distance below ceiling mounting height. VK 450 sidewalls were noted improperly installed greater than 8' from sidewalls within Activities 105, Dining 108, Office 113, and east end of Corridor 103 at Hall 102. Relocate sprinklers for proper spacing...

Item #6 Not installed... Provide required sprinkler coverage at bedroom closet near door to corridor (missing sprinkler coverage due to revised sprinkler layout; closet wall causes shadow effect from room sprinkler).

Item #7 Inconsistent with code requirements... Relocate sprinkler pipe noted installed deflected within wall framing due to light switch. Verify proper spacing of sprinkler at final location." (noted for corridor 103 & shower 116 & 119)

During the installation phases of the sprinkler system several changes were noted based on the original design.

Another site visit was conducted on February 14, 2008, and the following was noted about the sprinkler system. "...It was noted the basement piping for the sprinkler system has to be changed and hydro-tested. Crawlspace piping can remain as is. It was noted risers the first floor have not been pressure tested. All heads on the first floor have been located per code requirements, according to the contractor."

Another DASNY Quality Assurance Report was issued on March 31, 2008. The following items were noted on this report.

"Item #2 Inconsistent with code requirements... Provide tamper switches on all control valves of FP water supply piping (Note: installed piping arrangement differs from specified).

Item #3 Inconsistent with code requirements ... Provide additional sprinkler at west end of room between two furnaces required due to duct obstructions...

Item #5 Deflector shall be within 1 in. to 12 in. from ceiling deck... Relocate sprinklers under duct so deflector is 1"-12" below duct, as required per NFPA 13.

Item #6 Inconsistent with code requirements... Provide proper support of sprinkler piping under ductwork.

Item #7 See comment... Remove sprinklers noted installed in Crawl Space (not required or specified)."

This report concluded that Items 1 & 2 from January 9, 2008 were closed. However, Item 3 from January 9, 2009 included the following additional comments:

“3-20-08: Installed Viking VK 468 sprinklers are listed for 20’x20’ coverage per system flow and pressure. However, Blazemaster Install Guide indicates maximum 12’ spacing. As confirmed with Blazemaster Rep, sprinkler spacing for exposed Blazemaster piping in Unfinished Basements is maximum 12’x12’ to meet listing for piping (spacing required for protection of CPVC pipe). Improper spacing noted across from bottom of bsmt stair and north side of bsmt stair.”

“3-20-08: Deflector to ceiling distance noted greater than 1 ¾”. Up to 2 ½” distance noted. As confirmed with Blazemaster Rep, this is not acceptable to meet listing of system.”

This report also noted that Items #4, 6, 7 from February 6, 2009 were corrected. Item #5 from February 6, 2009 was corrected with the exception of Dining 108 which needed relocation for proper spacing.

A construction site visit was conducted on March 27, 2008 and the following was noted regarding the sprinkler system. *“...Fred noted the DASNY code person had been on site to review the sprinkler head placement. Fred will issue a report once he receives a copy. He noted one sprinkler head located in the dining room will have to be relocated. One sprinkler head in the basement will have to be moved to be in accordance with the piping manufacturer’s guidelines.”*

A construction site visit was conducted on April 21, 2008 and the following was noted regarding the sprinkler system. *“Fred noted a DASNY code official has reviewed the sprinkler system installation and has noted six items needing correction. One of the sprinkler heads in the dining room will have to be relocated. This will involve cutting the gypboard, patching and repainting.”*

A DASNY Quality Assurance Report was made for May 8, 2008. The general observations notes include an acceptance test by DASNY for the fire alarm system and verified the sprinkler tamper and water flow switch operation. The recommendations include: *“Confirm proper completion of open issues... Submit NFPA 13 Certificates (above and below ground)...*

Appendix B

EXECUTIVE LAW

“Building Code Act”

§ 371. Statement of legislative findings and purposes:

1. The legislature hereby finds and declares that:
 - a. The present level of loss of life, injury to persons, and damage to property as a result of fire demonstrates that the people of the state have yet to receive the basic level of protection to which they are entitled in connection with the construction and maintenance of buildings;
 - b. There does not exist for all areas of the state a single, adequate, enforceable code establishing minimum standards for fire protection and construction, maintenance and use of materials in buildings. Instead, there exists a multiplicity of codes and requirements for various types of buildings administered at various levels of state and local government. There are, in addition, extensive areas of the state in which no code at all is in effect for the general benefit of the people of the state;
 - c. The present system of enforcement of fire protection and building construction codes is characterized by a lack of adequately trained personnel, as well as inconsistent qualifications for personnel who administer and enforce those codes;
 - d. Whether because of the absence of applicable codes, inadequate code provisions or inadequate enforcement of codes, the threat to the public health and safety posed by fire remains a real and present danger for the people of the state; and
 - e. The multiplicity of fire protection and building construction code requirements poses an additional problem for the people of the state since it increases the cost of doing business in the state by perpetuating multiple requirements, jurisdictional overlaps and business uncertainties, and, in some instances, by artificially inducing high construction costs.
2. The legislature declares that it shall be the public policy of the state of New York to:
 - a. Immediately provide for a minimum level of protection from the hazards of fire in every part of the state;
 - b. Provide for the promulgation of a uniform code addressing building construction and fire prevention in order to provide a basic minimum level of protection to all people of the state from hazards of fire and inadequate building construction. In providing for such a uniform code, it is declared to be the policy of the state of New York to:
 - (1) reconcile the myriad existing and potentially conflicting regulations which apply to different types of buildings and occupancies; [emphasis added]
 - (2) recognize that fire prevention and fire prevention codes are closely related to the adequacy of building construction codes, that the greatest portion of a building

- code's requirements are fire safety oriented, and that fire prevention and building construction concerns should be the subject of a single code;
- (3) place public and private buildings on an equal plane with respect to fire prevention and adequacy of building construction;
 - (4) require new and existing buildings alike to keep pace with advances in technology concerning fire prevention and building construction, including, where appropriate, that provisions apply on a retroactive basis; and
 - (5) provide protection to both residential and non-residential buildings;
- c. Insure that the uniform code be in full force and effect in every area of the state;
 - d. Encourage local governments to exercise their full powers to administer and enforce the uniform code; and
 - e. Provide for a uniform, statewide approach to the training and qualification of personnel engaged in the administration and enforcement of the uniform code.

MENTAL HYGIENE LAW

Site Selection

§ 41.34 Site selection of community residential facilities.

(a) For the purposes of this section, the following definitions shall apply:

(1) "Community residential facility for the disabled" means a supportive living facility with four to fourteen residents or a supervised living facility subject to licensure by the office of mental health or the office of mental retardation and developmental disabilities which provides a residence for up to fourteen mentally disabled persons, including residential treatment facilities for children and youth.

(2) "Sponsoring agency" means an agency or unit of government, a voluntary agency or any other person or organization which intends to establish or operate a community residential facility for the disabled.

(3) "Municipality" means an incorporated village if a facility is to be located therein, a town if the facility is to be located therein and not simultaneously within an incorporated village, or a city, except that in the city of New York, the community board with jurisdiction over the area in which such a facility is to be located shall be considered the municipality.

(4) "Commissioner" means the commissioner of the office of the department responsible for issuance of license and operating certificate to the proposed community residential facility.

(b) If a sponsoring agency intends to establish a residential facility for the disabled within a municipality but does not have a specific site selected, it may notify the chief executive officer of the municipality in writing of its intentions and include in such notice a description of the nature, size and community support requirements of the program. Provided, however, nothing in this subdivision shall preclude the proposed establishment of a site pursuant to subdivision (c) of this section.

(c) (1) When a site has been selected by the sponsoring agency, it shall notify the chief executive officer of the municipality in writing and include in such notice the specific address of the site, the type of community residence, the number of residents and the community support requirements of the program. Such notice shall also contain the most recently published data compiled pursuant to section four hundred sixty-three of the social services law which can reasonably be expected to permit the municipality to evaluate all such facilities affecting the nature and character of the area wherein such proposed facility is to be located. The municipality shall have forty days after the receipt of such notice to:

(A) approve the site recommended by the sponsoring agency;

(B) suggest one or more suitable sites within its jurisdiction which could accommodate such a facility; or

(C) object to the establishment of a facility of the kind described by the sponsoring agency because to do so would result in such a concentration of community residential facilities for the mentally disabled in the municipality or in the area in proximity to the site selected or a combination of such facilities with other community residences or similar facilities licensed by other agencies of state government, including all community residences, intermediate care facilities, residential care facilities for adults and residential treatment facilities for individuals with mental illness or developmental disabilities operated pursuant to article sixteen or article thirty-one of this chapter and all similar residential facilities of fourteen or less residents operated or licensed by another state agency, that the nature and character of the areas within the municipality would be substantially altered. Such response shall be forwarded to the sponsoring agency and the commissioner. If the municipality does not respond within forty days, the sponsoring agency may establish a community residence at a site recommended in its notice.

(2) Prior to forwarding a response to the sponsoring agency and the commissioner, the municipality may hold a public hearing pursuant to local law.

(3) If the municipality approves the site recommended by the sponsoring agency, the sponsoring agency shall seek to establish the facility at the approved site.

(4) If the site or sites suggested by the municipality are satisfactory with regard to the nature, size and community support requirements of the program of the proposed facility and the area in which such site or sites are located does not already include an excessive number of community residential facilities for the mentally disabled or similar facilities licensed by other state agencies, the sponsoring agency shall seek to establish its facility at one of the sites designated by the municipality. If the municipality suggests a site or sites which are not satisfactory to the sponsoring agency, the agency shall so notify the municipality which shall have fifteen days to suggest an alternative site or sites for the proposed community residential facility.

(5) In the event the municipality objects to establishment of a facility in the municipality because to do so would result in such a concentration of community residential facilities for the mentally disabled or combination of such facilities and other facilities licensed by other

state agencies that the nature and character of areas within the municipality would be substantially altered; or the sponsoring agency objects to the establishment of a facility in the area or areas suggested by the municipality; or in the event that the municipality and sponsoring agency cannot agree upon a site, either the sponsoring agency or the municipality may request an immediate hearing before the commissioner to resolve the issue. The commissioner shall personally or by a hearing officer conduct such a hearing within fifteen days of such a request. In reviewing any such objections, the need for such facilities in the municipality shall be considered as shall the existing concentration of such facilities and other similar facilities licensed by other state agencies in the municipality or in the area in proximity to the site selected and any other facilities in the municipality or in the area in proximity to the site selected providing residential services to a significant number of persons who have formerly received in-patient mental health services in facilities of the office of mental health or the office of mental retardation and developmental disabilities. The commissioner shall sustain the objection if he determines that the nature and character of the area in which the facility is to be based would be substantially altered as a result of establishment of the facility. The commissioner shall make a determination within thirty days of the hearing.

(d) Review of a decision rendered by a commissioner pursuant to this section may be had in a proceeding pursuant to article seventy-eight of the civil practice law and rules commenced within thirty days of the determination of the commissioner.

(e) (1) A licensing authority shall not issue an operating certificate to a sponsoring agency for operation of a facility if the sponsoring agency does not notify the municipality of its intention to establish a program as required by subdivision (c) of this section. Any operating certificate issued without compliance with the provisions of this section shall be considered null and void and continued operation of the facility may be enjoined.

(2) The office of mental health and the office of mental retardation and developmental disabilities shall not issue an operating certificate for the operation of a supportive living facility or a supervised living facility of more than fourteen residents if the agency or unit of government, voluntary agency or any other person or organization which intends to establish or operate such a facility does not notify the chief executive officer of the municipality in writing of the intention to establish such facility and include in such notice the specific address of the site, the type of residence, the number of residents and the community support requirements of the program; provided, however, that nothing contained in this paragraph shall either be construed to require facilities of more than fourteen beds to meet any other requirement of this section, or to deem such facilities family units for the purposes of local laws and ordinances.

(f) A community residence established pursuant to this section and family care homes shall be deemed a family unit, for the purposes of local laws and ordinances.

