“Planning Party”

UPCOMING CONSTRUCTION (ICRA)

PRESENTER – CHRISTA MARDAUS

ICRA COORDINATOR

CARPENTERS TRAINING INSTITUTE

Discussion

- Explain the functions and responsibilities of the Infection Control Risk Assessment (ICRA) team.
- Identify the important information relating to the ICRA permit, Safety Risk Assessment (SRA) and Risk Mitigation strategies (ICRMR).
- Describe the Interim Life Safety Measures (ILSM) plan, including mobilization.

WHY

CMS Condition of Participation
Hospital Infection Control Worksheet
Cite: 42 CFR 482.42(a)
1.A.6 The hospital has infection control policies and procedures relevant to construction, renovation, maintenance, demolition and repair, including the requirement for an infection control risk assessment (ICRA) to define the scope of the project and need for barrier measures before a project gets underway.

WHY

- COST
- QUALITY
- SATISFACTION
- NOSOCOMIAL INFECTION

Thank You all for coming to the project kick-off meeting.

Does it require Infection Prevention measures?

As project manager I've decided to not tell you the purpose of the project. That way it will be harder for you to sabotage it.

Good Lord, NO we've been doing it this way as long as I've been here

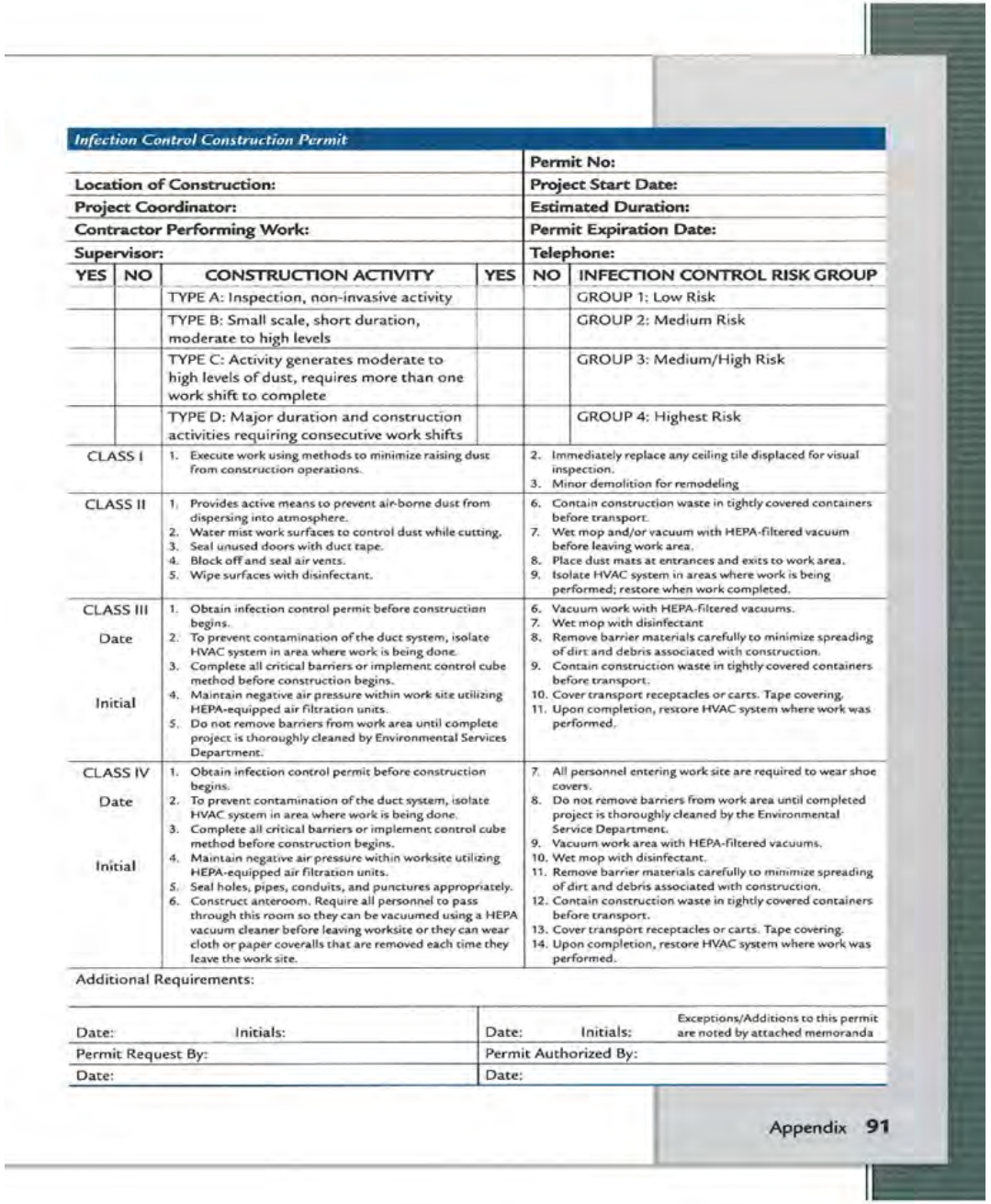
Team Approach

MULTIDISCIPLINARY TEAM

SAFETY RISK ASSESSMENT

INFECTION CONTROL RISK ASSESSMENT

INFECTION CONTROL RISK MITIGATION RECOMMENDATIONS



Infection Control Construction Permit

				Permit No:	
Location of Construction:				**Project Start Date:**	
Project Coordinator:				**Estimated Duration:**	
Contractor Performing Work:				**Permit Expiration Date:**	
Supervisor:				**Telephone:**	
YES	**NO**	**CONSTRUCTION ACTIVITY**	**YES**	**NO**	**INFECTION CONTROL RISK GROUP**
		TYPE A: Inspection, non-invasive activity			GROUP 1: Low Risk
		TYPE B: Small scale, short duration, moderate to high levels			GROUP 2: Medium Risk
		TYPE C: Activity generates moderate to high levels of dust, requires more than one work shift to complete			GROUP 3: Medium/High Risk
		TYPE D: Major duration and construction activities requiring consecutive work shifts			GROUP 4: Highest Risk

CLASS I	1. Execute work using methods to minimize raising dust from construction operations.	2. Immediately replace any ceiling tile displaced for visual inspection. 3. Minor demolition for remodeling
CLASS II	1. Provides active means to prevent air-borne dust from dispersing into atmosphere. 2. Water mist work surfaces to control dust while cutting. 3. Seal unused doors with duct tape. 4. Block off and seal air vents. 5. Wipe surfaces with disinfectant.	6. Contain construction waste in tightly covered containers before transport. 7. Wet mop and/or vacuum with HEPA-filtered vacuum before leaving work area. 8. Place dust mats at entrances and exits to work area. 9. Isolate HVAC system in areas where work is being performed; restore when work completed.
CLASS III Date Initial	1. Obtain infection control permit before construction begins. 2. To prevent contamination of the duct system, isolate HVAC system in area where work is being done. 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. Do not remove barriers from work area until complete project is thoroughly cleaned by Environmental Services Department.	6. Vacuum work with HEPA-filtered vacuums. 7. Wet mop with disinfectant 8. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 9. Contain construction waste in tightly covered containers before transport. 10. Cover transport receptacles or carts. Tape covering. 11. Upon completion, restore HVAC system where work was performed.
CLASS IV Date Initial	1. Obtain infection control permit before construction begins. 2. To prevent contamination of the duct system, isolate HVAC system in area where work is being done. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within worksite utilizing HEPA-equipped air filtration units. 5. Seal holes, pipes, conduits, and punctures appropriately. 6. Construct anteroom. Require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving worksite or they can wear cloth or paper coveralls that are removed each time they leave the work site.	7. All personnel entering work site are required to wear shoe covers. 8. Do not remove barriers from work area until completed project is thoroughly cleaned by the Environmental Service Department. 9. Vacuum work area with HEPA-filtered vacuums. 10. Wet mop with disinfectant. 11. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 12. Contain construction waste in tightly covered containers before transport. 13. Cover transport receptacles or carts. Tape covering. 14. Upon completion, restore HVAC system where work was performed.

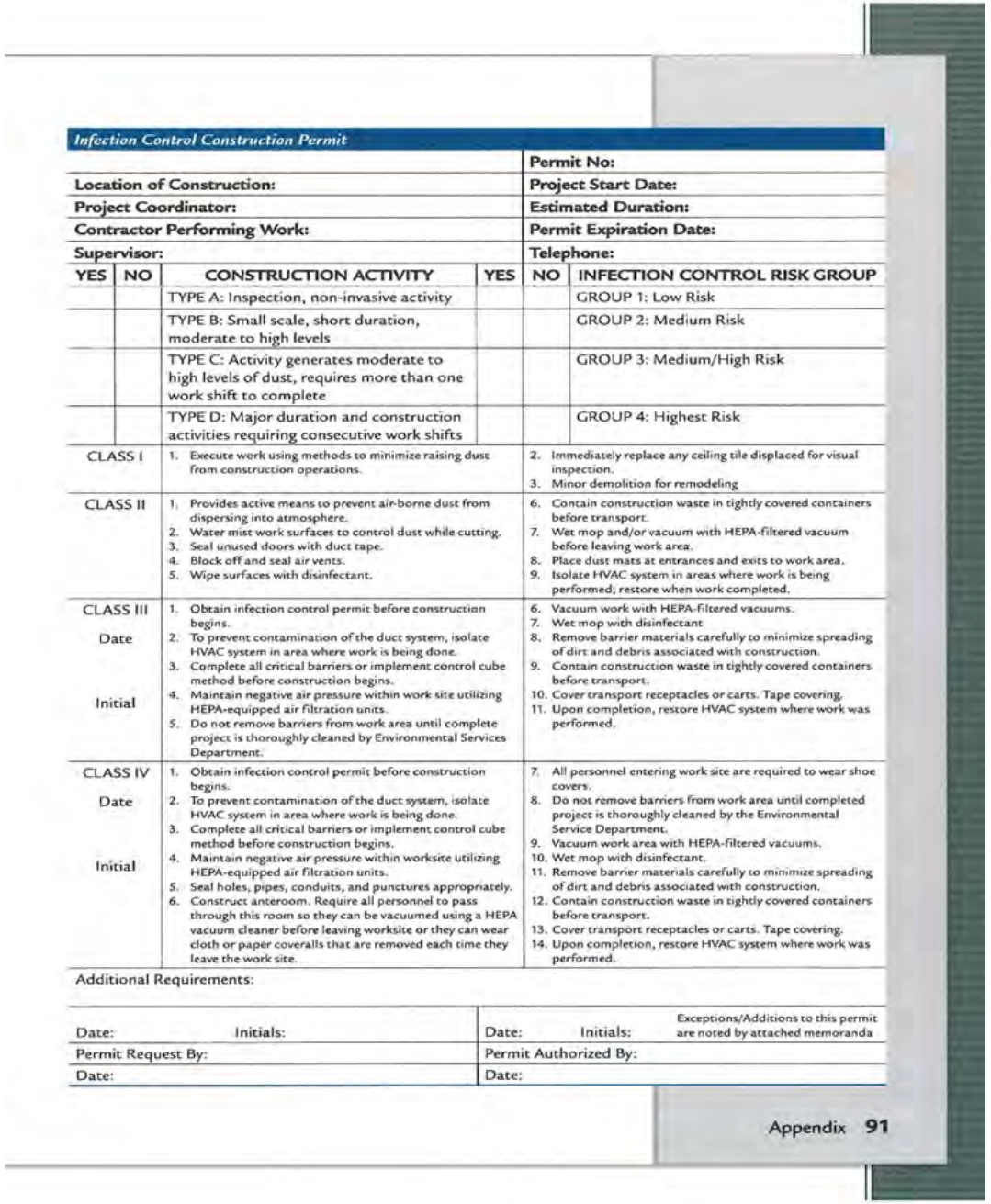
Additional Requirements:

Date: Initials:	Date: Initials:	Exceptions/Additions to this permit are noted by attached memoranda
Permit Request By:	Permit Authorized By:	
Date:	Date:	

Appendix 91

Infection Control Risk Assessment (ICRA) team

- This group identifies the precautions necessary to isolate the work area and protect patients
- ✓ Study the scope of the work, internal and external
- ✓ Evaluate the risk factors and potential hazards
- ✓ Minimize transmission of airborne and waterborne contaminants during construction
- ✓ Document information related to patient care risk within the work area, (ICRA) form



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CLASS II	1. Provides active means to prevent air-borne dust from dispersing into atmosphere. 2. Water mist work surfaces to control dust while cutting. 3. Seal unused doors with duct tape. 4. Block off and seal air vents. 5. Wipe surfaces with disinfectant.	6. Contain construction waste in tightly covered containers before transport. 7. Wet mop and/or vacuum with HEPA-filtered vacuum before leaving work area. 8. Place dust mats at entrances and exits to work area. 9. Isolate HVAC system in areas where work is being performed; restore when work completed.
CLASS III Date Initial	1. Obtain infection control permit before construction begins. 2. To prevent contamination of the duct system, isolate HVAC system in area where work is being done. 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. Do not remove barriers from work area until complete project is thoroughly cleaned by Environmental Services Department.	6. Vacuum work with HEPA-filtered vacuums. 7. Wet mop with disinfectant 8. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 9. Contain construction waste in tightly covered containers before transport. 10. Cover transport receptacles or carts. Tape covering. 11. Upon completion, restore HVAC system where work was performed.
CLASS IV Date Initial	1. Obtain infection control permit before construction begins. 2. To prevent contamination of the duct system, isolate HVAC system in area where work is being done. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within worksite utilizing HEPA-equipped air filtration units. 5. Seal holes, pipes, conduits, and punctures appropriately. 6. Construct anteroom. Require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving worksite or they can wear cloth or paper coveralls that are removed each time they leave the work site.	7. All personnel entering work site are required to wear shoe covers. 8. Do not remove barriers from work area until completed project is thoroughly cleaned by the Environmental Service Department. 9. Vacuum work area with HEPA-filtered vacuums. 10. Wet mop with disinfectant. 11. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 12. Contain construction waste in tightly covered containers before transport. 13. Cover transport receptacles or carts. Tape covering. 14. Upon completion, restore HVAC system where work was performed.

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Permit Request By:	Permit Authorized By:	
Date:	Date:	

Appendix 91

Infection Control Risk Assessment (ICRA) team

- The ICRA team may consists of a multidisciplinary group from varies departments:

✓ Infection control

✓ Administration

✓ Architects

✓ Facility mangers

✓ Safety officers, Security managers

✓ Directors of specialized departments

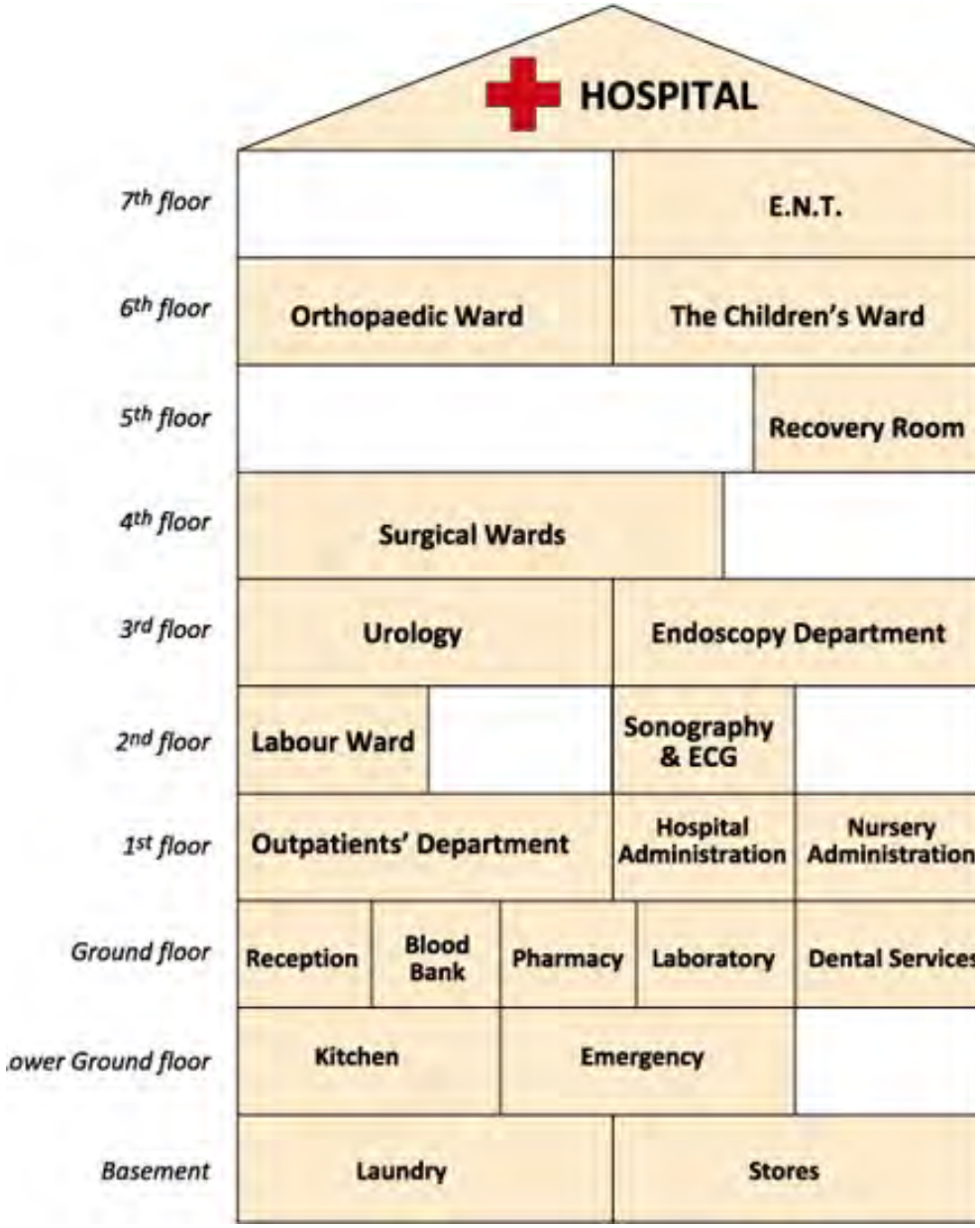
✓ Environmental services

✓ Interim Life Safety Measure team, etc…

Documentation

Project Type

- **Type A** – inspection and noninvasive activities
- **Type B** – small scale, short duration activities that create minimal dust
- **Type C** – work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies
- **Type D** – major demolition and construction projects



Documentation

Patient Risk Group

- Low Risk – office space
- Medium Risk – respiratory therapy, physical therapy, endoscopy, etc.
- High Risk – Coronary care, E.D., laboratories, surgical units, etc.
- Highest Risk – any area caring for immuno-compromised patients

Description of Required Infection Control Precautions by Class		
	During Construction Project	Upon Completion of Project
CLASS I	1. Execute work by methods that minimize raising dust from construction operations. 2. Immediately replace a ceiling tile displaced for visual inspection	1. Clean work area upon completion of task.
CLASS II	1. Provide active means to prevent airborne dust from dispersing into atmosphere. 2. Water mist work surfaces to control dust while cutting. 3. Seal unused doors with tape. 4. Block off and seal air vents. 5. Place dust mats at entrances and exits of work areas. 6. Remove or isolate HVAC system in areas where work is being performed.	1. Wipe work surfaces with disinfectant. 2. Contain construction waste in tightly covered containers before transport. 3. Wet mop and/or vacuum with HEPA-filtered vacuum before leaving work area. 4. Upon completion, restore HVAC system where work was performed.
CLASS III	1. Remove or isolate HVAC system in area where work is being done, to prevent contamination of duct system. 2. Complete all critical barriers—i.e., drywall, plywood, plastic—to seal area from non-work area before construction begins. Or, implement control cube method with HEPA-filtered vacuum for vacuuming prior to exit. 3. Maintain negative air pressure within worksite utilizing HEPA-equipped air filtration units. 4. Contain construction waste in tightly covered containers before transport. 5. Cover transport receptacles or carts. Tape down covering unless cart has a solid lid.	1. Do not remove barriers from work area until completed project is inspected by the owner's Safety Department and Infection Control Department and thoroughly cleaned by the owner's Environmental Services Department. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 3. Vacuum work area with HEPA-filtered vacuum. 4. Wet mop area with disinfectant. 5. Upon completion, restore HVAC system where work was performed.
CLASS IV	1. Isolate HVAC system in area where work is being done, to prevent contamination of duct system. 2. Complete all critical barriers—i.e., drywall, plywood, plastic—to seal area from non-work area before construction begins. Or, implement portable cube method with HEPA-filtered vacuum for vacuuming prior to exit. 3. Maintain negative air pressure within worksite utilizing HEPA-equipped air filtration units. 4. Seal holes, pipes, conduits, and punctures. 5. Construct anteroom. Require all personnel to pass through anteroom so they can be vacuumed using a HEPA-filtered vacuum cleaner before leaving worksite. Or, require all personnel to wear cloth or paper coveralls that are removed each time they leave the worksite. 6. All personnel entering worksite are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area. 7. Do not remove barriers from work area until completed project is inspected by the owner's Safety Department and Infection Control Department and thoroughly cleaned by the owner's Environmental Services Department.	1. Remove barrier material carefully to minimize spreading of dirt and debris associated with construction. 2. Contain construction waste in tightly covered containers before transport. 3. Cover transport receptacles or carts. Tape down covering unless cart has a solid lid. 4. Vacuum work area with HEPA-filtered vacuum. 5. Wet mop area with disinfectant. 6. Upon completion, restore HVAC system where work was performed.

Also on CD-ROM

Documentation

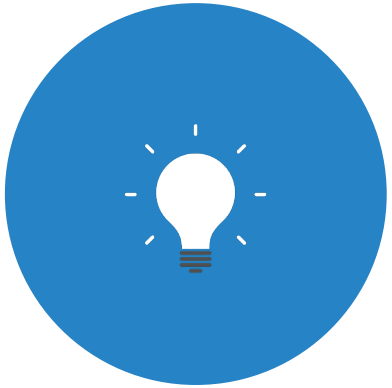
TABLE 3

Step 3 of the ICRA form

Construction Project Type				
Patient Risk Group	**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	II	III/IV	IV
HIGHEST Risk Group	II	III/IV	III/IV	IV

Note: Infection Control approval will be required when the Construction Activity and Risk Level indicate that Class III or Class IV control procedures are necessary.

Partnering Documents



SAFETY RISK ASSESSMENT (SRA)

INFECTION CONTROL RISK ASSESSMENT (ICRA)

INFECTION CONTROL RISK MITIGATION (ICRMR)

Additional Steps

Step 4 Surrounding Project Area – potential impact to room surrounding
Step 5 Identify Specific Site – project is recorded in
Step 6 Related Issues – all issues related to the mechanical systems
Step 7 Containment Measures – need for containment and whether it needs to be a hard or soft wall

Additional Steps

Step 8 Potential Risk of Water Damage – possible risk of compromising the structural integrity
Step 9 Work Hours – actual time the work will be conducted
Step 10 – 13 Facility design – building codes and regulatory areas
Step 14 Placement of Containment – barrier to be used and the placement to be recorded

Regulatory Guidelines – FGI 2014

Planning Elements

- Special HVAC needs or requirements
- Water management program
- Location of known hazards
- Assessment of external and internal construction activities
- Minimum hand hygiene and first aid equipment
- Number, location, type of airborne isolation protective environment rooms
- Selection materials for surfaces and furnishings

Hazards in Healthcare Construction

Biohazards – medical waste generated by medical procedures, Sharps containers, bodily fluids, and tissue

Chemicals – bonding agents, solvents, cleaning agents, adhesives, and different finished materials

Regulatory Guidelines – FGI 2014

Infection Control Risk Mitigation

Written plans that include the following:

- Patient placement
- Standards for barriers
- Construction including plumbing systems, water related equipment (ice machines, sterilizers), HVAC
- Staff training
- Bathrooms and break areas for construction staff
- Commissioning
- Occupancy

Regulatory Guidelines – FGI 2014

Disaster Plans for Emergencies

Written plans that include the following:

- HVAC shutdown
- Water outage
  - Location of supplies
  - Who is responsible
  - Chain of command
- Water leak
  - Location of supplies
  - Who is responsible
  - Chain of command

(What if….)

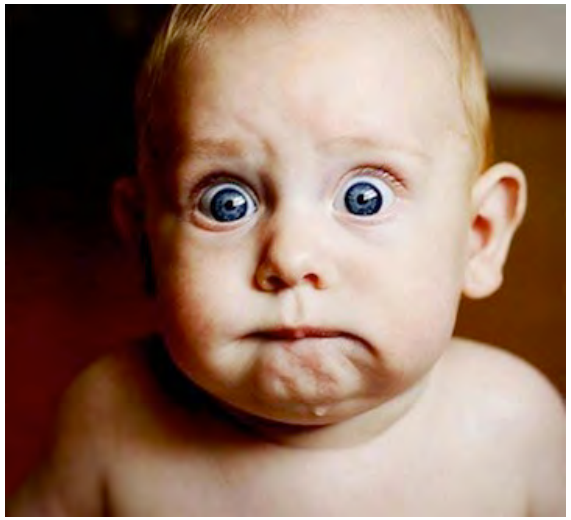
- Emergency room – 2015 sprinkler head break
- 9 of 19 rooms affected
- Patients had to diverted to area hospitals
- Average 15-40 GPM

(What if….)

- Fire hydrant malfunction near main entrance
- Water flooded 1/3 of the 1st floor
- Lab and emergency department affected
- 3 days out of commission
- Services rerouted

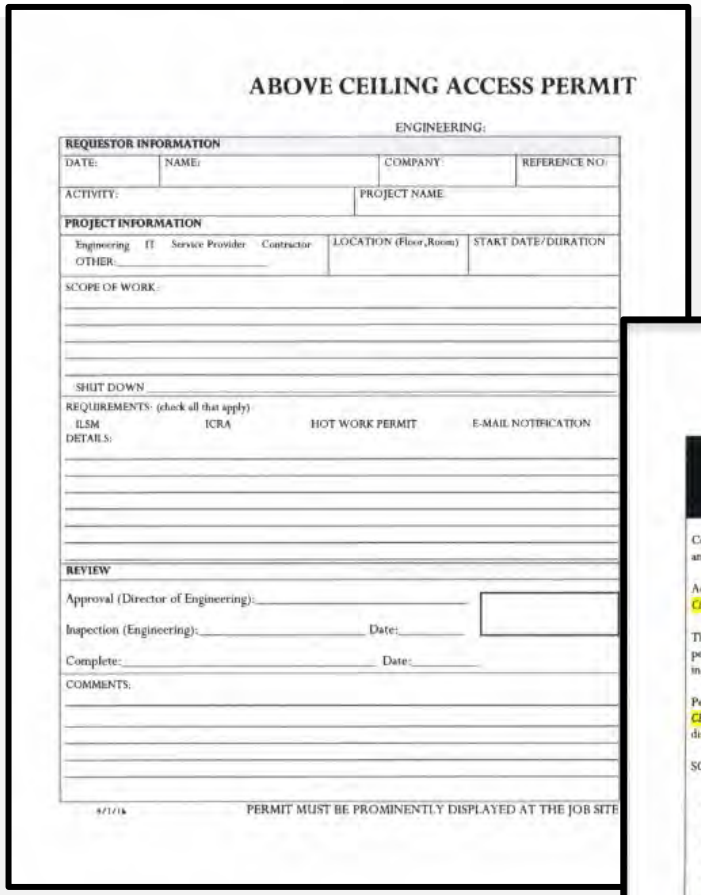
(What if….)

- New facility manager
- New I.P.
- First walk-thru with the surveyor



Revealed 200 buckets placed above ceiling to help prevent water damage.

Above Ceiling Access Permit



ABOVE CEILING ACCESS PERMIT

ENGINEERING:

REQUESTOR INFORMATION

DATE:	NAME:	COMPANY:	REFERENCE NO:
ACTIVITY:		PROJECT NAME:	

PROJECT INFORMATION

Engineering IT Service Provider Contractor OTHER:_____	LOCATION (Floor,Room)	START DATE/DURATION

SCOPE OF WORK:

SHUT DOWN

REQUIREMENTS: (check all that apply)

ILSM ICRA HOT WORK PERMIT E-MAIL NOTIFICATION

DETAILS:

REVIEW

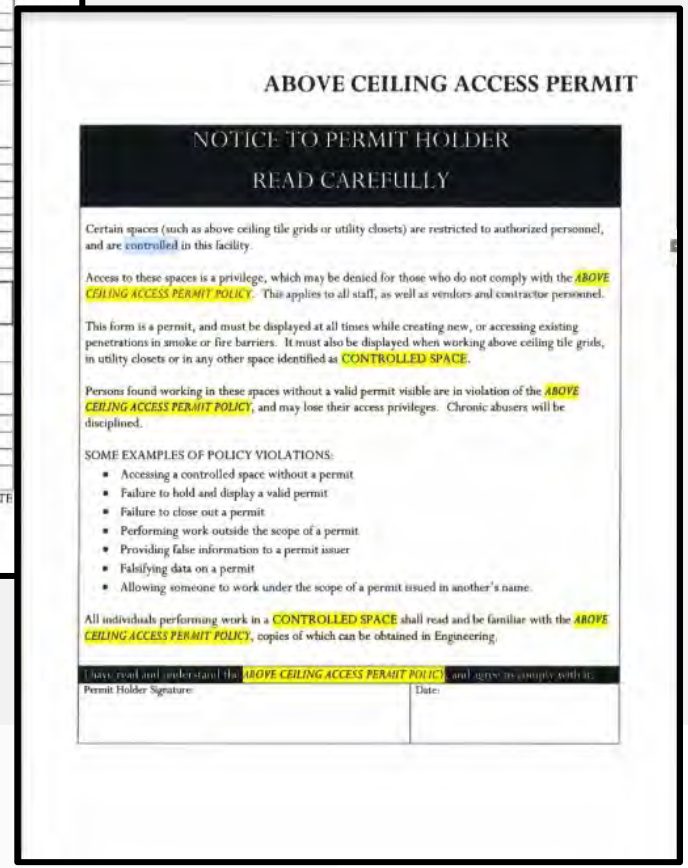
Approval (Director of Engineering):_____

Inspection (Engineering):_____ Date:_____

Complete:_____ Date:_____

COMMENTS:

8/1/16 PERMIT MUST BE PROMINENTLY DISPLAYED AT THE JOB SITE



ABOVE CEILING ACCESS PERMIT

NOTICE TO PERMIT HOLDER

READ CAREFULLY

Certain spaces (such as above ceiling tile grids or utility closets) are restricted to authorized personnel, and are controlled in this facility.

Access to these spaces is a privilege, which may be denied for those who do not comply with the *ABOVE CEILING ACCESS PERMIT POLICY*. This applies to all staff, as well as vendors and contractor personnel.

This form is a permit, and must be displayed at all times while creating new, or accessing existing penetrations in smoke or fire barriers. It must also be displayed when working above ceiling tile grids, in utility closets or in any other space identified as CONTROLLED SPACE.

Persons found working in these spaces without a valid permit visible are in violation of the *ABOVE CEILING ACCESS PERMIT POLICY*, and may lose their access privileges. Chronic abusers will be disciplined.

SOME EXAMPLES OF POLICY VIOLATIONS:

- Accessing a controlled space without a permit
- Failure to hold and display a valid permit
- Failure to close out a permit
- Performing work outside the scope of a permit
- Providing false information to a permit issuer
- Falsifying data on a permit
- Allowing someone to work under the scope of a permit issued in another's name.

All individuals performing work in a CONTROLLED SPACE shall read and be familiar with the *ABOVE CEILING ACCESS PERMIT POLICY*, copies of which can be obtained in Engineering.

I have read and understand the *ABOVE CEILING ACCESS PERMIT POLICY*, and agree to comply with it.

Permit Holder Signature:	Date:

Interim Life Safety Measures

DAILY MONITORING ILSM

Daily Monitoring: ILSM — IC

	Yes	No	NA
25. Materials used (i.e., fire retardants) comply with necessary safety regulations.			
26. Construction barriers maintain negative pressure relationships.			
27. Workers demonstrate compliance with traffic patterns.			
28. Workers comply with use of PPE (hard hats, eye protection, etc.) as needed.			
29. HEPA filtration units, HEPA vacuum equipment, and/or continuous use of exhaust fans demonstrate they are functioning appropriately.			
30. Exhaust ducts sealed/capped as agreed by ICRA.			
31. Construction area doors are closed and gaskets and hardware are intact.			
32. Construction carts transporting debris are covered and consistent with agreement designed to minimize airborne particulate matter from debris.			
33. All windows and doors remain closed to prevent circulation of dust/debris.			
34. Walk-off mats, adhesive strips are clean and changed sufficiently, or construction exit cleaned sufficiently to maintain clean entry/exits.			
35. No signs of water leakage or pests.			
36. Ceiling tiles are replaced when space not being accessed.			

Additional comments _____

Project Manager _____

Contractor _____

Sent to Safety &/or IC Committee _____

Daily Monitoring: ILSM — ICRA

	Yes	No	NA	List follo
12. There has been a minimum of two fire drills conducted per shift per quarter.				Dat
13. Number of hazard surveillance inspections in construction area has increased.				Last
14. Safety education programs have been conducted to ensure awareness of any ILS Safety Code deficiencies and construction hazards.				Dat
C. HAZARD SURVEILLANCE and INFECTION PREVENTIO				
15. Power is properly secured at the end of each workday.				
16. Hand and safety rails are in place and in good condition.				
17. Extension cords are grounded and in good condition.				
18. Power tools are in good condition.				
19. Workers are wearing required identification and hard hats are used as required.				
20. Cutting and welding operations are properly and safely conducted and have appropriate hot work permits.				
21. Documentation of worker instruction in Right-to-Know, Infection Control, and Fall Hazards is available if requested.				Dat
22. All scaffolding complies with OSHA requirements (1926.451).				
23. Construction site is secure and properly isolated from fresh air intakes.				
24. Lock out/tag out procedures are used as appropriate				

Daily Monitoring: ILSM — ICRA Precautions

Date of assessment/survey:	Assessment completed by:
Area assessed/surveyed:	Date distributed to safety/IC:
Project no.:	Project name:

	Yes	No	NA	List time, documentation, or action/ follow-up as needed
A. EXITS				
1. Exits provide free and unobstructed egress through construction.				
2. Alternative exits are clearly identified.				
3. Means of egress in construction area inspected daily.				
4. Free and unobstructed access to ED/ Services and for emergency forces.				
B. FIRE EQUIPMENT AND SAFETY				
5. Fire alarms, detection, and suppression systems are in an operational function.				
6. Fire alarms, detection, and suppression systems are not impaired.				
7. Temporary fire alarm, detection, and suppression systems have been inspected and tested monthly.				Date:
8. Training and additional fire equipment have been provided for personnel.				
9. Power has been properly secured at the end of each workday.				
10. No smoking policy has been implemented in and adjacent to the construction areas.				
11. Construction areas are free of storage and housekeeping materials, food waste, and debris from daily operations to reduce flammable and combustible fire load of the building; floor area leading to/from construction site cleaned daily.				Date or time:

ILSM ROUTING PLAN

ILSM Routing Plan

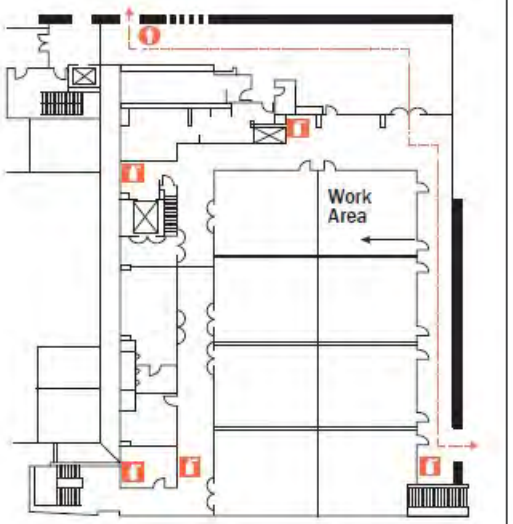
ILSM Routing

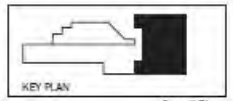
In Case of Fire - Dial 911
In Case of Fire Use Stairs for Exit
Do Not Use Elevators

- You Are Here
- Fire Alarm Pull Box
- Fire Extinguisher
- Routing Path
- Elevator
- Exit Stair

Alarm Sounds Like: (Buzz)

Alarm Looks Like: (Flashing Light)





Overall Plan

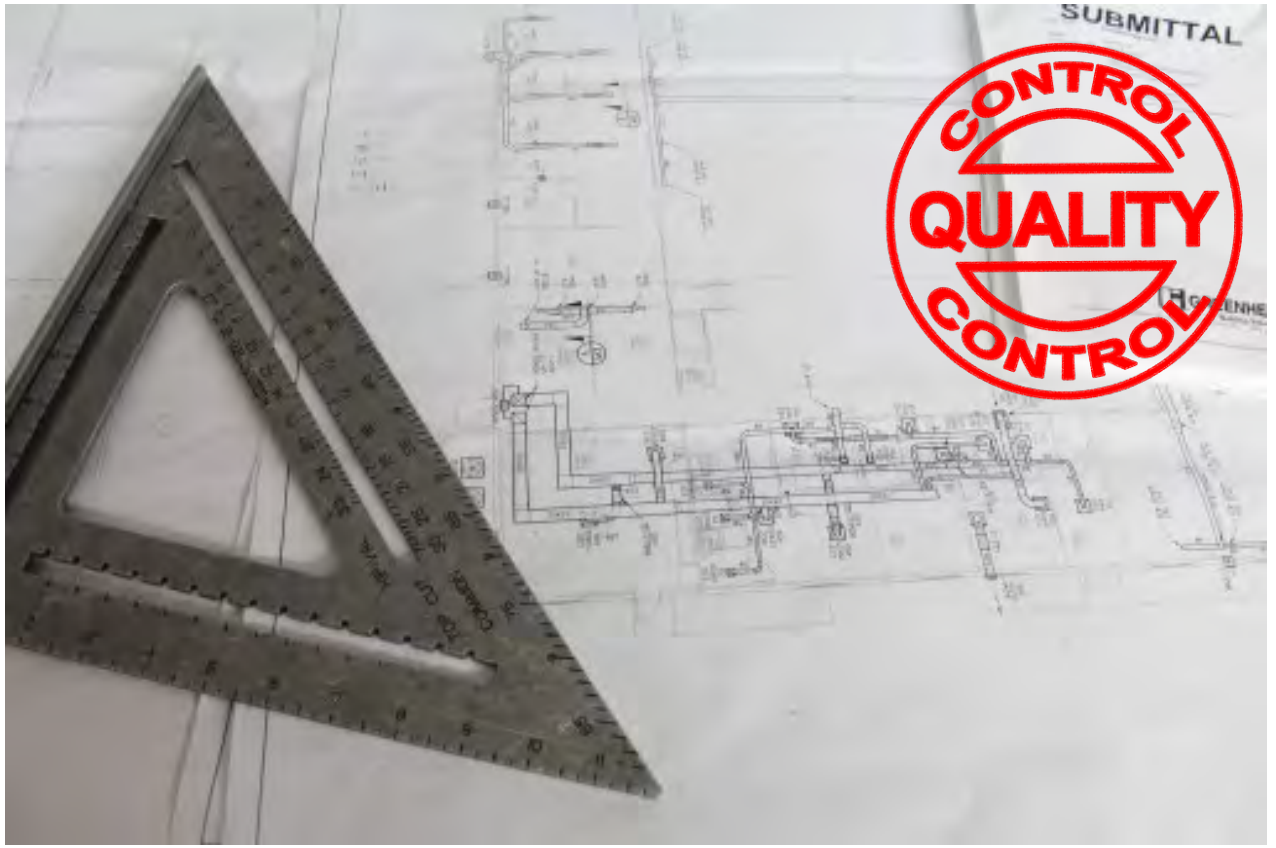
Construction staff should understand that working in a healthcare construction project differs from working on a residential or commercial construction project. It is vital that construction workers understand the importance of following policies and procedures for dust control. An educational program for this group should include the following:

- Adverse effects of construction dust to patients
- The ICRA process
- Specific facility rules, such as entry and exit from buildings
- Worksite containment
- Dust control measures
- Containment and transport of construction material and debris
- Etc….

Mission

The health and safety of every patient, facility employee, and construction worker is our **NUMBER ONE PRIORITY**

Success



Wrap Up

- The Facility Guidelines Institute (Hospitals and Outpatient Facilities) 2014 edition
- Infection Control Risk Assessment (ICRA): Construction Trades Best Practices Awareness Training, Carpenters International Training Fund
- APIC (Infection Prevention Manual for Construction & Renovation)

Reference Material

Thank you

QUESTIONS?

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