

# **Contractor Health & Safety Guidelines**

**Prepared cooperatively by Yale University's Offices of  
Facilities, Risk Management, and Environmental Health & Safety**

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## Yale University Contractor Health & Safety Guidelines

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### General Information

The Contractor and Subcontractors are responsible for complying fully with all Applicable Laws, as they relate to the safety of persons, environment, public, or property. This document is not an attempt to reiterate OSHA Standards nor should it be considered an all-inclusive guideline to such Standards. The Contractor and Subcontractors shall maintain a current copy of the OSHA Standards.

The Contractor Health & Safety Guidelines have specific health and safety requirements that in many instances exceed current federal, state, or local safety and environmental standards. In the event of a conflict, the Contractor and Subcontractor shall implement and comply with the more stringent health and safety procedures. In the event of a dispute over the applicability of a particular health or safety procedure, the Yale Office of Facilities Planning and Construction will identify the health or safety procedures to be followed.

The Contractor is required to develop a Site Specific Safety Plan, which identifies specific safety requirements, potential exposures associated with the Project, and the means and methods to be employed to address these exposures. The Contractor shall submit its Site Specific Safety Plan to the Owner for review and comment prior to the start of any construction activities. The Contractor's Site Specific Safety Plan must meet or exceed the requirements outlined in these Contractor Health & Safety Guidelines and comply with all Applicable Laws.

Owner shall have the right, but not the obligation, to review and comment on Contractor's Site Specific Safety Plan and any amendments to it. The Contractor shall carefully consider all Yale comments on its Site Specific Safety Plan, but the Contractor bears final responsibility for scope, detail, and administration of all such program. Review of the Contractor's Site Specific Safety Plan shall not impose any liability on the Owner and Owner's Representatives.

The Contractor is responsible for overseeing the safety of all Subcontractor employees on the Project. However, this does not relieve each Subcontractor of its safety responsibilities. All Subcontractors will be required to develop their own Site Specific Safety Plan. Subcontractors must submit their Site Specific Safety Plan to the Contractor. The Contractor is responsible for reviewing their Subcontractors' Site Specific Safety Plan.

Throughout the duration of this Project, the Contractor and Subcontractors shall each be responsible for administering their own Site Specific Safety Plan. The cost of compliance with their Site Specific Safety Plan, Applicable Laws and all applicable OSHA standards shall be borne solely by the Contractor and Subcontractors. Contractor and Subcontractors are expected to know and understand all OSHA Standards and other Applicable Laws that apply to the Work. Neither this document nor the safety services provided by the Owner or the Owner's designee



are intended to mitigate the obligation of Contractor and Subcontractors to provide a safe and healthy work environment for their employees and to secure the safety of the Project Site to ensure the safety of the Yale Community. No accommodations will be made to the Contractor and Subcontractors due to ignorance regarding safety requirements.

This document shall become part of the Contract Documents. The requirements contained herein are binding and failure to comply will be deemed non-compliance with or default of the Contract. Owner may withhold payments to Contractor withheld until Owner determines that Contractor or Subcontractor is no longer in default. Failure to comply may result in removal from the Project.

References in these guidelines to "Yale", "Yale University", or the "campus" all include the Central, West, and Science Hill campuses, School of Medicine, nearby athletic fields, and other properties owned or controlled by Yale. Additional background information, campus maps, and individual overviews for many buildings are available from the Facilities website at [www.facilities.yale.edu](http://www.facilities.yale.edu).

The Owner reserves the right to make any changes and modifications to this document via bulletin form or any other written communication.

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## **SECTION 1 INTRODUCTION - POLICY STATEMENT**

Safety is an essential component of construction work at Yale University (“Yale” or “Owner”). Each entity working on Yale Project Sites shall strive to conduct their operations in a responsible manner that ensures the safety and well-being of all Project employees, students, Yale employees, and the public.

Yale believes that effective safety plans enhance Projects by assisting all Contractors and Subcontractors working on Yale Projects in systematically identifying and evaluating anticipated hazards and establishing controls in advance of actual work. No phase of operations or administration is of greater importance than injury and illness prevention. All persons employed on Yale Projects are expected to conduct their Work in a safe manner. Performing Work in a manner that presents risk of injury is unacceptable.

Each Contractor and Subcontractor has a contractual obligation to perform their part of the Work using safe methods. Yale’s immediate goal is to have all Contractors and Subcontractors establish excellent safety records for each of the Projects they perform at Yale.

As the Project moves forward, new hazards may be identified, and therefore the required health and safety requirements may be changed at the discretion of the Owner. Commitment, attitude, and behavior will be the most important factors in preventing injuries and illnesses, and preserving health. Together we can achieve these goals.

## SECTION 2 DEFINITIONS OF TERMS USED IN THIS GUIDE

**NOTE:** Terms defined in the Contract Documents shall be afforded the same meaning in these Health & Safety Guidelines.

**APPLICABLE HEALTH AND SAFETY LAW(S):** All applicable laws, regulations, ordinances, codes, rules, decisions, and orders of government authorities that relate to the health or safety of persons, environment, the public, or property.

**APPLICABLE LAW(S):** All applicable laws, regulations, ordinances, codes, rules, decisions, and orders of government authorities. All applicable ANSI, ASME, NEC, and NFPA standards are incorporated by reference.

**COMPETENT PERSON:** A person who is capable of identifying existing and predictable hazards in the surrounding area or working conditions that are unsanitary, hazardous or dangerous to employees and who has the authorization to take prompt, corrective measures to eliminate them.

**CONTRACT:** All Contract Documents including without limitation these Contractor Health & Safety Guidelines. It represents the entire and integrated agreement between the parties thereto and supersedes all prior negotiations, representations, or agreements, either written or oral.

**CONTRACTOR:** Any entity in direct contract with Yale for construction related activities including labor, materials, equipment, and other construction services.

**CONTRACTOR'S SITE-SPECIFIC SAFETY PLAN:** The plan created by the Contractor pursuant to the requirements of its Contract with Yale outlining how the Contractor intends to address overall safety on the Project, meet the Contractor's responsibilities to provide a safe work environment, and eliminate accidents, injuries, and property damage.

**DART RATE:** Incidence rate for injuries/illnesses involving days away from work, restricted (i.e. modified) duty, or transfer of job assignment.

**DECONSTRUCTION:** Selective demolition with the purpose of preserving building components or materials for reuse or recycling.

**EMPLOYEE:** Contractor/Subcontractor employee.

**EMPLOYER:** Contractor and Subcontractors.

**HAZARDOUS MATERIALS:** Any pollutant, hazardous or toxic substance, waste or material, including oil products, mold, asbestos, asbestos-containing materials, lead, lead-containing materials, urea formaldehyde foam insulation, polychlorinated biphenyls, flammable

explosives, radioactive materials or other material or substance designated or regulated as hazardous or as a toxic substance or waste, pollutant or contaminant under Applicable Health and Safety Law.

**JOB HAZARD ANALYSIS (JHA)**: A safety analysis prepared to formally evaluate anticipated Project and activity hazards and their control.

**JOB SAFETY BOARD**: Board maintained by the Contractor in its office or centralized location on the Project Site, accessible to all entering the Project Site that sets forth safety information for the Project.

**MEDICAL REVIEW OFFICER (MRO)**: A person who is a licensed physician and who is responsible for receiving and reviewing laboratory results generated by an employer's drug testing program and evaluating medical explanations for certain drug test results. The MRO will be employed by the Third-Party Administrator.

**OSHA**: The federal Occupational Safety and Health Administration. OSHA enforces the Occupational Health and Safety Act of 1970.

**OSHA STANDARDS**: Title 29 of the Code of Federal Regulations, Parts 1910 or 1926, as applicable.

**OSHAct**: Means the Occupational Safety and Health Act of 1970.

**PRE-TASK PLAN**: A written plan developed by Contractor or a Subcontractor performing an operation. This plan describes the steps or tasks involved with the operation, the hazards associated with each step, and the controls the workforce will utilize to eliminate or minimize the listed hazards.

**PROGRAM SAFETY MONITOR**: Individual appointed by the Owner to oversee the coordination of safety efforts. On OCIP projects, the Program Safety Monitor will be a representative of the Insurance Broker. On non-OCIP projects, the Yale Project Manager or other designee will serve as the Program Safety Monitor.

**PROJECT SAFETY MANAGER**: Individual assigned by the Contractor who inspects and surveys Contractor and all tiers of Subcontractors for safety at the Project Site. The Project Safety Manager must be an employee of the Contractor.

**QUALIFIED PERSON**: One who, by possession of a recognized degree, certificate, or professional standing, and who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems related to the subject matter, the Work, or the Project.



**SAFETY REPRESENTATIVE:** The individual assigned safety responsibility at the Project Site by a Subcontractor. The Safety Representative must be an owner or employee of the Subcontractor.

**SUBCONTRACTOR'S SITE-SPECIFIC SAFETY PLAN:** The plan created by a Subcontractor pursuant to the requirements of its Contract with Contractor outlining how the Subcontractor intends to address overall safety on the Project to meet the Subcontractor's responsibilities to provide a safe work environment, and eliminate accidents, injuries, and property damage.

**THIRD PARTY ADMINISTRATOR (TPA):** A service agent contracted with the Owner that provides or coordinates the provision of a variety of drug and alcohol testing services. TPAs typically perform administrative tasks concerning the operation of drug and alcohol testing programs. TPAs are not "employers" for purposes of these Contractor Health and Safety Guidelines.

**TRIR RATE:** Total OSHA-recordable injury/illness incidence rate.

**VISITOR:** For the purposes of this document, a "Visitor" shall be considered any person who is not an employee of the Owner, Owner's Designated Representatives, Contractor, Subcontractor(s) working on that specific Project, nor an employee of the Program Safety Monitor's or Insurer. The term "Visitor" shall include salespersons, vendors, and other persons not directly employed on the Project unless otherwise designated and defined in this document.

**YALE COMMUNITY:** Includes, but is not limited to, Yale employees, students, faculty, neighbors, guests and Visitors.

**YALE PROJECT MANAGER:** The individual identified as such by Yale on a Project-by-Project basis.

**YALE ENVIRONMENTAL HEALTH & SAFETY or YALE EH&S:** Yale University's Office of Environmental Health & Safety.



## **SECTION 3 ORGANIZATION, ADMINISTRATION, AND RESPONSIBILITIES**

### **YALE UNIVERSITY CONSTRUCTION SAFETY GOALS**

For each Project, the goal for the DART Rate is twenty-five percent (25%) lower than the most recent DART Rate (as of Project inception date), as published by the Bureau of Labor and Statistics (BLS), for the North American Industry Classification System (NAICS) Code 23 – Construction. For each Project, the TRIR goal is twenty-five percent (25%) lower than the most recent TRIR Rate (as of Project inception date), as published by the BLS, for the NAICS Code 23 – Construction. At the start of each Project, the Yale Project Manager shall communicate these goals to, Contractors and Subcontractors, who are responsible for conveying this goal to their respective Employees. At least twice annually, Contractor shall post the current DART and TRIR Rates for the Project. Contractor shall review the current DART and TRIR Rates as part of the Monthly Safety Meeting.

For any Projects not meeting the DART and TRIR goals, the Contractor shall develop and implement a ‘recovery plan’ with the purpose of meeting or exceeding the goal(s). This plan shall include a description of methods, policy amendments, procedures, responsibilities, and an implementation schedule for the actions required to obtain the established goal(s). The Contractor shall implement the recovery plan and monitor the progress made towards achieving the established goal(s). The Project Team shall review this recovery plan monthly and update the plan until the goals have been achieved.

### **OWNER**

In the Contract, the Owner will designate a Program Safety Monitor. In addition to other responsibilities set forth in these Contractor Health and Safety Guidelines, the Program Safety Monitor is the final arbiter with respect to the terms of the Contractor Health and Safety Guidelines in the event that a dispute arises as to its scope, applicability, and interpretation. The Program Safety Monitor and his staff will be observing Projects on a regular basis to protect the Owner’s interest. The Program Safety Monitor and his designees have the authority to stop Work if there is an imminent danger condition and to request documentation required by these Contractor Health and Safety Guidelines or Applicable Law. The Contractor and Subcontractors shall to cooperate fully with the Program Safety Monitor and his designees.

### **CONTRACTOR**

The Contractor has responsibility for overall Project Site safety.

When required by Contract, the Contractor shall employ a full-time Project Safety Manager. The full-time Project Safety Manager’s sole responsibility shall be safety and he must be on the Project Site on a full-time, daily basis. The Project Safety Manager must have completed or be enrolled in a 30-Hour OSHA Construction Outreach Program and possess a current CPR and First Aid certification. The Project Safety Manager must have a minimum of seven years of construction safety experience.

If the Contract does not require a full-time Project Safety Manager, the Contractor's superintendent shall perform the job duties of a Project Safety Manager. The superintendent must have completed or be enrolled in a 30-Hour OSHA Construction Outreach Program and possess a current CPR and First Aid certification.

The Project Safety Manager must be on the Project Site at the time of mobilization and shall remain on the Project Site until the final punch list is completed. If the Project Safety Manager is unavailable due to vacation, illness, or is otherwise absent, the Contractor must designate an alternate Project Safety Manager, meeting the criteria mentioned above to fulfill this requirement.

The Project Safety Manager is responsible for the implementation and enforcement of the Contractor's Site Specific Safety Plan, and Applicable Health and Safety Laws, including OSHA Standards, and oversight and enforcement of the Subcontractor's Site Specific Safety Plan.

The Contractor's Project Safety Manager shall:

1. Conduct the Project Safety Orientation for all Contractor's and Subcontractor's Employees.
2. Perform daily inspections of the entire Project Site for safety and health exposures, and document these daily inspections and any corrective actions in a log book, which must be kept in the Project trailer.
3. Stop the Work if an imminent danger occurs.
4. Conduct a formal weekly inspection of the entire Project Site for safety and health exposures, and document the weekly inspection and any corrective actions in a written report, which must be kept in the Project trailer.
5. Promptly address exposures with the responsible parties at the time of observation.
6. Notify Subcontractors in writing when abatement measures to address exposures are inadequate or additional abatement measures need to be taken. Copies of such written notifications must be kept in the Project trailer with the inspection log book and weekly inspection reports.
7. Report safety and health exposures identified during inspections to the Contractor's project manager and superintendent, affected Subcontractors and the Program Safety Monitor, together with written verification and documentation that the exposures have been eliminated or controlled.
8. Follow up with personnel who do not respond to the Subcontractor's Safety Representative's request for abatement of safety hazards or submission of appropriate safety documentation.

9. Investigate and respond to reports by the Program Safety Monitor of non-compliance with the Site Specific Safety Plan, or Applicable Health and Safety Laws.
10. Conduct meetings of all Subcontractor Safety Representatives and a representative of the Contractor (superintendent or project manager) at least twice per month.
11. Coordinate safety efforts with Subcontractors.
12. Review Subcontractor's Safety Representative's weekly safety inspection reports.
13. Receive, review, and distribute Accident/Incident Investigation Reports.
14. Conduct a review and analysis of any incidents, accidents, injuries, or near misses on the Project Site.
15. Establish and implement additional specific safety procedures as may be necessary to ensure the safety of persons and property, including any necessary changes to the Contractor's Site Specific Safety Plan; assist Subcontractors with making any changes to the Subcontractor's Site Specific Safety Plan.
16. Ensure that all Contractor's Employees have received appropriate training, and assist with training and retraining as necessary.
17. Accompany any OSHA Compliance Officer on the Project Site during an inspection.
18. Ensure Subcontractors' Safety Representatives conduct daily Safety Huddle Talks and weekly Tool Box Talks using a JHA format specified by the Contractor, and periodically attend, participate in, and monitor the quality of these daily Safety Huddle Talks and weekly Tool Box Talks.
19. Conduct daily Safety Huddle Talks and weekly Tool Box Talks with Contractor's Employees using a JHA format.
20. Maintain the Tool Box Talk documentation for the Contractor and each Subcontractor in the Project trailer.
21. Ensure that the resources needed to maintain an effective Site Specific Safety Plan are available.
22. Assist the Owner with the drug testing program.
23. Assist or provide information (e.g. accident/incident investigation reports, weekly inspection reports, weekly tool box talks, pre-task plans, etc.) to the Program Safety Monitor or his designee as requested as it relates to the Project.

The Owner, at its sole discretion, reserves the right to require the Contractor to designate additional resources to assist the Project Safety Manager.

### **SUBCONTRACTOR**

Each Subcontractor working on Projects will designate a Safety Representative. This individual shall be a foreperson or superintendent unless the Contract requires a full-time Safety Representative. The Subcontractor's Safety Representative must have completed or be enrolled in at least a 30-Hour OSHA Construction Outreach Program and possess a current CPR and First Aid Certification. The Safety Representative will be responsible for the implementation and enforcement of the Subcontractor's Site Specific Safety Plan and applicable OSHA Standards, as they apply to the Subcontractor's Employees. The Subcontractor's Safety Representative shall also have the authority to stop Work if an imminent danger situation occurs. Unless otherwise stated in the Contract Documents, the Safety Representative may have other responsibilities (i.e. supervision of workforce, production, etc.).

The Safety Representative shall also:

1. Conduct daily Safety Huddle Talks and weekly Tool Box Talks using a JHA format specified by the Contractor.
2. Attend safety meetings of all Subcontractor Safety Representatives and a representative of the Contractor (superintendent or project manager), held at least twice per month.
3. Be familiar with current OSHA Standards and regulations for construction.
4. Instruct Subcontractor Employees in safe work practices and work methods.
5. Ensure all Subcontractor Employees comply with the Site Specific Safety Plan and applicable OSHA Standards.
6. Conduct a daily informal inspection of his work area(s) and a formal (documented) weekly inspection of his work area(s). The daily inspection shall be documented in a logbook, and the weekly inspections shall be documented with a written report, a copy of which the Safety Representative shall provide to the Project Safety Manager.
7. Respond in writing to safety recommendations submitted to his Employer organization by the Project Safety Manager within 24 hours after receipt.
8. Correct or report immediately to the Project Safety Manager any observed unsafe conditions, practices, or violations.

The Owner, the Owner's Designated Representatives, will make periodic surveys to monitor the implementation of the Contractor's and Subcontractor's Site Specific Safety Plans and physical conditions on the Project Site. It is the Project Safety Manager and Safety Representative's duty to aid these personnel in their surveys.

The Contractor and Subcontractors may also have a safety consultant or corporate safety representative visit the Project Site. The Owner will permit such visits under the following guidelines:

1. Upon arrival, the Project Safety Manager or Safety Representative shall inform the Program Safety Monitor and Yale Project Manager of the presence of the corporate safety representative or safety consultant.
2. The Project Safety Manager or a Safety Representative must accompany the corporate safety representative or safety consultant at all times.
3. The Project Safety Manager or a Safety Representative must notify the Program Safety Monitor and Yale Project Manager when the corporate safety representative or safety consultant's tour is completed.
4. Project Safety Manager or a Safety Representative will instruct the corporate safety representative or safety consultant and anyone else that accompanies them on a Project Site tour to document in writing and review with the Project Safety Manager any unsafe conditions that pertain to other Subcontractors on the Project prior to departure from the Project.
5. The Project Safety Manager must respond to any notice of any unsafe conditions in writing in a timely manner, and provide a copy to the Program Safety Monitor and Yale Project Manager.
6. Under no circumstances shall written documentation be forwarded to the Owner or Contractor after departure from the Project if the conditions noted were not observed, reviewed, and initially documented as prescribed above.

If the Project Safety Manager determines that a Subcontractor's actions or inactions, or one of its Employee's action or inactions, are not in compliance with the OSHAct, the OSHA Standards, these Contractor Health and Safety Guidelines or any other applicable health and safety requirements, the Project Safety Manager must take immediate action to correct the non-compliant occurrence. Non-compliance with the OSHAct, the OSHA Standards, or these Contractor Health and Safety Guidelines are grounds for Subcontractor dismissal and/or Employees' ejection from the Project Site. All costs of coming into compliance shall be borne by the Subcontractor(s) deemed responsible. The Contractor may divide these costs accordingly. The Contractor's decision of responsibility shall be final.

Similarly, if the Program Safety Monitor or his designee, determines that a Contractor's or Subcontractor's actions or inactions, or one of its Employee's action or inactions, are not in compliance with the OSHAct, the OSHA Standards, these Contractor Health and Safety Guidelines or any other applicable health and safety requirements, the Program Safety Monitor shall have the authority to order immediate cessation and correction of the non-compliant

occurrence. Non-compliance with the OSHAct, the OSHA Standards, or these Contractor Health and Safety Guidelines are grounds for Contractor and Subcontractor dismissal and/or Employees' ejection from the Project Site. All costs of compliance shall be borne by the Contractor and Subcontractors deemed responsible. The Owner may divide these costs accordingly. The Owner's decision of responsibility shall be final.

### **CONTRACTOR AND SUBCONTRACTOR EMPLOYEES**

All Contractor and Subcontractor Employees are responsible for performing their work in a safe manner. Minimal safety responsibilities include:

1. Attending a Project Safety Orientation prior to commencing Work on the Project Site.
2. Attending all daily Safety Huddle Talks and weekly Tool Box Talks.
3. Abiding by requirements of this program and OSHA Standards in the performance of their Work.
4. Following the safety rules and regulations of both their Employer and the Project.
5. Working safely to avoid personal injury, injury to others or damage to property.
6. Properly using personal protective equipment, tools, and other equipment required and furnished to perform assigned Work tasks.
7. Promptly reporting all unsafe working conditions, tools, or equipment to supervisory personnel.
8. Immediately reporting all accidents or incidents to supervisory personnel.
9. Accepting proper first aid treatment and follow-up medical attention for all injuries, no matter how minor.
10. Abiding by the Project Substance Abuse Policy.