Appendix C

CENTERS FOR MEDICAID AND MEDICARE SERVICE **FIRE SAFETY SURVEY REPORT**

Intermediate Care Facilities for the Mentally Retarded
(small)

Riverview IRA

As prepared by
OMRDD/Division of Quality Management
May 15, 2008

FIRE SAFETY SURVEY REPORT - 2000 LIFE SAFETY CODE
Intermediate Care Facilities for the Mentally Retarded
SMALL

1. (A) PROVIDER NO. K1

PART I - Chapter 6 - NFPA 101A - A Procedure for Determining Evacuation Capability
PART II - Chapter 32 & 33 - Residential Board & Care Occupancies - Requirements
PART III - Chapter 7-101A Fire Safety Evaluation System for Board & Care (Optional) - CMS-2786Y

1. (B) MEDICAID I.D. NO. K2

Identifying information as shown in applicable records. Enter changes, if any, alongside each item, giving date of change.

2. NAME OF FACILITY

SUMMIT DDCO

2. (A) MULTIPLE CONSTRUCTION (BLDGS)

A. BUILDING _____
B. WING _____
C. FLOOR _____

2. (B) ADDRESS OF FACILITY (STREET, CITY, STATE, ZIP CODE)

RT 30 (REVIEW)
WELLS, NY

- A. Fully Sprinklered
(All required areas are sprinklered)
B. Partially Sprinklered
(Not all required areas are sprinklered)
C. None (No sprinkler system)
K0180

3. SURVEY FOR

MEDICARE MEDICAID

4. DATE OF SURVEY K3

5/15/08 K4

E-SCORE

> 5

E-Score	Level of Evacuation Difficulty
≤ 1.5	Prompt
> 1.5 ≤ 5.0	Slow
> 5.0	Impractical

DATE OF PLAN APPROVAL K6

SURVEY UNDER: K7

5. 2000 EXISTING 2000 NEW

5. SURVEY FOR CERTIFICATION OF: SMALL FACILITY - LEVEL OF EVACUATION DIFFICULTY
(Check one)

1. Prompt 2. Slow 3. Impractical

6. BED COMPOSITION

a. TOTAL NO. OF BEDS IN THE FACILITY

8 BEDS + 1 RESpite = 9

e. NUMBER OF ICF/MR BEDS CERTIFIED FOR MEDICAID

7. A. THE FACILITY MEETS, BASED UPON (check all appropriate boxes):

1. COMPLIANCE WITH ALL PROVISIONS 2. ACCEPTANCE OF A PLAN OF CORRECTION 3. FSES 4. PERFORMANCE BASED DESIGN

B. THE FACILITY DOES NOT MEET THE STANDARD

SURVEYOR (Signature)

[Signature]

TITLE

ASSOCIATE ARCHITECT

OFFICE

DQM
44 HOLLAND
AUBANY

DATE

5/15/08

SURVEYOR ID

TITLE

OFFICE

DATE

FIRE AUTHORITY OFFICIAL (Signature)

TITLE

OFFICE

DATE

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0938-0242. The time required to complete this information collection is estimated to average 5 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to CMS, Attn: PRA Reports Clearance Officer, 7500 Security Boulevard, Baltimore, Maryland 21244-1850.

INSTRUCTIONS FOR COMPLETING THE FORM (CMS-2786V) SMALL FACILITIES —16 BEDS OR LESS

1. Complete a Worksheet for Rating Residents (CMS-2786M) for each resident in the facility.
2. Complete the first few pages of this form, a Worksheet for Calculating Evacuation Difficulty Score (Chapter 6 NFPA 101A, 2001 Edition).
Note: This is the ONLY method permitted to determine Level of Evacuation Difficulty in SMALL facilities.
3. Transfer the E-Score obtained in Scoresheet F2 C (Page 5) to the E-SCORE block on Page 1 of this form.
4. Complete either Chapter 31 or 32 Requirements or the FSES/BC Appendix G - Rating the Building.
 - A. If completing Chapter 31 or 32 Requirements:
 1. PROMPT - Complete ONLY the PROMPT section of this form.
 2. SLOW - Complete both PROMPT and SLOW sections of this form.
 3. IMPRACTICAL - Complete all three sections of this form PROMPT, SLOW and IMPRACTICAL.
 - B. If completing the FSES/BC - Appendix G - Rating The Building
 1. You must also complete the Chapter 31 or 32 requirements. An FSES building evaluation cannot be done without completing the usual survey form pages for these Chapters.
 2. You may use the FSES Health Care to evaluate the building (Form CMS-2786T), but if you choose to do so, you must also use the LSC Survey Report for Health Care Form CMS-2786R.

Worksheet for Calculating Evacuation Difficulty Score (E-Score)

F-2

BEFORE FILLING OUT THIS WORKSHEET:

- Please read the Instruction Manual.
- Make sure you have the completed "Worksheets for Rating Residents" (CMS-2786M) for each resident.
- Determine whether the requirements for using the Evacuation Difficulty Index have been satisfied by checking the one box to the left of each question below that shows whether the answer to the question is "YES" or "NO."

- Yes No 1. Has a protection plan been developed and written and have all staff members counted in the calculation of E-Scores been trained in its implementation?
- Yes No 2. Is the total available staff at any given time able to handle the individual evacuation needs of each resident who may be in the residence?
- Yes No 3. Can every staff member counted in the calculation of E-Scores meaningfully participate in the evacuation of every resident?
- Yes No 4. Are all staff members counted in the calculation of E-Scores required to remain in the residence with only the exceptions listed in the Instruction Manual?
- Yes No 5. Were at least twelve fire drills conducted during the year?

This worksheet is filled out for the staff "Shift"

From _____ To _____

(You must fill out this worksheet for the time of day, week, etc., when the ratings for the combination of staff and residents yields the highest E-Score. This period of time will usually be late at night. When it is not obvious which time period has the highest E-Score, complete a separate worksheet for all candidate time periods and use the one having the highest E-Score.)

F-2C Finding the Home's Evacuation Difficulty Score

1. Rate the home on the factor below by checking the circle that best describes the home.

Vertical Distance From Bedrooms to Exits		
All BR on one floor with direct exits	Any BR on one floor from exit	Any BR two or more floors from exit
<input type="radio"/> score = 0.8	<input type="radio"/> score = 1.0	<input type="radio"/> score = 1.2
<input type="radio"/> score = 1.0		

- Write the score for the category you checked in the appropriate box in Scoresheet F-2C below.
- Compute the E-Score as show in Scoresheet F-2C:
 - Multiply the Resident Score Total by the score for Vertical Distance from Bedrooms to Exits.
 - Divide the answer by the Staff Shift Score Total to find the Evacuation Difficulty Score (E-Score).

Scoresheet F-2C

CALCULATION OF E-SCORE

	X		=	E-SCORE <i>7.5</i>
Resident Score Total		Vertical Distance from Bedrooms to Exits		ENTER THIS SCORE on COVER of THIS FORM
Staff Shift Score Total				

4. Determine and record Level of Evacuation Difficulty appropriate to the Calculated E-Score; use Scoresheet F-2D.

Scoresheet F-2D

E-Score	Level of Evacuation Difficulty
≤ 1.5	Prompt
> 1.5 ≤ 5.0	Slow
> 5.0	Impractical

Level of Evacuation Difficulty

7.5

ID PREFIX	SMALL FACILITY PROMPT EVACUATION	MET	NO MET	REMARKS
BUILDING CONSTRUCTION				
No Requirements				
HAZARDOUS AREAS				
K29	<p>2000 EXISTING</p> <p>Any hazardous area that is on the same floor as, and is in or about, a primary means of escape or a sleeping room shall be protected by one of the following means:</p> <p>(a) Protection shall be an enclosure with a fire resistance rating of not less than 1 hour, with a self-closing or automatic closing fire door in accordance with 7.2.1.8 that has a fire protection rating of not less than 3/4 hour.</p> <p>(b) Protection shall be automatic sprinkler protection, in accordance with 32.2.3.5, and a smoke partition, in accordance with 8.2.4, located between the hazardous area and the sleeping area or primary escape route. Any doors in such separation shall be self-closing or automatic closing in accordance with 7.2.1.8.</p> <p>32.2.3.2.2</p>			
	<p>2000 NEW</p> <p>Any hazardous area that is on the same floor as, and is in or about, a primary means of escape or a sleeping room shall be protected by one of the following means:</p> <p>(a) Protection shall be an enclosure with a fire resistance rating of not less than 1 hour, with a self-closing or automatic closing fire door in accordance with 7.2.18 that has a fire protection rating of not less than 3/4 hour. The enclosure shall be protected by an automatic fire detection system connected to the fire alarm system provided in 32.2.3.4.1.</p> <p>(b) Protection shall be automatic sprinkler protection, in accordance with 32.2.3.5, and a smoke partition, in accordance with 8.2.4, located between the hazardous area and the sleeping area or primary escape route. Any doors in such separation shall be self-closing or automatic closing in accordance with 7.2.1.8.</p> <p>32.2.3.2.2</p>			

ID PREFIX		MET	NO MET	N/A	REMARKS
K211	<p>2000 EXISTING</p> <p>Where Alcohol Based Hand Rub (ABHR) dispensers are installed:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The corridor is at least 6 feet wide <input type="checkbox"/> The maximum individual fluid dispenser capacity shall be 1.2 liters (2 liters in suites of rooms) <input type="checkbox"/> The dispensers shall have a minimum spacing of 4 ft from each other <input type="checkbox"/> Not more than 10 gallons are used in a single smoke compartment outside a storage cabinet. <input type="checkbox"/> Dispensers are not installed over or adjacent to an ignition source. <input type="checkbox"/> If the floor is carpeted, the building is fully sprinklered. 19.3.2.7, CFR 483.70 			N/A	
K119	<p>2000 EXISTING</p> <p>Other hazardous areas shall be protected in accordance with 33.2.3.2.3 by one of the following:</p> <ul style="list-style-type: none"> (1) An enclosure having a fire resistance rating of not less than 1/2 hour, with a self-closing or automatic-closing door in accordance with 7.2.1.8 that is equivalent to not less than a 1 1/4 inch (4.4 cm) thick, solid-bonded wood core construction. (2) Automatic sprinkler protection in accordance with 33.2.3.5, regardless of enclosure. 		✓		

ID PREFIX	2000 NEW Other hazardous areas shall be protected in accordance with 32.2.3.2.3 by one of the following:	MET	NO MET	N/A	REMARKS
	<p>(1) An enclosure having a fire resistance rating of not less than 1/2 hour, with a self-closing or automatic closing door in accordance with 7.2.1.8 that is equivalent of not less than 1 1/4 inch (4.4 cm) thick, solid-bonded wood core construction and is protected by an automatic fire detection system connected to the fire alarm system provided in 32.2.3.1.</p> <p>(2) Automatic sprinkler protection in accordance with 32.2.3.5, regardless of enclosure.</p>	✓			
	FIRE ALARM SYSTEMS				
K51.	<p>2000 EXISTING A manual fire alarm system shall be provided in accordance with Section 9.6, 33.2.3.4.1.</p> <p><input type="checkbox"/> <i>Exception No. 1: Where there are interconnected smoke detectors meeting the requirements of 33.2.3.4.3 and there is not less than one manual fire alarm box per floor arranged to continuously sound the smoke detector alarms.</i></p> <p><input type="checkbox"/> <i>Exception No. 2: Other manually activated continuously sounding alarms acceptable to the authority having jurisdiction.</i></p>				
	<p>2000 NEW A manual fire alarm system shall be provided in accordance with Section 9.6, 32.2.3.4.1.</p>	✓			
K155	<p>Where a required fire alarm system is out of service for more than 4 hours in a 24-hour period, the authority having jurisdiction shall be notified, and the building shall be evacuated or an approved fire watch shall be provided for all parties left unprotected by the shut-down until the fire alarm system has been returned to service. 9.6.1.8</p>	✓			

