5. Provide all contractors and subcontractors with the following information: (**CONSTRUCTION PROJECT MANAGER/FACILITY-LEVEL DESIGNEE**)
    a. Facilities emergency numbers;
    b. Fire alarm pull boxes;
    c. Fire extinguisher locations;
    d. Evacuation routes from the construction site;
    e. Supply emergency contact phone numbers to the facility management staff. (**CONTRACTOR**)
    f. Notify the Fire Department (or other appropriate emergency response group), whenever a fire watch is initiated for fire alarm or suppression system impairment greater than 4 hours (within a 24-hour period) within an occupied building. **(FACILITIES MANAGEMENT**) (Reference Appendix III for specific information and instructions).

B. **Safety Requirements: Project Phase**

1. Require all construction projects to have weekly safety briefings with all personnel, including subcontractor employees, who are working on the job site. (**CONTRACTOR**)
2. Record safety briefing to meet minimum safety education requirements of the facility. Retain all safety documents in the construction file.
3. Submit to facility management staff, all Interim life safety equivalencies.
4. Where applicable, submit proposed changes of the Interim life safety equivalencies to the local authority having jurisdiction for approval and a copy of the approved plan to the facilities department office or their designee. (**FACILITY MANAGEMENT**)
5. Conduct an additional fire drill per shift per quarter in the affected area, when interim life safety measures have been implemented and approved by the local authority having jurisdiction.
(Reference Appendix II) **(FACILITIES/MANAGER/DESIGNEE**)
6. Provide for safety measures during project activity (*Reference Appendix I for a complete list of safety measures*) (**CONTRACTOR/FACILITY MANAGEMENT**)
    a. Keep all exits and exiting paths free and unobstructed.
    b. Post directional signage in place when alternate exit routes are being used.
    c. Manage debris at least daily.
    d. Document daily exit checks.
7. Coordinate with the project manager, facility management, and the appropriate department director/manager any directional changes or alternate exit routing at least 48 hours in advance of any changes.
8. Communicate to and educate staff about exiting changes to the appropriate department personnel and document this communication and education. (**DEPARTMENT DIRECTOR/MANAGER/DESIGNEE**)
9. Maintain (not impair) all fire alarm, detection and suppression systems. (**CONTRACTOR**)
    a. Coordinate with facilities management to provide a temporary, equivalent system when a system is impaired.
    b. Coordinate with facilities management when a fire watch (reference Definitions) is necessary.
    c. Coordinate with facilities management during **hot work processes** (Reference Appendix III).
        i. The individual assigned to fire watch will have no other duties other than fire watch.

C. *Appendix III* - Welding Permit and Fire Watch
D. *Appendix IV* - Pre-Construction Risk Assessment
E. *Appendix V* - Facility Management Team Contact Information

SUB-APPENDIX I - PROJECT SAFETY INSPECTION CHECKLIST

Project: _____Date: _____
Location: _____ Time: _____
1. Is there additional fire extinguishing equipment available/accessible?

YES	NO	SCORE	CORRECTIVE ACTION

2. Fire alarms, detection and suppression systems are in working order?

YES	NO	SCORE	CORRECTIVE ACTION

3. Are exit signs visible and lit?

YES	NO	SCORE	CORRECTIVE ACTION

4. All fire doors, stairwells and exits are unobstructed?

YES	NO	SCORE	CORRECTIVE ACTION

5. Escape routes/exits from the construction area are clear and unobstructed?

YES	NO	SCORE	CORRECTIVE ACTION

6. Are mats at entrance and exits? What type?

YES	NO	SCORE	CORRECTIVE ACTION

7. Are there barriers in place? Properly sealed? What type?

YES	NO	SCORE	CORRECTIVE ACTION

8. Is the contractor keeping flammables and combustibles to the lowest feasible level and removed at least DAILY?

YES	NO	SCORE	CORRECTIVE ACTION

9. Is there “hot work” being performed?

YES	NO	SCORE	CORRECTIVE ACTION

If yes -Are compressed gas cylinders properly restrained?

