

**UNIVERSITY OF PITTSBURGH**

**DIVISION B**

**SPECIAL REQUIREMENTS  
FOR UNIVERSITY PROJECTS**

**INSTRUCTIONS TO DESIGN PROFESSIONALS ON HOW TO USE THIS DOCUMENT**

*The Professional shall review these requirements with the University's Project Manager assigned to the respective project.*

*The Professional shall integrate these special Requirements into the Contract Documents (Typically into Division 1) as applicable to the project Scope of Work.*

*This document shall NOT be included as an attachment to the Specifications, but rather the individual Sections of this document shall be integrated into the Professional's Division 1 Documents (to avoid duplication and/or conflict of language).*

*The Professional must submit the SPECIAL REQUIREMENTS CHECKLIST (Located at the beginning of this document in Part II) with the submission of the 95% Construction Documents, (or earlier) as required by the Project Manager, to demonstrate that this task has been completed.*

*No form is ever perfect. If you have recommended changes/corrections to this "base" form, please email your requested/recommended changes/corrections to the Project Manager who provided it to you.*

**Updates**

- 2023-03-24 Reformatting and minor edits/corrections - Andrew Lang - Ron Leibow Approved
- 2019-05-10 Instructions to design professionals on how to use this document- added to cover sheet.
- 2019-04-24 B.18 - Fire Prevention Planning for Construction, Renovations or Demolition Projects'. F. 'Means of Egress' language changed to 'Fire Protection Testing System'. Add New section G. Means of Egress with 3 new notes.
- 2018-11-01 Coordination and inclusion of University of Pittsburgh Additional Requirements, Create Appendix A. Add Item # 1: University Crane/ Lift Notification Checklist
- 2018-08-17 Entire Document Revision

**DIVISION B**

**SPECIAL REQUIREMENTS  
FOR UNIVERSITY PROJECTS**

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**I. SPECIAL REQUIREMENTS CHECKLIST PROCEDURE**

- A. The Professional must submit this completely executed checklist with submission of construction documents.
- B. The Professional shall indicate where each Special Requirement is located within the project manual. If a particular requirement is not applicable to the project, professional shall indicate “NA” in the column.

C. Example:

B.5 - PHASED CONSTRUCTION FOR EXISTING BUILDING ALTERATIONS	Section 011000 Paragraph 1.3.A Page 011000-2
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**II. SPECIAL REQUIREMENTS CHECKLIST**

<b>DIVISION B - SPECIAL REQUIREMENTS CHECKLIST</b>	
<b>Project Name:</b> ProjectName	
<b>University’s Project Number:</b> University’sProjectNumber	
<b>Professional:</b> NameOfProfessional / NameOfProfessionalFirm	
<b>University’s Design Project Manager:</b> NameOfUniversity’sDesignProjectManager	
<b><u>SPECIAL REQUIREMENTS</u></b>	Professional to indicate Section, Paragraph, and Page Number in Project Specifications where the respective special requirement is located. If a section is not applicable, then indicate “N/A”
B.1 - HAZARDOUS MATERIALS PROCEDURES	
B.2 - EARTHWORK	
B.4 - SUBSURFACE INFORMATION	
B.5 - PHASED CONSTRUCTION FOR EXISTING BUILDING ALTERATIONS	
B.6 - WORKING HOURS	
B.7 - INTERRUPTIONS OF EXISTING UTILITIES DURING CONSTRUCTION	
B.8 - VIBRATION CONTROL	
B.9 - NOISE CONTROL	
B.10 - HAZARDOUS MATERIALS IDENTIFICATION	
B.11 - UNIVERSITY OWNED EQUIPMENT	
B.12 - CONTROLLED SUBSTANCE POLICY	

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<b>University's Project Number:</b> University'sProjectNumber	
<b>Professional:</b> NameOfProfessional / NameOfProfessionalFirm	
<b>University's Design Project Manager:</b> NameOfUniversity'sDesignProjectManager	
<b><u>SPECIAL REQUIREMENTS</u></b>	Professional to indicate Section, Paragraph, and Page Number in Project Specifications where the respective special requirement is located. If a section is not applicable, then indicate "N/A"
B.13 - EATING AREA AND DISPOSAL OF FOOD WASTE	
B.14 - BLASTING	
B.15 - ADVERTISING	
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B.22 - TEMPORARY HEAT - EXISTING BUILDINGS	
B.23 - CONSTRUCTION LIGHT AND POWER - NEW CONSTRUCTION	
B.24 - CONSTRUCTION LIGHT AND POWER - EXISTING BUILDINGS	
B.25 - COMMUNICATION SERVICE	
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B.28 - STORAGE SHEDS	
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<b><u>SPECIAL REQUIREMENTS</u></b>	Professional to indicate Section, Paragraph, and Page Number in Project Specifications where the respective special requirement is located. If a section is not applicable, then indicate "N/A"
B.33 - CRANES	
B.34 - CONSTRUCTION ACCESS ROADS	
B.35 - TEMPORARY ROADS AND PAVING	
B.36 - HAULING EXCAVATION MATERIALS	
B.37 - PARKING FOR CONSTRUCTION WORKERS	
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<b>University's Design Project Manager:</b> NameOfUniversity'sDesignProjectManager	
<b><u>SPECIAL REQUIREMENTS</u></b>	Professional to indicate Section, Paragraph, and Page Number in Project Specifications where the respective special requirement is located. If a section is not applicable, then indicate "N/A"
B.53 - SUBSTANTIAL COMPLETION PUNCH LIST PROCEDURE	
B.54 - ENERGY EFFICIENCY REBATE	
B.55 - RESTORATION	
B.56 - ONE-YEAR INSPECTION	

**III. DESIGN DEVELOPMENT PHASE DIRECTIVES TO PROFESSIONAL**

**B.1. HAZARDOUS MATERIALS PROCEDURES**

A. Summary:

The intent of this procedure is to identify hazardous materials when designing and renovating spaces within University buildings. Hazardous materials should be accounted for in the design, budget, and schedule of the project in order to minimize the disruption to the User of the space. Even though not all materials that will be disturbed during construction can be tested prior to starting the work, a plan must be developed to deal with those areas that will be disturbed prior to bidding the work.

B. Design Procedure:

1. Once the project scope is defined, Design Professional is to determine what materials will be affected by the work and visit the site to verify existing conditions.
2. Design Professional is to review the University's database maintained by Environmental Health and Safety Department (EH&S) on the hazardous materials within and adjacent to the space that is to be renovated.
3. University's Design Project Manager may engage an Environmental Consultant to analyze materials if present (i.e.: plaster walls, ceilings, acoustical treatments, flooring material, flooring adhesive, floor tile under carpeting, wall tile adhesive, etc.) to determine exact content and location of hazardous materials and to verify the existing conditions. A hazardous materials report may be provided to consultants.

4. If hazardous materials are found, the University's Design Project Manager will arrange for a certified environmental engineering firm to produce abatement documents to be included in the Design Professional's bid documents for the project. The construction documents are to include the abatement of hazardous materials and are to be part of the General Construction Contract. This may not always be the case; for example, on large building demolition projects the abatement may be a separate contract. Therefore, who will perform the abatement should be discussed during the Design Development Phase.