ID PREFIX	REMARKS	MET	NO MET	N/A
K55	<p align="center">SMOKE SYSTEMS</p> <p>2000 EXISTING Approved smoke alarms shall be provided in accordance with 9.6.2.10. These alarms shall be powered from the building electrical system and when activated, shall initiate an alarm that is audible in all sleeping areas. Smoke alarms shall be installed on all levels, including basement but excluding crawl spaces and unfinished attics. Additional smoke alarms shall be installed for living rooms, dens, day rooms, and similar spaces. 33.2.3.4.3.</p> <p><input type="checkbox"/> Exception No. 1: Buildings protected throughout by an approved automatic sprinkler system, in accordance with 33.2.3.5, that uses quick response or residential sprinklers, and protected with approved smoke alarms installed in each sleeping room in accordance with 9.6.2.10, that are powered by the building electrical system.</p> <p><input type="checkbox"/> Exception No. 2: Where buildings are protected throughout by an approved automatic sprinkler system, in accordance with 33.2.3.5, that uses quick-response or residential sprinklers, with existing battery-powered smoke alarms in each sleeping room, and where, in the opinion of the authority having jurisdiction, the facility has demonstrated that testing, maintenance, and a battery replacement program ensure the reliability of power to smoke alarms.</p>			
	<p>2000 NEW Approved smoke alarms shall be provided in accordance with 9.6.2.10, 32.2.3.4.3.1. Smoke alarms shall be installed on all levels, including basements but excluding crawl spaces and unfinished attics. Additional smoke alarms shall be installed for all living areas as defined in 3.3.119.</p> <p><input type="checkbox"/> Exception: Smoke alarms shall not be required in buildings protected throughout by an approved automatic sprinkler system in accordance with 32.2.3.5.</p>		✓	
K56	<p>2000 EXISTING Where an automatic sprinkler system is installed, for either total or partial building coverage, the system shall be in accordance with Section 9.7, 33.2.3.5.2 and shall activate the fire alarm system in accordance with 33.2.3.4.1. The adequacy of the water supply shall be documented to the authority having jurisdiction.</p>			

ID PREFIX		MET	NO MET	N/A	REMARKS
	<p><input type="checkbox"/> Exception No. 1: In prompt evacuation facilities, an automatic sprinkler system in accordance with NFPA 13D, Standard for the Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes, shall be permitted. Automatic sprinklers shall not be required in closets not exceeding 24 sq. ft. and in bathrooms not exceeding 55 sq. ft., provided that such spaces are finished with lath and plaster or materials providing a 15 minute thermal barrier.</p> <p><input type="checkbox"/> Exception No. 2: Not applicable</p> <p><input type="checkbox"/> Exception No. 3: In prompt and slow evacuation capability facilities where an automatic sprinkler system is in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, automatic sprinklers shall not be required in closets not exceeding 24 sq. ft. and in bathrooms not exceeding 55 sq. ft., provided that such spaces are finished with lath and plaster or material providing a 15 minute thermal barrier.</p> <p><input type="checkbox"/> Exception No. 4: In prompt and slow evacuation capability facilities up to and including four stories in height, systems in accordance with NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, shall be permitted.</p> <p><input type="checkbox"/> Exception No. 5: Not applicable</p> <p><input type="checkbox"/> Exception No. 6: Initiation of the fire alarm system shall not be required for existing installations in accordance with 33.2.3.5.5.</p>				
2000 NEW	<p>Where an automatic sprinkler system is installed, for either total or partial building coverage, the system shall be in accordance with Section 9.7 and shall initiate the fire alarm system in accordance with 32.2.3.4.1, 32.2.3.5.2. The adequacy of the water supply shall be documented to the authority having jurisdiction.</p> <p><input type="checkbox"/> Exception No. 1: In prompt evacuation facilities, an automatic sprinkler system in accordance with NFPA 13D, Standard for the Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes, shall be permitted. Facilities with more than eight residents shall be permitted. Facilities with more than eight residents shall be treated as two-family dwellings with regard to water supply. Additionally entrance foyers shall be sprinklered.</p>	✓			

ID PREFIX	REMARKS	NO MET	MET	N/A
	<input type="checkbox"/> Exception No. 2: Not applicable <input type="checkbox"/> Exception No. 3: In prompt and slow evacuation capability facilities where an automatic sprinkler system is in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, automatic sprinklers shall not be required in closets not exceeding 24 sq. ft. and in bathrooms not exceeding 55 sq. ft., provided that such spaces are finished with lath and plaster or material providing a 15 minute thermal barrier. <input type="checkbox"/> Exception No. 4: In prompt and slow evacuation capability facilities up to and including four stories in height, systems in accordance with NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, shall be permitted. <input type="checkbox"/> Exception No. 5: Not applicable <input type="checkbox"/> Exception No. 6: Initiation of the fire alarm system shall not be required for existing installations in accordance with 32.2.3.5.5.			<p style="text-align: center;">NFPA 13D</p>
K154	Where a required automatic sprinkler system is out of service for more than 4 hours in a 24-hour period, the authority having jurisdiction shall be notified, and the building shall be evacuated or an approved fire watch system be provided for all parties left unprotected by the shutdown until the sprinkler system has been returned to service. 9.7.6.1 A. Date sprinkler system last checked and necessary maintenance provided. <u>5/8/08</u> B. Show who provided the service. <u>ARMY FIRE PROTECTION</u> C. Note the source of the water supply for the automatic sprinkler system. <u>TOWN WATER.</u> (Provide, in REMARKS, information on coverage for any non-required or partial automatic sprinkler system.)		✓	
K144	2000 NEW All facilities shall be protected throughout by an approved automatic sprinkler system in accordance with 32.2.3.5.2, 32.2.3.5.1. Quick response or residential sprinklers shall be provided. <input type="checkbox"/> Exception No. 1: In conversions, sprinklers shall not be required in small board and care homes with a rating of prompt evacuation capability and serving eight or fewer residents. <input type="checkbox"/> Exception No. 2: Standard response sprinklers shall be permitted for use in hazardous areas in accordance with 32.2.3.2.		✓	<p style="text-align: center;">NFPA 13D</p>

ID PREFIX		MET	NO MET	REMARKS
K14	<p align="center">INTERIOR FINISH</p> <p>2000 EXISTING Interior wall and ceiling finish shall be Class A or Class B in accordance with section 10.2, 33.2.3.3. There shall be no requirements for interior floor finish. <input type="checkbox"/> Exception: Class C interior wall and ceiling finish shall be permitted in prompt evacuation capability facilities.</p>			
	<p>2000 NEW Interior wall and ceiling finish materials complying with 10.2.3 shall be Class A or Class B. 32.2.3.3.2. <input type="checkbox"/> Exception: Class C interior wall and ceiling finish shall be permitted in prompt evacuation capability facilities.</p>	✓		
	<p>SEPARATION OF SLEEPING ROOMS</p>			
K17	<p>2000 EXISTING The separation walls of sleeping rooms shall be capable of resisting fire for not less than 1/2 hour, which is considered to be achieved if the partitioning is finished on both sides with lath and plaster or materials providing a 15 minute thermal barrier. Sleeping room doors shall be substantial doors, such as those of 1 1/4 inch thick, solid-bonded wood core construction or other construction of equal or greater stability and fire integrity. Any vision panels shall be fixed fire window assemblies in accordance with 8.2.3.2.2 or shall be wired glass not exceeding 1296 sq. in. each in area and installed in approved frames. 33.2.3.6.1, 33.2.3.6.2. <input type="checkbox"/> Exception No. 1: In prompt evacuation facilities, all sleeping rooms shall be separated from the escape route by smoke partitions in accordance with 8.7.4. Door closing shall be regulated by 33.2.3.6.4. <input type="checkbox"/> Exception No. 2: This requirement shall not apply to corridor walls that are smoke partitions in accordance with 8.2.4 and that are protected by automatic sprinklers in accordance with 33.2.3.5 on both sides of the wall and door. In such instances, there shall be no limitation on the type or size of glass panels. Door closing shall be regulated by 33.2.3.6.4. <input type="checkbox"/> Exception No. 3: Sleeping arrangements that are not located in sleeping rooms shall be permitted for nonresident staff members, provided that the audibility of the alarm in the sleeping area is sufficient to awaken staff that might be sleeping.</p>			

ID PREFIX	REMARKS	MET	NO MET	N/A
<input type="checkbox"/> Exception No. 4: In previously approved facilities, where the group achieves an E-score of three or less using the board and care methodology of NFPA 101A. Guide on Alternative Approaches to Life Safety, sleeping rooms shall be separated from escape routes by walls and doors that are smoke resistant.	<p>No louvers or operable transoms or other air passages shall penetrate the wall, except properly installed heating and utility installations other than transfer grilles. Transfer grilles shall be prohibited.</p>			
<p>2000 NEW</p> <p>The separation walls of sleeping rooms shall be capable of resisting fire for not less than 1/2 hour, which is considered to be achieved if the partitioning is finished on both sides with lath and plaster or materials providing a 15 minute thermal barrier.</p> <p>Sleeping room doors shall be substantial doors, such as those of 1/4 inch thick, solid-bonded wood core construction or other construction of equal or greater stability and fire integrity. Any vision panels shall be fixed fire window assemblies in accordance with 8.2.3.2.2. or shall be wired glass not exceeding 1296 sq. in. each in area and installed in approved frames. 32.2.3.6.1 and 32.2.3.6.2.</p> <p><input type="checkbox"/> Exception No. 1: In prompt evacuation capability facilities, all sleeping rooms shall be separated from the escape route by smoke partitions in accordance with 8.2.4. Door closing shall be regulated by 32.2.3.6.4.</p> <p><input type="checkbox"/> Exception No. 2: This requirement shall not apply to corridor walls that are smoke partitions in accordance with 8.2.4 and that are protected by automatic sprinklers in accordance with 32.2.3.5 on both sides of the wall and door. In such instances, there shall be no limitation on the type or size of glass panels. Door closing shall be regulated by 32.2.3.6.4.</p> <p><input type="checkbox"/> Exception No. 3: Sleeping arrangements that are not located in sleeping rooms shall be permitted for nonresident staff members, provided that the audibility of the alarm in the sleeping area is sufficient to awaken staff that might be sleeping.</p> <p>No louvers or operable transoms or other air passages shall penetrate the wall, except properly installed heating and utility installations other than transfer grilles. Transfer grilles shall be prohibited.</p>	<p>MET</p>	<p>NO MET</p>	<p>N/A</p>	

ID PREFIX	REMARKS	NO MET	MET	N/A
K18	<p>Doors shall be provided with latches or other mechanisms suitable for keeping the doors closed. No doors shall be arranged to prevent the occupant from closing the door. 32.2.3.6.3, 32.2.3.6.4, 33.2.3.6.3; 33.2.3.6.4</p> <p>Doors shall be self-closing or automatic closing in accordance with 7.2.1.8</p> <p>Exception: Door closing devices shall not be required in buildings protected throughout by an approved automatic sprinkler system in accordance with 32.2.3.5.1 and 33.2.3.5.2.</p>	✓		
EGRESS				
K41	<p>Every sleeping room and living area shall have access to a primary means of escape located to provide a safe path of travel to the outside. 33.2.2.2.1.</p> <p>Where sleeping rooms or living areas are above or below the level of exit discharge, the primary means of escape shall be an interior stair in accordance with 32.2.2.4 and 33.2.2.4, an exterior stair, a horizontal exit, or a fire escape stair. 32.2.2.2.</p>	✓		
K120	<p>2000 EXISTING</p> <p>In addition to the primary route, each sleeping room shall have a second means of escape that consists of one of the following:</p> <ul style="list-style-type: none"> (a) It shall be a door, stairway, passage, or hall providing a way of unobstructed travel to the outside of the dwelling at street or ground level that is independent of and remotely located from the primary means of escape. (b) It shall be a passage through an adjacent nonlockable space, independent of and remotely located from the primary means of escape, to approved means of escape. (c) It shall be an outside window or door operable from the inside without the use of tools, keys, or special effort that provides a clear opening of not less than 5.7 sq. ft. The width shall be not less than 20 inches. The height shall be not less than 24 inches. The bottom of the opening shall be not more than 44 inches above the floor. Such means of escape shall be acceptable where one of the following criteria are met: 			