YES	NO	SCORE	CORRECTIVE ACTION

10. Are chemical containers properly labeled and stored?

YES	NO	SCORE	CORRECTIVE ACTION

11. Are storage areas neat and orderly?

YES	NO	SCORE	CORRECTIVE ACTION

12. Is the construction/project zone properly restricted and does it have proper signage?

YES	NO	SCORE	CORRECTIVE ACTION

13. Are randomly selected construction worker's familiar with emergency number, codes and extinguisher locations?

YES	NO	SCORE	CORRECTIVE ACTION

14. Are construction workers wearing PPE? Properly?

YES	NO	SCORE	CORRECTIVE ACTION

15. No smoking in or near construction areas enforced?

YES	NO	SCORE	CORRECTIVE ACTION

A score of 1= noncompliance, 2= partial compliance, 3= full compliance
All must have a noted corrective action;
Benchmark – 85%
Total Score: _____
Additional Comments:

Reviewer: _____
Copy to Facilities Office

SUB APPENDIX II – Interim Life Safety Measures Assessment (ILSM/ILSA)

POST THIS COMPLETED ASSESSMENT WHEN ILSM IS REQUIRED

Project Title/Location:

Project Start date:

Projected End Date:

Revision date:

Contractor:

YES responses require an assessment and action plan!

 Does the project affect any EXITING from the area?

NO	YES	ACTION PLAN

 Provide free/unobstructed exits at all times; COMMUNICATE any changes to the local AHJ

 Provide staff with additional information/communication when/where alternative exits are designated;

 Maintain escape routes for construction workers at all times in buildings/areas under construction; Facilities or designee will document on work order or other form and INSPECT EXITS DAILY

Assessment/Action Plan:

□ Does the project cover/silence/disable any aspect of the fire alarm/detection system?

NO	YES	ACTION PLAN

□ Provide a temporary but equivalent system, when any fire system is impaired

□ Inspect/test and document, any temporary systems, monthly, on work order or other form

□ Implement a fire watch (Appendix III) in an occupied building, whenever an approved fire alarm/automatic sprinkler system is out of service; NOTIFY the local AHJ (or other emergency response group) and facility-level leadership, for fire watch greater than 4 hours

Assessment/Action Plan:

□ Does the project require the use of temporary construction partitions?

NO	YES	ACTION PLAN

□ Ensure partitions are smoke-tight, built of non-combustible/limited combustible materials that will not contribute to the development or spread of fire

Assessment/Action Plan:

□ Will storage, house-keeping, debris-removal practices increase the buildings flammable and combustible fire load?

NO	YES	ACTION PLAN

□ Reduce debris to the lowest feasible level

Assessment/Action Plan:

□ Will compartmentalization/structural features be impaired by the project?

NO	YES	ACTION PLAN

□ NOTIFY/TRAIN staff to compensate for impaired structural/compartmentalization features of fire safety; DOCUMENT this training

Assessment/Action Plan:

□ Will access for fire/police/emergency services be affected by this project?

NO	YES	ACTION PLAN

□ NOTIFY the appropriate agencies as needed.

Assessment/Action Plan:

□ Provide additional fire-fighting equipment and education on proper use.

NO	YES	ACTION PLAN

□ May be contractor supplied/monitored by project manager

Assessment/Action Plan:

Submitted by:

Approved by:

SUB-APPENDIX III - Welding or Cutting Permit

(THIS PERMIT IS GOOD ONLY FOR TIME, PLACE AND JOB LISTED BELOW)

DEPARTMENT _____WORK AREA_____DATE_____/_____/_____
WORK TO BE DONE

_____

_____

CHECK SPARK PRODUCING EQUIPMENT TO BE USED:

GAS TORCH [ ] WELDING [ ] GRINDER [ ] CHOP SAW [ ] OTHER [ ]

_____

NECESSARY PRECAUTIONS:

	YES	NO	N/A
1 SPRINKLERS IN SERVICE?	[ ]	[ ]	[ ]
2 HAVE ALL CONNECTIONS BEEN BLANKED OFF?	[ ]	[ ]	[ ]
3 EQUIPMENT PURGED OF FLAMMABLES?	[ ]	[ ]	[ ]
4 FLAMMABLE LIQUIDS REMOVED?	[ ]	[ ]	[ ]
5 FLOOR SWEPT CLEAN OF COMBUSTIBLES?	[ ]	[ ]	[ ]
6 OTHER COMBUSTIBLES IF NOT REMOVED, COVERED WITH A FIRE-RESISTANT TARPAULIN?	[ ]	[ ]	[ ]
7 EQUIPMENT IN GOOD CONDTION?	[ ]	[ ]	[ ]
8 ENERGY SOURCES AND MOVING MACHINERY LOCKED OUT?	[ ]	[ ]	[ ]
9 ARE VENTILATION, SEWER, WALL, CEILING OPENINGS, ETC. PROTECTED FROM SPARKS?	[ ]	[ ]	[ ]
10 FIRE WATCH PRESENT?	[ ]	[ ]	[ ]
11 ATMOSPHERIC TESTING FOR FLAMMABLE GAS/VAPORS OR COMBUSTIBLE DUST CONDUCTED?	[ ]	[ ]	[ ]
12 IS A BREAKING INTO PIPING/EQUIPMENT PERMIT REQUIRED?	[ ]	[ ]	[ ]
13 IS A CONFINED SPACE ENTRY PERMIT REQUIRED?	[ ]	[ ]	[ ]
14 SMOKE DETECTION DISABLED FOR DURATION OF WORK?	[ ]	[ ]	[ ]
15 FULLY CHARGED FIRE EXTINGUISHER PROVIDED?	[ ]	[ ]	[ ]

FIRE WATCH LOG

FACILITY NAME		**LOCATION**	
DATE OF ACTIVATION		**TIME OF ACTIVATION**	
DATE OF DE-ACTIVATION		**TIME OF DE-ACTIVATION**	
PROJECT MANAGER		**PROJECT MANAGER PHONE #**	
DISRUPTION NUMBER		**FIRE DEPT. NOTIFIED ON AND BY**	

REASON FOR FIRE WATCH:

Responsibilities: The Fire Watch personnel shall conduct **hourly** rounds by walking throughout the affected area, looking for evidence of smoke, fire or any abnormal conditions. Dial the emergency number and implement **"Fire"** protocol, if evidence of smoke or fire is identified. NOTIFY Fire Department (or AHJ) for any fire watch greater than 4 hours (within a 24-hour period).

Devices Disabled:

_____Time:_____

Date: _____

Devices Enabled:

_____Time:_____

Date: _____

Verification Table

12A-1A		**6A-7A**		**12P-1P**		**6P-7P**	
1A-2A		**7A-8A**		**1P-2P**		**7P-8P**	
2A-3A		**8A-9A**		**2P-3P**		**8P-9P**	
3A-4A		**9A-10A**		**3P-4P**		**9P-10P**	
4A-5A		**10A-11A**		**4P-5P**		**10P-11P**	
5A-6A		**11A-12P**		**5P-6P**		**11P-12A**	

Initials are required for each hour of watch completed.

Problems Encountered/Status of Watch:

SUB-APPENDIX -IV – Pre-construction Risk Assessment Survey

STEP 1 – IDENTIFY THE HAZARD

CATEGORIES	***FACTORS***	***RISK LEVEL (1-3)***	***ACTION/EVALUATION***
1. Noise or Vibration	Impact, Duration		
2. Air Quality/Dust	Cutting, Grinding, Sanding, odor, etc.		
3. Survey for ACBM	Exposure to and/or disruption (friability) of Asbestos Containing Building Materials		
4. Hazardous Materials	Volatile / Flammable / Toxic/Lead-base paint (pre-1978 construction)		
5. Disruption of Utilities	Planned shutdowns, Construction near utility system supplies, medical gas, air test & balance, PA audible in area?		
6. Life Safety Impact	ILSM Issues (If Life Safety is compromised, then appropriate ILSM measures are implemented), fire watch, fire alarm covers		
7. Above ceiling	Inspection needed		
8. Water Intrusion Potential	Roof work, excavation, etc.		
9. Hot Work Permit	Risk of fire due to operations involving open flame or high heat.		
10. Confined Space Entry	Employee/contractor entry into permit required confined spaces.		
11. Emergency Services	Fire Dept., Ambulance access, etc.		
12. Security	Site security, access control		

13.Additional Training RQD.	Special training for employees/contractor. Education, Communication Plan?		
14.Other			

*** PCRA Risk Levels: 1 = No Impact / No Risk, 2 = Low Impact, 3 = Significant Impact**

(If a rating of 3 is given, Information in Action column must be completed).

SUB-APPENDIX V – FACILITY MANAGEMENT CONTACT INFORMATION

Project:_____ **Contractor:** _____

Project Start Date: _____**24 Hour Contact #:** _____

Staff Member	Name	Telephone	Date	Signature
Facilities Manager				
Project Manager				
Facilities Tech.				
Security				
Dept. Manager				
Contractor				
Environmental/Janitorial				
Other				

APPENDIX C.