### **SITE SPECIFIC SAFETY PLANS**

#### **Contractor**

Prior to commencing construction operations at the Project Site, the Contractor's safety personnel and field supervisory personnel will attend a pre-construction safety meeting as part of its obligations pursuant to the Contract Documents. The Contractor's Site Specific Safety Plan and the Health and Safety Guidelines will be reviewed during this meeting.

Contractor shall submit the Contractor's Specific Safety Plan to the Yale Project Manager and Yale EH&S at least two weeks prior to this pre-construction safety meeting. The Yale Project Manager, and Yale EH&S have the right, but not the obligation, to review the Contractor Site-Specific Safety Plan at any time.

The Contractor is responsible for ensuring that any Subcontractor it uses on the Project is thoroughly familiar with the specific Project Site safety requirements. Contractor shall review the specific Project Site safety requirements, including the Contractor's Site Specific Safety Plan, with each subcontractor at one or more safety meetings and at the Project Safety Orientation.

Although the specific elements of each Contractor's Site Specific Safety Plan will vary by the Work or services to be provided and project size, complexity, and location, at a minimum, the Contractor's Site Specific Safety Plan must adequately address the issues listed in these Contractor Health and Safety Guidelines, to the extent applicable to the Contractor's work. The Contractor's Site-Specific Safety Plan must also identify foreseeable Project-specific hazards and list the Contractor's means and methods planned for their mitigation and control. The Contractor's Site Specific Safety Plan is meant to be a living document, and Contractors must amend the Contractor's Site Specific Safety Plan to address any new hazards that were not addressed in the initial Contractor's Site Specific Safety Plan, but are later identified during the course of performing the Work at Yale. All amendments to the Contractor's Site Specific Safety Plan must be forwarded to the Yale Project Manager prior to the commencement of any planned work activities.

### **Subcontractors**

The Contractor will schedule and lead a safety meeting(s) with each Subcontractor before the Subcontractor commences Work at the Project Site. One of the purposes of the meeting is to discuss the Subcontractor's Site Specific Safety Plan and specific safety concerns related to the Subcontractor's Work.

Each Subcontractor is responsible for making sure that any Subcontractor it uses on the Project Site is thoroughly familiar with the specific Project Site safety requirements. Subcontractor shall review the specific Project Site safety requirements, including the Subcontractor's Site Specific Safety Plan, with each of its Subcontractors.

The Subcontractor shall submit the Subcontractor's Site Specific Safety Plan to the Contractor two weeks prior to the safety meeting. The Contractor shall review each of its Subcontractors' Site Specific Safety Plans in order to determine if such Site Specific Safety Plan meets Project safety requirements for the hazards to which the Subcontractors' Employees will be exposed on the Project Site.

### **PRE TASK PLANS AND JHAS**

On OCIP Projects, the Contractor and each Subcontractor shall complete a daily Pre-Task Plan. The Pre-Task Plan must be in writing, using the Pre-Task Plan in Appendix A or an equivalent form from the Contractor and a copy must be posted on the Project Safety Board. The Pre-Task Plan must address anticipated Work to be performed on that day, any anticipated hazards or exposures, and any measures necessary to address such hazards or exposures. The Project Safety Manager shall verify that the Contractor and each Subcontractor is completing the Pre-Task Plan in a quality manner. The Subcontractor shall use the Pre-Task Plan as the basis of the daily Safety Huddle Talk.

On Non-OCIP Projects, JHAs will be completed by Subcontractors as deemed necessary by the Contractor, Yale EH&S, or the Yale Project Manager. The JHA will be required based upon the frequency and/or severity of exposures, to ensure that appropriate controls are established prior to beginning Work. The format of the JHA shall be determined by the Contractor.

### **SAFETY MEETINGS**

The Project Safety Manager will hold Project Safety Meetings at least twice per month. All Safety Representatives and a representative of Contractor are required to attend. The content of these meetings will include:

1. Review of any incidents since the last Project Safety Meeting
2. Discussion of inspection results since the last Project Safety Meeting
3. Training/Discussion on a specific safety topic
4. Review of specific safety concerns of the Project Safety Manager or any Safety Representatives
5. Discussion of any unique or unusual hazards determined to be present at the Project Site and their controls
6. Review of two-week look ahead for pre-planning of exposure or hazard controls

The Project Safety Manager will distribute minutes for these meetings and maintain a copy at the Contractor's office or trailer.

### **DAILY SAFETY HUDDLE TALKS AND WEEKLY TOOL BOX TALKS**

The Contractor and Subcontractors are required to hold daily Safety Huddle Talks and weekly Tool Box Safety Talks for their respective Employees. Each daily Safety Huddle shall cover the Work to be performed on that day, the potential exposures that will be encountered, and the expected controls.

The weekly Toolbox Safety Talks shall include at least the following:

1. Training on specific safety topics
2. Results of weekly inspections
3. Special hazards being encountered and their controls
4. Specific concerns of employees

The Contractor and each Subcontractor will document their weekly Tool Box Safety Meeting. The documentation will include the name of the Contactor/Subcontractor, the items discussed, date conducted, the printed names of attendees, and their signatures. A copy of Tool Box Safety Meeting documentation, including the sign-in sheet, shall be forwarded to the Project Safety Manager by the end of the week. All Project Employees are required to attend these meetings.

### **PROJECT SAFETY ORIENTATION**

All Employees are required to participate in a Project Safety Orientation prior to their assignment to any Project. This orientation will be conducted by the Project Safety Manager. In his absence, the Contractor's superintendent will conduct this orientation. The Contractor will issue hard hat stickers to each Project Site Employee upon completion of the orientation.

The Project Safety Manager will include in the Project Safety Orientation a review of Contractor's Site Specific Safety Plan and specific safety requirements of the Project. The Employee shall sign the Project Safety Orientation Form in Appendix B or equivalent form from the Contractor stating that the specific safety requirements for the Project Site have been explained to them and that they understand these requirements. The Contractor will maintain a copy of the signed form in the job file.

In addition to the review mentioned above, the Project Safety Manager will include in the Project Safety Orientation, at a minimum:

1. The special safety requirements of the Project Site, including security, work hours, eating areas, designated smoking areas, etc.
2. Description of the nature of the Project
3. Project-Specific Substance Abuse Policy
4. Accident Reporting Procedures (including the panel of physicians)
5. How to report unsafe acts or conditions
6. Site disciplinary procedures
7. Personal protective equipment requirements
8. Hazards relevant to the Work being performed (fall protection, trenching, ladder usage, scaffold safety, etc.)
9. Hazard Communication requirements
10. A review of the Building Information Model (BIM) for emergency planning purposes, if BIM is available for the Project

## **SAFETY TRAINING**

The Contractor and Subcontractors shall verify that their employees are trained in accordance with applicable OSHA Standards prior to performing Work on the Project Site. The list of topics for which training (if exposure exists) must be provided includes, but is not limited to:

1. Fall Protection
2. Scaffolding
3. Ladders
4. Hazard Communication
5. Confined Space
6. Excavation
7. Lock-out/Tag-out
8. Powder-actuated tools
9. Personal Protective Equipment
10. Cranes

Contractor shall maintain documentation of its training of those Employees working on the Project in its Project Site office. Subcontractors shall provide documentation of their training of those Employees working on the Project to the Project Safety Manager, who shall maintain a copy in the Contractor's Project Site office.

All Employees on the Project Site must have completed at least a 10-Hour OSHA Construction Outreach Training Program, and shall show the Project Safety Manager their course completion card from the training. The Contractor shall maintain documentation that each Contractor Employee and Subcontractor Employee has completed this program.

## **PROJECT SAFETY BOARD**

The Contractor shall procure, provide, and install a Project Safety Board at the following locations on the Project:

1. The main employee entrance to the Project,
2. Any general lunch/break/or assembly area,
3. The Contractor's office or trailer, or

4. On projects without an office or trailer, the Project Safety Board may be in a gang box or binder

The Project Safety Board shall display the following items:

1. Basic Project information
2. OSHA/Connecticut 5-in-1 Labor Law Posting
3. Names and daytime contact numbers for key Contractor personnel and Subcontractors
4. Emergency procedures and contact numbers
5. Any safety bulletins or general communications to the Project
6. On OCIP Projects, the Contractor shall have a clipboard on the Project Safety Board for each active Subcontractor to attach and display their daily Pre-Task Plan
7. On Non-OCIP Projects, the Contractor shall have a clipboard or file folder on the Project Safety Board for each active Subcontractor to attach and display their JHAs

## **VISITORS**

Visitors to the Project Site must check in with the Contractor, and the Contractor shall obtain permission for the visit from the Yale Project Manager prior to the visitor entering the Project Site. The Contractor will provide each visitor with a brief safety orientation and require that all visitors read and sign the Visitor's Release Form located in Appendix C or equivalent form provided by the Contractor. The Contractor is responsible for maintaining a list of Project Site deliveries and visitors, and briefing all entrants about Project Site hazards, basic emergency procedures, and entry requirements, including the mandatory use of personal protective equipment. The Contractor must have appropriate personal protective equipment available for visitors' use (e.g. hard hats, safety glasses, and safety vests and gloves if required). The Contractor has the right to refuse entry to any visitor if they are not suitably attired (e.g. open toe shoes, high heel shoes). Visitors must not be permitted free access to the Project Site and must be escorted by a representative of the Contractor or Subcontractor. Photographs and other audio-visual data are prohibited without prior approval from the Yale Project Manager.

Except in the event of an emergency requiring immediate Project Site access, inspectors and other representatives from regulatory agencies shall be instructed to check in with the Contractor prior to entering the Project Site. The Contractor shall immediately inform Yale's Project Manager of the arrival of any agency representatives. Among other things, Yale's Project Manager may require that an appropriate representative of the University escort regulatory personnel or be present during the visit.

## **YALE COMMUNITY MEETING(S)**

At the request of the Yale Project Manager, the Contractors shall participate in various meetings with representatives of the Yale Community to address sensitive populations or areas on campus. Any such meetings will be led by the Yale Project Manager and may involve other, affiliated University departments. At such meetings, Contractors may be asked to respond to safety and operational issues that have the potential to arise on Projects and will be expected to provide brief descriptions of their planned Work and such other information that may be appropriate to the Project.

## **INTERRUPTIONS AND IMPACTS TO YALE OPERATIONS**

All Yale locations are sensitive to service interruptions. Contractors are responsible for minimizing disruption to University operations to the greatest extent possible. Contractors must communicate all utility and mechanical system shutdowns, roadway access closures, extended delivery blockages and any other activities with the potential to interrupt or disrupt University operations in advance and coordinate with the Yale Project Manager. Depending upon the size, duration, and scope of the Project, as well as the nature of adjacent areas, input from other Yale departments may be necessary to establish and monitor appropriate controls; in such cases, the Yale Project Manager will inform the Contractor of the need for such input and shall coordinate with the Contractor.

## **EMERGENCY ACTION PROCEDURES**

An emergency is any unplanned event that occurs on or adjacent to the Project Site that requires an emergency response from such entities as police, fire, rescue, medical services, etc. Examples of emergencies may include severe weather events, fire, bomb threats, terrorist activities, accidents, incidents, injuries, and illnesses.

The Contractor shall develop an Emergency Action Plan specific to the Project and ensure that the Emergency Action Plan and its contents are clearly communicated to all Employees working on the Project.

If Work is being performed in an occupied or partially occupied structure, the Yale Project Manager will provide the Contractor with the existing Emergency Action Plan for the structure. The Contractor shall comply with existing emergency procedures in occupied or partially occupied structures and incorporate existing procedures into the Contractor's Emergency Action Plan for the Project Site. The Contractor shall update the Emergency Action Plan, if necessary, as Project Site conditions change. The Contractor shall provide a copy of the Emergency Action Plan to all Subcontractors on the Project Site, the Yale Project Manager, and the Program Safety Monitor, and shall post a copy on the Job Safety Board.

The Contractor shall develop reasonable preparations and contingencies for the various potential emergencies that can occur on the Project Site, including but not necessarily limited to:

1. Project Site accidents and injuries
2. Smoke and fire conditions

3. Spills and releases of Hazardous Materials
4. Structural or equipment failure or collapse
5. Security threats, including public demonstrations, bomb threats, or the discovery of suspicious materials
6. Severe weather conditions, including high winds

The Contractor must describe its preparations and contingencies. Since many emergencies have potential impacts well beyond their immediate location, it is important for Contractors to understand basic emergency response and evacuation procedures, local emergency resources, and follow-up actions. Contractors are expected to devote significant efforts to ensuring that adequate preparations have been made for the range of foreseeable emergencies that might occur during their Work at Yale.

At a minimum, Emergency Action Plans will include the following information:

1. Emergency contact numbers for police, medical services, and fire/rescue. These numbers may differ depending on the Project and the Project Site.
2. Contractor emergency contacts and contact numbers.
3. A muster point(s) for all Employees working on the Project. Depending on the scope and size of the Project, more than one muster point may be needed.
4. The means by which the Contractor will account for all Employees.
5. The means by which Project Employees will be alerted in the event of an emergency and the means by which instruction and direction will be given.

The primary means to summon emergency response is by calling 911 on any telephone. Based upon the incident description, the 911 operator will dispatch police, fire, medical, or other assistance to the scene of the emergency.

For Work occurring within an occupied Yale building, emergency response may be summoned by pulling a nearby fire alarm station, using a Yale "blue emergency phone", or by contacting the Yale Police Department. The Yale Police Department can be summoned by dialing 911 from any Yale telephone or by dialing (203) 432-4400 from any non-Yale telephone. Note: Dialing 911 from a non-Yale telephone will connect to local emergency services, not the Yale Police Department.

Information about regional emergencies, severe weather conditions, and major campus disturbances is available from Yale's main website ([www.yale.edu](http://www.yale.edu)) as well as from the local radio station, WELI (960 AM).

In the event that an emergency requires evacuation of the Project Site, re-entry is prohibited until the public safety official or senior Yale official in consultation with the Contractor, has issued an “all-clear” announcement. Since the Project Site is the property of Yale, all inquiries from the media must be coordinated through Yale Public Affairs (telephone: (203)-432-1345). Additional local emergency resources, including area hospitals, are listed in Appendix D.

## **ACCIDENT REPORTING & INVESTIGATION PROCEDURES**

### **Written Reporting Requirements**

Contractor must document in writing all Project Site injuries, accidents, fires, spills, releases, property damage, and any other incidents. As described below in further detail, the Project Safety Manager is responsible for investigating and documenting incidents as soon as practicable.

For OCIP Projects, specific procedures for reporting accidents are identified in the OCIP Insurance Manual. The Contractor and Subcontractors shall become familiar with the Accident Reporting Procedures outlined therein.

After summoning emergency assistance, the Contractor is responsible for directly notifying any regulatory agencies as required as well as arranging for any necessary follow-up repairs, abatement, or other corrective actions.

The Contractor and Subcontractors must report all injuries, occupational-related illnesses, property damage, and general liability incidents immediately.

**Contractor must report all known accidents and incidents to the Yale Project Manager and the Project Safety Manager within 24 hours. At the Owner’s discretion, failure to report a known incident/accident that results in a claim within twenty-four (24) hours of an occurrence may result in a \$500.00 fine.** This fine will be issued through a Non-Negotiable Deduct Change Order or other means approved by the Owner. Separate and distinct from these requirements, the Contractor and Subcontractors are individually responsible for maintaining any legally required injury and illness records, such as the OSHA 300 Log and back-up data.

## **ACCIDENT/INCIDENT INVESTIGATION REPORTS**

The Project Safety Manager or applicable Subcontractor Safety Representative must complete and provide to the Yale Project Manager and the Program Safety Monitor the Accident/Incident Investigation Report located in Appendix E or an equivalent form from the Contractor within 24 hours of knowledge of any incident (including near miss incidents) regardless of severity. If the Project Safety Manager or Subcontractor’s Safety Representative cannot complete and submit the Accident/Incident Investigation Report within 24 hours, the Project Safety Manager must contact the Yale Project Manager and provide an explanation as to why. If the incident investigation extends beyond the 24-hour window, a preliminary Accident/Incident Investigation Report must be filed with the Yale Project Manager within 24 hours, pending the submission of the complete report.



**Failure to complete an Accident/Incident Investigation Report or a Preliminary Accident/Incident Investigation Report within twenty-four (24) hours of knowledge of an incident may result in a \$500.00 fine.** This fine will be issued through a Non-Negotiable Deduct Change Order or other means approved by the Owner. Copies of the Accident/Incident Investigation Report will be reviewed for completeness and proper corrective action, and will be maintained by the Project Safety Manager.

#### **ACCIDENT/INCIDENT REVIEW**

All lost time accidents, general liability incidents, and significant property damage incidents will require a formal review. The Project Safety Manager, Subcontractor Safety Representative and other management personnel of the Contractor and Subcontractor will discuss the accident/incident investigation to ensure that corrective actions have been implemented. The Project Safety Manager must document this meeting and forward a copy of the minutes to the Program Safety Monitor and Yale Project Manager.

#### **LOST TIME ACCIDENT FOLLOW-UP/RETURN TO WORK**

The Project Safety Manager shall follow-up with the Contractor and Subcontractors periodically until any injured Employee returns to work. The Contractor and Subcontractors shall promptly return injured Employees to full or modified duty work (as their physical condition permits) as soon as being advised of the Employee's ability to return to work. Upon such notification, the Employer shall immediately return such injured Employee to work whether or not such work is available on the Project.

#### **DISCIPLINARY PROCEDURES**

If a Project Labor Agreement (PLA) is in place for the Project Site, the Contractor and Subcontractors shall refer to the PLA in regard to disciplinary action.

If a PLA is not in place for the Project Site, the Contractor shall have a structured disciplinary action program.

The Contractor shall maintain an employee removal log. The employee removal log must be maintained on the Project Site and be available to the Yale Project Manager for review.

#### **SECURITY AND PERSONAL SAFETY**

The Contractor shall provide for adequate Project Site security against theft, trespass and vandalism as outlined in the Contract Documents and shall monitor the adequacy of the security as the Work progresses.

Contractor, Subcontractors, and their workers and other personnel, must conduct themselves in a courteous and professional manner, respectful of Yale's community and property. Horseplay, fighting, or harassment is prohibited.

The Contractor will enforce strict discipline and good order among persons performing the Work, regardless of their employer. Any person in violation of this Paragraph will be immediately



removed from the Project Site by the Contractor and is subject to dismissal at the Owner's discretion.

The Contractor will employ or hire only Subcontractors and Consultants capable of working harmoniously with the Project Team, Consultants, Separate Contractors and others associated with the Project.

The Contractor will not permit employment of unfit persons or persons not skilled in tasks assigned to them.

All forms of lewdness and sexual harassment including: language, touching, whistling, sexually explicit jokes, drawings, photos, representations, exhibitionism and all other sexually-oriented or hostile behavior is strictly prohibited.

The possession or use of drugs or alcohol on or about the Project Site is strictly prohibited. Smoking is strictly prohibited at the Project Site outside of designated smoking areas.

While working in occupied areas, the Contractor will conduct all Work so as to maintain the privacy of the Owner's operations, students and staff.

The Contractor will require each worker to dress in a clean, neat, professional and appropriate manner and to conduct themselves with respect and courtesy.

The use of entertainment devices including personal devices with headphones or earphones is strictly prohibited at all times. The Contractor will control the volume of communication radios and loudspeakers to avoid creating a nuisance.

Lethal and non-lethal weapons, ammunition and firearms of all types, even if properly licensed or permitted, are prohibited on the Owner's premises at all times (excluding appropriate knives, tools, and equipment required for performance of Work).

All workers and other personnel are restricted to their assigned Work areas and material transport routes and shall not explore the campus or use Yale restrooms or amenities, including cafeterias and dining halls.

Fire/emergency lanes and exit ways must not be blocked, nor shall vehicles be left idling or running near building air supply intake vents. Blocking of public rights of way is not permitted without municipal prior approval.

### **FIRST AID PROCEDURES**

The Project Safety Manager and all Safety Representatives are required to maintain current First Aid and CPR certification. Universal precautions are to be instituted. The Contractor and each Subcontractor are required to have first aid equipment and supplies immediately available to their employees, located in Contractor's Project Site office location and in each Subcontractor's Project Site office location. The Contractor and each Subcontractor are required to maintain their own

first aid supplies adequate for the type and amount of Work they will be performing and sufficient for the manpower anticipated for the Project.

In the event of an emergency, the Contractor and Subcontractor shall first call the appropriate emergency number. The Contractor and each Subcontractor on the Project Site are required to have the correct/appropriate emergency numbers conspicuously posted in their Project Site office.

### **ASSIGNMENT OF COMPETENT PERSON**

Prior to the start of construction, each Contractor and Subcontractor will designate a Competent Person for each of the various activities performed by that Contractor or Subcontractor on the Project. The Contractor or Subcontractor will make this designation in writing using the Competent Person Assignment Form located in Appendix F or by use of an equivalent form from the Contractor. Each Contractor or Subcontractor will complete this form and submit it to the Contractor.

Contractors or Subcontractors are responsible for ensuring that the forms are current and that any personnel changes are reflected in changes made to those forms. Contractor and each Subcontractor is responsible for ensuring that individuals identified as Competent Persons have the requisite knowledge, experience, training and authority to fulfill their duties as Competent Persons including, if necessary, the authority to stop Work and implement corrective action when a particular activity or condition under their control is being performed in a hazardous manner.