1 3/4" Solid core (no self or auto closing devices)

ID PREFIX	REMARKS	NO MET	MET	N/A
	<p>(1) The window shall be within 20 ft of grade.</p> <p>(2) The window shall be directly accessible to fire department rescue apparatus as approved by the authority having jurisdiction.</p> <p>(3) The window or door shall open onto an exterior balcony. 33.2.2.3</p> <p><input type="checkbox"/> <i>Exception No. 1: If the sleeping room has a door leading directly to the outside of the building with access to grade or to a stairway that meets the requirements of Exterior stairs in 33.2.3.1.2, that means of escape shall be considered as meeting all the escape requirements for the sleeping room.</i></p> <p><input type="checkbox"/> <i>Exception No. 2: A second means of escape from each sleeping room shall not be required where the facility is protected throughout by approved automatic sprinkler system in accordance with 33.2.3.5.</i></p> <p><input type="checkbox"/> <i>Exception No. 3: Existing approved means of escape shall be permitted to continue to be used.</i></p>			
2000 NEW	<p>In addition to the primary route, each sleeping room in facilities that use Exception No. 1 to 32.2.3.5.1 shall have a second means of escape that consists of one of the following:</p> <p>(d) It shall be a door, stairway, passage, or hall providing a way of unobstructed travel to the outside of the dwelling at street or ground level that is independent of and remotely located from the primary means of escape.</p> <p>(e) It shall be a passage through an adjacent nonlockable space, independent of and remotely located from the primary means of escape, to approved means of escape.</p> <p>(f) It shall be an outside window or door operable from the inside without the use of tools, keys, or special effort that provides a clear opening of not less than 5.7 sq. ft. The width shall be not less than 20 inches. The height shall be not less than 24 inches. The bottom of the opening shall be not more than 44 inches above the floor. Such means of escape shall be acceptable where one of the following criteria are met:</p> <p>(1) The window shall be within 20 ft of grade.</p> <p>(2) The window shall be directly accessible to fire department rescue apparatus as approved by the authority having jurisdiction.</p>			

ID PREFIX		MET	NO MET	N/A	REMARKS
	<p>(3) The window or door shall open onto an exterior balcony. 33.2.2.3</p> <p><input type="checkbox"/> <i>Exception: If the sleeping room has a door leading directly to the outside of the building with access to grade or to a stairway that meets the requirements of exterior stairs in 32.2.3.1.2, that means of escape shall be considered as meeting all the escape requirements for the sleeping room.</i></p>				
K20	<p>2000 EXISTING</p> <p>Interior stairs used as a primary means of escape shall be enclosed with 1/2 hour fire barriers, with all openings equipped with smoke-actuated automatic closing or self-closing doors having a fire protection rating comparable to that required for the enclosure. Stairs shall comply with 7.2.2.5.3. The entire primary means of escape shall be arranged so that it is not necessary for the occupants to pass through a portion of a lower story unless that route is separated from all spaces on that story by construction having not less than a 1/2 hour fire resistance rating. In buildings of construction other than Type II (000), Type III (200), or Type V (000), the supporting construction shall be protected to afford the required fire resistance rating of the supported wall. 33.2.2.4.</p> <p><input type="checkbox"/> <i>Exception No. 1: Stairs that connect a story at street level to only one other story shall be permitted to be open to the story that is not at street level.</i></p> <p><input type="checkbox"/> <i>Exception No. 2: Stair enclosures shall not be required in buildings of three or fewer stories that house prompt or slow evacuation capability facilities protected through out by an approved automatic sprinkler system in accordance with 33.2.3.5 that uses quick response or residential sprinklers. This exception shall be permitted only if a primary means of escape from each sleeping area still exists that does not pass through a portion of a lower floor, unless that route is separated from all spaces on that floor by construction having a 1/2 hour fire resistance rating.</i></p> <p><input type="checkbox"/> <i>Exception No. 3: Stair enclosures shall not be required in buildings of two or fewer stories that house prompt evacuation capability facilities with not more than eight residents and are protected by an approved automatic sprinkler system in accordance with 33.2.3.5 that uses quick-response or residential sprinklers. Exception No. 2 to 33.2.2.3 shall not be used in conjunction with this exception. The exceptions to 33.2.3.4.3 shall not be used in conjunction with this exception.</i></p>				

ID PREFIX		MET	NO MET	REMARKS
	<input type="checkbox"/> Exception No. 4: In buildings of three or fewer stories that house prompt or slow evacuation capability facilities protected by an approved automatic sprinkler system in accordance with 32.2.3.5 stairs shall be permitted to be open at the topmost story only. The entire primary means of escape of which the stairs are a part shall be separated from all portions of lower stories.	MET	N/A	
	2000 NEW 32.2.2.4 Interior stairs shall be enclosed with 1/2 hour fire barriers, with all openings equipped with smoke-actuated automatic closing or self-closing doors having a fire protection rating comparable to that required for the enclosure. Stairs shall comply with 7.2.2.5.3. The entire primary means of escape shall be arranged so that it is not necessary for the occupants to pass from all spaces on that story by construction having not less than a 1/2 hour fire resistance rating. In buildings of construction other than Type II (000), Type III (200), or Type V (000), the supporting construction shall be protected to afford the required fire resistance rating of the supported wall.	MET	N/A	
	<input type="checkbox"/> Exception No. 1: Stairs that connect a story at street level to only one other story shall be permitted to be open to the story that is not at street level.	MET	N/A	
	<input type="checkbox"/> Exception No. 2: Stair enclosures shall not be required for prompt and slow evacuation capability facilities in buildings of three or fewer stories that are protected with an approved automatic sprinkler system in accordance with 32.2.3.5. This exception shall be permitted only if a primary means of escape from each sleeping area still exists that does not pass through a portion of a lower floor, unless that route is separate from all spaces on that floor by construction having a 1/2 hour fire resistance rating.	MET	N/A	
	<input type="checkbox"/> Exception No. 3: Stair enclosures shall not be required in buildings of two or fewer stories that house prompt evacuation capability facilities with not more than eight residents. The exception to 32.2.3.4.3.1 shall not be used in conjunction with this exception.	MET	N/A	
	<input type="checkbox"/> Exception No. 1 to 32.2.3.5.1 shall not be used in conjunction with this exception.	MET	N/A	

ID PREFIX		MET	NO MET	N/A	REMARKS
K21	<p>32.2.3.1.1, 33.2.3.1.1 Vertical openings shall be protected so as not to expose a primary means of escape. Vertical openings shall be considered protected if separated by smoke partitions in accordance with 8.2.4 that prevent the passage of smoke from one story to any primary means of escape on another story. Smoke partitions shall have a fire resistance rating on not less than 1/2 hour. Any doors or openings to the vertical opening shall be capable of resisting fire for not less than 20 minutes.</p> <p><input type="checkbox"/> Exception: Stairs shall be permitted to be open where complying with Exception no. 2 or Exception No. 3 to 32.2.2.4, 33.2.2.4.</p>	✓			
K40	<p>2000 EXISTING 33.2.2.5.1 Doors or paths of travel to a means of escape shall not be less than 28 inches.</p> <p><input type="checkbox"/> Exception: Bathroom doors shall not be less than 24 inches.</p> <p>2000 NEW 32.2.2.5.1 Doors or paths of travel to means of escape shall be not less than 32 inches.</p> <p><input type="checkbox"/> Exception No. 1: Bathroom doors shall be not less than 24 inches.</p> <p><input type="checkbox"/> Exception No. 2: In conversions (see 32.1.1.3), 28 inch doors shall be permitted to continue in use.</p>	✓			
K121	Winders complying with 7.2.2.2.4 shall be permitted 32.2.2.6.2., 33.2.2.6.2.	✓			
K122	Every closet door latch shall be readily opened from the inside in case of an emergency. 32.2.2.5, 33.2.2.5.3	✓			
K123	Every bathroom door shall be designed to allow opening from the outside during an emergency when locked. 32.2.2.5.4, 33.2.2.5.4	✓			
K43	<p>No door in any means of escape shall be locked against egress when the building is occupied.</p> <p><input type="checkbox"/> Exception: Delayed egress locks complying with 7.2.1.6.1 shall be permitted on exterior doors. 32.2.2.5.5, 33.2.2.5.5.</p> <p>If the level of evacuation difficulty is PROMPT, stop here.</p>	✓			<p>K123 Bathroom keep door open devices Back keep from outside to open</p>

ID PREFIX		MET	NO MET	N/A	REMARKS
	SMALL FACILITY - SLOW EVACUATION BUILDING CONSTRUCTION				
K11	<p>2000 EXISTING 33.2.1.3.2 The facility shall be housed in a building where the interior is fully sheathed with lath and plaster or other material providing a 15 minute thermal barrier, including all portions of bearing walls, bearing partitions, floor construction, and roofs. All columns, beams, girders, and trusses shall be similarly encased or otherwise shall provide not less than a 1/2 hour fire resistance rating. 33.2.1.3.2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Exception No. 1: Exposed steel or wood columns, girders, and beams (but not joists) located in the basement. <input type="checkbox"/> Exception No. 2: Buildings of Type I, Type IV(2.2.2), Type II (1.1.1), Type III (2.1.1), Type IV, Type V (1.1.1) construction (See 8.2.1) <input type="checkbox"/> Exception No. 3: Areas protected by approved automatic sprinkler systems in accordance with 33.2.3.1. <input type="checkbox"/> Exception No. 4: Unfinished, unused, and essentially inaccessible lofts, attics, or crawl space. <input type="checkbox"/> Exception No. 5: Where the facility achieves an E-score of three or less using the board and care occupancies evacuation capability determination methodology of NFPA 101A, Guide on Alternative Approaches to Life Safety. <p>Note: No requirement for New - Chapter 32</p>				
	INTERIOR FINISH				
K16	<p>Interior wall and ceiling finish materials in accordance with 10.2 and 10.2.3 shall be Class A or Class B.</p> <p>32.2.3.3.2, 33.2.3.3</p>	✓			

ID PREFIX	AUTOMATIC SPRINKLER SYSTEM	MET	NO MET	REMARKS
K145	<p>2000 NEW 32.2.3.5.1</p> <p>All facilities shall be protected throughout by an approved automatic sprinkler system in accordance with 32.2.3.5.2. Quick response or residential sprinklers shall be provided.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Exception No. 1: In conversions, sprinklers shall not be required in small board and care homes with a rating of prompt evacuation capability and serving eight or fewer residents. <input type="checkbox"/> Exception No. 2: Standard response sprinklers shall be permitted for use in hazardous areas in accordance with 32.2.3.2. 	✓		
K56	<p>2000 EXISTING 33.2.3.5.2</p> <p>Where an automatic sprinkler system is installed, for either total or partial building coverage, the system shall be in accordance with Section 9.7 and shall activate the fire alarm system in accordance with 33.2.3.4.1. The adequacy of the water supply shall be documented to the authority having jurisdiction.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Exception No. 1: Not Applicable <input type="checkbox"/> Exception No. 2: In slow and impractical evacuation capability facilities, an automatic sprinkler system in accordance with NFPA 13D, Standard for the Installation of Sprinkler Systems in one-and-two-Family Dwellings and Manufactured Homes, with a 30 minute water supply, shall be permitted. All habitable areas and closets shall be sprinklered. Automatic sprinklers shall not be required in bathrooms not exceeding 55 sq. ft. (5.1 m²), provided that such spaces are finished with bath and plaster or materials provided a 15 minute thermal barrier. <input type="checkbox"/> Exception No. 3: In prompt and slow evacuation capability facilities where an automatic sprinkler system is in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, automatic sprinklers shall not be required in closets not exceeding 24 sq. ft. and in bathrooms not exceeding 55 sq. ft., provided that such spaces are finished with lath and plaster or material providing a 15 minute thermal barrier. <input type="checkbox"/> Exception No. 4: In prompt and slow evacuation capability facilities up to and including four stories in height, systems in accordance with NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, shall be permitted. <input type="checkbox"/> Exception No. 5: Not Applicable 			