Hot Work/Burn Permit

(THIS PERMIT IS GOOD ONLY FOR TIME, PLACE AND JOB LISTED BELOW)

DEPARTMENT _____WORK AREA_____

START DATE___/___/___ END DATE __/__/_____

WORK TO BE DONE

_____

_____

CHECK SPARK PRODUCING EQUIPMENT TO BE USED:

GAS TORCH [ ] WELDING [ ] GRINDER [ ] CHOP SAW [ ]

OTHER [ ] (LIST) _____

NECESSARY PRECAUTIONS:

	YES	NO	N/A
1 SPRINKLERS IN SERVICE?	[ ]	[ ]	[ ]
2 HAVE ALL CONNECTIONS BEEN BLANKED OFF?	[ ]	[ ]	[ ]
3 EQUIPMENT PURGED OF FLAMMABLES?	[ ]	[ ]	[ ]
4 FLAMMABLE LIQUIDS REMOVED?	[ ]	[ ]	[ ]
5 FLOOR SWEPT CLEAN OF COMBUSTIBLES?	[ ]	[ ]	[ ]
6 OTHER COMBUSTIBLES IF NOT REMOVED, COVERED WITH A FIRE-RESISTANT TARPAULIN?	[ ]	[ ]	[ ]
7 EQUIPMENT IN GOOD CONDTION?	[ ]	[ ]	[ ]
8 ENERGY SOURCES AND MOVING MACHINERY LOCKED OUT?	[ ]	[ ]	[ ]
9 ARE VENTILATION, SEWER, WALL, CEILING OPENINGS, ETC. PROTECTED FROM SPARKS?	[ ]	[ ]	[ ]

10 FIRE WATCH PRESENT?	[ ]	[ ]	[ ]
11 ATMOSPHERIC TESTING FOR FLAMMABLE GAS/VAPORS OR COMBUSTIBLE DUST CONDUCTED?	[ ]	[ ]	[ ]
12 IS A BREAKING INTO PIPING/EQUIPMENT PERMIT REQUIRED?	[ ]	[ ]	[ ]
13 IS A CONFINED SPACE ENTRY PERMIT REQUIRED?	[ ]	[ ]	[ ]
14 SMOKE DETECTION DISABLED FOR DURATION OF WORK?	[ ]	[ ]	[ ]
15 FULLY CHARGED FIRE EXTINGUISHER PROVIDED?	[ ]	[ ]	[ ]
16 IS ABOVE CEILING WORK PERMIT REQUIRED?	[ ]	[ ]	[ ]

I HAVE READ AND UNDERSTAND ALL PRECAUTIONS LISTED ABOVE AND AGREE TO OPERATE WITH THESE LIMITATIONS.

HOT WORK PERMIT SUBMITTED BY:_____ TIME_____AM/PM

NAME/TITLE

_____

HOT WORK PERMIT APPROVED BY:_____ TIME_____AM/PM

NAME/TITLE

_____

THIS PERMIT TO BE POSTED AT WORK LOCATION

APPENDIX E.

POLICY and PROCEDURE
TITLE: Environmental Control
I. Purpose/Expected Outcome:

A. Identify and reduce visitor and staff exposure to airborne particulates or moisture from construction, renovation or routine maintenance.

B. Implement and monitor safety measures to prevent exposure to common environmental contaminants during all phases of construction, renovation, and maintenance.

II. Definitions:

A. An Environmental Control Risk Assessment (ECRA): provides the strategic, proactive design to mitigate environmental sources of microbes and for prevention of Environmental through architectural design as well as specific needs of the population served by the facility recognizing the renovation requires more compromise of air and water quality than new construction the following guidelines are adopted and implemented when appropriate.

B. ECRA Team: a small group that may include members with expertise in risk management, facility design, construction and facilities maintenance.

III. Policy:

A. An Environmental Control Risk Assessment is conducted by a team member with expertise in at least one or more, of the following, facilities services, risk management, facility design, construction, and safety.