#### C. Testing Procedure:

1. Following building components could be suspect for containing hazardous materials including but not limited to:
  - a) **Roofing:** Roof membrane, flashings, and sealants.
  - b) **Walls:** Plaster, Tile, brick (fire brick), Transite.
  - c) **Ceilings:** Plaster, suspended acoustical, glued acoustical (including the mastic) and spray-on acoustical treatments.
  - d) **Flooring:** Tile and mastic, sheet flooring and mastic, carpeting adhesives, and in areas that are carpeted, the surface below the carpet should be exposed and tested.
  - e) **Insulation:** Pipe insulation, pipe fittings, covering on pipe insulation, ductwork insulation, spray-on insulations, and fire proofing.
  - f) **Transite:** This was used for: ductwork, fume hood linings, fire rated partitions, heat shields behind steam radiators and counter tops in labs.
  - g) **Doors:** Fire doors and cores of older doors.
  - h) **Mastic:** Chalkboard adhesive, glass and mirror adhesives, window surrounds sealant and caulking.
  - i) **Boilers:** Chamber linings, doors and breaching.
  - j) **Paint:** Test for lead paint in any areas that has a substantial amount of demolition. This is especially critical with the demolition of steel and the work done with a cutting torch or cutting blade.
2. All layers of building finishes should be tested. For example, vinyl asbestos tile may be found under carpeting, asbestos plaster under a layer of drywall and asbestos ceiling plaster above an acoustical tile ceiling. Insulation on piping above ceilings and in mechanical areas, and coatings on interior surfaces of ductwork should be suspect of hazardous materials.

## B.2. EARTHWORK

- A. Classified Excavation: Excavate to subgrade elevations. Material to be excavated will be classified as earth and rock. Do not excavate rock until it has been classified and cross sectioned by Professional. The Contract Sum will be adjusted for rock

excavation according to unit prices included in the Contract Documents. Changes in the Contract Time may be authorized for rock excavation.

*Professional Note - The Professional is to discuss with the University's Project Manager earthwork requirements. Verify who owns the cost for over-excavations and the need for unit prices for rock removal and unsuitable soils.*

#### **IV. CONSTRUCTION DOCUMENTS PHASE DIRECTIVES TO PROFESSIONAL**

##### **B.3. INSTRUCTIONS**

- A. The Professional shall incorporate these Special Requirements into the Contract Documents (Division 01) as applicable to the project's Scope of Work.
- B. The Professional shall review these requirements with the University's Project Manager.
- C. The Professional must submit the Special Requirements' Checklist (located at the beginning of this document) with submission of the 95% Construction Documents for University's review.
- D. When the term "Contractor" is used in this document, it refers to either the single Contractor in charge of the job, or each of the Prime Contractors involved. The Professional is to tailor the language of this document according to the manner in which the project will be bid.

#### **V. DOCUMENT 003100 - AVAILABLE PROJECT INFORMATION**

##### **B.4. SUBSURFACE INFORMATION**

- A. Available data concerning subsurface information based on geotechnical surveys, has been provided by the Professional for their use in designing this project. Its accuracy or completeness is not guaranteed by the University or the Professional. The provided information is for Contractors' convenience and is intended to supplement rather than serve in lieu of Contractors' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions.

#### **VI. SECTION 011000 - SUMMARY**

##### **B.5. PHASED CONSTRUCTION FOR EXISTING BUILDING ALTERATIONS**

- A. University will occupy site and existing building during the entire construction period. Cooperate with University during construction operations to minimize conflicts and facilitate University's usage.
- B. Departments and functions are to remain in operation with the minimum number of disruptions (moves).
- C. Existing HVAC, plumbing and electrical systems shall be maintained during construction in areas to be occupied by the University by providing temporary or permanent connections. Mechanical work indicated to be demolished or removed shall be completed without interruption to occupied areas. [Each] Contractor shall be responsible for maintaining and protecting the systems related to their trade.

- D. At conclusion of each phase and at completion of the project, temporary HVAC, plumbing and electrical systems shall be removed [by the respective Contractor].
- E. Occupied areas in the building shall be tightly protected against noise and dust resulting from construction. [General] Contractor shall be responsible for the erection of dust and other barriers to separate areas under construction or demolition from occupied areas. Barricades and construction partitions shall be erected in a manner that maintains exit access to fire stairs and exit passages.
- F. [General] Contractor shall be responsible for maintaining the existing fire alarm system in operation throughout the project. Where temporary outages are required, alternate means shall be established to alert building occupants of a fire condition. Refer to University's Safety Requirements.
- G. Construction access to work area shall not be routed through a finished or occupied space.
- H. [General] Contractor is responsible for the overall coordination of the construction schedule including scheduling of University's continued use of building and site. University will be responsible for the removal of furnishings, equipment or salvaged items not identified for removal and/or storage by the [General] Contractor. [General] Contractor shall review the phasing schedule during the weekly job meeting prior to implementation of phases and notify the respective Contractors and the University of the areas to be affected by the phasing. [General] Contractor shall be responsible for determining the route that construction traffic shall use to the work areas and ensuring that adjacent areas are protected against damage, dust, and noise. Each trade is responsible for the rerouting or temporary support and connection of existing utility lines and temporary construction required for the completion of that trade's particular scope of work.
- I. Contractors shall schedule use of loading dock areas for deliveries of materials and equipment in collaboration with University's Project and Facility Managers so as to minimize disruption to University's activities.

#### **B.6. WORKING HOURS**

- A. Unless otherwise stated in the Contract Documents, Contractor's working hours shall be in accordance with a schedule agreed upon by the Contractor and the University. Work during evenings and weekends shall be scheduled and fully coordinated with University's Project Manager.

*Professional Note - Discuss with University's Project Manager for the need of second and third shifts and the impact these shifts will have on the budget.*

#### **B.7. INTERRUPTIONS OF EXISTING UTILITIES DURING CONSTRUCTION**

- A. Unless otherwise stated in the Contract Documents, Contractors shall obtain approval from the University, at least ten (10) working days in advance, for the shut-down of utilities. Utility shutdowns must be scheduled so they do not interfere with the University's daily functions.

*Professional Note - The Professional will be responsible for identifying major shutdowns that will occur during nighttime or weekend hours. These shutdowns are to be specifically described in Division 01.*

#### **B.8. VIBRATION CONTROL**

- A. Contractors shall coordinate operations with the University that may result in high levels of vibrations at least ten (10) working days in advance of work.
- B. Because of experimental work being done in certain University buildings and because laboratory equipment can be damaged or destroyed by unexpected vibrations, Contractor shall verify with the University's Project Manager, if restrictions on the use of vibration producing equipment such as jackhammers, etc., shall be regulated.

#### **B.9. NOISE CONTROL**

- A. Contractors shall coordinate operations with the University that may result in high levels of noise at least ten (10) working days in advance of work. It may become necessary to schedule some operations during periods of low occupancy of adjacent buildings and areas. Cost to be included in the Contract Sum for other than normal working hours.

#### **B.10. HAZARDOUS MATERIALS IDENTIFICATION**

- A. Unless otherwise stated in the Contract Documents, if during the conduct of the work the Contractor encounters materials in the construction area suspected to be hazardous that require to be disturbed as part of the scope of work, they shall not disturb the material(s) and shall immediately inform the Professional and the University in writing. Work in that area shall be stopped until testing is performed and if needed, a qualified abatement contractor is brought in to abate the material.