ID PREFIX		MET	NO MET	N/A	REMARKS
	<input type="checkbox"/> <i>Exception No. 6: Initiation of the fire alarm system shall not be required for existing installations in accordance with 33.2.3.5.5.</i> 2000 NEW 32.2.3.5.2 Where an automatic sprinkler system is installed, for either total or partial building coverage, the system shall be in accordance with Section 9.7 and shall initiate the fire alarm system in accordance with 32.2.3.4.1. The adequacy of the water supply shall be documented to the authority having jurisdiction.			N/A	
	<input type="checkbox"/> <i>Exception No. 2: In slow and impractical evacuation capability facilities, an automatic sprinkler system in accordance with NFPA 13B, Standard for the Installation of Sprinkler Systems in one-and-two Family Dwellings and Manufactured Homes, with a 30 minute water supply, shall be permitted. All habitable areas and closets shall be sprinklered. Facilities with more than eight residents shall be treated as two family dwellings with regard to water supply.</i>				
	<input type="checkbox"/> <i>Exception No. 3: In prompt and slow evacuation capability facilities where an automatic sprinkler system is in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, automatic sprinklers shall not be required in closets not exceeding 24 sq. ft. and in bathrooms not exceeding 55 sq. ft., provided that such spaces are finished with lath and plaster or material providing a 15 minute thermal barrier.</i>				
	<input type="checkbox"/> <i>Exception No. 4: In prompt and slow evacuation capability facilities up to and including four stories in height, systems in accordance with NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, shall be permitted.</i>				
	<input type="checkbox"/> <i>Exception No. 5: Not Applicable</i>				
	<input type="checkbox"/> <i>Exception No. 6: Initiation of the fire alarm system shall not be required for existing installations in accordance with 32.2.3.5.5.</i>				
	EGRESS				
K32	2000 EXISTING (Only) 33.2.2.2.2 In slow and impractical evacuation capability facilities, the primary means of escape for each sleeping room shall not be exposed to living areas and kitchens.				
	<input type="checkbox"/> <i>Exception: Buildings equipped with quick-response or residential sprinklers throughout. Standard response sprinklers shall be permitted for use in hazardous areas in accordance with 33.2.3.2.</i> If the level or evacuation capability is SLOW, stop here.				

ID PREFIX	SMALL FACILITY IMPRACTICAL EVACUATION CAPABILITY	MET	NO MET	REMARKS
	BUILDING CONSTRUCTION			
K12	<p>2000 EXISTING</p> <p>Buildings shall be of any construction type in accordance with 8.2.1 other than Type II (000), Type III (200), or Type V (000) construction. 33.2.1.3.3.</p> <p><input type="checkbox"/> Exception: Buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 33.2.3.5 shall be permitted to be of any type of construction.</p>			
	AUTOMATIC SPRINKLER SYSTEM			
K56	<p>2000 EXISTING</p> <p>Where an automatic sprinkler system is installed, for either total or partial building coverage, the system shall be in accordance with Section 9.7 and shall activate the fire alarm system in accordance with 33.2.3.4.1. The adequacy of the water supply shall be documented to the authority having jurisdiction. 33.2.3.5.2.</p> <p><input type="checkbox"/> Exception No. 1: Not Applicable.</p> <p><input type="checkbox"/> Exception No. 2: In slow and impractical evacuation capability facilities, an automatic sprinkler system in accordance with NFPA 13D, Standard for the Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes, with a 30 minute water supply, shall be permitted. All habitable areas and closets shall be sprinklered. Automatic sprinklers shall not be required in bathrooms not exceeding 55 sq. ft., provided that such spaces are finished with lath and plaster or materials providing a 15 minute thermal barrier.</p> <p><input type="checkbox"/> Exception No. 3: Not Applicable.</p> <p><input type="checkbox"/> Exception No. 4: Not Applicable.</p> <p><input type="checkbox"/> Exception No. 5: In impractical evacuation capability facilities up to and including four stories in height, systems in accordance with NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, shall be permitted. All habitable areas and closets shall be sprinklered. Automatic sprinklers shall not be required in bathrooms not exceeding 55 sq. ft., provided that such spaces are finished with lath and plaster or materials providing a 15 minute thermal barrier.</p> <p><input type="checkbox"/> Exception No. 6: Initiation of the fire alarm system shall not be required for existing installations in accordance with 33.2.3.5.5.</p>			

ID PREFIX	REMARKS	NO MET	MET	REMARKS
2000 NEW	<p>Where an automatic sprinkler system is installed, for either total or partial building coverage, the system shall be in accordance with Section 9.7 and shall initiate the fire alarm system in accordance with 32.2.3.4.1. The adequacy of the water supply shall be documented to the authority having jurisdiction. 32.2.3.5.2.</p> <p><input type="checkbox"/> Exception No. 1: Not Applicable.</p> <p><input checked="" type="checkbox"/> Exception No. 2: In slow and impractical evacuation capability facilities, an automatic sprinkler system in accordance with NFPA 13D, Standard for the Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes, with a 30 minute water supply, shall be permitted. All habitable areas and closets shall be sprinklered. Facilities with more than eight residents shall be treated as two family dwellings with regard to water supply.</p> <p><input type="checkbox"/> Exception No. 3: Not Applicable.</p> <p><input type="checkbox"/> Exception No. 4: Not Applicable.</p> <p><input type="checkbox"/> Exception No. 5: In impractical evacuation capability facilities up to and including four stories in height, systems in accordance with NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, shall be permitted. All habitable areas and closets shall be sprinklered.</p> <p><input type="checkbox"/> Exception No. 6: Initiation of the fire alarm system shall not be required for existing installations in accordance with 32.2.3.5.5.</p>	N/A		
K20	<p style="text-align: center;">VERTICAL OPENINGS</p> <p>Vertical openings shall be protected so as not to expose a primary means of escape. Vertical openings shall be considered protected if separated by smoke partitions in accordance with 8.2.4 that prevent the passage of smoke from one story to any primary means of escape on another story. Smoke partitions shall have a fire resistance rating of not less than a 1/2 hour. Any doors or openings to the vertical opening shall be capable of resisting fire for not less than 20 minutes.</p> <p>32.2.3.1.1, 33.2.3.1.1</p> <p><input type="checkbox"/> Exception: Stairs shall be permitted to be open where complying with Exception No. 2 or Exception No. 3 to 32.2.2.4 and 33.2.2.4.</p> <p>Note: Make sure you have completed PROMPT and SLOW as well as this section.</p>			

ID PREFIX	OPERATING FEATURES FOR ALL FACILITIES	MET	NO MET	REMARKS
K46	Utilities shall comply with Section 9.1. 32.2.5.1, 33.2.5.1	✓		
K147	The administration of every resident board and care facility shall have in effect and available to all supervisory personnel written copies of a plan for protecting all persons in the event of fire, for keeping persons in place, for evacuating persons to areas of refuge, and for evacuating person from the building when necessary. The plan shall include special staff response, including fire protection procedures needed to ensure the safety of any resident, and shall be amended or revised whenever any resident with unusual needs is admitted to the home. All employees shall be periodically instructed and kept informed with respect to their duties and responsibilities under the plan. Such instruction shall be reviewed by the staff not less than every 2 months. A copy of the plan shall be readily available at all times within the facility. 32.7.1, 33.7.1	✓		
K148	Smoking regulations shall be adopted by the administration of board and care occupancies. 32.7.4.1, 33.7.4.1	✓		NO SMOKING
K149	Where smoking is permitted, noncombustible safety type ashtrays or receptacles shall be provided in convenient locations. 32.7.4.2, 33.7.4.2		✓	
K150	New draperies, curtains, and other similar loosely hanging furnishings and decorations in board and care facilities shall be in accordance with provisions of 10.3.1, 32.7.5.1, 33.7.5.1			
K151	New upholstered furniture within board and care facilities shall be tested in accordance with the provisions of 10.3.2(1) and 10.3.3. <input checked="" type="checkbox"/> Exception: Upholstered furniture belonging to the resident in sleeping rooms, provided that a smoke alarm is installed in such rooms. Battery-powered single-station smoke alarms shall be permitted. 32.7.5.2, 33.7.5.2	✓		
K152	CFR-42-483.470(i) Evacuation Drills (1) The facility must hold evacuation drills at least quarterly for each shift of personnel and under varied conditions to - <input type="checkbox"/> (i) Ensure that all personnel on all shifts are trained to perform assigned tasks; <input type="checkbox"/> (ii) Ensure that all personnel on all shifts are familiar with the use of the facility's emergency and disaster plans and procedures.	✓		(pre-opening)

ID PREFIX	MET	NO MET	N/A	REMARKS
				<p>(2) The facility must –</p> <ul style="list-style-type: none"> <input type="checkbox"/> (i) Actually evacuate clients during at least one drill each year on each shift; <input type="checkbox"/> (ii) Make special provisions for the evacuation of clients with physical disabilities; <input type="checkbox"/> (iii) File a report and evaluation on each drill; <input type="checkbox"/> (iv) Investigate all problems with evacuation drills, including accidents and take corrective action; and <input type="checkbox"/> (v) During fire drills, clients may be evacuated to a safe area in facilities certified under the Health Care Occupancies Chapter of the Life Safety Code. <p>(3) Facilities must meet the requirements of paragraphs (1) and (2) of this section for any live-in and relief staff that they utilize.</p>

Appendix D

CENTERS FOR MEDICAID AND MEDICARE SERVICE **STATE OPERATIONS MANUAL**

Appendix I - Survey Procedures and Interpretive Guidelines for Life Safety Code Surveys (rev. 1, 05/21/04)

State Operations Manual

Appendix I – Survey Procedures and Interpretive Guidelines for Life Safety Code Surveys - (Rev. 1, 05-21-04)

Part I - Survey Procedures for Life Safety Code Surveys

I. Introduction

II. The Survey Tasks

Task 1 – Offsite Survey Preparation

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Task 3 - Orientation Tour

Task 4 - Information Gathering

Task 5 - Information Analysis and Decision Making

Task 6 - Exit Conference

III. Complaint Investigations

IV. Post Survey Revisits

Part II - Interpretive Guidelines

I. Introduction

Use the survey procedures in this appendix section for all Life Safety Code (LSC) surveys (initial and recertification) of facilities subject to Survey and Certification inspections for Medicare/Medicaid certification. This includes, but is not limited to, Skilled Nursing Facilities (SNFs), Nursing Facilities (NFs) whether freestanding, distinct parts, or dually certified, Intermediate Care Facilities for Mentally Retarded (ICFs/MR), Ambulatory Surgical Centers (ASC), inpatient Hospice facilities, Program for All inclusive Care for the Elderly (PACE) facilities, Critical Access Hospitals (CAH), Psychiatric and General Hospitals, including validation surveys of accredited facilities. These procedures also apply to complaint investigations. When conducting LSC complaint investigations, focus your review on those requirements relevant to the complaint.

All SNF/NF and ICFs/MR surveys must be unannounced. The LSC survey of a SNF/NF **may** precede the survey of resident care requirements and can be done independent of a health survey. LSC surveys must be conducted and completed on consecutive days. Survey team members need not be onsite for the entire survey. For example special consultants participating in the survey (such as, a fire protection engineer, or fire alarm technician) have the option of being onsite only during that portion of the survey that require their area of expertise; however, they must conduct that portion while the rest of the LSC survey team is present. The special consultant(s) should present their findings to the team or team leader before departing the facility. If any deficiencies are to be cited, supporting documentation should be left with the team. The consultant should be available during the exit conference to supply any additional information required. This can be in-person or by telephone.