### **MONTHLY SAFETY REPORT**

The Contractor shall prepare and submit a monthly safety summary to the Yale Project Manager and Program Safety Monitor no later than the first Friday of each month. At a minimum, the monthly safety summary must include:

1. Dates and times of Project safety meetings, Project Site inspections, and any corrective actions made during the reporting period
2. A narrative of all near misses, accidents or incidents beyond first aid cases, and any other emergencies, broken down by subcontractor or trade as applicable
3. Discussion of any Project Site visits by any regulatory agency, including the results of the Project Site visit
4. Total number of hours worked during the month and running cumulative total hours worked on the Project Site through the end of the reporting month
5. Calculations of the TRIR and DART Rates for the Project on both a monthly and aggregate basis

The form in Appendix G shall be used to complete this report.

## **SECTION 4 SUBSTANCE ABUSE POLICY**

The policy directs the establishment and maintenance of an effective program for achieving a drug and alcohol-free workplace. Accordingly, all Contractors and Subcontractors are required to adopt and enforce this policy as a condition of their work with the Owner.

The intention of this program is to establish Projects as drug and alcohol free workplaces in order to ensure safe and productive working conditions with due regard for the personal privacy interests of Project employees. The program will apply to all personnel, including on-site management. This policy does not apply to off-duty activities of Project employees away from the project site unless those activities have a job-related impact.

The basic elements of the program are:

1. Use, possession or sale of illegal drugs or alcohol on the Owner's property is prohibited. Persons who violate this rule will not be permitted access to the project.
2. Employees who report for Work with illegal drugs, legal drugs causing impairment or alcohol in their system will not be permitted to remain on the project. Such employees will be barred from the project.

The policy will be enforced by drug and alcohol testing, as permitted by state and federal laws. Special safeguards have been undertaken to ensure that testing will be conducted by a qualified vendor, under strict state and federal guidelines, including provisions to ensure test reliability, employee privacy and confidentiality. All confirmatory testing will be conducted by approved laboratories in accordance with the Mandatory Guidelines for Federal Workplace Testing programs established by the U.S. Department of Health and Human Services, as amended.

### **PRE-ASSIGNMENT – Drug Test Only**

The special circumstances and working conditions on this Project warrant special assurances that Contractor and Subcontractor personnel to be employed at the site are certified as drug-free before they are eligible for regular employment.

Contractor and Subcontractor prospective employees will only be granted access to the project after the Contractor and/or Subcontractor received documentation confirming that the prospective employee has passed the required drug test. A document confirming that the employee has successfully completed a negative initial drug test will be issued by the testing agency and shown to the Project Safety Manager. Only after the results are confirmed "Negative" will an employee be permitted access to the Project.

Any employee testing "Positive", per the testing requirements, will be barred from the Project. The prospective employee shall be given a copy of any positive drug test result. The results of any such test shall be confidential and shall not be disclosed to any person other than any such employee to whom such disclosure is necessary.

Any employee so barred will not be eligible for referral back until he/she satisfactorily completes a drug test not less than six (6) months following the initial disqualification.

Refusal on the part of any employee to comply with the testing procedure will be considered a "Positive Test" and will disqualify the applicant from consideration for employment on the Project for not less than one year.

#### **REASONABLE SUSPICION/FOR CAUSE – Drug and Alcohol Testing**

All Contractor and Subcontractor employees are subject to a drug and alcohol test where the Contractor's staff, Program Safety Monitor, additional authorized persons, including but not limited to all Safety Representatives, and/or Owner has reasonable suspicion that the employee is under the influence of drugs or alcohol which adversely affects or could adversely affect such employee's job performance. Reasonable suspicion means reliable objective facts and circumstances sufficient to warrant a prudent person to believe that the employee may have ingested or used an intoxicating substance resulting in impairment while on duty. If testing results from an observation, the observation must be confirmed by a second member of Contractor's staff or Program Safety Monitor, Owner, or Owner's Representatives who has received appropriate training on the detection of possible impairment through observation. Observation shall be reviewed with a union steward in the employee's applicable trade, if applicable, and only on the condition that the steward is readily available.

Employees removed from duty for reasonable suspicion testing will remain off duty until test results are received. If the employee tests "Negative" for drugs or alcohol, the employee may be entitled to back pay for the time missed. Such payment will not be subject to reimbursement from the Owner, Program Safety Monitor, or Owner's Representatives. If the employee tests "Positive", per the testing requirements, the employee will be barred from Owner Projects.

#### **POST ACCIDENT/INCIDENT/INJURY – Drug and Alcohol Test**

The Contractor, Program Safety Monitor, Owner and/or other authorized persons shall have reasonable suspicion sufficient to refer an employee for substance testing whenever an employee is injured during the course of his or her employment on site or involved in an accident/incident in the course of job duties which involves use of heavy equipment, power tools or other dangerous instruments or working conditions and which results in off-site medical care or substantial property damage (generally in excess of \$1,000). Any employee involved in a near-miss incident which could have caused injury, disruption or property loss may be tested under the following circumstances:

1. The incident was caused by human error or could have been avoided by reasonably alert action; or
2. The employee to be tested was an active participant in the incident circumstances; or
3. Substance use cannot be discounted as a contributing factor.

## **TEST PROCEDURES**

All Contractor and Subcontractor prospective employees will be informed in writing by the Contractor prior to arrival on site of the Owner's intent to conduct a drug test and the applicable testing requirements.

Prospective employees that leave a Project will not be tested upon their return to a Project provided they return within 12 months.

Confirmatory testing procedures, including which drugs are to be screened, chain of custody and threshold and confirmation test levels, shall comply with state and federal laws, as well as the Mandatory Guidelines for Federal Workplace Testing Programs established by the U.S. Department of Health and Human Services.

Protocol shall be developed by the Owner to address the provisions of this policy, including specific testing procedures and the requirement that the Subcontractor shall be required to contact the Third Party Administrator until a test result is confirmed "Negative" or "Positive".

## **REFUSAL**

Failure to sign the appropriate release forms or to comply with the testing procedures shall disqualify the applicant from consideration for employment on the Project for not less than six (6) months. Signing the consent form shall not waive any individual rights available under federal and state law.

## **CONFIDENTIALITY REQUIREMENTS**

Strict confidentiality shall be maintained at all times for all substance abuse testing program activities. All information generated in connection with the testing program is inherently sensitive and is to be treated as confidential. In implementing this program care must be taken to:

1. Safeguard all written reports by maintaining separate, secured files and limiting written and verbal communications to the necessary functions of this procedure.
2. Conduct testing as privately as possible.
3. Limit the number of persons involved in testing activities to essential personnel only.
4. Prohibit the communication of confidential information about searches, tests, investigations, or the results of same to persons not authorized to receive it, including family members, friends, union representatives, or law enforcement agencies.
5. Release information only to those necessary to administer site employment, safety, and security; in response to legal process or when a written release has been obtained from the individual involved.

6. Drug and/or alcohol test results shall only be released to designated employee representatives from the Contractor, Subcontractor, Owner, or Owner's Representatives. Written authorization from the donor of the urine specimen and/or breath alcohol test shall be required for any others requesting drug and/or alcohol results. Federal, state, and/or local authorities will be able to obtain drug and/or alcohol test results only with written consent of the person tested or with a subpoena. The procedure to release drug and/or alcohol results is per 49 CFR Part 40 of the federal guidelines. Drug test results shall be maintained along with other employee medical records and shall be subject to the privacy protections provided for in C.G.S. § 31-128a to 31-128h, inclusive.

### **STATISTICAL REPORTS**

The Third Party Administrator shall provide a report indicating the individuals that passed the drug test by the end of each month. The reports and method of reporting shall also meet strict confidentiality protocol. The Third Party Administrator shall provide monthly reports on all test results to the Owner, and Program Safety Monitor. The reports shall be sorted by employer, number of tests performed, percent of Negative test results, number of tests for the month and the number of tests to date.

## SECTION 5 GENERAL SAFETY REQUIREMENTS

### PERSONAL PROTECTIVE EQUIPMENT

Contractor and each Subcontractor shall furnish personal protective equipment to each of its respective employees as required by specific job duties and as follows:

1. **Head Protection:** The wearing of non-conductive hard-hats meeting the requirements of the current ANSI Z89.1 standards is mandatory in all construction areas (i.e. worn at all times). Contractors shall ensure that hard hats are worn in accordance with manufacturers' instructions. The Program Safety Monitor shall have final authority to determine when hard-hats are no longer necessary for employees on the Project Site. The wearing of hats, caps, or other headgear not specifically designed to wear with a hard hat will not be authorized at any time. ***NOTE: Protective equipment such as welding shields and face shields must be designed for attachment to and wearing with hard hats and be used in such a manner.***

**Eye and Face Protection:** Project workers shall wear industrial safety glasses meeting the current requirements of ANSI Z87.1 with side shields at all times while time on the Project Site. Prescription glasses worn by personnel on the Project must meet current ANSI Z87.1 requirements or will require the wearing of safety eyewear specifically designed for wearing over glasses. Contractors and Subcontractors shall make available additional eye and face protection (e.g., face shields, welding helmets, burning goggles, etc.) for all employees on the Project Site and Employees shall wear such protections as necessary for the tasks being performed. Without limiting the generality of this statement, employees must use the following eye/face protective equipment when performing the following Work activities:

Activity	Safety Equipment
Welding	Welding Hood*
Burning	Burning Goggles
Abrasive grinding or cutting	Safety Glasses/Face Shield*
Drilling	Safety Glasses/Face Shield*
Reaming	Goggles/Face Shield*
Chemical Handling	Goggles/Face Shield*
Molten Materials	Goggles/Face Shield*
Corrosive Liquids	Goggles/Face Shield*
Concrete Pouring	Safety Glasses
* Safety glasses will be used in conjunction with face shields and welding hoods.	

2. Hearing Protection: Contractor and Subcontractors shall provide hearing protection and require its use wherever it is not feasible to reduce the noise levels or duration of exposure to those specified by OSHA 1926.52.
3. Respiratory Protection: When controls required by OSHA 1926.55 fail or are inadequate to prevent harmful exposure to employees, Contractor or Subcontractor shall provide appropriate respiratory protection in accordance with 1926.103 (1910.134). Contractor shall ensure that its employees and all Subcontractor's employees are instructed in the proper use and maintenance of these devices, and that all employees are medically qualified, fit tested, and informed why and where respirator usage is required.
4. Wearing Apparel: Contractor shall ensure that the appropriate work clothing is worn at all times to minimize exposures:
  - a. Shirts which cover the shoulders and torso (t-shirts with a 4 inch sleeve are acceptable). Shirts or alternate protection, which covers the entire arm, may be required in certain circumstances. Muscle shirts and cut off shirts are prohibited.
  - b. Long pants are required. Shorts are prohibited.
  - c. Loose clothing or jewelry that may catch or become entangled is prohibited.
  - d. Long hair (including long facial hair) that may become entangled in machinery or equipment must be tied back.
5. Foot Protection: Firm-sole leather work shoes with rubber soles maintained in good condition are required. Sneakers or athletic-style footwear are prohibited. If steel-toe shoes are required for a particular task, the steel-toe shoes must have a complete covering over the steel-toe with no steel exposed. Where required for the type of Work performed, shoes equipped with metatarsal guards will be required.
6. Gloves: The Contractor shall require the wearing of properly rated and designed protective gloves any time Project Site employees are exposed to hand injury hazards that can be eliminated or mitigated by the use of such gloves.
7. Reflective Vest: Contractor shall ensure that any Project Site employees exposed to struck-by hazards from mobile equipment or vehicles on the Project Site are provided and wear high visibility retroreflective vests or shirts appropriate for the exposure maintained in a highly visible condition.

## **FIRE PROTECTION**

The Contractor is responsible for establishing Fire Prevention and Emergency Response Procedures prior to the start of Work on a Project. The Contractor must review these procedures with Yale's Office of Fire Code Compliance and the Yale Project Manager, and if Yale's Office of Fire

Code Compliance determines that it is necessary, with the local municipal Fire Marshal for the jurisdiction in which the building is located (the “local Fire Marshal”).

The Contractor must post the procedures at the Job Safety Board and provide copies to Subcontractor Safety Representatives, foremen, and superintendents, who, as part of overall emergency planning and preparedness, must review this information with all workers and other personnel, Subcontractors and their workers and other personnel. The Contractor’s Fire Prevention and Emergency Response Procedures must be updated as necessary throughout the Project.

1. All fires, near-fires, or other incidents that occurred and/or caused a fire extinguisher to be discharged must be reported immediately to the Yale Office of Fire Code Compliance and Yale Project Manager.
2. At no point shall the fire sprinkler and or standpipe system in any building be disabled for any reason without prior notification and approval of the Yale Office of Fire Code Compliance and the local Fire Marshal. No fire sprinkler and/or standpipe system should be taken out of service for a period greater than 12 hours without the written approval of the local Fire Marshal. Once disabled, the systems shall be put back in service as soon as possible. Fire alarm and detection system(s) may need to be shutdown during the performance of Hot Work. If required, Contractors must schedule the shutdown through the Yale Project Manager. The Contractor must follow all necessary precautions as indicated on the permit(s) and provide proper training and resources to safely complete all assigned duties.
3. Open fires and warming fires are prohibited. Solid fuel is prohibited on all Yale Projects.
4. Temporary structures (including partitions, shanties, etc.) within existing structures must be made of fire-retardant/rated materials. Temporary plastic membrane construction enclosures and partitions are to be fire retardant and protected from fire.
5. Kerosene heating equipment is prohibited.
6. Subcontractors performing torch-applied roofing operations must submit NRCA (National Roofing Construction Manager Association)-recognized CERTA (Certified Roofing Torch Applicator) training documentation for each of their personnel involved in such operations prior to those personnel commencing Work on the Project.
7. All oily rags and oily cloths shall be taken off of the Project Site at the end of each shift for proper disposal.
8. Smoking is not permitted within building structures or Work areas. The Contractor will designate areas where smoking is permitted. Persons found smoking in non-designated areas are subject to immediate removal from the Project.

9. Storage of Flammable or Combustible Liquids or Gases:
  - a. Only containers approved by Underwriters Laboratories (UL) and/or Factory Mutual (FM) and clearly labeled to identify their contents shall be used for transporting or storing flammable or combustible liquids. Metal safety cans with self-closing spouts and spark arresters are required for the storage, handling, and transporting of flammable and combustible liquids.
  - b. All solvent containers shall be stored in UL-approved flammable liquids cabinets.
  - c. Except during actual use, LPG cylinders may not be stored within a Yale building (including roof areas).
  - d. Flammable or combustible liquids or gases shall not be stored inside any building unless approved by the Yale Project Manager in writing. When indoor storage is approved by the Owner in writing, such storage shall comply at a minimum with OSHA 1926.152 and NFPA requirements. Storage is defined as maintaining quantities in excess of what can be used in the course of normal Work during the intended shift.
  - e. Contractor and Subcontractors must store vessels or tanks containing flammable or combustible liquids or gases in an outside fuel storage area designated by the Contractor. This area will be located in accordance with OSHA, NFPA, and local regulatory requirements. At a minimum, such tanks will be kept a sufficient distance from buildings, construction equipment, parking lots, etc. to minimize the exposure to a fire involving the tank. The Contractor shall meet local, state, and federal safety requirements when placing vessels or tanks. Such locations will be equipped with substantial barricades or bollards to prevent vehicles and equipment from striking the vessels or tanks. This is also required of any fuel container that provides temporary heat for a structure.
  - f. Flammable or combustible liquids or gases shall not be stored on roofs when not in use including after work shifts.
10. Each Contractor and Subcontractor shall be responsible for compliance with the following as it pertains to their respective equipment:
  - a. All bulk containers shall be placed in impervious dikes or recessed area to retain spills equivalent to the capacity of the containers. These areas shall be stoned or otherwise treated and maintained to prevent the growth of easily ignitable undergrowth.
  - b. Storage tanks shall be marked to indicate their appropriate UL listing (e.g. UL 142, UL 80, etc.), equipped with self-closing dispensing nozzles and shall be provided with atmospheric and emergency relief vents equipped with flame arresters.

- c. Tanks or drums from which flammable liquids are dispensed shall be electrically grounded and shall be equipped with bonding wire to complete the grounding with the vessel into which the liquid is dispensed.
  - d. There shall be no smoking or open flame in flammable or combustible liquid or gas storage areas. Conspicuous and legible signs prohibiting smoking shall be posted by the Contractor or Subcontractor as applicable.
  - e. The Subcontractor will provide portable, dry chemical fire extinguishers (minimum 20# ABC) for each fuel storage area.
11. Minimum 20# ABC portable fire extinguishers suitable for the potential hazard shall be provided by each Subcontractor for their equipment, office area, and Work activities. A fire extinguisher must be in the immediate Work area when any spark or open flame producing Work is taking place. The Contractor shall be responsible for general area fire extinguisher placement and maintenance until the building is turned over to the Owner. In addition, the Contractor shall have available on the Project Site personnel trained in the proper use of fire extinguishers.
12. "Hot Work" is defined as a process or procedure that could result in a fire if not properly controlled. Common examples of Hot Work include welding, burning, cutting, brazing, and soldering. Hot Work equipment may produce high voltages or utilize compressed gases and requires special awareness training to be used safely. The Contractor shall prepare and enforce an effective Hot Work Procedures that follows Applicable Law and industry standards and complies with the Yale University Hot Work Policy and Procedures. A copy of the Hot Work Program must be submitted to the Yale Project Manager.
13. Any Contractor and or Subcontractor performing Hot Work shall prepare and submit to the Contractor for approval a Job Hazard Analysis (Pre-Task Plan) plan for all Hot Work. All planned Hot Work must be fully described during the permitting process, which must be completed before Hot Work begins. The Contractor or Subcontractor intending to perform the Hot Work must obtain a Hot Work permit from the Yale Office of Fire Code Compliance or the local Fire Marshal's Project Site designee, as applicable. The Contractor or Subcontractor shall keep a copy of that permit on the Project Site adjacent to the area of Work at all times.
14. Hot Work is restricted to normal working hours and the Contractor shall inspect the Work area to verify that adequate control has been established. The Contractor or Subcontractor performing the Hot Work must follow all necessary precautions as indicated on the permit(s) and provide proper training and resources to safely complete all assigned duties.
15. A copy of the Hot Work Permit must be posted in the Work area where the Hot Work is being performed and a copy must be maintained in the Contractor's field office. The fire

extinguisher must be dedicated and within easy reach of individual performing the Work requiring the permit.

16. Any Contractor or Subcontractor performing Hot Work must implement the following precautionary measures, at a minimum:
  - a. Verify that all equipment is in satisfactory operating condition.
  - b. Check the area for combustibles, flammable liquids, lint, dust, oily deposits and any other hidden or inconspicuous items.
  - c. Have the proper type of fire extinguisher within easy reach of the individual performing the Hot Work.
  - d. Ensure that Hot Work is not taking place in a flammable atmosphere, near large quantities of readily ignitable materials, or in unauthorized areas.
  - e. Verify that Work areas are free of combustibles for a radius of at least 35 feet. If the Work area (e.g. ceiling, walls, floors, etc.) itself is a combustible, it must be kept wet or otherwise protected, taking care to protect against possible electric shock.
  - f. Cover tightly, openings or cracks in walls, floors, or ducts with fire retardant or noncombustible material if within 35 feet of the work to prevent the passage of sparks to adjacent areas.
  - g. Shield conveyor systems that might carry sparks to distant combustibles.
  - h. If Hot Work is to be done on a wall, partition, ceiling, or roof, precautions must be taken to prevent ignition of combustibles on the other side by relocating combustibles, or, if not practical, providing an additional fire watch.
  - i. Do not perform any cutting or welding on pipes or other metal that is in contact with combustible materials close enough to cause ignition by heat conduction.
  - j. Hot Work in close proximity to sprinkler heads requires the head to be protected from accidental discharge. Once Hot Work is completed, the sprinkler head must be put back in service.
  - k. Provide proper ventilation in all areas where Hot Work is being performed.
  - l. Locate oxygen/acetylene hoses at least seven feet above the Work area or otherwise protect from damage.
  - m. All oxygen and acetylene cylinders must be stored outside (of buildings) and be identified with the contractor's name.

- n. All oxygen/acetylene hoses must have flash arresters.
- 17. The Contractor shall have, or shall verify that the Subcontractor performing any Hot Work has, a fire-watch present while they are performing Hot Work. Work on new construction that is not enclosed shall require a ½-hour fire watch after work is completed. Work in occupied or enclosed buildings will require a 1 hour fire watch after work is completed and 3 hours of monitoring. Monitoring shall include returning to the work area and surrounding locations to check for signs of smoldering or smoking materials. The Owner, Program Safety Monitor, and/or Contractor may require additional fire watch personnel be posted at other locations, based upon the nature of the Work. The fire-watch personnel shall have a charged, working, minimum 20# ABC fire extinguisher within 25 feet of their persons at all times. The fire watch shall remain posted at the location where Hot Work has taken place and observe the surrounding areas including floors above and below the Hot Work.
- 18. Welding flash screens shall be provided, placed, and moved as necessary to prevent radiation injury by the Contractor or Subcontractor performing welding.
- 19. The Yale Project Manager will determine if the proximity of Work to existing structures requires welding to be performed when the existing structure is not occupied. If welding is performed in existing structures while occupied, all means possible shall be implemented to prevent exposure or hazard to Owner's students, Owner employees, and the public.

#### **TEMPORARY HEAT**

Contractors must submit temporary heating system plans and procedures, in advance and in writing, to the Yale Project Manager and local Fire Marshal and Yale Office of Fire Code Compliance, noting duration of planned use, fuel handling procedures, safety procedures, type of heating system, and other essential or critical aspects of the plans and procedures. The local Fire Marshal and Yale Office of Fire Code Compliance must approve the plan prior to implementation.

