The following “Standards for Risk Reduction During Periods of Construction and Renovation” are to be implemented and maintained for the duration of all construction activity performed at or on the behalf of the Cleveland Clinic Health System. It is the responsibilities of all Construction Managers, Contractors and Subcontractors to implement and adhere to these guidelines.

**INTERIM LIFE SAFETY MEASURES**

Interim Life Safety Measures (ILSM) are a series of 11 administrative actions required to temporarily compensate for the significant hazards posted by NFPA 101 (1997 Life Safety Code) (LSC) deficiencies or construction activities. ILSM apply to appropriate staff (including construction workers), must be implemented upon project development and must be continuously enforced through project completion. Implementation of the ILSM is required in or adjacent to all construction areas and throughout buildings with existing LSC deficiencies. ILSM are intended to provide a level of life safety comparable to that described in Chapters 1-7, 31 and the applicable occupancy chapters of the LSC. Each ILSM action must be documented through written policies and procedures. Frequencies for inspection, testing, training, monitoring and evaluation must be established by the organization.

CCHS has developed a policy for use of ILSM that includes written criteria to evaluate various LSC deficiencies and construction hazards for determining when and to what extent one or more of the following are applicable:

The ILSM consist of the following actions:

1. Ensuring free and unobstructed exits. Personnel receive additional training when alternative exits are designated. Buildings or areas under construction must maintain escape routes for construction workers at all times. Means of exiting construction areas are inspected daily.
2. Ensuring free and unobstructed interior and exterior access to emergency services and for fire, police, and other emergency forces.
3. Ensuring fire alarm, detection, and suppression systems are in good working order. A temporary but equivalent system shall be provided when any fire system is impaired. Temporary systems must be inspected and tested monthly.
4. Ensuring temporary construction partitions are smoke tight and built of noncombustible or limited combustible materials that will not contribute to the development or spread of fire.
5. Providing additional fire-fighting equipment and training personnel in its use.
6. Prohibiting smoking per CCHS Policy throughout the organization’s building, and in and adjacent to construction areas.
7. Developing and enforcing storage, housekeeping, and debris removal practices that reduced the building’s flammable and combustible fire load to the lowest feasible level.
8. Conducting a minimum of two fire drills per shift per quarter.
9. Increasing hazard surveillance of buildings, grounds, and equipment, with special attention to excavations, construction areas, construction storage, and field offices.
10. Training personnel to compensate for impaired structural or compartmentalization features of fire safety.
11. Conducting organization-wide safety education programs to promote awareness of LSC deficiencies, construction hazards, and ILSM.

CCHS will maintain current record drawings (or documents) addressing all structural features of fire protection. CCHS will implement, document, and enforce appropriate ILSMs as determined by the organization. All Construction Managers, Contractors and Subcontractors are required to implement ILSM wherever applicable.

The Cleveland Clinic Health System Project Coordinator and Environmental Health and safety representative will conduct a final inspection of the area prior to the project being accepted by CCHS.

See ILSM Report. This checklist is to be completed by the Contractor/Construction Manager and submitted for approval to the Project Coordinator on a weekly basis.

**GUIDELINES FOR PREVENTION OF NOSOCOMIAL PNEUMONIA**

CCHS has adopted the Guidelines for Prevention of Nosocomial Pneumonia as established by the Center for Disease Control (January 3, 1997).

**Aspergillosis**
Preplanning: When planning hospital construction and renovation activities, CCHS will assess whether patients at high risk for Aspergillosis are likely to be exposed to high ambient-air spore counts of Aspergillus species from construction and renovation sites, and if so, develop a plan to prevent such exposures.

If determined by CCHS that exposure is likely during construction or renovation activities, the contractor shall:
1. Construct barriers between patient-care and construction areas to prevent dust from entering patient-care areas; these barriers (e.g., plastic or drywall) shall be impermeable to Aspergillus species.
2. In construction/renovation areas inside the hospital, create and maintain negative air pressure relative to that adjacent patient-care areas unless such a pressure differential is contraindicated (e.g., if patients in the adjacent patient-care areas have infectious tuberculosis).
3. Direct pedestrian traffic from construction areas away from patient-care areas to limit the opening and closing of doors or other barriers that might cause dust dispersion, entry of contaminated air, or tracking of dust into patient-care areas.
4. Clean newly constructed areas before allowing patients to enter the areas.

Other measures:
- a. When constructing new specialized-care units for patients a high risk for infection, ensure that patient rooms have adequate capacity to minimize fungal spore counts via maintenance of (1) HEPA filtration, (2) directed room airflow (laminar), (3) positive air pressure in patients' rooms relative to the air pressure in the corridor (10-20% excess air), (4) properly sealed rooms, and (5) high rates of room-air changes (at least 12).
- b. Prevents birds from gaining access to hospital air-intake ducts.
- c. Eliminate exposure of patients at high risk for Aspergillosis to activities that might cause spores of Aspergillus species or other fungi to be aerosolized (e.g., dry sweeping or vacuuming.) Use wet methods or HEPA vacuum.
- d. If air-handling systems that supply air to areas in which high-risk patients are housed are not optimal, deploy HEPA filter units until rooms with optimal air-handling systems are available for all patients at high risk for invasive Aspergillosis.
- e. If an environmental source of exposure to Aspergillus species is identified, perform corrective measures to eliminate the sources from the environment of patients at high risk infection.

**Legionnaires Disease**

When a new hospital building is constructed, place cooling tower(s) in such a way that the tower drift is directed away from the hospital's air-intake system and design the cooling towers such that the volume of aerosol drift is minimized.

**ASBESTOS**

CCHS will maintain a record indicating areas known to contain Asbestos Containing Materials (ACM). Areas which will undergo construction or renovation will be researched to determine if ACM are present. If contractors encounter suspected ACM material they are to notify the Project Coordinator and the CCHS Director of Environmental Health & Safety prior to disturbing the material.

Asbestos abatement shall be conducted in accordance with specifications and standards issued by the Office of Construction Management and Environmental Health and Safety.

**HAZARDOUS SUBSTANCES**

1. All construction and renovation in areas adjacent to Foundation employee occupied areas shall be performed in a fashion (e.g., isolation, engineering controls, ventilation, etc.) that prevents Foundation employee exposure to hazardous substances (chemical, biological, mold, dust, etc.) and physical hazards. Indoor air quality shall not be compromised.
2. All projects involving the use of a hazardous substance, solvent, stripper, sealer, epoxy, etc., shall be performed in an area of negative pressure to prevent the migration of such materials or odors into CCHS employee occupied areas. If negative pressure cannot be maintained, then such work shall be performed after normal working hours.
3. Each contractor shall ensure Material Safety Data Sheet (MSDS) is readily available for each hazardous chemical/product brought to the worksite. MSDS’s shall be made available to the Safety Department upon request.
4. CCHS employees shall not be permitted to work in a construction or renovation area unless approved by the Director, Safety Department.

**Interim Safety Measures Report**