II. The Survey Tasks

Task 1 – Offsite Survey Preparation

The surveyor or survey team will review the facility file for:

- Recent licensure and/or certification surveys, including any deficiencies from the previous, bed capacity, change in ownership, facility waivers;
- Corrective action status (if applicable);
- Complaint investigations;
- Facility floor plans, including the location of individual rooms, exits and commons areas; and

- Correspondence to or from the SA and the facility.

If more than one surveyor is participating in the survey designate a team coordinator. The team coordinator will conduct a brief presurvey meeting with team members, such as the State Agency or State Fire Authority, to: review previous findings, make specific assignments, and discuss efficient approaches to surveying the facility.

Determine the occupancy or use of the facility such as a hospital, nursing home, ambulatory surgical center, etc. Then determine which chapters of the Life Safety Code (LSC) should be used in the survey process based on the occupancy or use of the building. The basic fire safety requirement for participating facilities at this time is compliance with the National Fire Protection Association (NFPA) 101, Life Safety Code, 2000 edition.

Review the date the facility first applied for admission into the program. The use of the EXISTING or NEW chapters of the LSC depends on the date of plan approval or the date of construction (if there is no plan approval process) for the facility's building(s). If the facility's building plans were approved or a building permit was issued or construction started after the effective date, (March 13, 2003), of the final regulation, the building or addition must be surveyed under 2000 NEW LSC.

If the facility's building plans were approved by a State Agency or building permit issued or construction started prior to the effective date, (March 13, 2003), of the final regulation, the building must be surveyed under 2000 EXISTING LSC.

CMS has defined the terms "major" or "minor" for alterations, modernization or renovation of buildings as follows: If the building has undergone a modification (usually more than 50 percent or more than 4,500 square feet, of the smoke compartment involved) it is considered "major," if the building has undergone a modification (usually less than 50 percent or less than 4,500 square feet, of the smoke compartment involved) it is considered "minor." If a building undergoes a "major" modification after March 13, 2003 then the building would be surveyed under 2000 NEW LSC. The replacement of a system such as a fire alarm system would be considered "major" for that system only. Thus, that system only would have to meet the LSC requirements for 2000 NEW, not the entire building.

Cosmetic changes such as painting and wallpapering by themselves would not constitute a "major" modification regardless of the size of the area involved.

A building, which is a conversion from an occupancy other than Health Care such as a hotel or apartment house, but NOT a hospital, must also meet NEW requirements. Changes within Health Care such as a hospital to a nursing home are not considered conversions.

If the building is a hospital and has a SNF located within or attached to it, then a determination has to be made as to whether the SNF is considered a “distinct part.” If there is two-hour fire wall between the hospital and the SNF, then a LSC survey of the SNF section alone is allowed. A floor-ceiling assembly does not meet the separation requirements of a two-hour fire wall. If there is no fire wall, then a LSC survey of the complete building, hospital and SNF, is to be conducted. When there is no two-hour separation, then the complete building must be surveyed regardless of whether the hospital facility is accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) or American Osteopathic Association (AOA). All deficiencies found will be reported whether they were found in the accredited hospital portion or in the distinct part SNF.

Validation surveys of JCAHO or AOA hospitals must use the appropriate chapters, NEW or EXISTING, of the 2000 LSC.

CMS, in its regulations adopting the 2000 edition of the LSC, did not adopt the paragraph 19.3.6.3.2 exception No.2 dealing with existing roller latches. The use of roller latches is no longer acceptable as a corridor door-latching device in existing health care facilities. This includes facilities that are both non-sprinklered and sprinklered. Facilities have until March 13, 2006 to remove roller latches from use. Emergency lighting lasting at least 1-1/2 hours is required by the LSC; facilities have until March 13, 2006 to meet this requirement. CMS also adopted by regulation the requirement that any facility certified as an ASC is to meet the requirements of the LSC for ambulatory health care, without regard to the number of patients served by the ASC at any one time.

Determine whether or not a Fire Safety Evaluation Survey (FSES), has previously been conducted at the facility. The use of the FSES may be applicable when a facility has multiple deficiencies that may be cost prohibitive to correct. The facility should be informed that the use of the FSES is a certification option at the exit conference. It is up to the facility to decide if the FSES is to be used to achieve certification.

The State Agency, at its option, may complete the FSES for the facility or may act as a reviewer of an FSES submitted by the facility as part of the facility’s Plan of Correction (POC).

NFPA 101A, Guide on Alternative Approaches to Life Safety, 2001 Edition, is to be used to complete all FSES’s. An FSES evaluation is to be done in conjunction with the completion of the regular Fire Safety Survey form (CMS Form 2786). If the building is certified in compliance with the LSC on the basis of an FSES evaluation, an FSES evaluation must be completed each time a LSC survey is completed. To recertify the building using the FSES, a regular Fire Safety Survey form is completed before completing the FSES, this evaluation will take into account any changes in the facilities life safety features.

The FSES is only available for buildings surveyed using the Health Care Occupancies and Residential Board and Care Occupancies chapters. There is no FSES available for

use when surveying ASCs, which are surveyed using the prescriptive requirements of the Ambulatory Health Care Occupancies chapter (20/21) of the LSC.

Task 2 - Entrance Conference/Onsite Preparatory Activities

Entrance Conference:

Upon arrival at the facility, proceed to the Administrator's office and identify yourself and state the purpose of your visit: to perform a fire safety survey under the regulations of Medicare/Medicaid. The team coordinator or individual surveyor conducts the Entrance Conference, informing the facility's administrator about the survey and introducing any team members. The team coordinator then explains the survey process and answers any questions from facility staff.

While the team coordinator conducts the Entrance Conference, other LSC team members, may begin Task 3 - Orientation Tour.

Ask the Administrator to describe any special features of the facility's physical plant. For example, was the facility constructed at different times and were different types of construction used, or is the facility only partially sprinklered? Have any changes or remodeling occurred since the last inspection?

Does the facility have an emergency generator or admit patients/residents that may require life support equipment? Request documentation of: any existing fire safety evacuation plan; fire drills; disaster plan; smoking policy; fire alarm testing; sprinkler maintenance records if applicable; kitchen range hood maintenance; fire extinguisher maintenance and testing reports; generator testing logs; flame spread ratings of interior finishes. The type of materials used for any smoke stopping or fireproofing should be obtained.

Obtain a list of key facility personnel and their location (that is, administrator, director of nursing services, dietitian and/or food supervisor, charge nurses, plant engineer, and housekeeping supervisor).

These individuals will be able to provide specific information about fire safety issues in their departments, which is needed by surveyors to complete the fire safety survey report form (Form CMS-2786).

Ask the administrator or building plant engineer to provide the surveyor with a copy of the facility's building layout, indicating the location of exits, individual resident rooms, and common areas if available.

The existence of any waivers of the LSC requirements should be confirmed at this time by the facility. Inform the facility that a detailed inspection will be conducted and that it may include any building used by the residents or patients. At this time, request that someone from the facility staff, preferably from the maintenance department, accompany

the surveyor. It is not mandatory that a representative from the facility accompany the surveyor on the facility inspection.

Determining Which LSC Chapter to Use and Which Building(s) to Survey

Determine which LSC chapters apply for each building, including buildings that do not house residents or patients on a 24-hour basis. This situation is most common in large campus type facilities such as medical centers, teaching hospitals, or large state-operated ICFs/MR.

To determine which buildings to survey, the term “customary access” is critical. Buildings that house offices or spaces to which residents do not have normal access do not require a LSC survey. However, buildings which are used by residents (e.g., a school or therapy building, cafeteria, workshop, gym, chapel, etc.) must be surveyed.

In many cases, the health care chapters of the Code may not be the most appropriate sections to use as survey guides. Instead, the most appropriate chapter could be Chapter 14/15, Educational Occupancies or, possibly, Chapter 12/13, Assembly Occupancies, etc. Since there are no survey report forms for these chapters of the LSC, the chapters and their references serve as the source documents, and, if deficiencies are found, they are to be reported on the CMS Form-2567 and identified using the appropriate code reference number in the applicable chapter(s) of the code.

To determine which LSC chapters are applicable to ICFs/MR, the type and extent of services provided need to be determined. The New Residential Board and Care Occupancy Chapter (Chapter 32) or the Existing Residential Board and Care Occupancy Chapter (Chapter 33) of the 2000 edition of the LSC is applicable to a ICF/MR in the Medicaid program which provide “personal care services.” The LSC defines personal care as “protective care of a resident who does not require chronic or convalescent medical or nursing care.” Generally, protective oversight and personal care is defined as assistance in meeting daily needs (e.g., being aware of residents’ whereabouts, reminding them of appointments). This may include “transient medical care,” such as the kind of care provided in the home by one family member to another when he/she is sick. In an ICFs/MR this means supervising client’s movements and daily living skills. An RN or LPN on staff at the board and care home solely to dispense medication is not an indication of chronic medical or nursing care.

If a resident receives skilled/acute nursing or medical care such as is provided in a hospital, nursing home or an inpatient hospice, Chapter 18/19 (Health Care Occupancies) must be applied.

If the LSC surveyor determines that an ICFs/MR will be surveyed under the Residential Board and Care Occupancy of chapters 32 and 33, it must be further broken down into one of two categories based on size and evacuation capability before the survey can continue.

Small facilities are those with sleeping accommodations for not more than 16 residents (section 32.2 or 33.2). Large facilities are facilities with sleeping accommodations for more than 16 residents (section 32.3 or 33.3). This means that an apartment building containing several ICFs/MR in separate apartments must meet Section 32.2 or 33.2 for the individual units, and the apartment building must meet the requirements of Chapter 30/31 Apartment Buildings which are listed in section 32.4 or 33.4.

Most large facilities tend to fall into the category of health care, while smaller facilities tend to be residential board and care occupancies.

Task 3 - Orientation Tour

An orientation tour may be in order to provide an overview of the facility, and serve as an introduction of the surveyors to the staff. This may be helpful if the facility is a very large single building or has multiple buildings that may have to be surveyed.

Task 4 - Information Gathering

Upon completion of the review of the documentation provided by the facility, the more detailed inspection begins. Using the layout of the building as a guide, begin an observation tour that includes the outside of the building as well as the inside.

At this time determine the type of building construction. This can be accomplished by review of the construction drawings, if available, and must be confirmed by direct observation of the structure and building materials used in constructing the building (exposed areas above the ceilings or vertical pipe shafts may provide insight).

Check floor-to-floor separations, corridor wall construction, smoke barrier locations, construction and condition, and any vertical opening construction including access doors. If multiple buildings or wings are involved, any fire barriers present should be inspected for construction materials used, the protection of penetrations through the barriers and the type and arrangement of any doors thru the barriers. Buildings separated by a vertical two-hour fire barrier can be considered separate buildings for the purposes of a Life Safety survey. (Note: If the two-hour fire barrier has been so severely compromised by penetrations or other construction defects that it may not provide the required fire protection, it may be necessary to ignore this feature and consider combining the two buildings together. If this is done, the two buildings will be surveyed as if there were only one building. The facility may elect to repair the two-hour separation and have the buildings surveyed as two separate buildings.)

When separate buildings are surveyed, each building requires the use of an individual set of reporting forms.

Proceed next to a complete room-by-room, floor-by-floor, walk through of the facility. This includes a representative sample of bedrooms ([Table 1](#)). At a minimum, inspect: one smoke barrier, including doors, on each floor or wing; all fire barriers; all hazardous

areas including doors into the area; all exit stairs, doors, signs; resident room doors for condition, latching and fit in the door frame; the fire alarm system; the sprinkler system; the emergency power generator set; corridor walls; emergency lighting; and medical gas storage, if applicable.

Inspect the smoke and fire barriers for construction materials and continuity, completeness from outside wall to outside wall and from the floor to the bottom of the floor above where applicable. Inspect any penetrations to determine if they are sealed properly. Where ductwork penetrates the barrier, inspect any dampers, fire or smoke that have been installed in the ductwork.