#### **B.11. UNIVERSITY OWNED EQUIPMENT**

- A. Use of University-owned equipment is prohibited. It shall be the responsibility of contractor's performing the work at the University to provide the tools, equipment, and materials necessary to perform the work.

#### **B.12. CONTROLLED SUBSTANCE POLICY**

- A. Use of tobacco products and other controlled substances within University owned and leased facilities is not permitted. Residence halls, off-campus housing, University vehicles and construction sites are also included in this policy. Construction workers must refrain from the use of tobacco products and other controlled substances within these areas and or within a distance of fifteen (15) feet from University buildings.

#### **B.13. EATING AREA AND DISPOSAL OF FOOD WASTES**

- A. Workers shall refrain from eating at the Work site and within University buildings, except in an area specifically designated for that purpose and shall not dispose of meals' related trash and garbage in areas of the Work site other than those containers specifically provided for that purpose.

#### **B.14. BLASTING**

- A. Blasting is not permitted on University property.

#### **B.15. ADVERTISING**

- A. No advertising will be permitted on any part of the building, scaffolding, fences, materials, trailers, or site except by permission of the University.

#### **B.16. SALVAGED MATERIALS**

- A. Contractors shall verify with University's Project Manager items of demolition work that shall be salvaged and turned over to the University. Contractors shall remove such items to a pickup area of the building to be removed by others.
- B. Other demolished materials not scheduled to be salvaged shall be the property of the Contractor and shall be disposed of properly.

### **VII. SECTION 013523 - OWNER SAFETY REQUIREMENTS**

#### **B.17. SAFETY REQUIREMENTS**

- A. The University of Pittsburgh expects each Contractor and their employees to perform their individual duties in a manner that is not injurious or otherwise dangerous to themselves or others. Each Contractor and by default, Contractor personnel, Subcontractors and their personnel are solely responsible for their own safety and required safety training.
- B. Employer Certification: The employer shall certify that employees have been trained by preparing a certifications record that includes the identity of the person trained; the signature of the employer or the person who conducted the training and the date that training was completed. The certification record shall be maintained in a file and be kept readily available for review by the University's Project Manager.
- C. Contractors are contractually obligated to comply with applicable federal, state, and local health rules and regulations including applicable University site-specific and business unite policies and procedures. Each Contractor and Subcontractor is responsible to assess the hazards associated with their activities and develop site specific safety strategies and procedures to mitigate risks.
- D. Contractor shall have written health and safety program that outlines safe work practices and procedures expected to be followed by workers and shall have it available for review by the University's Project Manager or by representatives of the Environmental Health and Safety Department (EH&S). A copy of this plan shall be forwarded to University's Project Manager and maintained on-site.
- E. Contractor shall have a Competent Person(s) or Qualified Person(s) as defined by OSHA on the project site to support Environmental, Health and Safety Efforts and to monitor hazardous work activities.
  - 1. Competent Person: "One who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate the" OSHA 29 CFR 1926.32(f).
  - 2. Qualified Person: "One who by possession of a recognized degree, certificate or professional standing or who by extensive knowledge, training, and experience, successfully demonstrate the ability to solve problems related to the subject matter, the work, or the project." OSHA 29 CFR 1926.32(m).
- F. Contractor's Site-Specific Safety Plan: Documents of this plan shall detail the scope of the work in concert with the safety processes affiliated with each work activity. The plan shall include, but not limited to:

1. Compliance with Applicable Federal, State and Local safety requirements.
  2. Protection of the students and public.
  3. Personal Protective Equipment (PPE): Minimum PPE requirements for Projects includes hard hats, safety glasses, appropriate shoes, long pants and shirts with minimum one quarter sleeves.
  4. High Hazard Activities - Notify University's Project Manager two weeks prior to High Hazard Activity that may impact public or pedestrians, (i.e. Crane, Scaffolding, Trenching, etc.). Notice shall accompany an Activity Hazard Analysis (AHA) or comparable safety plan.
- G. Chemical Safety Plan: Contractors shall have an up-to-date Safety Data Sheet (SDS) for chemical products used on the project site. SDSs shall be maintained on the project site and be readily accessible to University staff upon request. If the use of any chemical product has the potential for harmful exposure to students, staff, and visitors, the EH&S shall be notified. At Project completion, chemicals shall be removed from project site.
- H. Electric Safety: Affected Contractors and Subcontractors shall be responsible for implementing electrical safety requirements in accordance with OSHA and National Fire Prevention Association requirements. Temporary wiring shall have ground fault circuit interrupter protection for personnel.
- I. Fall Protection: Contractors shall follow OSHA's requirements and recommendations when Contractor's personnel are exposed or have the potential to be exposed to a fall hazard. This requirement applies to floor, roof and wall openings and perimeters.
- J. Incident Investigation: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report to University's Project Manager and Safety Department. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise University Project Manager in advance when these events are known or predictable.

#### **B.18. FIRE PREVENTION PLANNING FOR CONSTRUCTION, RENOVATIONS OR DEMOLITION PROJECTS**

- A. Potentially applicable Codes include International Fire Code Chapter 14 and International Building Code Chapter 33, NFPA 241, NFPA 70, and NFPA 3: Recommended Practice For Commissioning and Integrated Testing Of Fire Protection And Life Safety Systems, 2012 Edition.
1. Contractors working on new construction, renovation or demolition projects at the University of Pittsburgh must familiarize themselves with the above Codes enforced by the City of Pittsburgh and/or Commonwealth of Pennsylvania. Contractor shall submit a Fire Prevention plan prior to starting of Work. The project-specific Plan is to be developed by the contractor/construction manager and must be submitted to the University of Pittsburgh Facilities Management Division. Facilities Management shall submit each Fire Prevention Plan to Environmental Health and Safety (EH&S) for review.

- B. During construction, renovation, or demolition, especially within buildings that will remain occupied during any portion of the project, the Fire Prevention Plan should address the potential fire and life safety hazards created by the project, and the maintenance of conditions and control measures that allow for continued building occupancy. It is not acceptable for any project to have a condition that lacks the required fire notification, fire protection, and safe egress features.
5. A thorough review of the existing fire alarm and fire protection systems along with review of any proposed modifications to these systems shall be performed by the Contractor. This review shall determine how modifications or removal of devices in the work zone may impact adjacent areas or the entire building. Maintaining existing systems (in full or in part), installing temporary systems or devices; or a combination of these approaches shall be included. B. Fire Alarm Systems:
  6. Existing fire alarm system consisting of but not limited to smoke detectors, heat detectors, water-flow switches for the sprinkler system, valve tamper switches, pull stations, and notification devices (horns/strobes/speakers) shall remain operational.
  7. A “minimal level” of detection shall be maintained at all times. This is defined as active pull stations at both primary and secondary egress points and notification devices in work zone. Smoke detectors in and adjacent to work zone shall be temporarily bagged during construction to help reduce false alarms and keep dust from entering devices. Bags shall be cleaned and carefully removed to prevent activation at end of each shift. Accepted bagging techniques involve paper bags temporarily fastened to detector in a manner that covers sensing device. Tape covering sensing device is not an acceptable method for bagging detectors. Specific detection devices (e.g., beam type detectors or duct detectors) may be temporarily disabled upon approval of EH&S. Every effort shall be made to minimize the time that the devices are inactive.
    - a) Project’s Fire Prevention Plan shall address removal of devices on fire alarm system, including anticipated impact to adjacent areas on fire alarm system (or loop). Adjacent areas or zones shall remain properly protected and operation of fire alarm system shall remain unaffected. If programming changes are required to fire alarm panel, these shall be documented in the Plan and coordinated with fire alarm panel manufacturer’s approved technicians.
    - b) If it is determined that there is no practical way to maintain fire alarm system components during any portion of the project, a fire watch shall be established. Fire watch and the impacts to fire alarm system shall be detailed in the Plan.
  8. New system installations shall comply with applicable standards as listed in the IFC, IBC and NFPA.