- 1. All heating equipment must be wired, piped, and operated in accordance with Applicable Laws, industry codes, and regulations, Underwriters Laboratories approved, and installed per the manufacturer's guidelines.
- 2. The fuel supply to temporary heating appliances must automatically shut off if the appliance is tipped over.
- 3. Temporary propane heating systems must have placards at all project entrances.
- 4. If 100 lb propane cylinders are used, heating appliances must have a minimum of three (3) 100 lb cylinders manifolded together if the BTU rating of the appliance exceeds 100,000 BTU's.

5. If bulk propane is used, tanks must have crash protection installed. All piping must be protected from impact or crushing.
6. If temporary heating is used to heat membrane structures, the main supply valve or circuit breaker must be accessible without entering the structure.

### **SANITATION AND HOUSEKEEPING**

Contractor must ensure that the Project Site is maintained in a clean, healthy and sanitary condition. Contractor must further ensure that Work areas, passageways and stairs, and walkways in and around buildings and structures are kept clear of debris and maintained free of dangerous depressions and/or obstructions. In addition, the following requirements apply:

1. Materials shall be piled and stacked so that safe clearances are maintained and toppling is prevented.
2. Any spills or releases of Hazardous Materials, including fuel or oil, must be reported to the Contractor. Contractor shall ensure that spills are cleaned up immediately. The Contractor must have a Spill Kit available on the Project Site. Disposal of Hazardous Material on the Project Site is prohibited. For any spill or release that is too large to immediately clean up, Contractor shall contain such spill using employees appropriately trained to do so, and shall immediately contact a spill response contractor. Contractor shall immediately contact the Yale Project Manager and the appropriate regulatory authority to report any spill, as required by Applicable Law.
3. Trash and garbage shall be placed by Contractor or Subcontractors into appropriate containers. Debris is to be cleaned up daily. Each Project will have a "clean-as-you-go" policy. The Contractor is responsible for monitoring this policy and ensuring Subcontractor compliance.
4. Contractor must provide containers for the collection of waste, trash, and other refuse. Common construction debris must be disposed of or recycled in accordance with Applicable Law. Trash removal from upper floors/work levels requires the use of trash chutes or some other safe means of trash removal; no one is permitted to throw or drop trash/debris from upper floors/levels to the dumpster or ground below.
5. Nails protruding from lumber shall be removed or bent over immediately.
6. Unobstructed passageways for the movement of fire trucks, ambulances, or similar emergency vehicles shall be maintained. A minimum of 15 feet (or as stipulated by the governing fire official) of clear, unobstructed access shall be maintained leading to fire hydrants and Siamese connections.
7. All loose and combustible material shall be secured or removed from Work areas at the end of the work day or as wind and weather conditions dictate.

8. Empty drums, containers, or vessels that formerly contained any Hazardous Materials, including flammable substances, shall be removed from the Project site daily by the responsible Subcontractor and managed in accordance with Applicable Law.
9. In cases where personal trash and non-identifiable debris accumulates on the Project, the Contractor may assign responsibility for the clean up of such debris to a Subcontractor(s) and distribute the costs of such clean up among the Subcontractors on the Project Site.
10. All materials and supplies must be stored in locations that do not block access-ways, and arranged to permit easy cleaning of the area. In areas where equipment might drip oil or cause other damage to floors, whether finished or unfinished, a protective cover of heavy gauge, flame resistant, oil-proof sheeting must be provided between the equipment and the floor surface so that no oil or grease contacts the floor surface.
11. Contractors must arrange for or provide potable water and ensure that adequate sanitary facilities are available for persons working at or visiting the Project Site.

## **SENSITIVE WORK AREAS AND CONDITIONS**

### **Nuisance Conditions**

It is the full responsibility of the Contractor to assess the risk and develop an appropriate plan to control all dust, noise, vibrations, odors, and other factors as may be required to comply with the Contractor's Site Specific Safety Plan, these Health and Safety Guidelines and Applicable Law. In addition, Subcontractors performing activities that require dust control shall prepare a written dust control plan, which dust control plan shall take into account the Yale "Dust Control Measures", available from Yale EH&S, and be included in Subcontractor's Site Specific Safety Plan.

Some common examples of construction activities that often require dust control include but are not necessarily limited to blasting, heavy equipment operation, demolition or deconstruction (including selective demolition), roofing, drywall work, and the indoor use or application of a variety of products and equipment including paints and other chemical products, gas or diesel powered equipment, and impact or powder-actuated tools.

### **Sensitive Work Areas**

Many locations within Yale are sensitive or special areas, including residential dormitories, laboratories, analytical equipment rooms, research animal facilities, clinical patient care areas, and classrooms. As a result, the Contractor shall take additional steps to minimize noise, vibration, dust, odors, or other nuisance conditions associated with the Project in these sensitive or special areas. Although these kinds of impacts are generally most acute for Work occurring in or very close to occupied buildings, they can also pose problems on new construction sites. The Yale Project Manager will communicate special or sensitive conditions about the space, occupants, or neighbors during Project planning and act as a liaison with other Yale departments to establish appropriate levels of protection or control. Depending upon the size, duration, and scope of the Project, as well as the nature of any adjacent sensitive areas, Yale may require that the Contractor participate in a pre-construction community meeting to inform affected community members, including nearby building occupants, of the Work and any needed controls.

## **MOTOR VEHICLES AND MECHANIZED CONSTRUCTION EQUIPMENT**

Contractor and Subcontractors shall inspect motor vehicles and mechanized construction equipment daily before use. Contractor and Subcontractors shall maintain such inspection records on the Project Site and make such records available to the Yale Project Manager upon request. Defective equipment shall be repaired or removed from service immediately. Drivers of motor vehicles must have a valid state driver's license (CDL when applicable) and be instructed to exercise good judgment as well as observe posted speed limits. Operators of construction equipment shall have all necessary training, licenses and certifications. Contractor must maintain documentation of training and copies of the licenses or certifications on the Project Site and make them available to the Yale Project Manager upon request.

Backup/bi-directional alarms shall be white noise-type alarms only and maintained on all mobile equipment and vehicles operating on the Project Site with obstructed rear views. Contractor or Subcontractor shall perform a daily pre-operational inspection to make sure the backup alarm is functional. The backup alarm shall be able to be clearly audible above background noise.

Contractor must adequately mark means of vehicular and equipment ingress and egress to the Project Site and keep the Project Site clear of stored material, debris, and equipment. Where crossing public walks and roadways, pedestrians always have the right-of-way over motorized traffic.

Contractors and Subcontractors must also be aware of nearby building air supply intake vents to avoid the inadvertent entrainment of vehicle exhaust. Where operating equipment must be located close to building air intakes, the Contractor shall review conditions with the Yale Project Manager to develop adequate controls and/or work modifications. Contractor shall develop and implement adequate controls for equipment that will be operated indoors and shall review those controls in advance with the Yale Project Manager.

## **WORK AREA PROTECTION**

Contractor and Subcontractor's responsibilities for general protection of personnel in Work areas shall include, but are not limited to, the following:

1. Contractor and Subcontractors shall only use warning signs, barricades, and flagging to warn personnel of potential or hidden hazards or to advise of intermittent activities that might endanger outside personnel. They are not to be used in lieu of protection that is more effective.
2. Contractor shall provide adequate ventilation or localized exhaust to satisfy applicable OSHA Standards.
3. Subcontractors must notify the Contractor if temporary illumination furnished by others is inadequate, in which case, Contractor must provide adequate, portable lighting.

4. Employees are prohibited from working above or adjacent to vertically protruding reinforcing steel or other impalement hazards that have not been covered or protected to eliminate the hazard of impalement.

### **TRAFFIC CONTROL**

Contractors shall ensure that flaggers have been trained in accordance with Applicable Law. Roadways and walkways may not be blocked or encroached without municipal authority. Where roadways or walkways must be encroached upon or closed due to Work, the Contractor shall install adequate signage and barriers to safely redirect the flow of vehicles, bicycles, and pedestrians and protect them from construction activities. As much as possible, the Contractor shall preserve sightlines for such encroachments, as well as for drop-offs, short-term parking, and other construction activities.

### **VIBRATION PRODUCING ACTIVITIES**

When the use of explosives, blasting, pile-driving, heavy equipment, vibration-producing equipment and similar materials, equipment or methods at the Project Site is necessary for the execution of the Work, the Contractor and Subcontractors will exercise the utmost care and conduct such activities under the supervision of properly qualified personnel.

Contractors or Subcontractors performing blasting operations must develop, implement, and enforce safe work procedures for the blasting operations that addresses the hazards of blasting work and complies with the special requirements and Applicable Laws and regulations governing this work. Prior to initiating any blasting, the blasting Subcontractor must (1) provide the Yale Project Manager, for review and comment, its blasting plan; and (2) coordinate its blasting operations with Yale's Project Manager. The Contractor and Subcontractor must immediately stop work and notify the Yale Project Manager if any unintended consequences of the blasting operations occur.

The Contractor will submit the safe work procedures specifically for vibration producing activities that are required to be included in the Site Specific Safety Plan. Prior to commencing such activities, Subcontractors will conduct a survey of the existing conditions of all property that may be damaged, and provide a copy, in a form acceptable to the Owner, to the Yale Project Manager. At the conclusion of such activities, Subcontractors will survey the same existing conditions for damage resulting from such activities.

The Contractor and any Subcontractors will promptly remedy property damage resulting from the use of such materials, equipment or methods by them or those for whom they are responsible.

### **POWDER-ACTUATED TOOLS**

Each Contractor and/or Subcontractor shall ensure that all workers who operate powder-actuated tools are properly trained and carry valid operator's cards for the tools used. Powder-actuated tools must be stored in a locked container when not in use. Powder-actuated tools must be left unloaded until they are ready for use. Contractors using such tools shall conspicuously post a sign with bold face type reading "POWDER-ACTUATED TOOL IN USE" posted in the area of operation

when the tool is in use. Contractors and Subcontractors shall ensure that their workers inspect powder-actuated tools for obstructions or defects before use.

### **PROTECTION OF THE PUBLIC**

Protection of the public (including Yale University students, faculty, staff, and visitors) is paramount to any construction operation. The Contractor shall include in their Site Specific Safety Plan any and all requirements for protection of property and the public. The entire Project Site must be secured against unauthorized access and contain appropriate warning signage.

The Contractor must coordinate Work occurring in areas occupied by the public with the Yale Project Manager. Whenever permanent sidewalks, ramps or stairs are obstructed by Work, the Contractor shall install temporary sidewalks, ramps, or stairs in the place of the permanent, with guardrails on both sides in accordance with Applicable Law and industry standards. If fences, sheds, walkways, and/or guardrails are impractical, the Contractor may employ barricades that meet the requirements of Applicable Law and industry standards. During the period when any barricade, fence, shed, walkway, or guardrail is removed for the purpose of Work, the Contractor shall place a watchperson at all potential hazard locations.

Precautions to be taken shall include but are not limited to the following:

1. Work shall not be permitted in any area occupied by the public unless specifically permitted by the Contract Documents.
2. The Contractor shall install barriers against falling debris and objects as necessary where spatial set-backs on the Project Site are limited. The Contractor shall also develop proper protections against wind-blown debris and construction-related materials.
3. The Contractor shall post conspicuously appropriate warnings, signs, warning lights, and instructional safety signs where necessary.
4. When it is necessary to maintain public use of work areas involving sidewalks, entrances to buildings, lobbies, corridors, aisles, stairways and vehicular roadways, the Contractor shall protect the public with appropriate guardrails, barricades, temporary fences, overhead protection (including sidewalk shed canopies and catch platforms), temporary partitions, shields, warning and instructional signage, and adequate visibility as required by the Contract Documents.
5. Sidewalks, entrances to buildings, lobbies, corridors, aisles, doors or exits shall be kept clear of obstructions to permit safe entrance and exit of the public at all times. The Contractor shall consult with and obtain approval from Yale's Office of Fire Code Compliance before any emergency egress route is blocked or reduced.
6. A properly trained and equipped flagger shall control the movement of motorized equipment in areas where the public might be endangered.

7. Sidewalk shed canopies, catch platforms and appropriate fences as permitted by the Contract Documents shall be provided when it is necessary to maintain public pedestrian traffic adjacent to the erection, demolition, or structural alteration of outside walls on any structure.
8. Contractor shall provide temporary sidewalks meeting local requirements when a permanent sidewalk is obstructed by the Contractor or Subcontractor's operation.
9. Contractor shall provide illumination from dusk to sunrise for all temporary walkways in both public and construction areas. Illumination provided must meet local requirements.
10. The Contractor shall be responsible for completing a Pre-Job Survey of adjacent structures within 300 feet of any active construction work area unless otherwise directed in the Contract Documents. The Contractor shall also video tape roadways if heavy truck traffic is anticipated in and out of the Project Site in advance of such work.

### **OSHA INSPECTIONS**

It is the Owner's policy to allow OSHA to conduct an inspection of the Project. The Program Safety Monitor and Yale Project Manager must be notified immediately of all OSHA Inspections so that a representative of the Owner has the opportunity, but not the obligation, to have a representative accompany the OSHA Compliance Officer during the inspection.

The Contractor will accompany the OSHA Compliance Officer at all times during the inspection and arrange for the meetings between OSHA, Subcontractors, and organized labor representatives. Subcontractors will immediately inform the Contractor of the issuance of any OSHA citations and provide a copy to the Contractor. Contractor shall immediately inform the Program Safety Monitor and the Yale Project Manager of the issuance of any OSHA Citations to either Contractor or any Subcontractor. Posting of any citations is the responsibility of each employer.

### **TEMPORARY BARRICADES**

When temporary barricading is required, Contractor will install the following types of barricades:

1. Yellow "Caution" tape -- to limit the passage of workers through the barricaded area. This barricading must only be used to protect workers from hazards that the Contractor has determined are not severe or do not pose the potential for severe injury or death.
2. Red "Danger" tape -- to prohibit the passage of unauthorized workers through the barricaded area. This barricading must be used to protect workers from hazards that the Contractor has determined have the potential to cause serious injury or death. Danger tape is not to be used if the hazards cannot be eliminated or removed during a single work shift.

3. Contractors will install rigid barricades when protection is required beyond a work shift or longer. Rigid barricades will consist of standard guardrail, temporary chain-link fencing, or concrete barriers.
4. Contractor will use radiation "Danger" tape to identify x-raying operations and to warn of a radiation hazard in the area.

#### **ROTATING AND STATIONARY LEVEL USE**

At a minimum, the use and inspection of laser levels, both rotating and stationary, shall comply with 29 CFR Part 1926.54, ANSI Z136.1 (current), and the manufacturers' recommendations and requirements. Contractor or Subcontractor must keep the Owner's manual for such equipment with it at all times, and make it available upon request. Contractors must ensure that each laser user has been trained and certified for the class of laser he is using. Users must maintain proof of qualification on their persons, and make it available upon request.

Appropriate laser warning placards shall be conspicuously posted on the equipment and laser warning signs shall be posted in the area where the beam reaches/affects.

Where a certain model or class laser requires the use of a specific eye protection for protection against direct or reflected laser light, this operation shall be conducted only in an area where access is restricted to only the user(s), or shall be done off-hours.

## SECTION 6 FALL PROTECTION

**The Owner requires 100% Fall Protection for all trades working on all Projects. 100% Fall Protection is defined as continuous fall protection (e.g. guardrails, hole covers, personal fall arrest systems, safety nets) at every location with a falls from heights exposure 6 feet or greater to a lower level or surface. These procedures require pre-planning before work-at-height occurs. This policy will be strictly enforced and there will be no second chances under this policy. Employees observed in violation of this policy will be immediately removed from the Project and shall not be permitted to return to any Owner Projects.**

The Owner requires, and Contractor is required to provide or ensure continuous 100% Fall Protection whenever workers are exposed to fall hazards of six feet or more above lower levels. This includes but is not limited to open floors, roofs, skylights, pits, and open tanks. Fall protection is also required when there is a potential for falling into/onto dangerous machinery, regardless of distance/height.

The Contractor and Subcontractors will take all practical measures to eliminate, prevent, and control fall hazards for their employees, vendors, and third party individuals. All work will be planned with the intent to eliminate identified fall hazards. The types of work that are likely to involve fall hazards include but are not limited to:

1. Structural steel erection (bolt-up and connectors)
2. Rebar assembly
3. Concrete forming
4. Precast erection
5. Roofing
6. Masonry
7. Carpentry
8. Scaffold erection/disassembly
9. Electrical
10. Mechanical

Contractors must also ensure that all workers on the Project have been trained to recognize the hazards of falling and in the procedures to be followed in order to minimize these hazards. Contractor and Subcontractors will maintain the training records for their respective Employees

in their offices on the Project and make them available for review by the Project Safety Manager.

On properly constructed scaffolds, elevated decks, and elevated platforms that have perimeter guardrail systems consisting of a top and mid rail, workers are not required to utilize personal fall arrest. If the perimeter guardrail system must be removed, for any length of time regardless of duration, Contractors and Subcontractors will ensure that workers wear personal fall arrest systems.

### **PERSONAL FALL ARREST SYSTEMS**

A Personal Fall Arrest System will consist of a full-body harness, double lanyard with shock absorbing device, or retractable lifeline, locking snap hook, and properly rated anchorage points.

Worker shall not tie a lanyard back to itself unless the lanyard is specifically designed to tie back to itself.

Contractors and Subcontractors will not allow workers to use guardrail systems as anchorage points for personal fall arrest systems.

Subcontractors will submit all engineering documentation on horizontal lifelines to the Contractor for review prior to use. All horizontal lifelines will be designed, installed, and used under the direct supervision of a Qualified Person.

### **SAFE DISTANCE AND WARNING LINES**

There is no safe distance from any unprotected side or edge, leading edge, or shaft that would exempt a worker from fall protection (i.e. distance is not fall protection).

Warning lines placed on roofs must meet OSHA's requirements contained within 29 CFR Part 1926 – Subpart M. **Safety Monitors shall not be used.** Employees going outside the warning line near an unprotected side or edge must utilize personal fall arrest or fall restraint.

### **GUARDRAIL SYSTEMS**

Guardrail construction shall comply, at a minimum, with the requirements listed in 29 CFR Part 1926 Subpart M, including Appendix B.

The Contractor shall install guardrails prior to, if possible, or immediately following construction of the walking or working surface. No Employees, other than those directly involved in the construction of the walking or working surface, shall be allowed to access the walking/working surface until the guardrail systems have been installed.

Where wire rope and steel stanchions are used for guardrail construction, the wire rope shall be at least 3/8 inch galvanized aircraft cable (minimum). Turnbuckles shall be installed at all turns in the direction of the guardrail. At least three (3) forged steel wire rope clips (Crosby or

equal) shall be installed on all eyelets. The use of lap joints is prohibited. Selection, installation, and maintenance of rigging hardware shall be in accordance with current ASME standards.

### **GUARDRAIL DISRUPTION PERMIT**

If the Contractor or any Subcontractor determines that it is necessary to remove the guardrail system, floor opening covers, or any other fall protection related item, the Contractor or the Subcontractor must request and obtain a Guardrail Disruption Permit from the Project Safety Manager. Requests must be submitted at least 24 hours prior to the proposed disruption. See Appendix J for the Guardrail Disruption Permit form.

Any Contractor or Subcontractor that must remove a guardrail, floor opening covers, or any other safety device in the course its work will be responsible for immediately replacing the protective system in strict conformance with applicable requirements (e.g. tension, height, etc.). When no other practical means of fall protection can be used, workers must use their personal fall protection system connected to a suitable anchorage point.

### **FLOOR HOLES**

Contractors and Subcontractors must properly guard or cover floor openings or gaps two inches or greater in their least dimension. Floor covers must be secured to the floor to prevent accidental displacement. The floor covers must be properly marked with a Danger sign stating, "HOLE" or "COVER".

### **EXCAVATIONS**

Wells, pits, shafts, or similar excavations six (6) feet or greater in depth require fall protection, in the form of guardrails, around all openings. Guardrails shall be installed as the well, pit, or shaft, progresses. Other requirements associated with excavations can be found in Section 11.

### **FALLING OBJECTS**

Contractors and Subcontractors must protect all workers and others on the Project Site from falling objects.

### **DEVIATIONS**

In the event Contractor or Subcontractor determines that a deviation from this fall protection procedure is required, the Contractor or Subcontractor must request in writing and discuss the proposed changes with the Yale Project Manager.

### **MATERIAL AND EQUIPMENT LOADING CORRALS**

During construction and until the building is enclosed, the Contractor must equip each floor, unless serviced by an elevator hoist, with corrals where material and equipment will be loaded onto the floors. These corrals shall be constructed in accordance with the requirements of OSHA 1926 Subpart M and equipped with removable guardrails and personal fall arrest anchorages that provide fall protection for both personnel assisting with the loading/unloading and any personnel on that floor at all times.

## **ELEVATORS AND HOISTWAYS**

No one is allowed to ride on top of the elevator or personnel hoist care except during erection, dismantling, and inspection operations. The Contractor or Subcontractor shall install a guardrail on the top of the cab to protect Employees from falling or ensure that Employees utilize a Personal Fall Arrest System (PFAS) if the anchor point meets the requirements of 29 CFR Part 1926.502(d).

For permanent elevator construction, the Contractor will ensure that the false car or temporary platform is enclosed on all sides by guardrails and toeboards, in compliance with 29 CFR Part 1926.502, and that a removable front rail is provided on the car to provide access onto and off of the car.

For permanent elevator construction, Contractors will install or ensure the installation of a falling object protection system, consisting of a minimum of 3/4" plywood and 2" framing, above the car, extending at least to the perimeter of the car floor.

Prior to commencement of permanent elevator construction, Contractor shall protect and enclose, or ensure the protection and enclosure, of elevator shaft openings and entryways from the floor to the top of the opening/entryway using fire-retardant plywood doors and framing, or a combination of removable guardrails and fire-retardant safety netting (full height). Contractor shall consult with the elevator subcontractor, and install the protections so as not to interfere with the permanent elevator door installation. This protection cannot be removed until completion of the permanent elevator doors and jambs.

