

Appendix 5

BOSTON-NBL SECURITY PROGRAM AND EMERGENCY RESPONSE

Boston-NBL Security Program and Emergency Response

Security Program

Boston University Medical Center (BUMC) incorporates a wide range of public safety, facilities, design, and construction and information technology expertise into its security programs. These programs include a blend of staffing and security systems that are reviewed annually. The senior managers responsible for these programs are active in a number of professional organizations and attend at least two professional development seminars a year to ensure that staff training and system support is current with, or exceeds, industry standards.

The Executive Director of Operations and Public Safety manages the process of defining programmatic needs and is supported by a Public Safety Department made up a Director, an investigations group, a systems group and an operations group that includes eighty-six officers. This department of 100 includes forty sworn police officers and attends more than fifty mandatory hours of training each year. The BUMC Public Safety staff is supported by the Boston University Police Department's fifty-five sworn police officers. Within these two operations there is ongoing coordination related to technology by systems experts, investigations by trained and experienced investigators and joint coordination with local, state and federal law enforcement agencies.

Security plans are tailored to programs and/or facilities and are addressed in the design of new facilities or through risk assessments in existing facilities and programs. BUMC utilizes two separate and distinct card access and alarm systems that are produced by General Electric and Tyco. These systems are capable of providing card access, panic alarms and door alarms for areas of the campus. Both systems are capable of integrating with biometric devices and closed circuit television as well as with fire alarm systems and building automation systems. The inclusion of facilities, design and construction and information technology staff in security system design and implementation provides a high degree of reliability once a project is complete or protocols are revised.

The convergence of staffing and systems takes place in the 24 hour a day, 7 day a week Command and Control Center where public safety and facilities staff manage information delivered over alarm, card access, closed circuit television, communication and panic alarm systems. The staffs that manage this information and initiate response are selected based on their success in security or facilities roles, their ability to think critically, their ability to work with technology and their knowledge of the campus.

The description of the public safety program above is the basis for planning and designing a program related to the National Emerging Infectious Diseases Laboratories (NEIDL). BUMC has designed the project with an addition of twenty-five to thirty new public safety officers, five to ten new Command and Control Center staff and three to five new management staff.

These staff may either be hired from external sources if background, training and education are appropriate or may be selected from experienced existing staff. In either case, these staff will undergo training done in coordination with the National Institutes of Health Security and Emergency Response personnel, will undergo police academy training, including firearms training and will undergo significant BUMC biosafety training.

Public Safety staff will be assigned to the following locations:

1. Perimeter pedestrian entry/exit point where staff will only admit authorized personnel and where personnel and belongings will be checked. This post will be staffed 24 hours a day by at least one public safety officer and will have monitors to view the perimeter of the site.
2. Main entrance where staff will manage the entrance/exit of authorized personnel that have been checked in through the perimeter pedestrian entrance. This post will be staffed 24 hours a day and will have monitors to view closed circuit television, access, and audit and alarm activity within the building.
3. Perimeter Vehicular entry/exit point where limited access will be granted to select vehicles providing specialized deliveries or services. This post will be staffed at least 12 hours a day during the business week and will have monitors to view the perimeter of the site. This post will include vehicle control devices that allow public safety staff to secure a vehicle when checking it and to then direct the vehicle to enter the site, exit the site, or to secure the vehicle for entering or exiting if necessary.
4. Loading Dock will be staffed at least 12 hours a day during the business week, will have monitors to view the perimeter of the site as well as the main entrance and will manage the entrance/exit of personnel that have been checked in through the perimeter vehicle entry/exit.
5. Control Center will be staffed 24 hours a day to provide additional support and response to requests for assistance or emergency situations.
6. Patrol officers will be in the building 24 hours a day monitoring the environment and ensuring that all security protocols are in place.

The design of the NEIDL includes the installation of one of the two primary card access systems acting as the primary system that will integrate card access with biometric iris scan readers, closed circuit television cameras and applications of those systems to ensure absolute identity, audit and conformance with a two-person rule. These systems, like all mechanical, electrical and plumbing systems are designed with system and operational redundancies to ensure that the systems have no down time.

The security system will enforce levels of access that individuals will be granted based upon their responsibilities in the building. Employees will pass through security layers that will require identification by a public safety officer, use of card access, use of biometric iris readers, access with another authorized employee or any combination of those approaches. Activity will be monitored by close circuit television. Entry, egress and activity will be

monitored for compliance both electronically and by public safety staff. Variances to authorized entry, egress or activity will result in electronic notification of public safety staff within the building and at the Control Center and will initiate response to that variance.

The combination of staff and systems related to the NEIDL will take place at two locations. The building will contain its own command center and will be staffed with employees capable of managing events within the structure. The systems will also report to the existing Command and Control Center where critical thinkers can support the NEIDL operations, coordinate response, notify both external and internal responders and activate campus wide plans if necessary.

Emergency Response

Boston University Medical Center (BUMC) prepares for a variety of emergency, contingency and disaster scenarios that include events that occur within the medical center, external to the medical center and/or from natural events. Planning is done on the institution level and with the City of Boston. Response plans are documented, tested with full response or as a table-top exercise and are reviewed annually. Internal plans include fire, chemical, biological or radiation spill/release, evacuation, criminal incident (bomb threat, infant abduction, etc), or loss of utility (heat, electrical power, water, etc). External plans include incidents in which a large influx of patients are expected or an incident occurs that may become an internal incident such as a large scale utility issue. Natural disaster plans include severe weather conditions or situations that may impact the structural integrity of medical center facilities.