C. Fire Protection Systems:

1. Existing fire protection systems including but not limited to sprinkler systems, fire hose standpipe systems, and fire pumps (including the controller and back-up emergency generators) shall remain operational.
2. Consideration shall always be given to maintaining portions of sprinkler system within the work zone. When sprinklers are removed from service, temporary smoke detection shall be installed. Temporary smoke detectors shall be programmed into the fire alarm panel and shall remain in service until sprinkler protection is resumed. Temporary smoke detectors in and adjacent to the work zone shall be bagged during construction to help reduce false alarms and keep dust from entering the devices. Bags must be removed at the end of each workday.
3. If it is determined that there is no practical way to maintain fire protection systems during any portion of the project, a fire watch shall be established. Fire watch and the impacts to fire protection systems shall be detailed in the Plan.
4. New system installations shall comply with applicable standards as listed in the IFC, IBC and NFPA.

D. Other Responsibilities

1. [General] Contractor must establish a designee or Program Superintendent to implement and supervise the following:
  - a) Verify that fire alarm and fire protection systems are arranged and operational as discussed in the Plan.
  - b) Verify that installation of new equipment, suspended ceilings, walls, cabinets, shelving, signs/displays or other items do not interfere or obstruct sprinkler heads (existing or new), fire alarm initiating and notification devices, hose cabinets, fire extinguishers, fire alarm control panels, annunciators, and EXIT signs until relocation or new components are provided.
  - c) Coordinate with University's Project Manager scheduled and emergency outages to fire alarm and fire protection systems.
  - d) Manage procedures established in the Plan for control of the following precautions against fire:
    - 1) University's Hot Work Permit System shall be followed. Hot Work Permits shall be obtained from University's Project Manager or EH&S. Hot Work is defined as any temporary operation involving open flames or producing heat and/or sparks, including but not limited to brazing, cutting, grinding, soldering, torch-applied roofing, applied roofing kettles, thermal spraying, welding and similar operations.
    - 2) Fire Watch is the action of an on-site person whose sole duty is to act as Fire Watch to include but not limited to the following:

- i. Fire Watch shall be supplied by the contractor with suitable extinguishers. University-owned fire extinguishers shall not be used by contractor for this purpose.
  - ii. Fire Watch must be trained in use of equipment and in sounding alarm.
  - iii. Fire Watch may also be required in adjoining areas, above and below the Hot Work area.
  - iv. Fire Watch shall watch the area during Hot Work and for 60 minutes after completion. Prior to leaving the area, Fire Watch shall remove bags from smoke or heat detectors, perform final inspection on work area and all adjacent areas to which sparks and/or heat might have spread and if found fire-safe, shall sign the Hot Work Permit and return to the job foreman/ supervisor, who will forward to EH&S as per Hot Work Permit section above.
- 3) Open burning for construction related operations such as torching applied roofing is prohibited unless a Permit is obtained from the City. Do not burn demolished materials. Demolished materials shall be removed from site and properly disposed of in a waste landfill acceptable to authorities having jurisdiction.
- 4) Materials susceptible to spontaneous ignition such as oily rags shall be stored in a listed/approved disposal container.
- 5) Storage, use and handling of flammable and combustible liquids shall be in accordance with IFC Section 1405 and applicable sections of Chapter 34.
- 6) Storage, use and handling of flammable gas shall be in accordance with Chapter 35 of the IFC.
- 7) Combustible debris shall not accumulate within buildings. Combustible debris, rubbish and waste material shall be removed from buildings at the end of each work shift, and shall be properly disposed.
- 8) Temporary wiring for electrical power and lighting installations shall comply with NFPA 70.
- 9) The use, type and arrangement of temporary heating equipment shall be in accordance with Section 1403 of the IFC.
- 10) Do not refuel internal combustion powered construction equipment while in operation. Locate so that exhaust does not discharge against combustible material. Exhaust shall be piped outside of the building, shall be directed away from, and located at 10ft minimum from air intakes and operable windows. Store fuel in an approved area outside the building. A Permit shall be obtained from the City of Pittsburgh.

- 11) For roofing operations, use of heat producing systems or other ignition sources shall be in accordance with IFC Section 1417 and Chapter 26.
  - 12) Contractor shall provide and maintain fire extinguishers which have current service inspection tags. There shall be at least one approved portable fire extinguisher in work site in accordance with IFC Section 906, and at each stairway on floor levels where combustible materials have accumulated and in every storage and construction shed. Additional portable fire extinguishers shall be provided where special hazards exist including, but not limited to, storage and use of flammable or combustible liquids.
2. University's Project Manager will initiate University outage notification procedures, and coordinate activities with contractors and designated Facilities Trades staff responsible for the fire protection and fire alarm systems. Contractor shall notify University's Project Manager at least ten (10) working days in advance, for the shut-down of utilities.
  3. For areas under renovation, University's "Fire Alarm and Fire Protection Outage Procedures" shall be referenced in the Plan and implemented at all times.
  4. The Plan shall address impairment procedures with a focus on reducing accidental fire alarm activation associated with demolition, renovation and new construction.
  5. Contractor shall notify University's EH&S in advance of all planned or emergency impairments/outages, so that these activities are documented with the University's property insurance carrier.

#### E. Fire Department Access

1. Exterior access for Fire Department apparatus and vehicles shall be maintained for the duration of the project. Alterations to Fire Department access shall be incorporated in the Plan.
2. Fire hydrants and building Fire Department connections shall remain accessible. Alterations and restrictions in access to hydrants or Fire Department connections shall be incorporated in the Plan.
3. An unobstructed path from exterior through interior of the building to work zone shall be maintained for fire fighter access. Provisions may be necessary for areas where secured access is required. If applicable, this shall be addressed in the Plan.

#### F. Fire Protection Testing System

1. Fire protection and fire alarm system testing subsequent to modifications and prior to acceptance shall be performed in accordance with applicable NFPA standards. Tests shall be documented using appropriate acceptance forms, as completed by the installing contractor and witnessed by both University and authority having jurisdiction (AHJ) personnel.

2. Contractor shall notify University's EH&S when acceptance testing will be performed by the AHJ (or FM Global). Provide University's EH&S with copies of test forms and test reports.
3. Applicable trades staff shall be involved with outages associated with acceptance testing and shall also be present to witness testing, especially when it involves specialized fire protection systems, components or devices.