All access doors and gates into elevator shafts shall swing open away from the shaft, and shall be operable from both the inside and the outside of the shaft, but may be constructed so that the contracted elevator constructor can block the door (on the inside of the shaft) from being opened.

## SECTION 7 STEEL ERECTION

**The Owner requires 100% Fall Protection for all structural steel erection work at 6 feet or greater above a lower surface.**

### GENERAL REQUIREMENTS

1. Owner requires and Contractor shall provide or ensure that all Employees involved with structural steel erection on this Project Site are provided with and use fall protection when working at heights of six (6) feet or greater. When appropriate, such as when workers are performing welding or burning, Contractor shall provide or ensure employees fire resistant fall protection equipment designed for welding/burning applications.
2. The steel erector shall not allow the use of rigging equipment for fall protection. Unless specifically designed as fall protection anchorage devices, wire rope chokers otherwise used for rigging shall not be used for fall protection anchorages.
3. There is no safe distance to an unprotected side or edge that renders fall protection unnecessary.
4. Horizontal lifeline systems either must be a manufactured system or designed by a Professional Engineer registered in Connecticut. Horizontal lifeline design specifications must be submitted to the Contractor for review and acceptance prior to being installed on the Project Site.
5. The Contractor or Subcontractor must use tag lines for controlling loads during hoisting.
6. No multiple lifts will be permitted on this Project without authorization from the Yale Project Manager. The Contractor must submit a written request to the Yale Project Manager for authorization which must include the justification for and procedures to be followed to perform multiple lifts.
7. The Contractor and Subcontractors must plan work that no load will be swung over the public. The Contractor and all Subcontractors must take any and all steps necessary to protect workers below from falling objects.
8. The steel erector must establish Controlled Decking Zones in accordance with Appendix D to 29 CFR Part 1926 Subpart R, except that the control line must be set at least fifteen (15) feet from the leading edge. All employees working between the control line and the leading edge must be protected from falling by means of a personal fall arrest or fall restraint system. Danger signs indicating that fall protection is required shall be placed and maintained along the entire length of the control line at intervals no less than ten (10) feet.

9. The Contractor and Subcontractors shall secure all tools and equipment used during steel erection against accidental displacement or falling. Canvas bolt bags shall be used for storing and carrying bolts, drift pins, etc. Bolt bags shall be adequately secured to prevent accidental displacement while aloft.
10. The steel erector shall make sure that all of their employees are aware of Project Site safety requirements that exceed the safety requirements in 29 CFR Part 1926 – Subpart R.

#### **CUSTODY OF FALL PROTECTION**

1. Prior to the start of steel erection, the Contractor and the steel erector Subcontractor shall agree, and document in writing, which entity is responsible for installing fall protection on the decks.
2. Contractor shall not permit other trades access to the deck to perform any Work until Contractor or steel erector Subcontractor has installed the required fall protection.
3. Fall protection provided by the steel erection Subcontractor shall remain in an area to be used by other trades after the steel erection activity has been completed only if the Contractor has directed the steel erector to leave the fall protection in place and has inspected and accepted control and responsibility of the fall protection prior to authorizing persons other than the steel erection Subcontractor to work in the area.
4. All wire rope fall protection must meet OSHA Regulations. Contractor shall verify height of the fall protection in relation to the finished floor. In addition, wire rope shall be secured with at least three wire rope clamps. There shall be no overlapping joining of wire rope (i.e. eyelets required), and turnbuckles must be put in place so the wire rope can be kept tight once the steel erector turns the fall protection over to the Contractor.
5. The Contractor will assign responsibility for the maintenance of exterior and interior wire rope guardrail systems to an appropriate Subcontractor or to their internal staff.
6. Temporary loading bays must be installed at each elevated floor level unless loading/unloading is performed by an elevator hoist. These shall be equipped with a hook and turnbuckle system to allow for removal and proper replacement as needed for loading.

## SECTION 8 CONCRETE AND MASONRY

### CONCRETE

Each Subcontractor performing concrete work shall ensure that their Site Specific Safety Plan addresses the hazards presented by such work and that their operations meet applicable OSHA standards. They shall also ensure that all equipment and materials used in concrete work on the Project meet applicable ANSI standards.

With regard to precast/prestressed concrete materials and operations, the following requirements apply:

1. The Yale Project Manager, Contractor, and all relevant Subcontractors (such as fabricators or erectors) must meet prior to beginning any concrete work to discuss and review topics relevant to work coordination and safe installation of precast/prestressed concrete. Meeting topics must, at a minimum, include staging areas and delivery sequences, work and erection sequences, crane and lift details, anchor bolt certification, structural plans and details, and temporary stabilization and bracing.
2. As part of the pre-work meeting, the Contractor must provide the Yale Project Manager with a written erection plan prepared by a Professional Engineer registered in Connecticut that includes complete details of all phases of erection. This plan must, at a minimum, include staging areas, delivery sequences, crane lift schemes, erection sequences, temporary stabilization and bracing, fall protection, employee training, wind loading, high wind work suspension and each parties' responsibilities with respect to the installation of precast/prestressed concrete.
3. The registered Professional Engineer mentioned above must approve any field modifications to the approved erection plan, and amend the plan to include such changes. Copies of approved field modifications must be available at the Project Site and sent to the Yale Project Manager.
4. Adjustment of a precast member, after initial placement, which requires the lifting of the member in any manner, shall not occur unless appropriate safety precautions are taken, including, but not limited to, using wire rope safety tiebacks or the member is attached to a crane load line.
5. Chain "come-alongs" shall only be permitted on the Project Site if proof of current, valid inspections and certifications applicable to such equipment can be furnished.

### MASONRY

Each Subcontractor performing masonry work must ensure that their Site Specific Safety Plan addresses the hazards presented by such work and ensure that all operations, equipment, and materials used in their masonry work meet applicable ANSI and OSHA standards. In addition, the following requirements apply:

1. The Contractor or masonry Subcontractor must appoint a Qualified Person to prepare a Site Specific Safety Plan for the Work. The Site Specific Safety Plan must be reviewed by the Contractor with the Yale Project Manager prior to the start of Work and a copy of the plan must be maintained at the Project Site in the Subcontractor's office. The Qualified Person that prepared the Site Specific Safety Plan must review and approve all changes to the Site Specific Safety Plan. All changes to the Site Specific Safety Plan must be in writing and must be reviewed by the Contractor. The Contractor shall be responsible for submitting Site Specific Safety Plan changes to the Yale Project Manager and must discuss these changes with the Yale Project Manager as they are received.
2. Masonry work may only be performed by appropriately trained crafts or trades persons who have reviewed the hazard analysis and work plans.
3. The masonry Subcontractor must provide a design to the Yale Project Manager prepared by a registered Professional Engineer that meets the requirements of 29 CFR 1926.706 (b) and the Standard Practice for Bracing Masonry Walls under Construction, as developed by the Council for Masonry Wall Bracing.
4. Masonry Subcontractor must use appropriate equipment and procedures to protect against falls of persons, tools, and equipment, including without limitation and barriers provided below the work area.
5. The Contractor must regularly evaluate weather conditions to protect the Project Site from damage and workers and the public from injury. Special attention must be given to developing adequate means and methods to protect against damage or injury caused by wind-blown debris and construction materials and to ensure the safety of masonry structures during demolition or construction.

## SECTION 9 LADDER AND STAIRWAY SAFETY REQUIREMENTS

The Project Safety Manager and Subcontractor Safety Representatives are responsible for all facets of Project safety requirements and have full authority to make necessary decisions to ensure that ladders and stairways are installed and used properly by employees.

### GENERAL REQUIREMENTS

1. All ladders and stairways used on this Project will meet the requirements established in OSHA 29 CFR Part 1926 Subpart X.
2. Stairways having four or more risers or rising 30 inches or more shall have a stair rail system 36 inches high on each unprotected side of the stairs.
3. Metal pan stairs shall not be used unless the pans are filled to prevent a tripping hazard.
4. Ladders, stairs, or ramps will be provided where there is a change in elevation of 19 inches or greater.
5. Workers must be trained on the safe use of ladders.
6. Ladders are required to ascend or descend truck beds and/or trailers.
7. Ladders will extend past the bearing point of the upper landing surface no less than 36 inches.
8. Ladder access points and landings shall remain clear of all obstacles and obstructions to allow easy access on and off the ladder.
9. Each Contractor or Subcontractor is required to inspect its own ladders daily prior to use. Ladders with broken or bent rungs, steps, or side rails will be immediately destroyed and removed from the Project.
10. When ladders are used to access upper levels, they must be secured at the base and at the top by tying to prevent displacement.
11. Aluminum ladders are prohibited.
12. All ladders will be minimum extra-heavy-duty (Type 1A) with a minimum capacity rating of 300 lbs.

### **STEPLADDERS (A-FRAME LADDERS)**

Stepladders will not be used as straight ladders. Stepladders will only be used with the spreaders fully extended and locked in place.

Contractor and Subcontractors shall ensure that workers will not stand on the top or top step of a stepladder, and that workers will not work with their knees are above the top of the stepladder.

### **STRAIGHT/EXTENSION LADDERS**

Ladders will be set up so the horizontal distance at the bottom is not less than 1/4 of the vertical distance to the bearing point.

Contractor and Subcontractors shall ensure that workers will not stand on the top three rungs of a ladder, and that no workers will work with their knees above the top of the ladder.

All straight ladders will have non-skid feet at the base.

### **JOB-MADE LADDERS**

Job-made ladders shall be constructed for a particular intended use, and used only for that use.

Job-made ladders will be constructed and maintained in accordance with OSHA and ANSI standards.

If a ladder is to provide the only means of access or exit from a working area for 25 or more employees, or simultaneous two-way traffic is expected, a double-cleat ladder shall be installed.

### **LADDER OPENINGS**

Guardrail openings at points of ladder access must be equipped with a gate or an offset opening so that employees cannot walk directly into the openings.

All ladder openings shall be equipped with a rope, secured at the top of the ladder or ladder opening, to be used to manually hoist tools and materials up the ladder. The rope shall be capable of supporting at least twice the maximum anticipated load that could be hoisted.

Ladders constructed and placed for use by more than one Contactor or Subcontractor (i.e. general-use access ladders) must allow the user to walk through the rails at the top of the ladder.

## SECTION 10 SCAFFOLDING SAFETY REQUIREMENTS

The scaffolding requirements contained within this program are general in nature. Contractor or any Subcontractor that erects, uses, maintains or dismantles scaffolding used on this Project must do so in accordance with requirements of OSHA 1926 Subpart L.

**100% Fall Protection is required for all persons erecting, using, and dismantling scaffolding when working six feet or more above lower levels. This requirement may be met using guardrails meeting the requirements set forth in OSHA 1926 Subpart L. If situations or conditions occur that prevent Contractor or Subcontractor from achieving fall protection through the use of guardrails, the Contractor or Subcontractor must provide adequate alternative means of fall protection for its personnel and document those means in a written plan. All fall protection anchorages must meet OSHA requirements. To the extent that employees will tie-off to partially erected or erected scaffolding, the Subcontractor shall supply certification to the Contractor that the scaffolding is capable of supporting the OSHA anchorage point requirements for each employee.**

### GENERAL REQUIREMENTS

1. Each Subcontractor erecting or dismantling scaffolds must designate a scaffolding Competent Person to direct and supervise the erection and dismantling of all scaffolding on this Project. The Competent Person will sign and attach one of the following color-coded scaffold tags to each scaffold:
  - a. Green Tag: Scaffolding complete and ready for use
  - b. Red Tag: Scaffolding incomplete and not for use
  - c. Yellow Tag: Scaffolding usable but personal fall protection required

The Competent Person must inspect the Scaffolding daily prior to use by any workers.

2. Workers required to work on scaffolding must receive training from their Employer in accordance with OSHA 1926.454. Employers must maintain records of scaffolding training and make such records available for review by the Project Safety Manager.

Such training must include but not be limited to:

- a. Nature of any known hazards, such as electrical, fall or falling objects
- b. Correct method of erecting, maintaining, and disassembling fall protection systems
- c. Falling object protection
- d. Proper handling of equipment or material on the scaffold

- e. Maximum load-carrying capacity of the scaffold
  - f. Any other pertinent requirements about the scaffold
3. During erection and dismantling of scaffolding, if Contractor or the Subcontractor determine that deviation from the fall protection procedure is required, they must request approval from the Project Safety Manager.
  4. Prior to erection, the Subcontractor will inspect all scaffolding components for defects and any damaged components will not be used.
  5. Scaffolding must be erected on a firm foundation/footing. Scaffold poles, legs, posts, frames and uprights will bear on base plates and mud sills or other adequate firm foundation. Scaffold legs, poles, posts, frames and uprights will be pinned or locked to prevent uplift.
  6. No scaffold will be enclosed unless a Professional Engineer registered in Connecticut designed the enclosure.
  7. Scaffold platforms will be constructed with no space greater than one inch between the platform components. The space between the platform components and the scaffold uprights will not exceed one inch. In special circumstances such as building a scaffold around a pipe, the space opening between the scaffold and the object/structure cannot exceed 9-1/2 inches.
  8. Scaffold planks shall extend past the horizontal support a minimum of six inches (unless cleated or restrained) and not more than 12 inches. Scaffold planks will not be overlapped unless:
    - a. Overlap occurs at a horizontal support, and
    - b. The minimum planking overlap is 12 inches
  9. Only scaffolding-grade planking will be used for scaffold planks.
  10. Ladders or stairs must be used to access any scaffold platform that is more than two feet above the point of access.
  11. End frames of tubular welded scaffold can be used as a ladder if the following criteria are met:
    - a. Specifically designed and constructed as ladder rungs
    - b. Rung length of at least eight inches

- c. Spacing between rungs not to exceed 16-3/4 inches
- 12. No worker will climb up or down a scaffold using the cross bracing.
- 13. Any Employee working from an incomplete scaffold six feet or more in height without standard guardrails will wear personal fall protection and be tied off to a fixed anchorage point.
- 14. Wheels on mobile scaffolding will be locked in place when workers are working from it.
- 15. A Competent Person will evaluate suspended scaffolding and anchorages before use, and its suspension lines daily.
- 16. Employees working from suspended scaffolding will wear a full body harness attached to an independent vertical lifeline.
- 17. Scaffold platforms **six feet or more above lower levels** will be equipped with guardrail systems.
- 18. If guardrails cannot be used on a scaffold, workers will wear a full body harness and be appropriately tied-off to a suitable anchorage point.
- 19. Employees working from a scaffold will be protected from falling objects such as hand tools, debris, and other small objects from above.
- 20. Employees working below scaffolding will also be protected from falling objects. Scaffold will be equipped with toe boards, screening, debris netting, catch platforms, or a canopy structure as appropriate to best eliminate the falling object hazard.
- 21. When welding is required from swing stage scaffolding, the scaffold will be grounded and suspension ropes protected.
- 22. Interior or dry wall scaffolding (Perry or Baker type scaffolding) greater than one section high will be equipped with outriggers. All other built-up scaffolding will follow the four-to-one rule.
- 23. The use of Ladder Jack-type scaffolds is prohibited on all Yale Projects.

### **AERIAL LIFTS**

The Owner requires that all personnel working from aerial lifts be provided with fall protection (guardrail or personal fall protection equipment) at all times while in the basket/platform of the lift. Personnel working from aerial lifts must follow manufacturer's instructions in regard to fall protection. The use of aerial lifts must comply with 29 CFR 1926.453 and manufacturer operation and maintenance specifications.

## SECTION 11 TRENCHING/EXCAVATION REQUIREMENTS

### GENERAL REQUIREMENTS

Prior to any disruption of ground, excavation, or trenching on this Project Site, the following must occur:

1. Before performing any disruption of ground, excavation, or trenching, the Contractor or Subcontractor performing the work must coordinate its excavation and trenching operations with Yale's Project Manager.
2. To determine whether any under-ground installations are present, the Subcontractor performing the work shall contact both the State Call Before You Dig (CBYD) program, <http://www.cbyd.com/>, as well as the Yale Central Control Center. If underground utilities are identified, Subcontractor will notify the Contractor.
3. The Contractor shall notify the Subcontractor of the presence of hazardous contaminants in the soils, if any are present.
4. No groundbreaking, excavation, or trenching work will be performed without the presence of a Competent Person identified by the Subcontractor performing the work.
5. The Competent Person will analyze the soil of the work area to determine the condition and type of soil to ascertain proper sloping or shoring requirements.
6. A Professional Engineer registered in Connecticut must design all protective systems for excavations 20 feet or more in depth.

During excavation or trenching operations on this Project, the following requirements will be followed:

1. The Contractor or Subcontractor will barricade all trenches and excavations to keep persons from accidentally walking or falling into them. If an excavation is to remain open longer than one work shift, barriers sufficient to protect people from falling into the open excavation or trench must be erected and maintained for the entire duration that the excavation remains open. All trenches and excavations six feet or deeper will have as a minimum rigid barricades, signage posted at the work area, and appropriate fall protection, if needed.
2. Trenches or excavations will be sloped or benched in accordance with applicable OSHA or other standards, and as determined by the Competent Person. Maximum allowable slopes for excavations less than 20' based on soil type and angle to the horizontal are as follows:

<u>Soil Type</u>	<u>Height/Depth Ratio</u>
Stable Rock	Vertical
Type A	¾:1
Type B	1:1
Type C	1-1/2:1

NOTE: All soil at Yale’s New Haven Campus should be considered “previously disturbed.”

3. Supporting systems (i.e., shoring, piling, etc.) will be utilized for all trenches and excavations where sloping or benching cannot be performed.
4. Spoil piles and all other material will be placed a minimum of two feet from the edges of all trenches or excavations.
5. When underground utilities are suspected, they will be located first by hand digging.
6. The Contractor or Subcontractor must immediately stop work and notify the Yale Project Manager if any evidence of an underground storage tank, piping, other underground equipment, components, structures, or staining from possible spills or leaks is observed during excavation or trenching work.
7. Adequate access must be maintained at all times during trenching or excavating activities. When ladders are used, they will be placed such that no worker travels more than 25 feet lateral in any direction.
8. The Competent Person will inspect excavations and trenches at the beginning of each day and when conditions change.
9. Excavations in Type C soil will not be benched.
10. Excavations and trenches four feet or greater in depth will be evaluated for confined space hazards.

## **SECTION 12**

### **CONFINED SPACE ENTRY PROCEDURES**

Whenever personnel must enter or perform work in a confined space, strict adherence to the procedures and requirements set forth in 29 CFR 1926 Subpart AA is required at a minimum. The Owner will identify and label known confined spaces. The responsibility for recognition and advance notification of work in a confined space rests with the Contractor or Subcontractor performing the work. The Contractor must be notified prior to any confined space entry and must evaluate the situation, develop safe work plans, and issue an entry permit as necessary.

The confined space entry permit must be posted at the entrance to the confined area. The Contractor or Subcontractor performing the work must be responsible for providing equipment and special instructions for workers, including any needed ventilating units, respirators, harnesses, life lines, and the like and for conformance with all applicable OSHA standards.

Any Contractor or Subcontractor performing confined space entry shall have a Competent Person present in the work area overseeing the confined space entry. The Competent Person must be present to continually monitor the status of the space in question. In addition, the Contractor or Subcontractor performing confined space entry shall submit an exposure-specific Confined Space Entry Procedure in writing as part of their Site Specific Safety Plan. The presence or creation of confined spaces on the project must be discussed at the Pre-Construction Safety Meeting.

#### **GENERAL REQUIREMENTS**

1. Consideration must be given to major recognized hazards.
2. All activities involving work in confined spaces shall be reviewed with the Project Safety Manager prior to their commencement.
3. The responsibility for the recognition and avoidance of all hazards and provision of all necessary safety equipment is assigned to the Subcontractor performing the work.
4. All employees who must work on, in or enter a confined space must receive special hazard training by their employers. At a minimum, the employer must address the following: personal protective equipment requirements and their proper use, instruction as to the specific hazard(s) of the work to be performed, means and methods of access and egress, and rescue and emergency procedures.
5. The Contractor or Subcontractor shall review emergency rescue procedures with the employees involved with the confined space entry prior to any confined space entry. A "buddy system" shall be utilized whenever personnel enter a confined space. This requires that a properly trained employee of the Contractor or Subcontractor performing the work remain outside of the confined space, maintain constant visual or verbal contact with the employee(s) inside the confined space, and attend the lifeline of any employee inside the space. This employee may occasionally pass tools but must not

have any other job that would require him/her to take his/her attention from the employee(s) working in the confined space. Under no circumstances, however, may the employee break the plane of confinement. The employee may not expose himself to the confined space hazard at any time and must never leave his/her post unless properly relieved.

6. The Contractor or Subcontractor performing the Work shall be responsible for ensuring the availability of rescue services in accordance with Applicable Law, including without limitation, OSHA standards.

If a change to conditions within or surrounding the confined space is noted (such as spills, leakage, or the introduction of solvents, toxic or flammable materials), Work in the confined space shall cease at once. All equipment in use shall be shut off and all personnel shall exit the confined space. Re-entry is prohibited until a thorough survey of the area and the confined space is conducted by the Contractor and Subcontractor.

## **SECTION 13 ELECTRICAL SAFETY REQUIREMENTS**

All temporary electrical installations on this Project shall be in accordance with the latest version of the National Electrical Code and Contract Documents. The general guidelines below apply to all Contractor and Subcontractor personnel on the Project.