BUMC constructs and manages its facilities in accordance with all applicable design, construction and regulatory standards and prepares for scenarios during the design phase of a project. Building automation systems are incorporated into all design plans to maximize control over building systems including those related to fire and evacuation. Security features are designed into buildings considering the use of the facility. Structural plans are incorporated recognizing potential for manmade and natural occurring events such as earthquakes. Plans include compliant means of egress and areas of refuge for both lateral and vertical evacuations, depending on the building occupancy.

The Office of Environmental Health and Safety (OEHS) manages the development of plans, develops test (drill) scenarios, critiques events that take place following drills and represents BUMC with regulatory and emergency/disaster response agencies. These efforts include significant involvement of BUMC Administration, the Office of Occupational and Environmental Medicine,,, the Office of Public Safety and the Medical Center Disaster Coordinator. Plans are reviewed by the Boston Fire Department and/or the Boston Emergency Management Agency, when applicable. Tours of laboratory space are provided to City of Boston emergency responders as necessary. Compliance and hazard surveillance tours, including documentation audits are conducted on a regular basis to ensure continued compliance.

The OEHS includes thirty employees representing expertise in fire and life safety, environmental compliance, radiation safety, industrial hygiene, construction safety, hazardous materials, environmental management and biological and laboratory safety.. The specialized managers and staff responsible for these programs are active in a number of professional organizations and attend at least one professional seminar a year to ensure that staff training and knowledge of regulatory standards are current with, or exceed industry standards. In addition, all OEHS staff are trained annually in HAZWOPER, OSHA's emergency responder standard, in order to manage on-site chemical incidents.

The activation of any BUMC emergency, contingency or disaster plan involves activation of the Command Center to manage the incident independently or with the assistance or under the direction of the City of Boston depending on the type of situation. The public safety and facilities located in the Control Center collect and disseminate information while the emergency response team implements actions.

The description of the existing emergency response planning process described above will be used as the foundation for planning and designing a program for the National Emerging Infectious Diseases Laboratories (NEIDL). BUMC has designed the NEIDL like similar research buildings on the campus but has added significantly to the design of the BSL-4 space and to the building security. This area has been designed to manage incidents from within the space utilizing lateral evacuation plans within defined compartments, redundant systems for controlling the environment, and will be managed with an additional two to four Environmental Health and Safety / Emergency Response personnel. These staff will undergo training in coordination with the National Institutes of Health Security and Emergency Response personnel, including coordinating all plans with the City of Boston and undergoing significant BUMC biosafety training in an on-site BSL-4 training laboratory.

In the event of an emergency situation that may impact the community BUMC will immediately contact all appropriate responding agencies including the Boston Public Health Commission, the Boston Fire Department and the Boston Police Department who will activate city plans to command and coordinate all appropriate agencies and response plans.

It is important to note that in almost eighty years of operation the five existing BSL-4 Labs have had not incidents that impacted the communities surrounding them.

Environmental Health and Safety (EHS) and Emergency Response personnel assigned to the NEIDL will include the following personnel;

1. Biosafety Officer will be responsible for ongoing monitoring of laboratory protocols for performance improvement and compliance with internal and regulatory standards.
2. Laboratory Safety Technician will be responsible for inspections and audits related to all laboratory space.
3. Emergency Response Manager will be responsible for all emergency response plans and the coordination of those plans with local, state and federal authorities.
4. Other EHS professional staff will be identified for other safety and industrial hygiene related activities.

BUMC continues to work with the City of Boston's Public Health Commission, Fire Department, Police Department and Emergency Management Agency regarding preparedness for incidents that occur at BUMC and how they could impact the community. This type of planning and preparedness includes facility evacuation plans, the identification

of areas of refuge, communication to external response agencies, and their communication to the surrounding community. BUMC will be the primary non-governmental responder given the knowledge of the facility, expertise in disaster response, and its capabilities in trauma services. The planning will include the roles and responsibilities of external response agencies including but not limited to how determinations are made regarding evacuation of non-BUMC properties and areas. BUMC will communicate immediately to the City of Boston should it be aware of an emergency situation and to provide services as necessary in response to that situation.

The response to an incident in the BSL-4 area of the building will include protocols that define the isolation and containment of the area for emergency responders as well as the protocols for those who work in the area. This space is designed to allow for those inside to move from one compartment into another allowing for a safe re-location within containment. All compartments have access to decontamination showers or, in the event of an immediate evacuation, fumigation chambers to ensure those in containment can exit the facility without the risk of contamination to the building exterior. The operations of the area require conformance with a two-person rule that addresses issues associated with an individual becoming disabled, becoming exposed or panicking as a result of those types of situations. Application of the two-person rule includes training on how individuals should respond to situations within containment to ensure all risk is isolated and contained.

The convergence of emergency response staff and plans related to the NEIDL will take place at two locations. The building will contain its own command center and will be staffed with employees capable of managing events within the structure. The systems will also report to the existing Command and Control Center where critical thinkers can support the NEIDL operations, coordinate response, notify both internal and external responders and activate campus wide plans as necessary.