G. Means of Egress

1. Whenever practical, at least two means of egress should be maintained from the work zone.
2. For the occupied areas of the building, the minimum number of required egress paths must be maintained and kept free of any obstructions.
3. Directional signs or revisions to existing EXIT signage may be needed to direct occupants around the work zone to the new or existing egress path. Alterations to directional signage and egress paths for building occupants must be addressed in the Plan. Existing Evacuation Maps may need to be altered to reflect these changes in projects of longer duration.

H. New Building Construction or Demolition

1. Following items also require AHJ approval and shall be included in project's Fire Prevention Plan.
  - a) Type and arrangement of required standpipe systems.
  - b) Provision of a temporary or permanent water supply.
  - c) Protection of pedestrians.
  - d) Protection of adjoining property.
  - e) Temporary use or closing of public streets.

**VIII. SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS**

**B.19. TEMPORARY SERVICES DURING CONSTRUCTION**

*Professional Note - The Professional is to discuss with the University's Project Manager temporary service requirements. Verify available services for Regional Campuses as they may vary and be restrictive for these temporary services. New buildings require contractors to meter and pay for these services until final acceptance of the project work.*

- A. Contractor shall, at their own cost and expense, install, operate, protect, and maintain the respective temporary services as hereinafter specified, during the construction period of this project. These temporary services shall include water supply, electric light and power, material hoists, fire protection, sanitary facilities, access roads, and other services as may be stipulated in the Contract Documents.
- B. [General] Contractor shall pay the costs for electric power, and fuel required for the operation of temporary services except where it is stipulated herein that these items

will be furnished free of charge to the Contractors by the University or will be furnished by other Contractors.

- C. Temporary connections to new and existing permanent service lines shall be made at locations as directed by the University and when temporary service lines are no longer required, they shall be removed by Contractor installing same. Permanent service lines, grounds, and buildings disturbed or damaged by installation and removal of temporary service lines shall be restored to their original condition by Contractor responsible for temporary installation, at no cost to the University.
- D. Contractors who fail to carry out their responsibility in supplying temporary services as set forth in their contract shall be held responsible for such failure and University shall have the right to take such actions as it deems proper for the protection and conduct of the work and shall deduct the cost involved from the amount due of the Contractor at fault.

#### **B.20. TEMPORARY WATER SUPPLY - NEW CONSTRUCTION**

- A. The [Plumbing] Contractor shall, at their own cost and expense, install, operate, protect, and maintain an adequate water supply for use by the Contractors on the project during the period of construction either by means of the permanent water supply line or by the installation of a temporary water supply line.
- B. The [Plumbing] Contractor shall be required to bring the temporary water supply to a point approximately ten (10) feet from the building and to provide a meter; the actual location of the point to which the water is brought shall be in close proximity to the point of entrance of the permanent water supply.

#### **B.21. TEMPORARY HEAT - NEW CONSTRUCTION**

- A. Temporary heat requirements are divided into two categories:
  - 1. Temporary heat required prior to enclosure of the structure, structures, or portions thereof; and
  - 2. Temporary heat subsequent to enclosure of the structures.
- B. A structure shall be considered to be enclosed when (a) roof is on tight; (b) exterior walls have been complete; and (c) when openings, doors and windows are closed with permanent closures, or with substantial temporary closures which will affect the retention of heat within the structure as determined by the University and Professional.
- C. Where projects are multi-story which are more than three levels or stories above grade, buildings shall be defined as "enclosed" when requirements of preceding paragraph have been met, except that the stipulation that the roof shall have been completed shall not apply as long as the floor construction of the level above the proposed working area is complete, and as long as all stairs or other openings which penetrate or project through ceiling or floor above proposed working area have been protected. This provision shall apply only after first three floors are fully enclosed.
- D. Prior to enclosure of structure, structures, or portions thereof, each Contractor shall provide, maintain, operate and pay costs, including fuel, to supply temporary heat to install and protect their own portion of the work of the project.

- E. Self-contained oil fired portable heaters, if used, shall be vented to the outside of the structure; these types of heaters shall be used only in areas where finished work has been started.
- F. After structure is enclosed and temporary heat is required as determined by the University, [Mechanical] Contractor, at their own cost and expense, shall provide the equipment and heating personnel for temporary heat. Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that shall not have a harmful effect on completed installations or elements being installed. Also provide temporary ventilation and adjust and control humidity required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that shall not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption. [Mechanical] Contractor may utilize the permanent system or portions thereof or may install temporary steam or hot water radiation or convection or a combination of both. [Mechanical] Contractor may install, operate, protect and maintain a temporary steam heating system through connections to existing University steam lines. [University will provide steam for temporary heating after the structure is enclosed at no cost to the Contractors.] (Coordinate with the University for tie-ins to operating systems.)
- G. [General] Contractor shall pay for fuel, including [steam for the temporary heat and for] electricity in conjunction with the operation of temporary heating facilities after enclosure [when not provided by the University]. Metering shall be provided by the [General] Contractor for temporary heat.
- H. Permanent heating equipment used to supply temporary heat shall be completely cleaned and reconditioned by [Mechanical] Contractor prior to final acceptance in the presence of the University personnel. Pertinent heating equipment such as radiator trap seats and diaphragms, valve seats and discs, strainer internals, or any other equipment found to be damaged due to being used for temporary heat shall be replaced. Replacements will be checked and approved by the University personnel. Repair works shall be in accordance with manufacturer's warranty which shall remain in effect.

## **B.22. TEMPORARY HEAT - EXISTING BUILDINGS**

- A. Use of existing [and new] HVAC system is permitted. Protect systems with HEPA filters at each return air grill; clean HVAC system. Supplement system with heating units to maintain adequate heating and ventilation for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity.
- B. Permanent heating equipment used to supply temporary heat shall be completely cleaned and reconditioned by [Mechanical] Contractor prior to final acceptance in the presence of the University personnel. Replace radiator trap seats and diaphragms, valve seats and discs, strainer internals, and other equipment found to be damaged

due to being used for temporary heat. Replacements will be verified and approved by University personnel.

#### **B.23. CONSTRUCTION LIGHT AND POWER - NEW CONSTRUCTION**

- A. [Electrical] Contractor shall, at their own cost and expense, install, operate, protect and maintain temporary service for construction of light and power.
- B. This service shall be taken from the closest available primary or secondary source. [Electrical] Contractor shall extend temporary wiring throughout building, properly insulated and installed in a safe manner. University will not provide electric power used as a source of heat for temporary heating as hereinbefore specified.
- C. [Electrical] Contractor shall furnish this service within fifteen (15) days after receipt of notice from University. Contractors shall notify University twenty (20) days before date they will require service. [Electrical] Contractor shall confer with University and all other [Prime] Contractors as to the type and location of temporary services before installation.
- D. [Electrical] Contractor shall provide and maintain electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations. If multi-phase power service is required by other Contractors, these services shall always be the responsibility of the Contractor requiring same.
- E. [Electrical] Contractor shall provide and maintain temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
- F. [Electrical] Contractor shall provide and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- G. Complete installation of temporary lighting and power shall be in strict accordance with authority having jurisdiction.
- H. Where a service of a type other than that as herein mentioned is required, [each] Contractor requiring same shall provide such service and necessary equipment at their own expense. [Each] Contractor shall provide their own extension cords with lamps.