Contractor and Subcontractor personnel performing electrical work must comply with 29 CFR 1926 Subpart K and NFPA 70E, Electrical Safe Work Practices. No Subcontractor may perform Work on any energized electrical circuit, buss bars, equipment, or panels unless they have submitted a written work plan developed in accordance with NFPA 70E to the Contractor for review and approval prior to performance of work.

### **GROUND FAULT CIRCUIT INTERRUPTERS (GFCI)**

All cord sets and cord-plug electrical equipment, tools, or appliances that are 120-volts will be connected to a ground fault circuit interrupter (GFCI). No cord set or cord-plug electrical equipment, tool, or appliance will be plugged directly into any permanent building or structural electrical system not equipped with a GFCI. Exemptions are office equipment and appliances in Project Site offices.

### **DOUBLE-INSULATED TOOLS**

Double-insulated tools are allowed on the Project only if the case bears the Underwriter Laboratories "double-insulated" label. Tools with that label removed, painted over, or otherwise not legible are not allowed on the Project.

### **INSPECTION PROGRAM**

Contractor will establish an electrical equipment inspection program to inspect all cord sets, portable electrical equipment, tools, and appliances as described below and before first use, before returned to service following any repair, and after an incident that could have caused damage.

### **DAILY INSPECTION**

Each cord set, attachment cap, plug, and receptacle or cord sets, portable electrical equipment, tools or appliances connected by a cord and plug, will be visually inspected daily by workers for external damage, such as deformed or missing ground pins, insulation damage, frayed wires, or indications of possible internal damage. Exceptions include cord sets and receptacles that are fixed to the permanent electrical system and are not exposed to damage.

Any electrical equipment, tool, appliance, or cord set that is damaged or defective will be immediately removed from service and tagged out as defective equipment for repair. Only qualified electricians will be permitted to repair tagged electrical items.

### **GENERAL ELECTRICAL RULES**

1. All cord sets will be elevated at least seven feet (7') above the finished floor or work platform when practical.

2. All temporary cords will be three-wire types rated for hard or extra hard use. No flat extension cords are permitted.
3. Cord sets and electrical tools that have the grounding prong missing must be removed immediately from service and tagged for repair or removed from the Project Site.
4. Wire, nails, or other conductive material will not be used to hang or attach cord sets or welding leads. Cord sets that cross roadways will be protected from damage by vehicle and equipment traffic by devices such as hose bridges.
5. Portable electric lighting used in moist or other hazardous locations such as drums, tanks, vessels, bins, bunkers, etc., must operate at 12 volts or less, and meet applicable standards to qualify as non-explosive.
6. Shop lighting and portable task lighting must have covers and guards installed.
7. Light bulbs on stringers must be protected from accidental contact or breakage.
8. Necessary steps must be taken to prevent unauthorized or unqualified workers access to energized electrical parts or equipment.

## SECTION 14 LOCKOUT/TAGOUT CLEARANCE PROCEDURES

**Each lockout/tagout situation is unique. Prior to any lockout/tagout taking place on the Project Site, a meeting between the Contractor, Subcontractor, and the Yale Project Manager will take place, and specific procedures and responsibilities will be confirmed in writing.**

### **LOCKOUT/TAGOUT**

The Contractor must determine in advance if any equipment or electrical circuits on the Project Site that is deenergized could pose a safety risk to workers or occupants of the area as a result of unexpected energization. Electrical shutdowns with the potential to affect adjacent occupants, adjacent buildings, or the Yale community must be reviewed and coordinated in advance with the Yale Project Manager in order to make appropriate notifications and precautions.

Each Subcontractor performing work on energized systems must have a written Lockout/Tagout Program to ensure equipment is isolated from energy sources and that workers are not exposed to hazards from moving machinery or equipment and those hazards posed by an energized source (pneumatic, steam, hydraulic, chemical, etc.). The Contractor is responsible for ensuring coordination of all Lockout/Tagout plans with the Yale Project Manager and Subcontractors must submit their Lockout/Tagout plan to the Contractor.

A Lockout/Tagout checklist shall be utilized as a planning and management tool prior to the commencement of any work that requires the isolation of hazardous energy.

Safety locks and tags, as appropriate, will be applied to circuits, switches, valves, isolating devices and any other energy sources to ensure that equipment, machinery, or processes that might be functioning, charged, or could otherwise be operable are rendered non-operational or de-energized. No person will remove another worker's safety lock or attempt to energize any piece of equipment, machinery, or process that has been locked out and tagged.

If a worker fails to remove his/her safety lock at the completion of the job or assigned duties, his/her immediate supervisor will immediately notify the Project Safety Manager. Every attempt must be made to contact the worker and require his/her return to the Project to remove the lock. If the worker is unwilling or cannot return to the Project, it must be verified that he is not physically at the Project before the safety lock can be removed. All safety lock removal incidents will be investigated following the incident investigation process and disciplinary action will be taken as appropriate.

## SECTION 15 CRANES AND RIGGING

### MOBILE CRANES

Cranes will be operated in strict accordance with OSHA 29 CFR 1926 Subpart CC and applicable ASME requirements.

Cranes and cable (wire rope) rigged hoisting equipment brought onto the Project Site shall have undergone annual inspection by third party recognized by the Department of Labor/Occupational Safety and Health Administration within the last 12 months. If a year or more has elapsed since the last annual inspection, or if the crane or its associated rigging has sustained any damage, the crane and its associated rigging must be fully re-inspected and proof of the inspection and its results furnished to the Contractor and Yale Project Manager. A copy of this annual certification must be submitted to the Contractor on or before the crane or hoisting equipment's arrival on the Project Site.

All crane operators must have in their possession a valid Connecticut Crane Operator's license appropriate for the crane they intend to operate. The Contractor shall maintain a copy of each such license on file in the field office, which shall be available upon request.

Crane operators must perform shift and monthly documented crane safety inspections. Crane operators are to provide copies of the completed daily shift inspection reports to their supervisor at the end of each shift and make these available for review by the Project Safety Manager. All repairs and adjustments noted on inspections must be corrected prior to equipment use. This applies to all power-operated equipment used in construction for hoisting, lowering, and/or horizontally moving suspended loads. All cranes (except those used for pile driving and compaction operations) will be equipped with anti-two block devices on both the main and auxiliary hoist lines.

Use of cranes to hoist personnel will not be allowed on this Project without prior approval of the Contractor and the Yale Project Manager.

Subcontractor supervision will review the safe operations of the crane with each operator.

The crane manufacturer's operating manual, instructions, and load charts for a specific crane will be used to determine the safe operation of that crane.

The following minimum guidelines apply:

1. The ground where the crane will be set up must be solid and able to support the weight of the loaded crane. Determine if underground utilities exist near where the crane will be set up.
2. The crane must be level 360° and maintained level during operation.

3. Extend outriggers fully or set per the manufacturer's recommendation for a particular lift configuration. Weight must be off the tires and the tires cleared from resting on the ground.
4. Cribbing or mats under outrigger pads must be of sufficient size and properly placed to ensure adequate soil bearing.
5. A designated, qualified person will determine the load weight. Note: OEM drawings listing the equipment or machinery assemblies are not always accurate. Refer to the shipping weight or have the equipment or machinery assembly weighed. Calculate all structural loads and determine the center of gravity. Cranes equipped with systems that provide weight of a load as it is lifted will not be used to weigh equipment or machinery assemblies.
6. Determine the load radius using a tape measure.
7. Crane operators are to know the weight of the load they are lifting.

#### **TOWER CRANES**

1. Tower crane(s) will be equipped with a substantial and durable load chart visible at all times in both the operator cab and/or on the remote control console.
2. No employee will work or travel on any part of the crane boom without a proper personal fall arrest system connected to a suitable anchorage. No worker will be allowed to climb the tower or access the boom when the crane is in operation.
3. Crane operators will perform daily tower crane safety inspections and the crane Owner/rental company will perform other maintenance and inspections in accordance with the manufacturer's recommendations.
4. Project management will ensure all tower crane operators are properly and adequately trained, experienced, and competent.
5. A qualified third party must inspect all structural components in accordance with manufacturer's recommendations.
6. Hoisting ropes must be shortened by the removal of ten feet at the dead end after every three months of use unless otherwise specified by the manufacturer.
7. No load will be swung over any public street that is occupied by the public.
8. Prior to a load being swung over other workers, the first-line supervisor using the crane will provide a lookout that shall sound an alarm as the load is moved across the work area. The lookout shall wear fluorescent orange vests or other similar high-visibility garment.

9. The erection, jumping, and dismantling of tower and gantry cranes of all types requires a written procedure, compliant with the manufacturer's recommendations and requirements. The Subcontractor responsible for the tower or gantry crane must prepare this written procedure, which must be submitted to the Contractor and Project Safety Manager for review and approval prior to commencement of use of the crane.

## **RIGGING**

1. Only qualified riggers will be permitted to rig material or equipment lifted by a crane. Subcontractors using qualified riggers must submit documentation to the Project Safety Manager identifying the qualified riggers by name and listing evidence of their qualification. Qualified riggers will have a hard hat decal or other means of identification indicating their status.
2. Hooks used for overhead lifting must be equipped with safety latches.
3. All rigging equipment and spreader bars shall have a manufacturer's tag or otherwise marked noting the safe working load. Rigging equipment and spreader bars not tagged or marked will be immediately removed from the Project.
4. All rigging will be inspected daily before each shift by a qualified rigger and documented in writing. Inspection reports will be made available upon request inspection.

## **HOIST PLANS**

If a Subcontractor uses a crane to perform work, the Subcontractor shall submit a Hoist Plan, an example of which can be found in Appendix H. A Hoist Plan must be completed for each phase of work to be performed and submitted to the Project Safety Manager at least 72 hours prior to the commencement of the work. The Contractor may also use a Daily Task Planner as a substitute for the Hoist Plan, provided the Daily Task Planner addresses each of the items in the Hoist Plan found in Appendix H.

## **CRITICAL LIFTS**

For the purposes of these guidelines, Critical Lift means a lift that (1) exceeds 75 percent of the rated capacity of the crane or derrick, (2) requires the use of more than one crane or derrick, (3) requires where exceptional care due to the load size, weight, value, or proximity to electrical lines, other obstructions, buildings, roadways or tracks, or (4) is over an occupied structure. A Critical Lift Plan must be submitted to the Project Safety Manager at least two-weeks prior to any scheduled critical lift. Following the submission of the plan, a pre-lift meeting shall be held between the Contractor, Subcontractor(s), Project Safety Manager, Subcontractor Safety Representative, and Crane Operator(s) to review this plan in detail. For Sample Forms and additional Critical Lift information, see Appendix I, "Critical Lift Sample Forms".

## **SECTION 16 HAZARD COMMUNICATION**

The OSHA Hazardous Communication Standard, specifically 29 CFR 1926.59 and 1910.1200, requires that each employee potentially exposed to hazardous chemicals be advised of the potential hazards and how to guard against those hazards.

### **SAFETY DATA SHEETS (SDSs)**

The Contractor must maintain, and their Subcontractors must provide to the Contractor, copies of Safety Data Sheets (“SDSs”) for hazardous chemicals brought onto the Project Site and keep them readily available for review by Employees, the Yale Project Manager, other Yale officials, government inspectors, and emergency response personnel. Any questions relating to hazardous chemicals shall be directed to the Project Safety Manager or the Safety Representative. No hazardous chemical shall be on the Project Site without a SDS.

### **EMPLOYEE INFORMATION AND TRAINING**

The Contractor and the Subcontractors shall provide their employees training and information regarding the requirements of the Hazard Communication Program, the hazardous chemicals present in their work place, and the physical and health risks of these chemicals. This requirement may be met through orientation sessions for new employees and refreshers for all personnel during toolbox talks. The information and training will also include the following elements:

1. The symptoms of overexposure to the chemicals.
2. How to determine the hazardous presence or release of a chemical in the work place.
3. Methods to reduce or prevent the exposure to hazardous chemicals, such as control procedures, work practices, or personal protective equipment.
4. Procedures to follow in the event of an exposure to hazardous chemicals and the location of the the SDSs on the Project site as well as the location of the written Hazard Communication Program.
5. How to review a SDS to obtain the hazard information for the chemical, and how to read the labels, which are required on the chemical containers. When a new chemical is obtained for use, each employee who could be exposed will be given the information and training as described above. The SDS for all chemicals used on the Project Site will be available to all employees during each work shift and can be obtained through their employer or the Contractor.

### **CONTAINER LABELING**

All chemical containers at the Project Site must be clearly labeled as to the contents, the hazards involved, and the name and address of the manufacturer. All secondary containers of hazardous chemicals are to be clearly labeled with the same information as the original



container. The Contractor and each Subcontractor shall be responsible for ensuring that its chemicals are maintained in properly labeled containers.

#### **HAZARDOUS NON-ROUTINE TASKS AND NEARBY WORK**

In the event an employee is assigned to perform a hazardous task, non-routine to their Work, or is assigned to work in an area involving exposure to hazardous chemicals, the employee will be given the additional information and training related to the hazardous chemicals that may be encountered in the non-routine task. The employees' foreperson, superintendent, or Safety Representative will provide this information and training. The information will include the specific chemical hazards of the task, the controls and protective measures required, the types of personal protective equipment required, how to use the equipment, the nature of other work being performed in or near the non-routine task, and what emergency procedures are involved with the task.

#### **AUDIT AND REVIEW**

It will be the responsibility of the Contractor and each Subcontractor to review the entire Hazard Communication Program. It will also be the responsibility of the Contractor and Subcontractor to make sure the procedures in use meet the requirements as set forth in the SDS.

## SECTION 17 DEMOLITION AND DECONSTRUCTION

### ENGINEERING SURVEY REPORT

Any Contractor or Subcontractor performing demolition or deconstruction work shall submit to the Yale Project Manager for review, prior to the start of construction, a detailed plan that specifies the means and methods to complete the demolition or deconstruction, related drawings, materials surveys, dust, noise, and nuisance control plans, and other relevant safety information. The Contractor or Subcontractor performing the demolition or deconstruction is responsible for obtaining any required demolition or building permits, and complying with such permits.

A Professional Engineer registered in Connecticut is required to conduct the Engineering Survey Report prior to beginning any demolition work. The purpose of the Engineering Survey Report is to thoroughly evaluate the Project to identify potential hazards and develop controls to prevent accidents. The Contractor and Subcontractor shall confirm existing conditions and all information supplied to them by the Owner, when completing the Engineering Survey Report. Once demolition work has started, there will be additional safety requirements for various activities. Potential hazards include:

1. Occupational Health Hazards
2. Cave-ins
3. Explosions
4. Premature Collapse
5. Fire

**NOTE: For structural demolition, the engineering survey must be conducted by a Professional Engineer registered in Connecticut. This engineer shall also sign the report compiled from any such survey. For non-structural demolition and deconstruction, the Contractor/Subcontractor may have a Qualified Person complete the Engineering Survey Report.**

The Subcontractor performing the demolition must have the written Engineering Survey Report and retain that report on the Project Site. A copy of the Engineering Survey Report shall be forwarded to the Contractor prior to any demolition work taking place. At a minimum, the Engineering Survey Report must include:

1. Building Characteristics
  - a. Construction type and structure size

- b. Number of stories or height
  - c. Structural hazards
  - d. Basements and confined spaces
  - e. Party wall locations
  - f. Wall tie requirements and number
  - g. Shoring requirements for adjacent structures
  - h. Type of shoring and location
2. Protection requirements for adjacent structures
3. Demolition methods that will be used—If mechanical equipment will be used for removal of walls, floors, or material then engineering calculations establishing the floors or surfaces are of sufficient strength to support the imposed load shall be readily available for review.
4. Public protection required
- a. Pedestrian walkways or roadways may need to be relocated.
  - b. Walkways or roadways shall be well lit and kept clear of equipment and debris.
  - c. Sidewalk sheds may be necessary to protect pedestrians from overhead hazards.
  - d. Special controls or procedures may be necessary if a portion of the structure is occupied.
  - e. If the Project is entirely protected with security fencing, the gates shall be kept closed at all times throughout the demolition work.
5. Overhead and underground utility protection is required.
- a. The location of all electric, gas, water, sewer, and communications lines shall be identified and the lines shut off before work is started.
  - b. The National Association of Demolition Contractors recommends that utility lines be color-coded:
    - i. Red, if the lines are to stay

- ii. Green, if the lines are to be removed
  - c. The One-Call system shall be notified.
- 6. Above and below ground tanks shall be protected. Purging and testing of these tanks shall be completed.
  - a. Locations of pits or open holes shall be identified and barricaded.
  - b. Compliance with EPA regulations and guidelines is required.
- 7. If hazardous materials are found, responsibilities shall be assigned to the appropriate parties for removal and disposal of the materials.
  - a. Asbestos and other materials may be in furnaces, reactors, boilers, insulation, other fire protection materials, certain types of floors and ceiling tiles.
  - b. Lead may be in pipe systems and with lead based paints.
  - c. Polychlorinated biphenyls may be in electrical systems such as transformers and capacitors.
- 8. Existing damage to nearby structures
  - a. This damage shall be documented. Photographs and/or videotape can be taken to supplement documentation.
  - b. The documentation shall be dated and retained with the Engineering Survey Report.

## **SECTION 18 MOLD PROTOCOL**

### **POLICY**

It is the policy of the Owner to take reasonable precautions to reduce the potential for problematic mold growth. This policy outlines the procedures that will be followed during new construction and/or renovation activities to minimize the potential for mold growth and for responding to problematic mold growth when it occurs.

### **RESPONSIBILITIES**

While enforcement of this mold prevention and management plan during the construction phase is ultimately the responsibility of the Contractor, all who are involved in the construction of the structure have a responsibility for complying with its provisions. To this end, all Project Site workers shall be informed of this policy as part of the orientation process. Compliance with the provisions shall be enforced by the Contractor.

### **PROCEDURAL CONTROLS**

Because mold spores are present everywhere and cannot be totally eliminated from the environment under normal circumstances, the key to preventing problematic mold growth in structures is to prevent the spores from contacting water. In the event water gets into the structure, it then critical to respond within 24 to 48 hours and remove the water. If the water is allowed to remain in contact with mold spores for longer than this period, problematic mold growth can occur.

Control of moisture during construction begins at the design phase and continues until final completion of the applicable work has occurred. The moisture controls to be utilized by the Contractor during the various construction phases are discussed below.

### **MOISTURE CONTROL DURING DESIGN PHASE**

Moisture problems can best be addressed at the design stage. For this reason, the Contractor will verify the following elements are properly addressed in the construction specifications prior to commencing Project Site operations. This shall be the responsibility of the Project Manager or designee.

1. Drainage away from foundations
2. Roof flashing installed in accordance with design specifications
3. Vapor barriers
4. Enclosed spaces that contain moisture and are not ventilated
5. Exterior waterproofing
6. HVAC systems

7. Venting of moisture producing processes (i.e., bathrooms, kitchens, indoor pools)
8. Window flashing/caulking
9. Sump pump installation (primary and battery back-up)
10. Rain gutters
11. Drainage systems
12. Septic systems

Any discrepancies shall be brought to the attention of the Project Site architect or engineer for corrective action.

#### **MOISTURE CONTROLS DURING CONSTRUCTION/RENOVATION PHASE**

Once Project Site operations are underway, there are many opportunities for moisture to enter the structure. Controls must focus on preventing this entry and encouraging the removal of moisture. To this end, the Contractor shall be responsible for performing periodic inspections and ensuring:

1. Building materials are inspected upon delivery and significantly mold impacted materials rejected
2. Building materials are stored elevated and covered, to protect them from rain or flooding
3. Roof and all penetrations are sealed before porous materials are stored in the building
4. Other building openings are protected when possible to limit water entry
5. Wet porous building materials are allowed to dry prior to installation
6. The moisture limiting design features discussed above are properly installed according to manufacturer's specifications
7. Site workers practice good housekeeping and sanitary practices
8. Subfloor is cleaned and dried prior to carpet installation
9. Construction debris is removed from within HVAC systems and associated ductwork
10. HVAC condensate collection systems are functioning properly

11. Regular inspections are performed during construction to identify leaks, ponded water, and/or sources of water entry
12. Water leaks are responded to within 24 to 48 hours of discovery

#### **PROCEDURES FOR RESPONDING TO MOLD GROWTH**

In the event water enters the structure, during the construction phase (e.g., roof leak, pipe leak, weather-related flooding), the emphasis must shift to removing the water and encouraging any impacted materials to dry. In some cases, impacted porous materials may need to be removed and replaced. Response activities must commence immediately (within 24 to 48 hours) following the water event or upon discovery of the water damage.

## SECTION 19 SMOKING POLICY

The “No Smoking Policy” applies to all personnel, customers, visitors, and consultants. The primary purpose of this policy is the establishment of a completely smoke-free environment in the work place in order to protect life, health, and property. Contractor and Subcontractor employees will not be permitted to smoke in any buildings on the Owner’s property. Contractor and Subcontractor employees may smoke at the designated smoking areas on the Project Site. It is impossible in this guide to identify all designated smoking areas for all Project Sites, as they will vary; however, the Owner will insist that each Contractor and Subcontractor comply with the no smoking policy in buildings, vehicles, or areas containing hazardous materials. At each Project, the Contractor will designate a smoking area for Contractor and Subcontractor employees. The area will include but will not be limited to the following conditions:

1. No smoking is permitted in the immediate work area.
2. Smoking will be permitted only at designated smoking areas, at least 100 feet from work areas.
3. Designated smoking areas must have a “Smoking” sign that indicates the designated smoking area. A cigarette butt container with sand must be available to extinguish smoking materials. Cigarette butts will not be permitted to be discarded on the ground, roadway, or work area.
4. A charged, 20# ABC fire extinguisher must be available at the designated smoking area. The fire extinguisher must be within 25 feet traveling distance in any direction of the designated smoking area.
5. Contractor and Subcontractor employees must be trained in the proper use of fire extinguishers.
6. No smoking is permitted within 100 feet of flammable liquids, approved flammable liquid containers, and flammable materials. No smoking is permitted within 100 feet of storage and/or in use flammable compressed gas cylinders, or gas cylinders that support combustion.
7. No smoking is permitted within 100 feet of combustible materials. Positively “NO SMOKING” is permitted within 100 feet of a gas pump area.
8. The Owner reserves the right to designate specific smoking areas at its discretion.