B. Contract documents will contain specific construction related requirements for:

1. Airflow direction shall be from occupied to construction areas with placement of barriers to protect susceptible staff and visitors from airborne contaminants.
2. Take measures to prevent water pathogens from contaminating the environment during utilities services interruptions.
3. If adequate containment of airborne contaminants is not possible, staff must be relocated.
4. Debris must be removed daily and work area is cleaned as per the ECRA permit at completion of project.
5. Post construction occupancy will be contingent upon completion of ECRA.

C. Environmental Control Risk Assessment and/or Permit will be issued by a member of the panel prior to beginning any project and will require approval for all Class III and IV projects.

All classes of projects will require an Environmental Control Risk Assessment/Permit to be posted with
other Life Safety Permits at the site of construction, renovation or maintenance.

D. The worksite will be monitored to verify compliance with the Environmental Control measures as outlined on the Environmental Control Risk Assessment/Permit.

IV. Procedure/Interventions:

A. **Step One: Project Type**

Using the following table, identify the type of construction activity:

Type A	**Inspection and Non-Invasive Activities.** Includes but is not limited to: • Removal of ceiling tiles for visual inspection limited to 1 tile per 50 square feet • Painting (but not sanding) • Wall covering electrical trim work, minor plumbing, and activities which do not generate dust or required cutting of walls or access to ceiling other than for visual inspection
Type B	**Small, scale, short duration activities which create minimal dust** Includes, but is not limited to: • Access to chase spaces • Cutting of walls or ceiling where dust migration can be controlled.
Type C	**Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies** Includes, but is not limited to: • Sanding of walls for painting or wall covering • Removal of floor coverings, ceiling tiles and casework • New wall construction • Minor duct work or electrical work above ceilings • All cabling activities
Type D	**Major demolition and construction projects** Includes, but is not limited to: • Requires heavy demolition or removal of a complete cabling system • New construction • Anything involving noise and vibration • Anything involving mold or asbestos

Step Two: Project Risk Groups
Using the following table, identify all staff risk groups that will be affected, including adjacent areas if appropriate. If more than one risk group will be affected, select the higher risk group.

Low Risk	*Medium Risk*	*High Risk*	*Highest Risk*
• Public Only Corridors • Unoccupied Space	• Office Area • Educational/Conference Areas	• Research Labs	• Laboratory • Food Prep Areas

Step Three: Project Class
Match the staff risk group (low, medium, high, highest) with the planned project type (A, B, C, D) on the following matrix, to find the level of Environmental control activities which are required.

Staff Risk Level	*TYPE A*	*TYPE B*	*TYPE C*	*TYPE D*
Low Risk Group	I	II	II	III/IV
Medium Risk Group	I	II	III	IV
High Risk group	I	III	III/IV	IV
Highest Risk Group	II	III	III/IV	IV

Environmental Control approval will be required when the project activity is a Class III or Class IV project. Environmental Control precautions must be maintained with all classes of projects.

V. Procedural Tools:

A. Environmental Control Risk Assessment/Permit
B. Pre-Construction Inspection Form (optional)
C. Post Construction Inspection Form (optional)
D. Construction Rounds Compliance Checklist (optional)

VI. Keywords and Keyword Phrases:

A. ECRA
B. Construction Permit
C. Construction Risk Groups

VII. Appendix:

A. Environmental Control Risk Assessment Tool
B. Rounds Checklist
C. Pre-Construction Checklist
D. Post-Construction Checklist

ENVIRONMENTAL CONTROL RISK ASSESSMENT

Location of Project/Activity:	Project Start Date:
Coordinator/Employee Performing Activity:	Estimated Duration:

Contractor Performing Work:

Supervisor:
Phone/Pager:

	Before/During Work Activity	Upon Completion of Work Activity
Class I	1. Complete Environmental control risk assessment before construction begins. 2. Execute work by methods to minimize common environmental contaminants for example dust and/or contaminated water. 3. Assess the need for PPE Immediately replace any ceiling tile displaced for visual inspection.	1. Immediately replace any ceiling tile displaced for visual inspection. Wipe surfaces with hospital approved disinfectant. 2. Wet mop with hospital approved disinfectant and/or vacuum before leaving work area where necessary.
Class II	1. Complete Environmental control risk assessment before construction begins. 2. Provides active means to prevent air-borne dust from dispersing into atmosphere 3. Water mist work surfaces to control dust while cutting. 4. Seal unused doors with tape. 5. Block off and seal air vent 6. Contain construction waste before transport 7. Assess the need for PPE	1. Wipe surfaces with hospital approved disinfectant. 2. Wet mop with hospital approved disinfectant and/or vacuum before leaving work area where necessary. 3. Remove isolation of air vents.
	Signature of ECRA panel member assessing project as Class I or II.	Date:
Class III Date: Initials:	1. Obtain Environmental control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of the duct system. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Place sticky mat at entrance/exit of work area. 6. Contain construction waste before transport in tightly covered containers. Tape covering unless solid lid. 7. Assess the need for PPE	1. Do not remove barriers from work area until complete project is thoroughly cleaned by Env. Services Dept and inspected by Environmental Prevention and Control. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 3. Vacuum work area with HEPA filtered vacuums. 4. Wet mop area with hospital approved disinfectant. 5. Remove isolation of HVAC system in areas where work is being performed.
Class IV	1. Obtain Environmental control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of duct system. 3. Complete all critical barriers or implement control cube method before construction begins.	1. Do not remove barriers from work area until completed project is thoroughly cleaned by the Environmental Service Dept. and inspected by Environmental Prevention Control. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.

ENVIRONMENTAL CONTROL PERMIT

Environmental Control Permit: Guide for Determination of Class Type

Step One: Project/Activity Type -- Using the following table, identify the type of activity:

TYPE A	Inspection and Non-Invasive Activities. **Includes but is not limited to:** • **Removal of ceiling tiles for visual inspection** • **Painting (but not sanding)** • **Wall covering electrical trim work, minor plumbing, and activities which do not generate dust or required cutting of walls or access to ceiling other than for visual inspection.**
TYPE B	**Small scale, activities which create minimal dust** Includes, but is not limited to: • Access to chase spaces • Cutting of walls or ceiling where dust migration can be controlled.
TYPE C	**Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies** Includes, but is not limited to: • Sanding of walls for painting or wall covering • Removal of floor coverings, ceiling tiles and casework • New wall construction • Minor duct work or electrical work above ceilings • All cabling activities
TYPE D	**Major demolition and construction projects** Includes, but is not limited to: • Requires heavy demolition or removal of a complete cabling system • New construction • Anything involving mold or asbestos • Anything involving noise and vibration

Step Two: Project/Activity Risk Groups -- Using the following table, identify all staff risk groups that will be affected, including adjacent areas if appropriate. If more than one risk group will be affected, select the higher risk group.

Low Risk	Medium Risk	High Risk	Highest Risk
• Office area • Public-only corridors • Educational/ • Public areas	• Office Area • Educational/Conference Areas	• Research Labs	• Laboratory • Food Prep Areas

- Electrical Work:

Ground fault circuit interrupters are required for electrical tools and cord connections. Red emergency power outlets are not to be used unless prior approval is obtained from the 8QLYHUVLW\ PBC project manager. Cords and tools shall not be laid in wet locations or walkways. Pre-job inspection is required for all electric tools and cords. Defective equipment shall be removed from the work area and either repaired or disposed of. Only non-metallic ladders shall be used for electrical work. (See 29 CFR 1926 Subpart K). All contractors must adhere to NFPA 70e.

- Blue Stake:

The contractor is responsible for ascertaining the location of all underground installations that exist in the defined work area prior to beginning the job. The contractor shall take the necessary safeguards to ensure the integrity of these systems and protection of personnel from these systems where appropriate. Remember that Blue Stake is not accurate; it is only to be used as a guide.

- Power Lines:

The contractor shall be aware of overhead electrically energized conductors and shall ensure that personnel maintain the required separation given from materials, equipment and personnel from the conductors. OSHA for voltages to ground 50kV or below - 10 feet (305 cm); For voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV (See1910.333(c)(3)(i)(A)(2), 1910.333(c)(3)(i)(A)(1).

- Work Clearance:

All work performed on 8QLYHUVLW\ PBC equipment that requires a work clearance (complete mechanical and/or electrical isolation) shall comply with applicable procedures for that purpose. The contractor will obtain all work clearances.

- Temporary Material Storage:

Material yards or set up yards shall not be located near or under power lines. And shall be kept clean and organized to reduce the amount of combustibles. Special attention shall be given to crane safety and the OSHA regulations requiring specific minimum clearances from electrically energized conductors. A signalman shall be used when required.