#### **B.24. CONSTRUCTION LIGHT AND POWER - EXISTING BUILDINGS**

*Professional Note - Verify the following paragraphs with the University's Project Manager:*

- A. [Electrical] Contractor shall, at their own cost and expense, extend temporary lighting and power from existing service in the buildings to work areas. [Electrical] Contractor shall fully coordinate loads required to perform the work and to maintain existing lighting and power circuits in use [for each Prime Contractor].
  - 1. University[, within its facilities,] will furnish electricity for construction purposes free of charge to the Contractors.

#### **B.25. COMMUNICATION SERVICE**

- A. Communication Services: Contractor shall provide his own communications (telephones and other devices) at his cost to meet his needs. University's telephones and other communication devices shall not be used unless in case of an emergency.

#### **B.26. OFFICE FOR THE CONTRACTOR - NEW CONSTRUCTION**

- A. [General] Contractor shall provide at their own cost and expense, field offices and storage sheds as required by their needs including utility services and maintenance, at a location directed by the University. Office shall have an area to conduct project meetings.
- B. Other Prime Contractors may, at their option and expense, be located in an area approved by the University, erect and maintain office space on the premises for their own use.

#### **B.27. OFFICE FOR THE CONTRACTOR - EXISTING BUILDINGS**

- A. [General] Contractor shall establish an area at the work site as may be feasible for conducting their operations, as agreed upon by the University.

#### **B.28. STORAGE SHEDS**

- A. [Each Prime] Contractor shall, at their own cost and expense, provide upon the premises, at a location directed by the University and maintain and remove when directed, suitable substantial watertight storage sheds. Contractors shall not store materials in existing building or beyond the contract limits.
- B. University shall not be held responsible for stored items at the sites. This shall be the sole responsibility and liability of the Contractors.
- C. Storage of combustibles shall not be permitted within University buildings. Corridors, hallways, stairwells, loading docks and egress ways shall not be used for storage of materials.

#### **B.29. SANITARY FACILITIES**

- A. General Contractor shall provide and maintain in a clean and sanitary condition, temporary sanitary facilities until structures are enclosed and sanitary facilities are fully operational. Thereafter, Contractor's work forces may use the project's sanitary facilities only within areas where construction work is being completed but not those within the areas already occupied by the University. Permanent sanitary facilities shall be maintained in a sanitary condition and shall be thoroughly cleaned immediately prior to occupancy by the University.
- B. Contractors shall not dispose of flammables and solids such as paint thinners, plaster, concrete or other debris in University sanitary facilities. Construction and demolition waste products shall be properly disposed of off the site and University property.

#### **B.30. WASTE DISPOSAL FACILITIES**

- A. [General] Contractor[(s)] shall provide waste-collection containers in a location as agreed upon between University and Contractor for disposal of wastes generated at the construction site [for use by each Contractor]. Waste-collection containers shall be emptied on a schedule as required by project activities and shall be removed immediately when no longer required. On project sites where there is no locations

acceptable for waste-collection containers, Contractor shall remove trash, rubbish and construction debris on a daily basis.

- B. Use of University waste-collection containers for disposal of materials is prohibited.

*Professional Note - If Construction and Demolition (C&D) Waste Management is called for in the Contract Documents, the C&D Waste Management requirements take precedence over the requirements on this paragraph. Modify paragraph to refer to Waste Management section.*

### **B.31. TEMPORARY ELEVATOR USE**

- A. University will designate one (1) elevator for movement of workers and materials as is permissible within load limits of elevator cab and equipment. [General] Contractor shall schedule use of elevator with University and Professional prior to construction operations. [General] Contractor shall provide protection pads and covering for the walls, ceilings and floors of elevator cab and shall provide an elevator operator, if required.
- B. At Substantial Completion, [General] Contractor shall restore elevator to condition existing before initial use, including cleaning of shaft, and replacing worn cables, guide shoes, and similar items of limited life.

### **B.32. SCAFFOLDING**

- A. Contractor shall provide at their own cost and expense materials required for scaffolding, trestles, platforms, flooring, railings, ladders and other equipment as required by authorities having jurisdiction and applicable requirements of OSHA for execution of the Work and protection of employees on the Work. Contractor shall be held responsible for installation, maintenance and removal of scaffolding and equipment required for construction. Refer to University's Safety Requirements.
- B. Contractors shall be required to receive permission from the University for the display of signs, banners and emblems prior to erecting same on Contractor owned equipment.

### **B.33. CRANES**

- A. Cranes: Contractors and their Subcontractors utilizing cranes, rigging, and cribbing during execution of their work shall be solely responsible for the proper setup, inspection, operation, maintenance, and disassembly of said equipment. Contractor and Subcontractor management shall not allow untrained or unauthorized personnel to perform activities involving the assembly, use, and disassemble of cranes, rigging, and cribbing. Crane Lift Plan shall be provided to both University's Project Manager and Safety Department. Refer to University's Safety Requirements.
- B. Crane Inspection Report: Submit a copy of the Annual Crane Inspection Report prior to starting work. The report shall conform to either OSHA or authority having jurisdiction standards and requirements. If a crane is brought on site without proper documentation or inspection, said crane shall be removed at once from the site, with associated charges borne by the Contractor.
- C. Refer to Appendix A: Item# 1. University Crane/ Lift Notification Checklist

#### **B.34. CONSTRUCTION ACCESS**

- A. [General] Contractor shall provide and maintain construction access to site for construction operations.
- B. Contractors shall be responsible for keeping public and private roads clean of mud, dirt, or debris originated by the construction operations. Mud, dirt, or debris deposited on Campus roads and adjacent public roads by construction operations or construction traffic shall be cleaned daily by the [General] Contractor to the satisfaction of the University.

#### **B.35. TEMPORARY ROADS AND PAVING**

- A. [General] Contractor shall provide temporary roads and paving. To the fullest extent possible, locate temporary roads and paving for storage areas and temporary parking, in the same locations as permanent facilities for similar uses.

#### **B.36. HAULING EXCAVATION MATERIALS**

- A. Excess topsoil and material suitable for backfill shall be disposed [off] [on] Campus property, (at the location shown on drawings.) Other materials shall be removed from the site and disposed of properly by the Contractors or subcontractors responsible for the same.

#### **B.37. PARKING FOR CONSTRUCTION WORKERS**

- A. Oakland Campus: University will not provide parking for Contractors. Workers, at their own expense, may park in available public parking areas close to site. Contractors and their workers shall not park along the streets in residential areas adjacent to Campus.
- B. At the Regional Campuses, the University will designate parking areas for Contractors within the Campus. Workers shall refrain from parking outside the designated areas.
- C. No parking of construction related vehicles is permitted on University sidewalks, pedestrian plazas or lawn and green areas.

#### **B.38. HAUL ROUTES**

- A. Haul Routes: Contractors shall consult with University's Project Managers and authority having jurisdiction, to establish public thoroughfares and campus roads to be used for haul routes and site access. Contractors shall provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public and University's traffic. Contractors shall pay bonds and fees required by authority having jurisdiction.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
  - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
  - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
  - 3. Signs, Signals, and Devices: Provide signs, signals, control devices, and personnel as approved and required by authority having jurisdiction.

