CLINTON REGIONAL HOSPITAL

Pre-Construction Infection Control Risk Assessment - Matrix

Project **Location** **Date** **Project Scale:**	**Low Risk Areas** Offices, Support areas, Lobbies,	**Medium Risk Areas** Non-invasive patient care: Cardiology, PT/OT, Radiology, Medical Offices, Food Service areas	**High Risk Areas:** Special Care Areas, ER. LDR, Nurseries, Peds, Pharmacy, Recovery rooms	**Extreme Risk Areas** Areas with Immuno-compromised Patients-transplant Area, Cardiac Cath, OR's ICU's Isolation Rooms, Sterile Supply areas
Minor: Inspections above ceiling, minor repair, painting, (no patching) Minor electrical work, plumbing, similar work with little or no drilling, cutting or other dust-raising activity. Normal maintenance activity.	**Category 1 precautions**	**Category 2 precautions**	**Category 2 precautions**	**Category 3 precautions**
Small Scale Projects: Installation of electrical and computer cabling, Opening into chases and concealed spaces, cutting plaster and drywall, sanding and other dust making/ activity within a room or other controlled area. Usually one to three shifts.	**Category 1 precautions**	**Category 2 precautions**	**Category 3 precautions**	**Category 3 precautions**
Larger Scale Projects: Removing floor coverings, sanding plaster walls, wall demolition and construction, Duct work, electrical work above ceilings, major ceiling work, Usually more than three days work.	**Category 1 precautions**	**Category 2 precautions**	**Category 3 precautions**	**Category 4 precautions**
Major Renovation and Construction: Major demolition of areas, particularly those open to patient care areas (less than one hour wall. Work on HVAC Systems, projects scheduled for more than three weeks total activity.	**Category 2 precautions**	**Category 3 precautions**	**Category 4 precautions**	**Category 5 precautions**

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Recommended Infection Control Precautions, by Category

Category 1:

	Protect patient care areas from activity or enclose work area (close doors). Replace ceiling tiles promptly.
	Minimize dust and dirt, clean or have area cleaned when done and when dust or dirt builds up. Vacuum with HEPA post-filter type vacuum, and/or damp mop areas when work complete.
	Direct questions about work to ICP.

Category 2:

	Protect patient care areas from activity by closing doors or enclosing area with plastic or equivalent. Replace ceiling tiles prior to removal of enclosures.
	Use water spray mist to minimize dust when opening ceilings and conducting activities that will cause dust or dirt to be airborne.
	Close off HVAC system openings (exhaust and supply) with plastic or equivalent. If exhaust must be is maintained, use "clean air machine.", or powered HEPA filters in exhaust path, or exhaust directly to outside.
	Use dust mats or tacky mats at entrances. Wet mops areas during and after construction to remove and control dust and dirt with suitable cleaning agents. Use HEPA filters on vacuums used in area for cleanup. Wipe down all horizontal surfaces (except floor and ceiling) with suitable disinfectant at conclusion of job.
	Control of Debris: use covered container to remove debris through internal hospital paths. Cover must be dust tight and secured to container, not just laid on top.

At Job Completion:

	Replace all ceiling tile or re-close ceiling.
	Wipe down all horizontal surfaces (except floor and ceiling). Wet mop or extract floor with disinfectant approved by Infection Control. If appropriate, vacuum all areas with HEPA Post-filters on vacuum.
	Clean HVAC system as closure being removed, and operate system for 24 hrs prior to final cleaning of job.
	Maintain all enclosures practical until post-job cleaning complete. Use vacuum with post-HEPA filters during removal of barriers, as practical.

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Category 3:

	Isolate the HVAC systems to minimize a route for dust movement. If exhaust is used to maintain the area negative in pressure to outside areas, the exhaust must go to the outside. If existing exhaust systems are to be used, they must be non-recirculating exhausts. A pressure negative to the air in the patient care units must be maintained during construction activity.
	Provide construction separations that are fire resistive and dust tight, constructed of sheet rock or limited combustion plywood and plastic sheeting. Enclose work areas prior to any demolition work or opening any walls or ceilings. If work is being done in public areas, use control unit technology (similar to units developed to remove asbestos in areas that could not be closed down.) and clean-air machines to maintain a pressure in the enclosure negative to the air outside the enclosure, with the exhaust going through a HEPA filter prior to releasing into the air in the patient care area.
	Debris must be removed in tightly closed containers, with solid lid or plastic taped into place. The debris removal containers should be vacuumed or wet-wiped prior to removal from the site, to remove all surface dust and dirt.

