

## 00 73 19 – Health and Safety Requirements

### 1. General

Duke University will take reasonable precaution to provide a safe and accessible environment for its employees, patients, visitors and construction workers in all occupied areas during alteration or new construction to buildings or grounds. These measures shall pertain to all construction projects, whether by outside contractors or by Duke Personnel.

### 2. General Safety Policies

- A. Duke University requires that all consultants, contractors and subcontractors engaged in work on campus maintain an OSHA-compliant safety program, designed to ensure the health and safety of their own personnel and all members of the Duke Community. The Project Manager will verify the existence and rigorous application of this program by the contractor. In general, all construction, maintenance, and repair work performed on campus, whether by Duke Personnel or outside service providers, are subject to OSHA safety regulations.
- B. On construction sites, the General Contractor (GC) or Construction Manager (CM) is responsible for site safety. This responsibility includes the establishment of appropriate construction site boundaries, barriers, temporary fences, and signage to deter access by unauthorized personnel. Accessible pedestrian detours should be provided as part of the construction logistics and safety plans in order to minimize the likelihood of unauthorized access to the construction site, by reducing the temptation to trespass. It is the contractor's responsibility to supervise the construction site and immediately remove unauthorized persons from the construction site.
- C. Construction Site Barriers and Temporary Fencing must comply with the Duke Standard, illustrated in Appendix **A015626**.
- D. Temporary Protective Walkways must comply with the Duke Standard, illustrated in Appendix **A015629**.

### 3. Safety Requirements for Patient Care Areas

- A. The project site must be contained completely within construction barriers. The barriers must consist of solid wall construction (i.e. dry wall) that extends from floor to the underside of the above floor.
- B. The construction entrances shall have solid doors with self-closing latch hardware to assure the doors are closed at all times. When security issues are of concern, a solid wood door with a window shall be an acceptable alternative. Plastic drapes over entrances into construction sites are not permitted. The number of doors in construction barriers should be minimized.

- C. All ceiling tiles removed during the work day shall be replaced as quickly as possible and no later than the end of the work day.
- D. Construction traffic and patient traffic must remain separate at all times.
- E. Construction debris must be removed in containers with appropriate covers. When the containers do not have covers, the top layer of the debris is to be wet down to prevent aerosolizing of particulate matter from the debris. If the removal of debris has to pass through patient wards, the patient doors must be closed during transport of the debris to the elevators.
- F. At the end of each work day, the project site shall be vacuumed and dusted thoroughly. During periods of extensive demolition, dusting and vacuuming shall be done more frequently.
- G. Air handling ducts are to be covered during all demolition activities.
- H. Upon award, the Contractor (and any subcontractor) must submit their Hazard Communication Plan for review. The Contractor shall provide certification that each employee used on the job has received Hazard Communication Training.
- I. The Contractor (or subcontractor) shall maintain on site, copies of Material Safety Data Sheets (MSDS's) for all products used during the project.
- J. Construction Site Barriers and Temporary Fencing must comply with the Duke Standard, illustrated in Appendix **A015626**.
- K. Temporary Protective Walkways must comply with the Duke Standard, illustrated in Appendix **A015629**.

#### 4. Facility Security

- A. The owner's foremost priority is security of the facility occupants. Therefore, the following policies and procedures shall be conformed to at all times:
  - 1. All required facility access keys and/or cards shall be issued to the contractor's superintendent by the project office.
  - 2. Only the contractor's superintendent shall be allowed to sign out keys and/or cards.
  - 3. The contractor shall be responsible for the security of the loaned keys and/or cards during the loan term and shall be responsible to reimburse the owner for all costs to revise the key and/or card system of the facilities if the contractor fails to return the loaned keys and/or cards.

4. If requested the owner shall furnish the contractor an estimated cost for such aforementioned measures.
5. All contractors and subcontractor personnel shall display a picture identification badge at all times while on campus.
6. The picture identification badge shall display the photograph, company name and person's name.

#### 5. Protection

- A. Temporary security and protection provisions required include, but not by way of limitation: fire protection, barricades, warning signs/lights, building enclosure/ lockup, environmental protection and similar provisions intended to minimize property losses, personal injuries and claims for damages at project site.
- B. Plant Material: All trees, shrubs, lawns and all landscape work shall be protected from damage, providing guards and covering. Any damaged work shall be repaired or replaced at Contractor's expense to the Owner's satisfaction. The Owner will specify required landscape repairs, including repairs to irrigation systems.
- C. Water Protection: Excavation, trenches, building, existing buildings and site shall be protected from damage from rain water, spring water, ground water, backing up of drains or sewers and all other water. All pumps and equipment and enclosures shall be provided to ensure this protection.
- D. Open fire will not be permitted within the building enclosure or on the project site.
- E. Contractor shall obtain a hot work permit from the Occupation and Environmental Safety Office (OESO) Fire Safety Division for cutting and welding.
- F. Contractor shall obtain an excavation permit for any work on Duke's campus from the Facilities Management Department and meet all requirements of North Carolina One-Call.
- G. Construction Site Barriers and Temporary Fencing must comply with the Duke Standard, illustrated in Appendix **A015626**.
- H. Temporary Protective Walkways must comply with the Duke Standard, illustrated in Appendix **A015629**.
- I. Tree Protection Zones must comply with the Duke Standard, illustrated in Appendix **A015639**.

#### 6. Reporting Accidents

- A. The Contractor shall be required by the Owner to prepare and submit reports of accidents at the site. Report within 24 hours of the event to the Owner, Architect, insurance company(ies) and others as may be required by law, giving necessary data and actions. For this purpose, a significant accident is defined to include events where bodily injury or property loss of substance is sustained.

7. Risk Mitigation

- A. Duke FMD administers a Risk Mitigation process that is designed to prevent damage to utilities, buildings, paving or landscaping and other physical assets during construction and maintenance tasks. Before engaging in any activity that has the potential to damage utilities, buildings, paving or landscaping, contractors are required to present the proposed work and associated risk mitigation strategies to the Risk Mitigation Committee, at the direction of the Project Manager. Examples of tasks requiring risk mitigation include but are not limited to: crane setup, excavation of any kind, stockpiling of materials, demolition and any work performed within a 'high risk' area as defined by FMD.

8. Stop Work Orders

- A. Only designated Duke Personnel are authorized to issue 'stop work' orders to contractors. These personnel include: Project Managers, Duke Utility and Engineering Services personnel and Occupational and Environmental Safety Office personnel. Whenever a 'stop work' order is issued by any Duke employee or non-Duke entity, the contractor should verify the identity and affiliation of the employee or entity issuing the order, comply with the order and immediately notify the Project Manager in charge of the project in order to pursue resolution and confirmation of the validity of the 'stop work' order.