### **B.39. SITE FENCE**

- A. [General] Contractor shall provide and maintain a temporary site fence on the perimeter of site to meet requirements of the University and local authorities having jurisdiction.

*Professional Note -Verify with University's Project Manager for type of site fence required for project and required Graphics from the following:*

#### B.Portable Chain-Link Fencing: ASTM A392.

1. Posts: Galvanized Steel pipe posts, 2-3/8" OD posts with 2-7/8" OD corner and pull posts, with 1-5/8" OD top and bottom rails. For post supports, provide galvanized steel base plates with four anchor bolts or 36 inch galvanized steel pipe base stands with sand filled ballast bags.
2. Fabric: 2-inch, 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; 6 feet in height.
3. Gates: Provide lockable vehicular and pedestrian access gates with appropriate sized support posts. Provide keys to University Project Manager.
4. Privacy Screen: Resilient HDPE polyethylene fabric, minimum 80 percent blockage with reinforced hemmed edges and steel grommets; 6 feet in height. Color: Blue as selected by University Project Manager and Professional.
  - a) Graphics: Provide University of Pittsburgh script PITT at 20 foot intervals.
  - b) University will provide camera ready artwork for graphic.

#### C. Wood Fencing:

1. Wood Framing: Preservative treated lumber appropriate for ground contact; space post not more than 8 feet apart. Frame shall be four 2-by-4-inch horizontal rails.
2. Plywood: Structural Grade 1 exposure 1, 3/4 inch thick, 8 feet high.
3. Paint: Paint plywood on public side with two coats of exterior grade paint. Color as selected by University and Professional.
4. Gates: Provide lockable vehicular and pedestrian access gates. Provide keys to University Project Manager.

### **B.40. TEMPORARY PARTITIONS**

*Professional Note -Verify with University's Project Manager for type of temporary partitions required for project and required Graphics.*

- A. [General] Contractor shall protect work, including existing property affected by work activities, against weather, and maintain work, materials, apparatus and fixtures free from injury and damage during entire construction period. Work likely to be damaged shall be covered and protected at end of each day's work. Remove and replace damaged work with new at no additional cost to University.

B. Temporary Exterior Enclosures:

1. [General] Contractor shall provide weather enclosures protecting University occupied areas with an average overall thermal resistance value of R11.
2. Doors: Provide plywood or metal doors with locks; provide hardware complying with governing codes and regulations.
3. Windows: Provide windows covered with transparent plastic or tempered glass at openings; maintain in satisfactory condition until installation of permanent materials and equipment.
4. Walls: ½ inch plywood on wood or metal studs with insulation and one layer of ½ inch gypsum board on interior side. Seal joints to provide a weathertight partition. Paint with one primer coat and one finish paint coat.

C. Temporary Interior Partitions: [General] Contractor shall isolate Work areas from University occupied areas to prevent dust, fumes, noise and odors from entering occupied areas. Maintain negative air pressure within work area using HEPA-equipped air-filtration units.

1. [General] Contractor shall provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by University from fumes and noise.
2. Long Term Partitions: Construct with wood or metal studs with water-resistant gypsum wallboard on public sides. Provide a Level 3 finish with one prime coat and one finish paint coat on public side.
3. Short Term Partitions - Less than 24 Hours Use: Construct with wood or metal studs with polyethylene sheeting free of dirt, holes and tears.
4. Provide fire-rated partitions and doors where required by governing codes and regulations.
5. Elevators shafts shall be protected with polyethylene sheeting taped to elevator door frames to reduce dust from entering shaft. Damage to walls and frames shall be repaired to like new conditions.
6. Where indicated on drawings or as may be required, provide negative air vestibules using partitions described above along with doors and frames with locks.

D. Wall Graphics: Provide on public side of partitions, University of Pittsburgh script PITT painted at 20 foot intervals. University will provide camera ready artwork for graphic.

**B.41. BARRIERS**

- A. Provide protective barriers at open trenches and excavations.

**B.42. JOB SITE SECURITY**

- A. Job site security will not be provided by the University.

- B. University assumes no responsibility for damage or loss to Contractor's property. [Each Prime] Contractor shall be responsible for security and protection of their own materials, equipment, tools and toolboxes both on and off-site.
- C. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

#### **B.43. ENVIRONMENTAL QUALITY CONTROL**

- A. [Prime] Contractor[s] and [their] sub-contractors shall perform their work in a manner which shall minimize the possibility of air, water, land, and noise pollution, and in accordance with authority having jurisdiction. [Each Prime] Contractor shall comply with statutes and regulations of the Commonwealth of Pennsylvania concerning environmental quality control administered by the Department of Environmental Protection. [Each Prime] Contractor shall be solely responsible for any violations and shall be responsible for securing required permits.

#### **B.44. SOIL EROSION AND SEDIMENTATION CONTROL DURING CONSTRUCTION PERIOD**

- A. Temporary Erosion and Sedimentation Control: [General] Contractor shall provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to [erosion- and sedimentation-control Drawings] [requirements of DEP or other authorities having jurisdiction, whichever is more stringent].
- B. No water which transports sediment resulting from earth moving, demolition or other construction activities shall be permitted to discharge into the waters of the Commonwealth or beyond the contract limits of the project.
- C. Natural surface water shall be diverted away from the work area.
- D. Surface runoff from a project area and discharge resulting from the de-watering of excavations shall be collected and diverted to facilities for removal of sediment.
- E. Surfaces of cut and embankment slopes, ditches, shales, earth stockpiles, and areas denuded of topsoil shall be stabilized to minimize surface erosion as soon as possible after exposure. Whether temporary or permanent, such surfaces shall be stabilized immediately to control erosion.
- F. Temporary erosion control facilities shall be inspected, repaired, and maintained on a regular basis for the duration of construction and shall be removed only after the permanent drainage and erosion control features of the project have been completed and established in operation.
- G. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project immediately upon direction by the University.

#### **B.45. CHEMICAL WATER TREATMENT SERVICES**

- A. University has entered into a contract for provision of chemical water treatment services for mechanical systems. Should any such system be installed, drained or altered during the course of the Work, Contractor shall provide appropriate water treatment measures upon system start-up and shall use University's vendor to obtain required water treatment services.

#### **B.46. MOLD AND MOISTURE**

- A. Contractor's Moisture Protection Plan: Contractor shall submit a plan describing procedures and controls for protecting materials and construction from water absorption and damage. Document visible signs of mold that may appear during construction. Remove materials that cannot be completely restored to their manufactured moisture level.

#### **B.47. DEWATERING**

- A. [General] Contractor shall assume responsibility for continuous removal of water, including surface and rain water, by the use of pumps, drains and other approved methods necessary to keep the excavation and site free from water at all times until completion of the work.
- B. Water shall be directed away from existing structures in a manner that will cause no erosion, and that will keep foreign material from backing up existing drains or entering into the sewers.