- Lockout/Tagout (LOTO): (OSHA CFR 1910.147)

All work performed that requires the control of hazardous energy (a.k.a. Lock Out Tag Out) to achieve zero mechanical state, shall be communicated and coordinated with 8QLYHUVLW\ PBC and 8QLYHUVLW\ PBC maintenance personnel. This applies specifically to the use of multiple hasp locks and tags when controls are applied and when they are removed from electrical panels, piping, machines or equipment.

- Existing Equipment and Systems:

All electrical and mechanical switching on 8QLYHUVLW\ PBC equipment shall be done in accordance with applicable industry procedures. A 8QLYHUVLW\ PBC facilities representative shall be present when any existing equipment or system is disrupted or shut down. Unless prior approval is obtained, no contractor shall exercise any switches or valves that are part of the existing equipment or system.

- Barrier Tape and Flagging:

The contractor shall ensure that all personnel are familiar with, and comply with barrier tapes. Red barrier tape with "Danger" tags attached shall indicate a dangerous condition within the taped area and that entrance into the taped area is prohibited without authorization of the individual whose

name appears on the tag. Yellow or yellow and black barrier tape with “Caution” tags attached indicates that caution is necessary within the taped area. Entrance is permitted as long as personnel take the necessary precautions to protect themselves from the hazardous condition(s). The lack of attached "Danger" or "Caution" tags does not change the meaning of the colored barrier tape. (See 29 CFR 1926 subpart G)

22. Scaffolding:
Scaffolding, shall be erected, dismantled or modified only under the supervision of a competent person. Proper access must be provided to all scaffolds. Footings need to be secured. A guardrail system is required on all scaffolds/work platforms more than 6 feet high. Toe boards are required on scaffolds/work platforms more than 6 feet high.

Employers are required to provide fall protection for employees erecting or dismantling supported scaffolding per 1926.451 (g)(2). No one may ride on a manually propelled scaffold unless it has a standard railing system and is moved from the flooring surface. Wheels must be locked on all rolling scaffolds when not being moved.

23. Hazard Communication:
The contractor shall maintain (a full and up to date “chemical inventory list”) listing of all chemical products and a copy of each product’s Material Safety Data Sheet (MSDS) for chemicals on the construction site readably available in a predetermined location. (See 29 CFR 1926.59 and 29 CFR 1910.1200)

24. Chemical Waste:
All solvents and other chemical-cleaning agents, when used, shall be collected, contained and properly labeled as specified by industry practice. Under no circumstances are waste solvents and/or other chemicals to be dumped on the ground, down drainage systems or placed in regular trash receptacles. The contractor will be responsible for the disposal of any hazardous waste, and shall comply with all regulations pertaining to the disposal of such.

25. Hazard Communication Training:
Contractors and subcontractors must have a hazards communication program to inform personnel of the hazards associated with the chemicals they work with. To assure that all on-site personnel are trained in the recognition and avoidance of hazards, training must also be provided in the personal protective equipment to be used in association with the use of these chemicals.

26. Mold or Asbestos:
Mold or asbestos may be found on University - PBC properties. The contractor's personnel shall be familiar with the applicable safety and environmental rules governing these substances prior to their disturbance. If mold or asbestos are encountered STOP WORK IMMEDIATELY and notify University - PBC project manager.

27. Solid Waste:
Empty drums, bags or other chemical containers to be disposed of shall be emptied as much as possible by pumping and/or pouring and shall be labeled and located safely. The contractor shall be responsible for the proper disposal of such containers, bags, drums, etc.

28. Spill Reporting:
The contractor shall immediately report any accidental spillage of hazardous substances, solvents or cleaning agents to the general contractor, project manager and/or University - PBC Safety Representative. The spillage shall be contained and removed by the contractor.

29. Cranes and Rigging:
Verify that crane inspection and servicing is current for all construction cranes. Identify at least one person per shift to serve as the “competent person” for crane inspections and general safety issues. Document all crane inspections and servicing performed internally or by a vendor, as well as any crane training conducted. Provide swing radius protection when necessary. Only qualified persons may signal cranes. (See 29 CFR 1926.201, .550 and .602). Only qualified persons may rig loads. Crane operators are to be tested for competency in the equipment they will be using on site. All crane lifts will be preplanned, documented and reviewed by the contractor and University - PBC safety team. Critical lifts are defined as lifts over 75% of the load chart. A third party shall confirm critical lift load calculations. Crane setup must be in compliance with ANSI and the manufacturer’s recommendations. Anti two-blocking devices are required on all cranes.

30. Manufactured Ladders: (OSHA CFR 1926.1053)

a). Ladders with broken or missing rungs, broken or split side rails or otherwise damaged, shall not be used.

b). All portable ladders shall be equipped with non-skid safety feet and shall be placed on a stable base. The access areas at the top and bottom of ladders in use shall be kept clear.

c). The side rails shall extend 36 inches above the landing. When this is not practical, grab rails shall be installed. All ladders in use shall be tied, blocked or otherwise secured to prevent accidental displacement.

31. Job Made Ladders:
Job-made ladders shall be fabricated in compliance with the regulations in OSHA 1926.1053. The general rules applying to the use of manufactured ladders also apply to the use of job made ladders.
NOTE: The contractor shall provide additional runways and ladders as he may require for the execution of the work. All such apparatus, equipment and construction shall meet all requirements for safety and all provisions of laws and ordinances applicable thereto. Permanent stairs shall be erected as soon as possible, and the contractor shall provide same with temporary protective treads, handrails and shaft protection.

32. Ladder Training shall be in accordance with OSHA 1926.1060.

33. Specific University - PBC and site regulations may dictate the identification of additional items.

APPENDIX G.

Above Work Ceiling Permit

Location of Work_____ Date Work Starts:_____
Contractor's Name:_____ Date Scheduled Complete:_____
On Site Lead:_____ On Site Lead Phone:_____
On Site Supervisor's Name:_____ Contact Number:_____

Pre-Work Information: (Contractor) * * MUST BE POSTED AT WORK LOCATION * *
Brief scope of work to be done:
_____

How many wall penetrations?_____ How many are fire/smoke walls?_____

Have the applicable asbestos reports been reviewed? Yes_____ No_____

Names of trained firestop installers for this project (attach firestop training certificate)
_____ _____ _____

Attach a map of the entire area and scope of work to be done. Initials: _____ Date:_____

Received and Approved: (Facilities personnel):_____ Date:_____

Post-Work Information: (Contractor)

1. Have all fire/smoke wall penetrations have been sealed per an approved UL system, OPL system, or engineering judgment, by the above installers and flagged for inspection?

Yes No

2. Have all abandoned materials and debris created by your work been removed

Yes No

Signature Indicating Compliance: _____

Post-Work Inspection: (Facilities Services)

I have inspected the above work and release the project as complete.
Inspection Type: Total Spot

Signature:_____ Emp: #_____ Date:_____

11) Before beginning work on active systems verify line has been drained by tapping or drilling a small hole in area to be replaced		
12) Provide education on excersing valves and which types that can and can't be exercised		
13) Provide education on proper cleaning of fire sprinkler heads		
14) Use heat detectors in lieu of smoke detectors in construction areas		
15) Cap all water, waste and drain lines before end of work shift		
16) Locate in wall plumbing by above ceiling and wall investigation		
17) CM & foreman walk project at the end of shift to identify potential leaks		

APPENDIX I.

UTILITY SYSTEM/EQUIPMENT IMPACT REQUEST

Seven calendar days are required for approval

To:

From:

Date of Request:

_____ is requesting an Shutdown, Investigation, Impact permit approval for the building utility or equipment. Submit a separate request for each system.

Select the system to be shutdown investigated or impacted:

- ☐ Domestic Hot Water Domestic
- ☐ Cold Water RO Water System
- ☐ Normal Electrical
- ☐ Emergency Electrical
- ☐ Transfer Switch
- ☐ Generator
- ☐ Centralized UPS
- ☐ Fire Sprinkler-wet

☐ Fire Sprinkler-pre-action

☐ Fire Alarm

☐ Air Handler

☐ Exhaust System

☐ Steam System

☐ Condensate

☐ Heating Hot Water

☐ Elevator Other:

Time Frame of Action:

Start: _____ End: _____

Name of person on-site during the time of the shutdown/impact

_____

Telephone number of the on-site person during the shutdown/impact

_____

Identify department or areas impact by request:

Description of Work:

_____
_____
_____

What is your contingency plan if actions do not go as planned?

_____
_____
_____
_____
_____

Coordination Required:

ECRA Attached? Yes N/A
ILSM Attached? Yes N/A

Approved: _____ Date: _____