**Persons found in violation of this smoking policy will be subject to disciplinary action.**

## **SECTION 20 ENVIRONMENTAL ISSUES**

### **UNDERGROUND STORAGE TANKS**

The Contractor shall coordinate any Underground Storage Tank (UST) removal with Yale EH&S. The Contractor shall be responsible for conducting tank waste material profiling with Yale EH&S, and all manifests are to be signed by Yale EH&S. UST status notification forms submittals shall be initially prepared by the Contractor. Yale EH&S will review UST forms, coordinate their signature by an authorized Yale official, and file the forms with the Connecticut Department of Energy and Environmental Protection. The Contractor shall immediately notify Yale EH&S if a UST is discovered during construction activities, notify Yale EH&S of all UST removal or abandonment prior to commencement, notify Yale EH&S of all tank grave testing results.

### **SOIL EROSION CONTROL**

The Contractor must ensure the provision of soil erosion and sedimentation controls, run-off protection, and means to minimize dust generation and sedimentation in run-off, all in compliance with Applicable Law, any required permits, including without limitation, the general permit for the discharge of stormwater associated with construction activity, and associated Stormwater Pollution Prevention Plans, locally approved erosion control plans, industry standards and good practice. Project Site access points from municipal roads must also be maintained in accordance with Applicable Law, industry standards and good practice to reduce mud and dirt transfer from the wheels of construction vehicles and other heavy equipment onto public road surfaces.

### **STORMWATER PERMITS**

Before commencing soil disturbance activities of any kind, the Contractor shall register for or obtain all applicable construction stormwater discharge permits, if appropriate and applicable, one of the General Permits for Discharge of Groundwater Remediation Wastewater, any required local approvals, and verify that any local erosion control plans have been approved. The Contractor and Subcontractors must follow all requirements of such permit(s), associated Stormwater Pollution Prevention Plans, stormwater requirements, and/or the local erosion control plan.

### **OTHER CONSTRUCTION WASTEWATER DISCHARGES**

Contractors and Subcontractors shall not discharge wastewater of any type from the Project Site without a permit as required by Applicable Law. The Contractor and Subcontractors shall adhere to all requirements of wastewater discharge permits and local sewer ordinances.

## **HAZARDOUS MATERIALS**

For purposes of these Safety Guidelines, there are three types of Hazardous Materials:

1. Hazardous Materials brought onto the Project Site by the Contractor or a Subcontractor for purposes of the Work, or generated by the Contractor or a Subcontractor during the Work (“Hazardous Contractor Materials”)
2. Hazardous Materials that are a component or part of any building or building equipment at the Project Site including but not limited to asbestos-containing materials, lead-based paint, lead-based paint abatement waste, mold, or PCB-containing transformers and lamp ballasts (“Hazardous Building Materials”)
3. Hazardous Materials used or generated by the Yale Community or students in the ordinary course including but not limited to laboratory chemicals, heating oil, or hazardous waste (“Yale Hazardous Materials”)

## **HAZARDOUS CONTRACTOR MATERIALS**

Contractors are responsible for the safe and lawful receipt, handling, storage, transport, use, and disposal of all Hazardous Contractor Materials.

When working with Hazardous Contractor Materials, Contractors shall have or develop, implement, and enforce an effective Site Specific Safety Plan that complies with Applicable Law, including without limitation Applicable OSHA standards. The Contractor must maintain, and their Subcontractors must provide to the Contractor, copies of Safety Data Sheets (“SDSs”) for Hazardous Contractor Materials brought onto the Project Site and keep them readily available for review by employees, workers, Subcontractors, the Yale Project Manager, other Yale officials, government inspectors, and emergency response personnel. Contractors and Subcontractors responsible for any Hazardous Contractor Materials must also ensure that they are appropriately and safely packaged, labeled, stored, and used. Contractors must also provide their employees with, and ensure that Subcontractors provide their employees with, training, personal protective equipment, and emergency response supplies appropriate to the Hazardous Contractor Materials and their use on the Project Site.

The Contractor must immediately notify the Yale Project Manager and Yale EH&S of spills or other releases, threats of releases, over-exposures, and all other incidents involving Hazardous or potentially Hazardous Contractor Materials. The Contractor will also report any release of Hazardous Contractor Materials to the appropriate governmental agency, if required by and in accordance with Applicable Law, and is responsible for any required investigation and/or remediation of releases or threatened releases of Hazardous Contractor Materials.

Any contractor planning to use products containing volatile organic compounds (e.g., paints, adhesives, sealants, coatings, cleansers) shall inform the Yale Project Manager of the planned use prior to use, and apply any safeguards or controls legally required or otherwise needed to protect the Yale community, their employees, workers, Subcontractors, their employees, workers or other personnel, and adjacent University occupants.

Since many laboratories and related rooms are under “negative” air pressure relative to surrounding hallways and corridors, airborne releases (e.g., dusts, off-gases, vapors, odors) from nearby construction can travel long distances and enter such areas. The Yale Project Manager will identify such areas to Contractor prior to the commencement of Work. Contractors working near any occupied University spaces shall develop plans to control or contain the vapors, dusts, and fumes released from their operations so that laboratories, other sensitive areas and their occupants are not impacted.

The disposal of Hazardous Materials to the ground or into sink or floor drains, storm drains, or regular trash receptacles is prohibited.

Consistent with the Contractor’s contractual obligations regarding the handling and management of Hazardous or potentially Hazardous Contractor Materials, the Contractor, Yale Project Manager, and Yale EH&S shall discuss whether the Work will result in the generation of any special or hazardous waste (as defined by Applicable Law) during the Project and the Contractor shall develop for review and approval by Yale EH&S appropriate methods for the safe and lawful management and disposal of wastes that constitute Hazardous Contractor Materials. The Contractor is responsible for maintaining proper storage of Hazardous Contractor Materials, including hazardous or special wastes, while on the Project Site and must verify to the Yale Project Manager in writing that the Hazardous Contractor Materials have been accumulated, stored, collected, removed, transported, and disposed of in a legal manner. The Contractor shall not bury, burn, or in any other way dispose of Hazardous Contractor Materials on the Project Site or on any other University-owned property.

#### **HAZARDOUS BUILDING MATERIALS**

Several kinds of Hazardous Building Materials may be present in older existing buildings, including but not limited to asbestos, lead-based paint, lead-based paint abatement waste, mold, or PCB-containing transformers and lamp ballasts. The Yale Project Manager shall inform Contractor of the presence of any known or presumed Hazardous Building Materials prior to the start of the Project. In the event that any suspicious building materials are identified during the course of Work, the Contractor must comply with the requirements of its Agreement with Yale that address the discovery of suspected Hazardous Building Materials and shall immediately stop Work in the affected area and report the discovery to the Yale Project Manager for testing by Yale.

The Contractor shall not begin Work in areas with known or presumed Hazardous Building Materials until the area where the Work is to be performed has been cleared by the Yale Project Manager and/or Yale EH&S. Certain spaces (i.e., laboratory exhaust ductwork, waste, or vacuum plumbing) may not be fully accessible for clearance surveys before the start of Work, and Contractor may need to arrange for additional surveys or sampling as the Project progresses.

Any contractor retained to perform Work associated with Hazardous Building Materials shall have properly trained personnel and all the applicable licensing, registrations, certifications, or other authorizations necessary to lawfully and safely perform this Work. Any contractor

performing abatement, remediation, and disposal shall coordinate such Work with Yale EH&S. Yale EH&S shall determine whether the Contractor or Yale will be responsible for obtaining any required permits and providing advance notices to the regulatory agencies having jurisdiction over the Work as required by Applicable Law. Yale EH&S is responsible for completing and signing any bills of lading or manifests required for the off-site disposal of Hazardous Building Materials.

Prior to the generation of Hazardous Building Material waste, the Contractor or Subcontractor will notify the Yale Project Manager and Yale EH&S. Yale EH&S will provide properly labeled DOT approved containers for the collection of all wastes. As required, Yale EH&S will conduct inspections of waste containers and provide the Contractor or Subcontractor a standard emergency contingency plan. All waste containers and waste materials must remain at the point of generation and may only be transported by licensed hazardous waste contractors as designated by Yale EH&S. Yale EH&S will arrange for disposal and sign all hazardous waste or shipping manifests.

Hazardous materials or waste and materials suspected to be hazardous require special handling and management pursuant to the Contractor's contract with Yale. Consistent with the Contractor's contractual obligations regarding the handling and management of hazardous or potentially hazardous materials, the Contractor, Yale Project Manager, and Yale office of Environmental Health & Safety must discuss the potential generation of any special or hazardous waste during the project and develop appropriate methods for the safe and lawful management of these materials. The Contractor is responsible for maintaining proper storage of these materials and wastes while on the Project Site and must verify to the Yale Project Manager in writing that the materials and wastes have been abated, remediated, collected, removed, transported, and disposed of in a legal manner. No one is permitted to bury, burn or in any other way dispose of chemicals, chemical products, or other suspected hazardous materials on the Project Site or on any other University-owned property.

#### **EXPOSURE TO YALE HAZARDOUS MATERIALS**

In the unlikely event that a Contractor employee, or Subcontractor or other worker or personnel or visitor is exposed to Yale Hazardous Materials, the Contractor must contact the Yale Project Manager immediately for assistance in identifying and evaluating the exposure and the Yale Hazardous Material. Work in the immediate area must stop until the area is appropriately surveyed or sampled by Yale EH&S or its agent and cleared for re-occupancy by the Yale PM and/or Yale EH&S. Once the space is cleared, the Yale Project Manager will notify the Contractor through the use of a "Clearance Form." This precaution also applies to any suspicious materials identified during excavation, trenching, or other subsurface Work. Safety Data Sheets for Yale Hazardous Materials are maintained by Yale EH&S and available to contractors or their designated representatives by contacting Yale EH&S. During off-hours, contractors must contact the Yale Police Department dispatch center ((203) 432-4400), who in turn will summon Yale EH&S for assistance.

## **LABORATORIES AND RESEARCH ANIMAL FACILITIES**

Contractors and their Subcontractors must avoid entering laboratories and related support spaces or research animal facilities. If Work requires regular entry into laboratories, research animal facilities or other sensitive areas, a plan for safe entry will be developed by the Contractor and the Yale Project Manager in consultation with lab personnel and Yale EH&S. For entry into a research animal facility, the Contractor must contact the Yale Animal Resources Center (YARC). The Yale Project Manager will provide contact information.

Warning signs and the laboratory or facility safety door card provide specific information about potential hazards in the room. While in such a facility, Contractors and their Subcontractors shall not touch, move, or otherwise disturb anything in the space until the Yale Project Manager has explained potential hazards and given approval.

## **PEST CONTROL**

The Contractor shall not permit the use any insecticide products on Yale University property unless such activities are part of a Subcontractor's contracted Work and Subcontractor or its employees are specifically trained and licensed to do so. If the Contractor or a Subcontractor notes evidence of cockroaches, rats, mice, ants or other pests during the course of their Work, they must notify the Owner immediately. The Contractor and Subcontractors must ensure that they perform their operations on the Project Site in a manner that minimizes the potential for pest infestation including, but not limited to, maintaining housekeeping on Project Site, utilizing rodent-proof trash receptacles and securing door/window/wall penetrations and other access points.

## **AIR EMISSIONS**

The Contractor must ensure compliance with all Applicable EHS Laws, including without limitation, obtaining any required permits, pertaining to the operations of their equipment on the Project Site.

## **BIOLOGICAL/CHEMICAL/RADIOACTIVITY HAZARDS**

Some Yale University operations involve the use of biological, chemical, or radioactive material that can be hazardous to Yale's students, faculty, or employees if not handled safely. Areas where work with biological, chemical, or radioactive materials is being performed will be marked with appropriate signs. Do not enter these areas and do not handle hazardous biological, chemical, or radioactive material unless it is part of your contracted Work and you are specifically trained to do so.



## APPENDIX B: PROJECT SAFETY ORIENTATION FORM

NAME OF EMPLOYEE (PRINT):	STICKER #:	DATE:
COMPANY:	PERSON CONDUCTING THE ORIENTATION:	
<p>TOPICS TO BE REVIEWED WITH ALL EMPLOYEES DURING THEIR INITIAL SITE ORIENTATION INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:</p> <ol style="list-style-type: none"> <li>1. INFORMATION TO ACQUAINT THE EMPLOYEE WITH SPECIAL SAFETY REQUIREMENTS OF THE WORK SITE, INCLUDING SECURITY AND TRAFFIC REGULATIONS</li> <li>2. DESCRIPTION OF THE NATURE OF THE PROJECT</li> <li>3. SUBSTANCE ABUSE POLICY</li> <li>4. ACCIDENT REPORTING PROCEDURES</li> <li>5. HOW TO REPORT UNSAFE ACTS OR CONDITIONS</li> <li>6. SITE DISCIPLINARY PROCEDURES</li> <li>7. PERSONAL PROTECTION EQUIPMENT REQUIREMENTS</li> <li>8. HAZARDS PREVALENT FOR THE WORK BEING PERFORMED (FALL PROTECTION, TRENCHING, LADDER USAGE, SCAFFOLD SAFETY, ETC.)</li> <li>9. HAZARD COMMUNICATION PROGRAM</li> <li>10. EMERGENCY EVACUATION PROCEDURES</li> <li>11. OTHER</li> </ol>		
<p>COMMENTS:</p>		
<p>BY SIGNING THIS SITE ORIENTATION FORM, I HEREBY ACKNOWLEDGE THAT THE BASIC SITE SAFETY CONTROLS OUTLINED ABOVE HAVE BEEN THOROUGHLY REVIEWED WITH ME AND THAT I AGREE TO OBEY THE SITE SAFETY REQUIREMENTS.</p>		
EMPLOYEE SIGNATURE:	DATE:	
<p>NOTE: ANY EMPLOYEE QUESTIONS REGARDING THE SAFETY REQUIREMENTS SHALL BE DIRECTED TO THE PROJECT SAFETY MANAGER/PROJECT SAFETY REPRESENTATIVE.</p>		
EMPLOYEE EMERGENCY CONTACT NAME:	RELATIONSHIP TO EMPLOYEE:	
EMERGENCY CONTACT #:	SECONDARY EMERGENCY CONTACT NAME:	
SECONDARY EMERGENCY CONTACT #:	EMPLOYEE DRIVERS LICENSE # AND STATE:	

## APPENDIX C: INSTRUCTIONS TO VISITORS

**DUE TO THE HAZARDS AND RISKS ASSOCIATED WITH ANY CONSTRUCTION SITE, WE REQUIRE EVERY VISITOR TO THE PROJECT TO BE ALERT FOR THEIR OWN SAFETY AND TO SIGN A WRITTEN WAIVER AND RELEASE ABSOLVING THE OWNER AND OTHERS ASSOCIATED WITH THIS PROJECT OF ANY AND ALL RESPONSIBILITY IN CONNECTION WITH ALL RISKS ENCOUNTERED AT THE PROJECT.**

While on the Owner's Property, please be on guard constantly and follow sound safety practices including but not limited to the following:

1. Hard-hats must be worn by all visitors at all times.
2. Although work boots are not required, all visitors shall wear low-heeled leather shoes. High heels of any kind or open-toed sandals are not permitted.
3. All visitors are to be escorted at all times while on the Project.
4. BE ALERT for changing conditions and ongoing construction activities while walking on the Project. LOOK and LISTEN before you move from one position to another.
5. Be aware of uneven walking surfaces and extreme care shall be taken with each step.
6. No firearms, drugs or alcoholic beverages are permitted on the Project.
7. All warning signs and barricades must be obeyed.
8. Do not stray from the approved path for ingress and egress.
9. Do not enter areas with inadequate lighting.
10. Be aware of and stay clear of any overhead hazards.
11. Smoking is only permitted in designated areas.
12. Do not touch construction materials of any kind without written authorization from the Contractor.
13. Do not lean on or reach beyond any handrails or barricades.
14. Report any hazards to the Contractor prior to leaving the Project Site.
15. No written correspondence regarding any hazards observed on the Project Site shall be written or forwarded after leaving the Project Site unless previously agreed upon at the Project Site.

I agree to abide by the Instructions set forth above.

VISITOR NAME:	VISITOR SIGNATURE:	DATE:
COMPANY:	TO SEE:	

### WAIVER AND RELEASE

In consideration of granting the undersigned permission to enter upon the premises at the Project and for other good and valuable consideration, I hereby waive and forever discharge the Owner, its officers, trustees, students, and employees, Owner's representatives, Contractor, all Subcontractor(s) on the project (the "Released Parties") from and against any claim for damages that may arise due to injury to my person or property while on the project whether caused in whole or in part by any negligence, actions or inactions of the Released Parties. As a licensee, I assume the risk of all dangerous conditions on or about the premises and waive notice of the existence of any such conditions.

I acknowledge the confidential nature of the Owner construction procedures and processes and agree not to photograph, reproduce or divulge the same without the written consent of the Owner.

I HAVE READ THE ABOVE AND AGREE TO SAME:

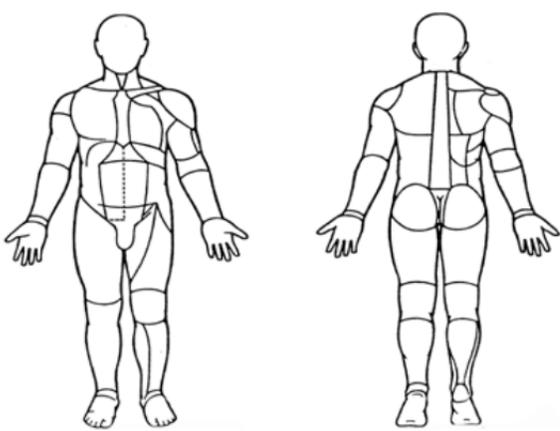
SIGNATURE:
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WITNESS:
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## APPENDIX D: LOCAL EMERGENCY RESPONSE RESOURCES

<b>Emergencies (fire or police)</b>	911
<b>City of New Haven</b>	
Fire Department - Non-Emergency	(203) 946-6237
Police Department - Non-Emergency	(203) 946-6316
Health Department	(203) 946-6999
<b>Local Hospitals</b>	
Yale - New Haven Hospital	
Emergency Room, 20 York Street	(203) 688-2222
St. Raphael Hospital	
Emergency Room, 1450 Chapel Street	(203) 789-3464
<b>State of Connecticut</b>	
DEP Hazmat Response	(860) 424-3338 FAX: (860) 424 4062
Poison Control Center	(800) 343-2722
<b>Federal</b>	
National Spill Response Center	(800) 424-8802
OSHA - Bridgeport Area Office	(203) 579-5581
<b>Other Agencies and Organizations</b>	
Regional Water Authority	(203) 562-4020
Southern Connecticut Gas	(203) 777-7311
United Illuminating	(203) 499-3333
<b>Key Campus Contacts</b>	
<b>Main Campus</b>	
Yale Police (non-emergency)	(203) 432-4400
Yale Security	(203) 785-5555
Yale Fire Code & Compliance	(203) 432-9923
Environmental Health & Safety	(203) 785-3555
Risk Management	(203) 432-0140
Facilities Customer Service	(203) 785-4620 (Medical School)
	(203) 432-6888 (Central/Science)
Central Control Center	(203) 432-6899 or (203) 432-7096
Utilities Control Center	(203) 432-7507
Yale Public Affairs	(203) 432-1345
<b>West Campus</b>	
Yale Security	(203) 479-1414 or (203) 737-3111
Utilities Control Center	(203) 737-3010
<b>Websites</b>	
Yale University Front Door	<a href="http://www.yale.edu">www.yale.edu</a>
Yale Office of Emergency Management	<a href="http://www.yale.edu/secretary/emergency">www.yale.edu/secretary/emergency</a>
<b>State-wide CBYD</b>	(800) 922-4455 or 811 <a href="http://www.cbyd.com">www.cbyd.com</a>

## APPENDIX E: ACCIDENT/INCIDENT INVESTIGATION REPORT

<b>PROJECT DATA</b> <small>(Must be completed in full)</small>	Date of Incident:			Time:                    AM/PM			Day of Week:		
	Date of Report:						Weather:		
	Project Manager:								
	Superintendent/Foreman:						Project Name:		
	Exact Location of Incident: Street Address:						Drug Screen(s) Administered: Yes No If Yes, list employees:		
	City/State/Zip:								
	Are there any Witnesses?                    Yes                    No						See Page 5 for Witness Instructions		
Type of Incident:	WC		GL	Auto	Equipment		Theft/ Vandalism	Property	Utility
<b>PERSONAL INJURY – WC</b> <small>(To be completed for all employee injuries)</small>	Injured Employee Name:						Employee ID#:		
	Employee Home Address: Street Address:						Phone:		
	City/State/Zip:								
	Occupation/Job Title:				Years of Experience:		Date of Hire:		
	Time Employee Started Work:			AM	PM				
	Onsite First Aid Given:			Yes	No	Is Yes, by Whom & What Given:			
	Offsite Medical Treatment:			Yes	No	Is Yes, Treating Facility: (Name, City, State)			
	Date Treatment Given:					List PPE worn at the time of incident:			
	Shade the Specific Body Part(s) Injured:						<b>INCIDENT TRACKING</b> <small>(See Page 6 for Code #s)</small>		
							Body Part:		
							Injury:		
							Detailed Description of Injury:		
Incident Designation:									
<input type="checkbox"/> First Aid Only			<input type="checkbox"/> Restricted Work						
<input type="checkbox"/> Non-Recordable – Medical Treatment			<input type="checkbox"/> Recordable – Lost Time						
<input type="checkbox"/> Recordable – Medical Treatment									

**ACCIDENT/INCIDENT INVESTIGATION REPORT CONTINUED**

<b>GENERAL LIABILITY</b> (To be completed for all injuries and/or property)	Property Owner Name:	
	Property Owner Address:	
	Street Address:	
	City/State/Zip:	
	Detailed Description of Damages: (draw diagram – next page)	
	Estimated Damage:	Pictures Taken: Yes    No
If Utility Strike Please Indicate the Following: <input type="checkbox"/> Electrical Line <input type="checkbox"/> Phone Line <input type="checkbox"/> Gas Line <input type="checkbox"/> Water Line <input type="checkbox"/> Cable Line <input type="checkbox"/> Other __ <input type="checkbox"/> Marked <input type="checkbox"/> Mismarked <input type="checkbox"/> Unmarked Was Call Made: Yes/No    By Whom: _____    Date: _____    Ticket #: _____		
<b>EQUIPMENT</b> (To be completed for all automobile and equipment accidents)	Operator Name:	Equipment/Vehicle #:
	Rental:            Yes                      No	Rented From:
	Rental Company Phone #:	Estimated Damages:
	Did Operator obey all applicable safety rules? Yes/No – If no, list exceptions:	
	Did Authorities Respond (fire, police, ambulance, etc.)?	Responding Authority:
		Contact Person:
Was there Property Damage? Yes/No – If yes, please specify:	Phone #:	
	Report/Incident #:	



**ACCIDENT/INCIDENT INVESTIGATION REPORT CONTINUED**

<b>LESSONS LEARNED</b> (To be completed for all incidents)	Was there any type of planning (ex: Pre-con, daily huddle, toolbox talk, etc.) that discussed the potential for this incident and the safe work procedures to be followed to prevent it? Yes or No – please attach document to support your findings.
	What was the root cause(s) for the incident?
	Contributing factor(s) for the incident (weather, lighting, traffic control plan, communication of hazards, etc.)

