

RETURN TO OPERATIONS

PART 1 — BRING YOUR BUILDINGS BACK ONLINE

As the United States continues to open up, facilities across the country are beginning to plan for a return to occupancy. Careful consideration for the safety of those occupants, from employees to the general public, must be considered to mitigate the spread of COVID-19. While not inclusive, SSR's subject matter experts have compiled a list of recommendations for owners and facility staff to prepare their existing facilities to confidently return to operations. This two part series will examine necessary steps to **bring your building back online** (part 1) and **enhancements to reduce the risk of COVID-19** (part 2). Our intention is to provide concise and actionable information relative to your facilities operational systems with minimal capital investment — *information you can use NOW with equipment you have NOW*. This expertise is based on our 50+ year history providing engineering design and consulting services for the healthcare market and collaboration between our subject matter experts to inform a re-opening of facilities.

MECHANICAL

Building owners and service professionals should follow the requirements of [ASHRAE Standard 180-2018, Standard Practice for the Inspection and Maintenance of Commercial HVAC Systems](#).

- Consider PPE for operations staff when maintaining ventilation equipment including changing filters and cleaning condensate pans.
- Provide a complete change out of all filtration media at air handling units and fan coil units serving the facility.
- Review the building automation system (BAS) for overrides, setbacks, and scheduling to revert back to normal operation. Check all alarm logs in the BAS and make corrections.
- Confirm that outside air and return air dampers are functioning properly. Rebalance dampers and recalibrate airflow measurement stations (AFMS) as needed.
- Confirm that all filters and/or UV lamps have been replaced according to the manufacturer's recommendation.
- Adjust BAS programming and scheduling to provide indoor air flushing for four hours prior to initial re-occupancy and for two hours before and post normal occupancy. Flushing should include modulating outside air dampers to maximum position and operation of all exhaust and relief fans.
- If the building has operable windows, doors, walls, or roof, open for a two hour minimum before reoccupation.
- Operate all air handling systems with minimum outside air, rather than allowing the outside air dampers to fully close, during unoccupied periods. This step may require adjustment to the BAS programming, but will allow ventilation to remain in place to flush the building even during periods of no occupancy.
- Confirm that the overall facility pressure is positive relative to outdoors.
- For adjacent enclosed parking garages, operate ventilation systems for a minimum of two hours prior to re-occupancy at full system capacity (or high speed).
- Check the condition of all heat recovery wheels in the building. Confirm that there is no leakage or cross-contamination. Consider deactivation of wheels until operation and condition is confirmed.

- Monitor space temperature and humidity levels closely to confirm control set points are maintained.
- Check refrigerant pressures for chillers and other A/C units to confirm adequate charge.
- Check water quality in systems and add chemical treatment as needed. Confirm make-up water for all open systems and cooling towers.
- If boiler systems were shut down completely, follow boiler codes and manufacturer's recommendation for re-startup and returning the hot water or steam heating systems back to normal operation.

ELECTRICAL

- If the facility has an emergency or back-up generator(s), test generator as required by local code and manufacturer's recommendation.
- Revise lighting controls schedules, if equipped, to minimize the number of touchpoints of building occupants to local control stations. Rely on more widespread use of occupancy/vacancy sensors where applicable.
- Check battery back-up systems of technology equipment, especially any building critical systems such as servers, building automation systems, lighting controls, communication systems, and security systems.
- Check fire alarm system and other systems with battery back-up power supplies for proper operation.
- Turn on elevator cab (lift) ventilation fans, where possible. Limit number of elevator occupants based on social distancing procedures.

PLUMBING / FIRE PROTECTION

- Turn on the water and run the drinking fountains, lavatories, urinals, water closets, and pantries to ensure water quality before usage.
- Make sure all P- and U-traps on plumbing drains are wet.
- Distributed domestic hot water systems – If possible, keep these systems circulating. Keep water above 140°F to avoid microbial incursion. Do not let it drop below 120°F. If circulation was stopped, try to circulate once every two weeks for two hours at temperature. If the hot water recirculating system goes down for extended duration, do a high temperature flush and pull the strainers before going back online.

- Drinking/Water fountains – Auto-sensor or delete all together if protocol in place to provide bottled.
- Adopt procedures for the use and/or addition of “touchless” interactions at all restrooms. “Touchless” interactions would include auto-flush valves at all toilets and urinals, sensor faucets at all lavatories, and sensor soap and paper towel dispensers. Use of hand dryers should be discontinued unless equipped with HEPA filters. Include steps to reduce direct-touch, such as hand contact at restroom entry and individual stall doors.
- Adopt procedures for use with liquid hand soap dispensers to reduce potential contamination.
 - » Use sealed disposable dispensers equipped with soap cartridges.
 - » Dispenser with detachable and closed containers for soap refill. Soap containers must be washed and disinfected when emptied, before refilling.

GENERAL

- Consider pursuing evidence-based, third-party verified rating for all new and existing building and facility types focusing on operational policies, maintenance protocols, stakeholder engagement, and emergency plans such as the [WELL Health-Safety Rating](#).

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