For each room inspected, check the corridor door for latching, operation and fit into the doorframe. The fire rating of the door should also be inspected if applicable. The interior of the room should then be inspected for hazards such as electrical outlets, extension cords, oxygen in use signs (posted where applicable), and portable space heaters.

Wastebasket size, drapes and cubicle curtains are checked for flammability. Where applicable cubicle curtains are checked for the correct mesh opening size. If the facility is sprinklered, the location of the sprinkler head in relation to the cubicle curtain and walls are checked for obstruction or interference to the water spray pattern. The walls and ceilings are inspected for unsealed penetrations and proper construction.

Inspect the corridor walls and ceilings for proper construction. This inspection should include areas above the ceiling.

Inspect all hazardous areas for proper door type and, where applicable, sprinkler installation or fire separation construction.

Note the maintenance of fire extinguishers and exit signs on an ongoing basis throughout the inspection.

Inspect the fire alarm pull stations and alarm devices while moving along the corridors. Similarly, review smoke detectors where they are required or provided.

Note any corridor obstructions and the distances to exits. At the same time the exitways, including the doors and door hardware are inspected, as well as the exitway lighting and exterior walkways.

Inspect the fire alarm control panel noting any areas/zones not covered by the detection system. Inspection tags or labels should be reviewed. Any system trouble lights should be noted and the facility questioned. Determine if the fire alarm system is connected to the fire department or a remote station outside of the facility.

Review sprinkler systems to determine if the system is providing complete coverage or only partial coverage. Complete coverage means that the entire facility, including all

closets, storage areas, and walk-in coolers and freezers, is sprinklered. Proper testing and maintenance records must be maintained by the facility. The connection between the sprinkler system and fire alarm system should be confirmed. Tamper switches and waterflow detection devices must be operational.

Inspect the facility kitchen range hood fire extinguisher system to determine if the proper maintenance of the system is being carried out and the activating mechanism is in a clearly marked location. The staff should be questioned regarding the operation of any fire suppression systems in an emergency.

Inspect the emergency lighting or power system for operability and coverage; including on-site generators. Review records of testing and maintenance of the generator(s). A demonstration of the emergency power system should not be requested due to the large amount of computerization and the use of life support equipment that may be affected.

Inspect laboratories for proper sprinklering, fire separation construction, door type, emergency eye wash equipment, storage of flammable liquids and gases, and fume hood ventilation.

Inspect medical gas storage areas for proper construction, ventilation, gas system controls/alarms and proper restraint of cylinders.

Review the facility fire plan including fire drill records and staff interviews to determine staff actions and responsibilities during a fire or emergency. The surveyor may request an actual fire drill demonstration based on a review of the facility fire drill records and interviews with the staff to verify the adequacy of staff response. This should be done only if there is a question of the adequacy of staff response found in the documentation of the monthly fire drills.

Determining the ICFs/MR “E” Score

The technique for surveying and determining compliance with the LSC of ICFs/MR is very similar to previous parts of this protocol with several additional requirements. After determining the type and size of the ICF/MR, determine the level of evacuation difficulty if the facility chooses to comply with the requirements for residential board and care. This is done for each of the types of facilities; small, large, and a Board and Care facility in an apartment house. The three levels of evacuation difficulty are known as Prompt (level A), Slow (level B) and Impractical (level C). CMS regulations require the use of NFPA 101A, Guide on Alternative Approaches to Life Safety, 2001 Edition, Chapter 6, Evacuation Capability Determination for Board and Care Occupancies to determine the evacuation difficulty index (EDI).

- The E Score of the facility is determined by using the six worksheets found in Chapter 6 of NFPA 101A. The worksheet for rating residents contains a cover sheet for the inclusion of facility information and date of the survey.

- When completing the worksheet “Rating the Residents Risk Factors,” Form CMS-786, interview the staff person who is most familiar with the resident’s risk factors, whenever possible. Rate each resident on each of the six risk factors (Risk of Resistance, Impaired Mobility, Impaired Consciousness, Need for Extra Help, Response to Instructions, and Response to Alarm) by checking the appropriate circle on each line. Calculate the score and write the score for each circle checked in the boxes in the far right column. For the seventh parameter (Response to Fire Drills) write the checked scores in the three large circles. Write the sum of the three scores in the box to the right. **NOTE:** In a small facility complete one form for each resident.
- The Residents Overall Need for Assistance is now determined by comparing the seven score boxes in F-1A and writing the HIGHEST score in the box labeled “Evacuation Assistance Score.”
- The worksheet for “Calculating Evacuation Difficulty Score” (E-score) is now filled out. The five questions must all be answered “Yes” to satisfy the requirements for obtaining the E-score.
- Complete F-2A (page 4) Finding the Total Resident Score by listing each resident’s name and score in the Score sheet (F-2A) and total the individual scores. Enter the total at the bottom in the box to the right of the word “Total.”
- Complete F-2B Finding the Staff Shift Score (page 4) by listing the names of each staff member required to remain in the facility for the shift being evaluated. Evaluate the shift with the highest E-Score (least amount of staff), usually the night shift. Enter the appropriate rating for the effectiveness of the alarm system (as determined by the table on the lower left) for each staff member. The terms “assured” and “not assured” are used in the alarm rating. “Assured” means that the alarm is “easily noticeable” in all locations where staff is allowed to go, regardless of the ratings on the promptness of response. “Not assured” means the alarm does not satisfy the conditions of “assured.” Then add the scores and enter the total in the box marked “Total.”
- Complete F-2C finding the Home’s Evacuation Difficulty Score by completing the chart at the top of page 5. Indicate the vertical distance of bedrooms (that is the stories) from the exits. Proceed to section F-2C Calculation of E-score. Enter the Evacuation Assistance Total (F-2A) score and the vertical distance score in the 2 boxes, which compose the numerator of this fraction and multiply them by each other. Enter the Staff Shift Total (F-2B) in the denominator and divide them into the product of the numerator. This is the E-Score.
- The Evacuation Difficulty Score is found by using the chart at the bottom of page 5 and entering the level of evacuation difficulty in the box at the bottom right. A score equal to or less than 1.5 is Prompt. A score greater than 1.5 but not more

than 5 is Slow. A score of greater than 5 is Impractical. Transfer the score to the cover page of the Survey Report Form CMS-2786. As an additional safeguard, the health facilities surveyor, who visits the facility before the fire authority's visit, should complete Items I thru VI on the Worksheet for Rating Residents for each client included in the health facility survey sample. This will help to corroborate the findings of the fire authority obtained through their interviews with staff about residents. This is done to determine if there is any cause to question the validity of staff reports of predicted client behavior. The health facilities surveyor is not required to complete all of the forms or calculate the Evaluation Difficulty Index unless required to by State regulations, but simply completes item I to VI.

The fire authority should obtain from the state survey agency health surveyors the completed "Worksheet for Rating Residents" and compare the results obtained from the two surveys. If there is a pattern of discrepancies in any of items I to VI for one or more of the clients in the sample, the state agency cannot certify the facility until these discrepancies are reconciled. Both the Fire Authority and the State Survey Agency must be satisfied that the EDI score is representative of client capability.

ICFs/MR Survey Procedures

After you determine the size of the facility and level of evacuation difficulty, rate the building. There are two alternative methods of rating the building.

- Use the prescriptive requirements in the appropriate section of Chapter 32/33, Prompt, Slow or Impractical; or
- Use NFPA 101A, Guide on Alternative Approaches to Life Safety, 2001 Edition, Chapter 7, A Fire Safety Evaluation System for Board and Care Occupancies (FSES/BC).

There are two separate series of forms for completion and certification of the facility depending on which method above was followed. If the survey was completed using chapter 32/33 the prescriptive requirements method then complete the fire safety report-chapter 32/33, as well as the Worksheets for Rating Residents, Staff and Determining the E-Score of the group from Chapter 6, NFPA 101A. In addition, complete a Statement of Deficiencies and Plan of Correction (CMS-2567), in the usual manner if deficiencies are found.

If the facility is certified or is to be certified using the FSES/BC, Chapter 7, NFPA 101A and you have determined an Evacuation Difficulty Score for the facility, and completed a prescriptive survey of the facility you may apply the FSES/BC (Chapter 7, NFPA 101A), to determine compliance. Please note that the entire Fire Safety Survey Report must be completed when applying the FSES/BC. This is no different from the usual survey procedure for health care facilities. Complete a Form CMS-2786 along with the

FSES/BC worksheets, which are part of the form, for each facility certified as a Residential Board and Care Occupancy.

Multiple buildings or parts of buildings on a campus are sometimes used by a facility to house clients. In such cases, rate each building separately. On a large campus, such as a State School for the Mentally Disabled or State Developmental Center, a large building may be surveyed under Chapter 18/19 Health Care and a small building may be surveyed as a Residential Board and Care Facility under Chapter 32/33. In some cases, buildings may be divided into separate wings, with one wing housing Residential Board and Care occupants and the other wing housing Health Care patients. You may use different chapters for different wings only if there is a 2-hour fire wall separating the two parts.

Large buildings previously meeting health care requirements such as a facility with 17 beds or more, which currently meets the health care provisions of the LSC, can continue to be surveyed either under the Health Care Chapter or the FSES/Health Care. If the large facility qualifies as Residential Board and Care occupancy, it may elect to be surveyed under Health Care.

If the facility is to be certified based upon achieving a passing score on the FSES/BC, complete a Statement of Deficiencies, Form CMS-2567, for both the regular Survey Report and the FSES/BC for any deficiencies found. The provider will indicate whether it chooses to correct the deficiencies on the Form CMS-2786, or the deficiencies on the FSES/BC.

There are no provisions for the granting of waivers when using the prescriptive requirements under the Residential Board and Care Occupancies Chapters 32/33. Providers may elect to be surveyed under the Health Care chapters to take advantage of the ability to obtain waivers.

Only surveyors that have completed CMS's basic Life Safety Code and the FSES/HC and if appropriate the FSES/BC training courses may apply the FSES in Medicare/Medicaid facilities.

Task 5 - Information Analysis and Decision Making

General Objective

The general objective is to review and analyze all observations and findings in order to determine whether the facility has a deficiency in one or more of the regulatory requirements. A deficiency is defined as observed problems of sufficient severity and/or frequency so as to identify the facility as responsible, and which require some form of corrective action by the facility.

Frequency means the incidence or extent of the occurrence of an observed problem in the facility.

Severity means the seriousness of the observed problem, e.g., the degree to which the problem compromises the residents' health and safety.

A deficiency may be cited when a deficient practice occurs once, or when it occurs frequently.

Procedures

The fire safety survey report forms, worksheets and procedures are designed to assist in the gathering information about the level of fire safety provided by the facility. The K-tags refer to the data tags on the Fire Safety Survey Report form. For each item on the report form page indicate "Met" or "Not Met" or "Not Applicable." For each item marked "Not Met," enter the appropriate documentation in the Explanatory Remarks section explaining the nature of the deficiency and the degree of hazard it presents. Use additional sheets of paper for additional comments. Throughout the survey, discuss your observations with any other LSC team members and the facility staff. This interaction will assist you in identifying facility problems and will permit the facility the opportunity to provide additional information that may alleviate your concerns.

At the end of the survey, meet with any other LSC team members to draw conclusions about the level of fire safety provided by the facility, and the facility's compliance with the life safety code.

Deliberately review the negative findings and documentation from each task, and decide whether any further information or documentation is required. Consider your findings and observations in terms of credibility and reliability. Also, consider whether there are any rival or competing explanations related to particular negative findings. If necessary, ask the facility for additional information for clarification about particular findings and carefully weigh any countervailing explanations before making a deficiency determination.

The threshold at which the frequency of occurrences amounts to a deficiency varies from situation to situation. One occurrence directly related to a life-threatening or fatal outcome can be cited as a deficiency. On the other hand, a few sporadic occurrences may have so slight an impact on the life safety of residents or patients that they do not warrant a deficiency citation.