#### **B.48. PROJECT SIGN**

- A. If identified and requested by the University, the [General] Contractor shall provide at a prominent location as selected by the University, a six-feet by eight-feet (6' x 8') sign, well braced, and supported by 4" x 4" posts identifying the project under construction. Sign board shall be constructed from weatherproof plywood, hardboard, or other smooth faced material that will weather and remain intact throughout the job. Sign shall be placed with eight-foot (8') dimension horizontal. Base colors shall be white with black lettering for University portion of the sign with University logo consisting of a gold shield, trimmed in white within a blue circle. Professionals' and contractors' names shall be red on white background. A 2" blue border shall be provided at the perimeter of the sign. Information to be provided on the project sign shall be with University's approval. At completion of the project, [General] Contractor shall remove sign from site.

### **IX. SECTION 017300 - EXECUTION**

#### **B.49. NOTIFICATION TO PUBLIC UTILITIES PRIOR TO EXCAVATION OR DEMOLITION WORK**

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, Contractor shall investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
- B. Comply with applicable requirements of "The Regulations for Excavations and Construction," Department of Labor and Industry, Commonwealth of Pennsylvania.

1. Prior to beginning excavation as defined in Act 287 of Commonwealth of Pennsylvania, Contractor shall request information with respect to location of underground installations from all companies and authorities which may have installations in area. Report immediately to user of underground installation, to the University and to Professional, breaks and damage to utilities including damage to coatings, or cathodic protection.

#### **B.50. FIELD ENGINEERING**

- A. Contractor shall employ a competent, experienced registered engineer to determine lines and grades and certify same from time to time during the progress of the work.
2. Engineer shall establish benchmarks referenced to the finished grade lines and critical elevations.
3. Each subcontractor shall provide a competent engineering service to lay out their work in accordance with lines and grades established by the Contractor.

#### **B.51. PROGRESS CLEANING**

- A. [General] Contractor shall be responsible for the overall cleanliness of the project site. Clean Project site and Work areas daily, including common areas. Enforce requirements strictly. [Each Prime Contractor shall remove their construction debris, trash and rubbish from the point of origin daily to the [General] Contractor's waste collection containers.] Construction debris, trash and rubbish shall not be allowed to accumulate. University shall have the right to direct [General] Contractor to establish a clean-up routine. [General] Contractor shall be expected to participate fully in this routine.

### **X. SECTION 017700 - CLOSEOUT PROCEDURES**

#### **B.52. PROJECT RECORD DOCUMENTS**

- A. During the course of the work, [Prime] Contractors shall record deviations from the drawings and specifications on a set of the contract documents, including one (1) complete set of drawings and one set of specifications for each [Prime] Contract. These Contractor's "As Built" documents shall reflect changes and deviations made in the specifications and on the contract drawings during the construction process, and indicate exact dimensions, geometry, and location of elements of the work completed under each contract. In addition, include copies of Addenda and supplementary drawings and sketches issued by the Professional. At Substantial Completion of the Work, this information shall be turned over to the Professional. Professional shall revise the original contract documents and provide the Project Record Documents to the University. This requirement applies to work by all trades involved in the project.
- B. University's Project Manager shall work with [each] Contractor to ensure prompt delivery of the As-Built documents to the Professional so that the Professional can introduce these changes into the Contract Documents on a timely manner. University's Project Manager shall not approve final payment to the Contractor or the Professional until the project record documents have been submitted to the University.

- C. Operation and Maintenance Manuals: Contractor shall submit Operation and Maintenance Manuals including warranties to Professional and University's Project Manager at time of Contractor's request for Substantial Completion.

#### **B.53. SUBSTANTIAL COMPLETION PROCEDURES**

- A. It is of utmost importance that the Contractor finishes the Work in an expeditious manner in compliance with the contract documents and within the established schedule.
- B. Procedures:
  - 1. Contractor shall prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete 10 working days prior to date of Substantial Completion along with a written request for Substantial Completion inspection.
  - 2. After receipt of Contractor's punch list, and if the Professional and University's Project Manager agree the work is Substantially Complete as defined by the General Conditions of the Contract, the Professional and University's Project Manager will produce a list of items to be completed and corrected, known as the Project Punch List and issue a Certificate of Substantial Completion.
  - 3. Professional will forward the Project Punch List to the University's Project Manager and Contractor, via project management software, E-mail or other agreed upon method.
  - 4. Contractor shall fill in the scheduled completion dates for each item, sign and forward to University's Project Manager via project management software, E-mail or other agreed upon method. If there are items of work that cannot be completed within 30 calendar days, Contractor is to indicate reasons in a space below each punch list item.
  - 5. As the work is completed, Contractor shall fill in actual completion dates which will be verified by University's Project Manager.
  - 6. When the punch list is complete and verified by University's Project Manager, a final copy will be distributed by University's Project Manager to all parties for their records.
  - 7. Final Completion: Final Completion shall occur within 60 days of Substantial Completion for the project including Project Punch List related work and associated paperwork.
- C. Inspection of Hard-to-Reach Areas:
  - 1. When conducting Substantial Completion inspection, University's Project Manager and Professional will give equal attention to areas of the project that may be hard to reach or concealed from plain view such as roofs and flashing, parapets, exterior masonry, etc. In order to ensure that all areas of the project receive thorough inspection, University's Project Manager will arrange with the

Contractor and Professional for inspection of these areas before scaffolding, ladders and other means of access, are removed.

2. Above Ceiling Inspections: Prior to installation of finished ceilings, schedule and coordinate above ceiling inspections with University's Project Manager and authority having jurisdiction. Inspection shall include but not limited to floor penetrations, wall and ceiling penetrations, head of wall conditions, cable trays, clearances required for operating devices, and support steel fireproofing and verification of appropriate supporting of above ceiling items.

#### **B.54. ENERGY EFFICIENCY REBATES**

- A. Contractor shall provide University with invoice documents for equipment purchased and installed in the project that could be eligible for Energy Efficiency Rebates. This includes, but is not limited to the following: DLC and EnergyStar certified lighting fixtures/lamps and VFDs. Invoices shall list model/part numbers and individual costs or lump sums.

#### **B.55. RESTORATION**

- A. Work such as paving, walls, floors, lawns, walkways, construction items, and/or similar related items and other work which is to remain, but which has been damaged by the operations of the [Prime] Contractor[s] on the project, shall be restored to its original condition with equal materials at each Contractor's expense to the approval of the University. Before commencing the construction work, the [General] Contractor shall photograph areas adjacent to the job site and shall provide one copy of the photographs to University.

#### **B.56. ONE-YEAR INSPECTION**

- A. Approximately ten to eleven months after Substantial Completion of the project, the University's Project Manager shall schedule a One Year Inspection with the Contractor, the Professional, the building Facility Manager, the User representative and other individuals as applicable (i.e., the FM Engineer or the FM Architect, Facility Manager, the Building Engineer for the building, etc.).
- B. Review the project to ascertain whether the project materials and systems are performing as intended and identify defects that need to be corrected by the Contractor.
- C. If needed, as the result of this meeting the Professional will develop a One Year Inspection Punch List and University's Project Manager will work with the Contractor to establish a schedule for resolution of each of the issues and to ensure that the items on the list are repaired as soon as possible. University's Project Manager will also inform the Facility Manager the date in which the project area is no longer under guarantee and Facility Manager Personnel must take over responsibility for total operation and maintenance.

### **END OF DIVISION B - SPECIAL REQUIREMENTS**

## **XI. APPENDIX A**

Index:

1. University Crane/ Lift Notification Checklist