At Job Completion

	Maintain barriers in place as much as practical until final cleaning is complete and site inspected by Infection Control. Removal of barrier materials should be accompanied by vacuuming using a vacuum with HEPA-filtered post-filters.
	Clean HVAC system as closure being removed, and operate system for 24 hrs prior to final cleaning of job and removal of barriers (to the extent practical based on the system.
	Site must be thoroughly cleaned, by damp-wiping all horizontal surfaces with disinfectants approved by Infection Control.

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Category 4

	Use all Category 3 precautions, plus:
	Isolate HVAC System and seal with at least plastic and tape. Where pressure may exist, use sheet metal or similar rigid materials in addition of plastic and tape to minimize accidental movement of air in ductwork. Isolate the ductwork as close to the construction barrier as practical.
	Seal all holes, penetrations and openings in the construction barriers and walls which are part of the construction separation with appropriate materials. Hole in fire rated separations must be equivalent in fire rating. Other holes must be sealed with tape and plastic or similar materials which are strong enough to withstand the pressure differential without leakage.
	Create a construction ante-room where all clothing, tools, equipment and other materials being removed are vacuumed or wet-wiped prior to being taken off site through the hospital patient care areas. Cart wheels should also be cleaned and run over a tacky mat or similar method to assure no dust is tracked out via wheels. All persons must walk across the tacky mats to clean their feet. Any person who has dust, dirt or materials on their clothing must vacuum it prior to leaving the ante-room areas. Tacky mats will be maintained to keep the surface tacky and to replace or remove layers when they become dirty. The ante-room will be wet mopped frequently (several time a day in usual construction activity) or similar methods will be used to satisfy the Infection Control staff.
	Personnel working in the area must either change clothing prior to leaving the job site or use shoe covers and cover clothing prior to leaving the area. (Modified asbestos rules. Showering is not required, but clothing changes are. If work shoes are worn off-site, they must be covered by shoe covers. Dirty work clothing must be removed in sealed containers for laundering.

At Job Completion

	Maintain barriers in place until final cleaning is complete, and site inspected by Infection Control. Removal of barrier materials must be accompanied by vacuuming using a vacuum with HEPA-filtered post-filters. Air pressure should be maintained negative to patient care areas during final cleanup.
	Clean HVAC system as closure being removed and operate system for 24 hrs prior to final cleaning of job and removal of barriers. If necessary allow the HVAC to blow into the site with the clean air machine catching the output of the supply and the machine feeding the air to the returns.
	Site must be thoroughly cleaned by damp-wiping all horizontal surfaces with disinfectants approved by Infection Control. Cleaning must be accepted by Infection Control prior to turning site over to hospital for equipment and supplies.

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Category 5

	Use all Category 4 precautions, plus:
	Use a "Clean-Air" machine, both to recirculate air in the job site to reduce airborne dust and to exhaust air from the job site. This is to maintain a pressure negative to the air outside the job site so leakage will be into the job site. The same machine may be used for both purposes if it has suitable capacity.
	Use a two chamber "air-lock" or similar method to assure no open path exists from the job site into patient care areas at any time. Wet-wipe down all materials and containers being removed from the site with appropriate disinfectant in the air-lock to assure no dust leaves the site. The clean lock must be mopped frequently and not allowed to become dirty. It should be as clean as a patient care area. Tacky mats and similar tools will normally be used in the clean chamber. Enclosed carts may be loaded from the dirty to the clean side of the airlock (if outside doors are closed and other precautions followed) to assure airborne dust cannot escape the worksite.
	All materials removed from the site during work activity must be either wet-wiped or placed in containers which can be wet-wiped prior to removal. This includes debris removed through the hospital routing and other materials removed from the site.

At Job Completion

	Maintain barriers in place as much as practical until final cleaning is complete and site inspected by Infection Control. Removal of barrier materials should be accompanied by vacuuming using a vacuum with HEPA-filtered post-filters.
	Clean HVAC system as closure being removed and operate system for 24 hrs prior to final cleaning of job and removal of barriers. If necessary allow the HVAC to blow into the site with the clean air machine catching the output of the supply and the machine feeding the air to the returns. The Clean Air Machine HEPA should be replaced or examined to assure it is working appropriately, and pre-filter replaced prior to the final air system cleaning so dust from the system can be visually evaluated.
	Site must be thoroughly cleaned by damp-wiping all horizontal surfaces with disinfectants approved by Infection Control. Site must be checked by Infection Control and wipe tests used, as deemed necessary by IC to verify the cleanliness of the unit prior to equipping and supplying the unit for patient care