Determining compliance with the LSC as indicated on the Fire Safety Survey Report form should be based on the facility meeting all the requirements of the LSC. Alternatively, if there are deficiencies, facilities can be found in compliance after an acceptable plan of correction. (A revisit may be needed to confirm that the deficiencies have been corrected. This can also include a telephone or fax confirmation of correction of cited deficiencies when appropriate). A facility may also be found in compliance with the LSC if the Regional Office of CMS has waived a specific provision of the LSC. Evidence of such a waiver should be provided by the facility. If the survey indicates that

the facility is not in compliance with LSC, then a recommendation of certification is instead inappropriate.

If the facility is a JCAHO or AOA accredited facility, the facility is found to either meet the provisions of the LSC or the facility does not meet the provisions of the LSC. The facility cannot be found to meet the LSC by waiver or acceptable plan of correction due to its accreditation status. If the facility has been found not to be in compliance with the LSC then the facility loses its “deemed” status and will be required to complete a POC to correct the deficiencies found. A Plan of Correction and the request for completion of a POC cannot occur until a certification decision is made to remove the facility’s “deemed” status by the Regional Office. The deficiencies cited will have to be corrected before the facility’s “deemed” status can be restored. A follow-up survey may be required to confirm that the deficiencies have been corrected and that “deemed” status can be restored.

When the plan of correction contemplates meeting the equivalency criteria, mark the facility in compliance based upon the findings of the FSES on page one of the Fire Safety Survey Report Form. The use of the Fire Safety Evaluation System does not necessarily eliminate the use of waivers. For example, if an item in the Facility Fire Safety Requirements Worksheet, of the FSES is deficient, it does not enter into the computation portion of the FSES and must either be met, not meet or could be waived. The Fire Safety Requirements Worksheet includes requirements for such items as building utilities, heating and air conditioning regulations. CMS encourages the use of the FSES in those cases where a facility could achieve a passing score without waivers.

Waiver of LSC Requirements

When the facility meets the LSC based on a waiver of a specific requirement in the LSC, the POC completed by the facility will indicate which items are requesting to be waived and:

- How compliance would impose an unreasonable hardship on the facility; and
- How a waiver would not adversely affect the health and safety of patient/residents in the facility.

There is no provision in the regulations for the granting of waivers of the LSC requirements under Chapter 32/33 (Residential Board and Care Occupancies). A facility may use the FSES survey or request to be surveyed under the requirements of Chapter 18/19 (Health Care Occupancies). There also cannot be a waiver of the requirement for a generator in a facility with life support equipment.

When recommending a waiver of a specific LSC requirement on the basis of correction of another deficiency, the waiver should not be granted until the corrective action on the other item is completed. For example, if a facility is requesting a waiver of the installation of return air ducts where corridors are being used as return air plenums on the

condition that the facility install smoke detectors tied into an alarm system and the automatic shutdown of ventilation fans, do not waive the return air plenums until you verify that the facility has actually installed the detectors and that are appropriately connected to the fire alarm and air circulation systems. In the above cases, the first page of the Form CMS-2786 should be marked “Meets, Based Upon 2. Acceptance of a Plan of Correction” and then upon completion of the corrective action it can be marked “Meets, Based Upon 3. Recommended Waivers.”

Waivers of specific LSC criteria can be recommended for an extended length of time if correction of the deficiency is not possible.

When a waiver is recommended, both the surveyor and concurring fire authority official must sign the form at the bottom of Part IV, Recommendation for Waiver of Specific Life Safety Code Provisions, after the facility has responded to the Statement of Deficiencies.

Writing Deficiency Statements

Following the Principles of Documentation, (appendix P) write the deficiency statement in terms specific enough to allow a reasonably knowledgeable person to understand the aspect(s) of the requirement(s) that is (are) not met. Indicate the data prefix tag and regulatory citation, followed by a summary of the deficiency and supporting findings using resident identifiers, not resident names. List the data tags in numerical order, whenever possible.

The statement of deficiencies should:

- Identify the Section(s) in the Life Safety Code and Mandatory References, where appropriate, that contain the requirements upon which the deficiency is based; and
- Specifically reflect the content of each requirement that is not met; and
- Clearly identify how/why the requirement is/was not met; and
- Identify the extent of each deficient practice; and
- Identify the source(s) of the evidence (e.g., interview, observation or record review); and
- If appropriate, identify the impact or potential impact of the facility’s non-compliance on health and safety of the residents/patients.

Decision Making for Compliance with the LSC

The final part of the fire safety survey is sometimes considered the most difficult, and that is making a compliance decision on whether or not the facility meets the LSC. There is no number of deficiencies, that if exceeded makes the facility out of compliance with

the LSC. It is possible to have one or two deficiencies are significant enough to be considered an immediate and serious threat to the residents/patients or a large number of less serious deficiencies that do not have the same impact. In the final analysis a decision has to be made, one that is based on the facts and can be objectively defended if questioned.

The decision making process for health care facilities is very similar across all provider groups with the exception of accredited hospitals.

If a facility has no deficiencies or non-consequential deficiencies the decision making process is very simple; the facility is in compliance and no deficiencies are cited. The survey report form is marked “The Facility Meets, Based Upon 1. Compliance With All Provisions.” No further action by the facility is expected regarding this survey. The facility is to be notified and the results posted and available to the residents and the public.

If the facility has deficiencies and they are not at the level that would constitute an immediate and serious jeopardy or threat to the health and safety of the residents/patients (see [Appendix Q](#) for criteria) then a compliance decision will have to be made based on the results of the survey. This decision needs to be based on the facts at hand and not biased one way or the other due to outside forces.

Deficiencies may be considered corrected by the approval of a waiver of a specific requirement of the Life Safety Code.

In the case of a building that is to be certified using the FSES and if a passing score is not achieved on the FSES form, the facility does not meet the requirements of the Life Safety Code and the Fire Safety Report Form part 7 B should be marked “The Facility Does Not Meet the Standard.” If this occurs then the Physical Environment Condition of Participation must also be found not met. Termination action should be instituted if the facility was found not in compliance and the same deficiencies were cited on the survey the year before. In other words, if the facility did not complete their POC from the year before as approved then termination proceedings shall be instituted. If the facility was not previously found out of compliance or different deficiencies were found previously, then a POC could be accepted from the facility. A follow up revisit needs to be scheduled to inspect the progress being made to correct the deficiencies.

Then an accredited hospital, one which has “deemed status,” is surveyed under a validation or complaint survey the compliance decision process is altered somewhat. If LSC deficiencies are found that require correction they are documented on a Form CMS-2567 in the usual manner. The facility is then found out of compliance with the “Standard of Life Safety from Fire” and the “Physical Environment Condition of Participation.” The SA then transmits the survey findings and the recommendation that the “standard” and the “condition of participation” are not met to the Regional Office (RO). The Regional Office, if in agreement with the SA findings, removes the facility’s “deemed status” and at that time a POC is requested from the facility, and corrective

action is taken by the facility. The facility is placed under SA monitoring and the SA is requested at this time to make periodic follow-up visits to insure timely completion of the POC. When the facility has completed its POC, the facility's "deemed status" is restored and the facility is no longer under SA monitoring.

Immediate and Serious Threat

An immediate and serious threat is defined in [Appendix Q](#) as having a high probability that serious harm or injury to residents/patients could occur at any time, or has already occurred and may well occur again if residents/patients are not protected effectively from the harm, or the threat is not removed.

The guiding principles to determine immediate and serious threat make it clear that the threat to life is imminent and can be related to the health and safety of the residents/patients. Some examples of life threatening deficiencies are failure to maintain required fire protection systems in an operating condition, obstructed passageways that prevent egress in the event of an emergency, open stairways, missing tamper switch and water flow alarm in a sprinklered facility and unprotected wood frame construction which is not sprinklered.

If, at any time during the survey, an immediate and serious threat is identified, the surveyor should immediately consult with his/her supervisor and the State Agency. If the supervisor and State Agency concurs with the findings of the surveyor, then the facility administrator is notified that immediate and serious threat termination procedures are being invoked. The surveyor should explain to the administrator the nature of the threat. The surveyor should complete the remainder of the survey to determine the extent of deficiency.

The Form CMS-2786 should be marked as 7. B. "THE FACILITY DOES NOT MEET THE STANDARD" if the facility is found to have an immediate and serious threat. If the form is marked "MEETS WITH ACCEPTANCE OF A PLAN OF CORRECTION," the State Agency cannot make a finding of immediate and serious jeopardy at the facility.

See Appendix Q for guidance regarding the determination of immediate and serious threat, and [§3010](#) of the State Operations Manual (SOM) for procedures to follow if the immediate and serious threat termination procedures are invoked.

Task 6 - Exit Conference

General Objective

The purpose of the exit conference is to inform the facility of the survey team's observations and findings.

Conduct of Exit Conference

Conduct the exit conference with the facility administrator or anyone designated by the administrator. Also, invite an Officer of the organized residents group, if one exists, or a representative of the residents of the facility to the exit conference.

Provide the facility with specific information necessary for POC, if there is a need for a POC. Do not provide the facility worksheets that contain surveyor notes.

Describe to the facility the requirements that are not in compliance, the findings that substantiate these deficiencies, and any other observations or findings that did not result in a deficiency being cited but that may assist the facility in maintaining or improving its level of life safety from fire.

Provide the facility with the opportunity to discuss and supply additional information, if necessary, and attempt to resolve differences regarding deficiencies.

Review with the facility alternatives to compliance with the prescriptive requirements of the LSC if appropriate, such as, waivers of specific life safety code requirements or the suitability of the facility to achieve compliance using the FSES.

Determine the level of Scope and Severity for deficiencies cited at long term care facilities. The level of scope and severity will be determined in accordance with procedures found in SOM, Chapter 7, [§7400](#). The level of scope and severity will depend on the extent of the deficient practice and its impact on the health and safety of the residents. This can occur on-site or presented to the facility on the Form CMS-2567.

In accordance with your Agency's policy, present the Form CMS-2567, on site or after supervisory review, no later than 10 calendar days following the survey.

III. Complaint Investigations

If a complaint alleges a deficient practice in fire safety, and the complaint is of a specific nature, use your discretion to investigate the complaint independent of the standard fire safety survey (a special survey) or incorporate the investigation of the complaint into that specific task that covers that issue in the standard fire safety survey.

The scope, duration and conduct of a complaint investigation are at the discretion of the State survey team. The investigation should be widespread enough to resolve the complaint. Base any citation of deficiencies upon observations at the time of the survey. If it can be determined that the facility was out of compliance at the time of the complaint but, is no longer out of compliance, this should be noted.

A Form CMS-2567 should be completed and forwarded to the facility in accordance with Agency policy if deficiencies are found.

IV. Post Survey Revisits

The purpose of the follow-up survey or revisit is to re-evaluate the specific deficient areas that were cited, as deficient, during the original survey. Determine the status of corrective actions being taken on all deficiencies cited on the original surveys Form CMS-2567. The nature of the deficiencies dictates the timing and scope of the follow-up survey. For example, LSC deficiencies that involve structural changes may require long construction periods, whereas maintenance driven items may be corrected fairly quickly.

Focus on the previously cited deficiencies but the surveyor is not prohibited from gathering information related to any of the LSC requirements during a follow-up survey. If, after completing the follow-up activities, you determine that the cited deficiencies were not corrected by the date specified in the facility's approved plan of correction, initiate adverse action procedures, as appropriate. Document the revisit to the facility using the appropriate CMS forms. It may be possible, if the need for documentation is minimal, to use the Surveyor Notes Worksheet (Form CMS-681) to record the results of the revisit survey.

**TABLE 1
SAMPLE SIZE OF RESIDENT/PATIENT ROOMS**

The table below gives the sample size (number of patient/resident rooms to be checked) needed.

Number of Bedrooms in the Facility	Bedrooms to be Checked
20	19
40	36
60	52
80	66
100	80
200	132
300	169
400	196
500	217
600	234
800	260
1000	278
2000	322