**CORRECTIVE ACTIONS**

<b>(To be completed for all accidents)</b>	Corrective Action(s) Taken or Planned What was/will be done?	By Whom	Estimated Completion Date	Date Completed	Confirming Initials
	Incident discussed with employee to prevent recurrence? <span style="float: right;">Yes      No</span>				
Any disciplinary action taken? Yes      No If yes, what type?					
Possible actions to be taken to prevent similar incidents (circle appropriate action):					
1. Repair/replace or modify equipment	6. Ergonomic enhancement	11. Retraining of employees involved			
2. Improve Project Site housekeeping	7. Establish a safe work procedure	12. Preventive maintenance			
3. Update inspection procedure	8. Improve environmental conditions	13. Improve enforcement			
4. Eliminate/reduce congestion	9. Require/change PPE	14. Modify procedure & retrain			
5. Change design	10. Install safety guard/device	15. Reassign employee to another job			
<b>Follow-Up Communication</b>					
Injury site reviewed by supervisor/safety representative with employee				Yes	No
Supervisor reviewed incident with employees				Yes	No
Lessons learned posted in safety review – if yes, what?				Yes	No

<b>EMPLOYEE WITNESS STATEMENT FORM</b> <b>(TO BE COMPLETED FOR WORKERS' COMPENSATION INCIDENTS ONLY)</b>			
Witness Name:			
Street Address:		Work #: _____	
City/State/Zip:		Home #: _____	
Date and Time of Incident:		List other witnesses:	
AM      PM			
Supervisor notified date and time:		Supervisor Name:	
AM      PM			
This is what happened (include who, what , where, when, how and why):			
Do you recall anything unusual or unexpected that happened? Yes or No, if yes explain?			
Are there work conditions that contributed to this injury? Yes or No, if yes explain?			
How would you prevent this incident from happening in the future?			
<b>PLEASE USE AND ATTACH ADDITIONAL PAGES IF NECESSARY</b>		Witness Signature:	Date:
PARTICIPANTS OF THE INCIDENT ANALYSIS		MANAGEMENT REVIEW	
Name/Title or Trade	Date	Name	Date
		Foreman:	
		Superintendent:	
		General Superintendent:	
		Safety Manager:	
Employee Name (Print):		Project Manager:	

<b>ACCIDENT TYPE</b>			
1. Falls On Same Level: Slips, trips, or falls on foot level surfaces such as the ground, floors, stairs, work platforms, or rebar. Includes slips on mud, liquids, ice and other slippery surfaces and trips over obstacles such as tools, cords, rocky or uneven surfaces.			
2. Falls From Elevations: Falls to a lower level from elevated surfaces. Includes falls from structural steel, scaffolds, work platforms, form work, equipment, etc.			
3. Falls From Ladders: Falls from portable or fixed ladders including stepladders.			
4. Falls into Opening: Falls into floor holes, openings in the ground (i.e., caisson holes, unguarded ditch/excavation, etc.)			
5. Material Handling – Manual: Injuries from manually moving tools, equipment, or material. This includes over exertion due to lifting or carrying material manually and usually results in sprains/strains of the back and other body parts.			
6. Caught In/Under/Between: Injuries caused by power tools or equipment and resulting in crushing or pinching of fingers and/or other body parts.			
7. Struck By/Against Object: Injuries caused by employees being struck by flying or moving objects, or injuries caused by employees bumping into/against stationary objects.			
8. Struck By Flying Object-Eye: Eye injuries only caused by grinding, chipping or other operations. Includes windblown dust and foreign bodies entering the eye.			
9. Occupational Illness – includes the following: <ul style="list-style-type: none"> <li>a. Skin diseases/disorders – poison ivy, heat rash, contact dermatitis, etc.</li> <li>b. Dust disease of lungs – silicosis, asbestosis, etc.</li> <li>c. Poisoning due to toxic materials – lead or other metal poisoning and poisoning by carbon monoxide or other gases</li> <li>d. Illness due to physical agents – sunstroke, heat exhaustion, frostbite, or other illnesses caused by temperature extremes or environmental conditions</li> <li>e. Disorders caused by repeated trauma – carpal tunnel syndrome, noise-induced hearing loss.</li> </ul>			
10. Electrical Contact: Injuries resulting in electrical shock caused by flow of electric current through the body. Includes shock from power tools, electrical cords, and contact with overhead power lines.			
11. Burns: Injuries resulting in thermal (heat) or chemical burns. Includes burns caused by welding/cutting operations, or use of chemicals.			
12. Miscellaneous: Avoid using this category. Only mark this category if the injury or illness doesn't fit into another general accident type.			
<b>CAUSE CODE</b>		<b>PART OF BODY</b>	
1. Improper handling of material	10. Defective equipment/ tools	1. Ankle	10. Hand/finger
2. Improper fitting	11. Improper/defective walk area	2. Arm	11. Head
3. Improper use of tools/equipment	12. Slippery/rough surface	3. Back	12. Knee
4. Making safety devices inoperative	13. Poor housekeeping	4. Chest	13. Leg
5. Failure to use PPE	14. Improperly pile material	5. Elbow	14. Neck
6. Taking unsafe position	15. Windblown dust	6. Eye	15. Shoulder
7. Clean, adjust, etc. of moving equipment	16. Congested area	7. Face	16. Wrist
8. Horseplay, distracting, fighting	17. Poor working conditions	8. Foot/toe	
9. Improper/inadequate guarding	18. Miscellaneous	9. Groin	

## APPENDIX F: COMPETENT PERSON ASSIGNMENT FORM

<p>The Contractor/Subcontractor designated Competent Person is responsible for recognizing and correcting safety risks/hazards. This person has the authority to stop work in the event of any potential safety concern in the work area they are responsible for. This form must be completed by the Contractor/Subcontractor's Project Safety Manager/Safety Representative and the designated Competent Person. Each Contractor/Subcontractor must submit this completed form to the Project Safety Manager/Safety Representative prior to beginning work on the project and update the forms any time there is a change in designated representative(s) or exposure.</p>					
<p><b>ACKNOWLEDGEMENT BY EMPLOYER</b></p>					
<p>By my signature below, I acknowledge that the Employee listed on this form is the Competent Person for the areas indicated below and furthermore acknowledge that he has been thoroughly trained, has experience in hazard recognition and that he possesses the authority to stop work and correct hazards in the event of a potential hazardous or imminent danger situation.</p>					
EMPLOYER PRINCIPAL NAME (PRINT):			EMPLOYER PRINCIPAL NAME (SIGNATURE):		
DATE:			DATE:		
<p><b>ACKNOWLEDGEMENT BY EMPLOYEE</b></p>					
<p>By my signature below, I acknowledge that I am the Competent Person for the areas indicated below and furthermore acknowledge I have been thoroughly trained, have experience in hazard recognition and that I possess the authority to stop work and correct hazards in the event of a potential hazardous or imminent danger situation.</p>					
EMPLOYEE NAME (PRINT):			EMPLOYEE NAME (SIGNATURE):		
DATE:			DATE:		
	ASBESTOS		HEARING PROTECTION		WELDING/CUTTING
	CRANES/DERRICKS		SCAFFOLDING		RIGGING
	FALL PROTECTION		ELECTRICAL (INCLUDING LOCKOUT/TAGOUT)		LEAD
	DEMOLITION (INCLUDING MECHANICAL DEMOLITION)		LADDERS		TRENCHING/EXCAVATION
	HAZMAT/WASTE		FORKLIFT TRUCKS		FIRST AID/CPR
	BOLTING/RIVETING/ FITTING		MATERIAL HANDLING		CONCRETE/FORMS/SHORING
	OTHER				

## APPENDIX G: MONTHLY SAFETY REPORT

<b>Project Name:</b>	<b>Contractor:</b>
Month:	Year:
Man-hours worked in past month:	Man-hours worked year to date:
Number of Worker Injuries in past month:	Number of Worker Injuries year to date:
Monthly - OSHA TRIR Incidence Rate:	Monthly – OSHA DART Incidence Rate:
OSHA TRIR Incidence Rate – year to date:	OSHA DART Incidence Rate – year to date:
<b>Summary of Near Misses, Accident/Incidents Beyond First Aid, and Property Damage Within the Past Month:</b> <i>(List Name of Construction Manager and Subcontractor, Date of Incident, Name of Injured Employee or Description of Property Damage or Name of Person Injured, and Brief Description of the Incident)</i>	
<b>Summary of Safety Violations Issued:</b> <i>(List safety Violations Issued Within the Past Month)</i>	
<b>Any regulatory authority inspections in the past month: (If so, list times, dates, reason, and outcome)</b>	

## APPENDIX H: CRANE HOIST PLAN FORM

Project	
Date of Lift	
Controlling Entity	
Contractor	
Contractor Submitting Hoist Plan	
Person Responsible for Completing Hoist Plan	
<b><i>The following information must be reviewed and verified prior to the lift.</i></b>	
1. This Lift Plan	
2. Drawings of the lift, including crane location(s)	
3. Crane Inspection Certification (Annual)	
4. Operator Certification and License (Per requirements in state of operation)	
5. Signalperson Certification/Qualification	
6. Crane Load Chart	
7. Verification of Load Weight	
8. Engineering calculation for lifting beams (if applicable)	
9. Ground Conditions in accordance with 1926.1402(b)	
<b>CRANE HOIST PLAN DETAILS</b>	
Time of Planned Lift	
Purpose of Planned Lift	
Assembly/Disassembly Director	
Qualified Person Responsible for Rigging Inspection	
Qualified Person Responsible for Rigging the Load	
Person in Charge (PIC) of Lift / Employer	
Qualified Signal Person	

CRANE HOIST PLAN DETAILS (continued)		
Method Used to Barricade Swing Radius		
Method used to barricade and prevent entry of personnel to areas below the hoist swing area during hoisting operations		
Type/quantity of material to be hoisted		
Will tag lines be used to control the load? <b>NOTE: If "No", explain why they cannot/will not be used.</b>	YES	NO
Type and size of cribbing/matting to be used under all outriggers		
Crane Capacity (in tons)		
Cribbing/matting size in square footage		
Is the crane equipped with an anti-two block device? <b>Note: If "No", explain why the device cannot/will not be used.</b>	YES	NO
Means of communication between the crane operator and the signal person. <b>NOTE: Two means of communication must be instituted for each lift—the second means would serve as a back-up in case of the failure of the first.</b>		
Actual wind speeds for the date and time of the planned lift		
Maximum allowable wind speeds for the crane to be used and the material to be lifted (from the crane charts/data)		
CRANE DATA		
Assembly/Disassembly Director		
Crane (make/model/size)		
Counterweight (lbs.)		
Maximum Load Radius (Planned) (ft.)		
Boom Length (ft.)		
Load Chart Capacity at Maximum Radius (Planned)(lbs.)		
<b>Crane Data Notes:</b>		

RIGGING DATA		
Type of rigging to be used: wire rope slings, nylon slings, chain, etc.		
Configuration of the rigging –basket, choker, etc. and its capacity in that configuration (lbs.)		
Type of rigging hardware used: shackles, hooks, come-a-longs, etc.		
Capacity of the rigging hardware used (lbs.)		
Will custom design shop-made/home-made rigging be used?	YES	NO
If so, what is the capacity of the custom design shop-made/home-made rigging?		
Has a copy of the proof test been submitted?	YES	NO
Is the custom design shop-made/home-made device marked to indicate the safe working load?	YES	NO
If so, what is the safe working load?		
LOAD DATA		
Gross Weight of Load (lbs.)		
Rigging Weight (lbs.)		
Main Block Weight (lbs.)		
Effective Jib Weight (lbs.)		
Cable Weight (lbs.)		
Overhaul Ball Weight (lbs.)		
Total Weight of Load (lbs.)		
% Capacity (= Total Weight of Load/Load Chart Capacity at Max Radius) <b>Note: % Capacity shall not exceed 75% of Load Chart Capacity</b>		
<b>Load Data Notes:</b>		

SITE DATA		
	YES	NO
Is the Project Site level and adequately compacted?		
Do the ground conditions meet the requirements of OSHA 1926.1402(b)?		
Is the load to be placed/removed in/from an excavation/pit/ vault (or similar) below grade of crane set-up? <b>NOTE: If "yes," provide depth of excavation/pit/vault (or similar) to crane vendor in advance of lift to ensure inclusion into calculation.</b>		
If the answer above is yes, provide depth of excavation in feet.		
Is the crane able to be set-up the necessary distance from the edge of excavation/pit/vault (or similar)? <b>NOTE: Check with crane vendor to determine required distance.</b>		
Are there overhead power lines in the area of the lift? <b>NOTE: Minimum 10-foot clearance required from all parts of crane or manufacturer's requirements whichever is greater for overhead power lines less than 50 KV. For lines over 50 KV, contact the Power Company to determine safe distance.</b>		
Is excavation properly sloped or shored?		
ADDITIONAL NOTES:		

## APPENDIX I: SAMPLE CRITICAL LIFT FORM

PRE-CRITICAL LIFT PLANNING MEETING	
Project:	Date:
Description of Lift:	
Contractor, Project Safety Manager/Project Safety Representative, crane rental representatives (when applicable), Subcontractor, Safety Representative, and PIC (Person In Charge from Contractor or Subcontractor) shall attend the pre-lift planning meeting to plan the lift. This meeting is required for all critical life crane activities on projects. <b>Obtain the following information for review at the meeting:</b>	
1. Lift plan submittal with drawings	
2. Engineering calculation for lifting beams	
3. Rigging capacities	
4. Crane's most recent annual certification will be required the date of the crane's arrival on-site	
5. Maintenance and inspection records (most recent monthly/daily inspection)	
6. Crane's make, model, and brief overview of the age and history of the crane	
7. Crane's complete load chart for boom length, counterweight, and configuration of the planned lift	
8. Certificate of insurance for the crane	
9. Crane operator's experience and special certification (i.e. CCO designation, long boom license, etc.)	
REVIEW THE FOLLOWING LIFT CRITERIA	
Lattice Boom or Mobile Hydraulic	
Crane (make/model/size)	
Counterweight (lbs.)	
Maximum Load Radius (ft.)	
Boom Length (ft.)	
Line Pull (lbs.)	
Load Chart Capacity @ Max. Radii (lbs.)	
Need for jib or lattice boom extension	
Crane set-up/configuration	

<b>CRITICAL LIFT SAMPLE PLAN CONTINUED</b>	
Rigging calculations	
Staging location for load (unloading and placement locations)	
Crane's capacity based on:	
1. Total weight of the load only (excluding rigging/block/etc.)	
2. Structural or stability part of the load chart	
3. Maximum radius	
4. Boom length	
5. Number of parts of hoist line and line pull	
6. Crane's configuration	
7. Capacity and weight of the hook block	
8. Weight of rigging	
Type and size of cribbing or mats	
Subsurface conditions (i.e., underground utilities, voids or poor soil conditions)	
Project Site conditions (i.e., power lines, tight site, traffic, etc.)	
Communications with the operator (i.e., designated signalman, radios are required for night, blind and tandem picks)	
Swing radius protection	
Anti-two block requirements	
Assign lift responsibilities (i.e., operator, signalman, rigger, etc.)	
Lift personnel with authority to abort a lift (include all personnel signing "Critical Lift Checklist"	

CRITICAL LIFT SAMPLE PLAN CONTINUED		
LOAD DATA		
Gross Load Weight (lbs.)		
+ Rigging Weight (lbs.)		
+ Main Block (lbs.)		
+ "Effective" Jib Weight (lbs.)		
+ Cable Weight (lbs.)		
+ Overhaul Ball Weight (lbs.)		
= Total Weight of Load (lbs.)		
Load Chart Capacity @ Max. Radii (lbs.)		
RIGGING DATA		
Sling Construction: Diameter in inches Core Type		
Number of legs		
Sling Angle (horizontal)		
Sling Capacity (lbs.)		
Means of connecting (rigging) the load		
Capacity of connectors (rigging accessories) (lbs.)		
PRE-LIFT REQUIREMENTS (ALL QUESTIONS MUST BE ANSWERED YES)		
Load chart utilized is for exact crane model: serial number, boom type, length, tip, counterweight?	<b>YES</b>	<b>NO</b>
Person in charge (PIC) of lift/Employer		
Signal person: Name		
Pre-lift meeting with crew		
Valid crane certification		
Daily inspection completed		
Swing path not over personnel or other construction activities		

<b>CRITICAL LIFT SAMPLE PLAN CONTINUED</b>		
<b>PRE-LIFT REQUIREMENTS (ALL QUESTIONS MUST BE ANSWERED YES):</b>	<b>YES</b>	<b>NO</b>
Footing is sound and level (soil conditions/compaction, underground utilities).		
Planning for radio or hand signal communication.		
Minimum clearances from power lines can and will be maintained.		
The load radius has been measured with a tape measure.		
Wind gusts do not exceed 25 mph. Postpone lift if gusts exceed or are expected to exceed 25 mph.		
Load will not touch boom at any time.		
Adequate head room/clearance.		
For tandem lifts, diagrams have been prepared.		
Non-essential personnel/activities are removed from critical lift area.		
Tag lines (if necessary) are long enough, tied only to the load (no knots), and in good condition – loose end controlled by designated person.		
Operating locations are far enough away from shoring, excavations and trenches to eliminate risk of collapse.		
Application of hardwood mats has been carefully considered.		
Outriggers or crawler tracks are properly extended, and tires are clear of ground.		
Application of blocking under outrigger pads has been carefully considered.		
Adequate swing clearance (minimum 2') between the counterweight and any obstacles.		
Boom configuration meets manufacturer's requirements.		
Machine is rigged with proper length/type of cable and number of parts of hoistline.		
Load block is of adequate capacity and sheaves are of proper size for hoist cable.		
All rigging has been inspected for capacity and condition.		
Underground structures and conditions have been considered.		

**APPENDIX J: GUARDRAIL DISRUPTION PERMIT**

PROJECT:	
DATE/TIME OF PERMIT APPLICATION:	SUBCONTRACTOR REQUESTING PERMIT:
PROPOSED DATE/TIME OF DISRUPTION:	PROPOSED DATE/TIME OF TERMINATION:
ACTUAL DATE/TIME OF DISRUPTION:	ACTUAL DATE/TIME OF TERMINATION:
Reason for disrupting (removing, altering, or changing) the guardrail system (weights, sizes, material measurements, hoist restrictions, building component placement description, etc.)	
<b>LOCATION OF PROPOSED DISRUPTION:</b>	
LOCATION:	COMPASS DIRECTION: North          South          East          West
FLOOR/AREA:	LOCATION DESIGNATIONS:
LOCATION AND DESCRIPTION OF ANCHORAGE POINT:	
MATERIAL USED FOR DESIGNATION OF TEMPORARY WORK AREA PERIMETER:	
<b>NAMES OF PERSONNEL TRAINED IN FALL PROTECTION WHO ARE TO BE WORKING IN THE GUARDRAIL DISRUPTION AREA:</b>	
<b>REQUIREMENTS:</b> Name of Contractor/Subcontractor's Competent Person who has training, knowledge and authorization as per the guidelines set forth in OSHA 29 CFR 1926. Competency must be for all proposed activities and equipment.	
COMPETENT PERSON NAME (PRINT):	COMPETENT PERSON SIGNATURE:
CELL PHONE # OF COMPETENT PERSON :	PROJECT SAFETY MANAGER/REPRESENTATIVE (PRINT):
PROJECT SAFETY MANAGER/REPRESENTATIVE (SIGNATURE):	DATE/TIME: