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Considerations for Reopening Following the COVID-19 Pandemic

Buildings in the Community and the Role of the Code Department

May 1, 2020

While code departments continue to address the immediate needs posed by the COVID-19 pandemic, some cities and states are beginning to plan for reopening. Just as code departments continued to provide valuable community functions during the pandemic, their effective operations will be essential during reopening. This includes both the operation of the code department itself and supporting the safe reopening of buildings in the community.

To support our members at this time, the International Code Council has compiled important considerations and potential solutions code departments should think about as they plan for the reopening of buildings in their communities.

The content presented here is general in nature, code departments know their local conditions and are aware of state specific requirements including stay-in-place orders, interpretations, and waiver procedures. Code Council chapters and building associations can be important sources of local information. The Code Council has also assembled resources on its [Coronavirus Response Center](#).

As we continue to navigate these unprecedented times, it is important to always abide by the recommendations of local health officials, the U.S. Centers for Disease Control and Prevention (CDC), and other national and international health authorities.

GENERAL CONSIDERATIONS FOR CODE DEPARTMENTS TO SUPPORT SAFE RESUMPTION OF BUILDING OPERATIONS

- Engage constituents for feedback on department plans.
- Communicate with stakeholders frequently to smooth the reopening process. This includes messages on the department's website and email communication to industry groups and Code Council Chapters.
- Encourage building owners and building managers to implement proactive building safety and property maintenance practices ahead of reopening to tenants.
- Encourage building owners and tenants to form ad-hoc advisory groups for purposes of joint planning and sharing of important building safety information.
- Share guidance with the community on recommendations to reopen buildings safely. The content below could be a good starting point.
- Be prepared for the possibility that the virus may return if a vaccine is not widely available yet. This period before re-emergence provides a good opportunity to refine plans and conduct after action assessments.

FIRE AND LIFE SAFETY CONSIDERATIONS

Due to either a reduction in occupancy or the suspension of certain practices, buildings may have deviated from pre-COVID-19 practice. To ensure buildings can be safely reopened, building safety, security, and property management officials should perform an exterior walkaround, interior walkthrough, and visual inspection of the building premises.

- Exterior walkaround and visual inspection considerations:
 - » Note any temporary parking rules or restrictions in the immediate area of the building.
 - » Plan for any temporary parking rules or restrictions on the building premises.
 - » Ensure all exterior roadway entrances and exits are open and free from obstructions.
 - » Ensure fire lanes are posted and clear.
 - » Ensure there is clear access to building standpipe systems, sprinkler systems, utilities and utility rooms, and backup generators.
 - » Ensure building service areas such as docks, shipping and receiving areas, and dedicated employee entrances and exits are clear and free from obstructions.
 - » Ensure trash and other waste containers are organized, accessible, and free from obstructions.
 - » Ensure waste is removed from dumpsters and other waste containers.
 - » Address any amendments made to building waste removal schedules during building closure.
 - » Consider adding any needed or additional special waste removal services specifically for personal protective equipment (PPE) or other potentially hazardous waste.
- Interior walkaround and visual inspection considerations:
 - » Visually inspect and test the operation of building entrances and exits including doors, revolving doors, and garage doors for proper operation and ensure they are free from obstructions.
 - » Walk through and visually inspect emergency exit doors and stairwells for proper operation and to ensure they are free from obstructions.
 - » Ensure the proper operation of exit signage and lighting throughout the interior of the building.
 - » Inspect any areas of the building that are currently under renovation for adherence to all applicable construction safety measures including access control for construction workers and building occupants.
- Ensure life safety systems and equipment have been inspected, tested, maintained according to established schedules, and are in good working order. These systems and equipment include:
 - » Fire sprinkler systems and signaling equipment,
 - » Fire detection and alarm systems and equipment,
 - » Fire suppression systems and equipment including hood systems, ventilation systems, and dampers,
 - » Portable fire extinguishers, and

- » Building-maintained medical equipment such as Automatic External Defibrillators (AEDs).
- Ensure security systems including mechanical locks, electronic locks, and access control devices are working properly.
- Plan and perform any needed updates or changes to access control requirements for reopening ensuring compliance with applicable codes for ingress and egress.
- Ensure elevator and escalator operations including maintenance, emergency stop, and emergency recall are working properly.

PERSONNEL HEALTH & SAFETY / INFECTION CONTROL

- Address any temporary changes needed to building ingress and egress patterns to accommodate any temporary reopening protocols such as employee health screening; donning, doffing, and disposal of PPE; or any areas specifically designated for decontamination.
- Ensure that any measures taken to limit public access to occupied buildings continue to comply with the fire code egress requirements.
- Engage in risk-based decision-making:
 - » Understand, plan for, and classify worker exposure risk to COVID-19 in the workplace according to [Occupational Safety and Health Administration \(OSHA\) Guidelines](#).
 - » Understand and plan for potential cross contamination across the built environment including work activities performed in office-based, remote telework, and field-based environments.
- Implement a combination of individual and workplace preventive measures to limit the potential spread of COVID-19 in the built environment. Consult the following resources:
 - » Centers for Disease Control and Prevention (CDC) [individual guidance on preventing the spread of COVID-19](#).
 - » [OSHA Guidance on Preparing Workplaces for COVID-19](#).
- Close common areas where personnel are likely to congregate and interact or enforce strict physical distancing protocols.
- To facilitate adequate physical distancing protocols, consider revising maximum occupant loads for all buildings and spaces to accommodate 75 gross SF/occupant.
- Limit the re-opening of large assembly use facilities to groups A-1, A-2 and A-3, with strict physical distancing protocols, using 75 gross SF/occupant as a guideline.
- Review/approve temporary fixed seating plans for all dining facilities, theatres, etc., to verify spacing of tables/chairs meet physical distancing protocols.

PLUMBING AND MECHANICAL

If a building's water service or water distribution system has been shut down or seen reduced or low flow for a period of time, the potability of water may be impacted. It is strongly advised to flush the building's water distribution system and then have a bacteriological examination administered. If this bacteriological examination is positive, then further disinfection of the building's water distribution system or private individual water supply system (well) needs to be performed.

Disinfection methods as prescribed by the health authority or water purveyor having jurisdiction should be followed. If such procedures are not provided, then the procedures found in American Water Works Association standards AWWA C651 and AWWA C652 or the disinfection methods found in the 2021 International Plumbing Code should be followed. The basic flushing and disinfection methods as prescribed in the 2021 International Plumbing Code are provided below.

- The pipe system must be flushed with clean, potable water until dirty water does not appear at the points of outlet.
- The system or part thereof must be filled with a water/chlorine solution containing not less than 50 parts per million (50 mg/L) of chlorine, and the system or part thereof must be valved off and allowed to stand for 24 hours; or the system or part thereof must be filled with a water/chlorine solution containing not less than 200 parts per million (200 mg/L) of chlorine and allowed to stand for 3 hours.
- Following the required standing time, the system must be flushed with clean potable water until the chlorine is purged from the system.
- The procedure must be repeated where shown by a bacteriological examination that contamination remains present in the system.

The sanitary drainage system and its fixture traps may also have been affected by evaporation. Plumbing fixture traps may need to be replenished. This may simply mean running the faucet on a sink or lavatory or just flushing a water closet. Floor drains, floor sinks or other waste receptors may not have had their traps replenished via a trap primer or other trap seal protection devices during this time. To make sure floor drains, floor sinks or other waste receptor traps seals are replenished, simply dump water into these floor drains or other waster receptor to recharge the trap water seal.

While mechanical systems may have been operating during this period, they may not have been monitored as closely or operating at lower than typical usage due to thermostat temperature adjustments related to unoccupied or lower occupancy numbers within these structures. Under Chapter 1 of the International Mechanical Code (IMC) both new and existing mechanical systems must be inspected and maintained, thus preserving a HVAC system's ability to achieve acceptable indoor air quality based on its initial design. This means cleaning or changing filters to avoid contaminant buildup and maintaining airflow along with ensuring that the ultraviolet (UV) intensity of systems using UV disinfection are also monitored and maintained.

Many studies suggest that poor ventilation [increases disease transmission](#). This is an important factor in hospital or healthcare settings where frontline healthcare workers in some locations are currently coping with a shortage of personal protective equipment. [Studies](#) following the SARS and MERS outbreaks demonstrate that adequate ventilation can [reduce the likelihood of a contaminant's airborne transmission](#). More in depth requirements regarding the inspection and maintenance of ventilation systems can be found in ASHRAE/ACCA/ANSI Standard 180 which is referenced in section 102.3 of the IMC.

Consult [Guidance for the Disinfection of Building Water Systems Using the IPC](#) for more details.

BUILDING OWNER, MANAGER AND TENANT CONSIDERATIONS:

In addition to the inspection and reactivation of building systems, building owners and managers should establish ongoing measures that protect occupant health. This includes an initial cleaning process in advance of opening and an ongoing schedule of cleaning to reduce the spread of the virus. Consult the [CDC Guidance on Cleaning and Disinfecting your Facility](#) for recommendations. Building owners, managers and their tenants may want to take the opportunity to review their business continuity plans and communication plans to incorporate any lessons learned from the pandemic. Additional considerations are provided below:

- Communicate frequently with building occupants on new health and safety policies and procedures.
- Employ a monitoring system or dedicated personnel to enforce physical distancing protocols.
- Consider whether employers or building managers will supply personnel protective equipment to their employees or building occupants. If so, be sure to order such supplies with sufficient lead time to support reopening.

Consult [Getting Back to Work: Preparing Buildings for Re-Entry Amid COVID-19](#) from the Building Owners and Managers Association for additional guidance.

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