



IAQ and Other Needed Improvements

By Howard McKew, P.E., C.P.E.

COVID-19 put a spotlight on indoor air quality and occupant health in public buildings. ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineering), in response to this pandemic formed their “ASHRAE Epidemic Task Force” of professionals made up of a diversity of experts in heating, ventilating, and air-conditioning (HVAC) to collect, develop, and share information regarding this global issue and provide guidance on how to ensure that buildings are prepared for future pandemics. Information can be found on the web site, <https://www.ashrae.org/about/news/2020/ashrae-epidemic-task-force-established>. In addition, the Federal Government’s initiative to attack the COVID-19 problem can be found at <https://www.usa.gov/government-coronavirus-response>. Both of these technical resources provide a wealth of useful information for building owners and facility managers to read.

ASHRAE’s goal has been, since the announcement of this Task Force March 31, 2020, to establish technical resources relating to HVAC systems addressing disease transmission in healthcare facilities, the workplace, public and recreational facilities, and the home environment. Our Federal Government has been working with the World Health Organization (WHO) globally to disperse ASHRAE’s findings and recommendations. At a more local level, building owners and their asset management staff have been managing occupant health concerns by drawing upon our Federal Government and organizations such as WHO and ASHRAE to mention two valuable resources to create their own specific healthy building strategies.

While COVID-19 has everyone’s attention, there are other issues and concerns for building management to be aware of including the following:

Sick building syndrome (SBS): This first became an issue back in the late 1970’s and increasing in occupant health concerns due in part from energy conservation



initiatives to reduce energy consumption resulting from the 1973 oil crisis that resulted in major energy conservation solutions. Experience has shown the building industry that not all solutions would have “positive” results, e.g., poor indoor air quality.

With tighter building construction, again to reduce energy consumption, mold and dampness concerns have occurred requiring new construction methods to avoid this problem.

Past use of hazardous/caustic building materials has raised awareness to what equipment, materials, and fluids manufacturers are required to state on the product labels.

In 2017, Harvard T.H. Chan School of Public Health published “The 9 Foundations of a Healthy Building” that highlighted:

1. Air quality

2. Thermal health
3. Moisture
4. Dust & pests
5. Safety & security
6. Water quality
7. Noise
8. Lighting & views
9. Ventilation

For more on these needs and improvements to achieve a healthy building success, please refer to [Foundations of a Healthy Building](#).

When finished reading about a healthy building, it is suggested that a committee be formed to evaluate building(s) and determine that the facility is in good operating condition. If not, a repair/solution plan will be needed to tune-up the building. How one does this, we recommend reading past Focus on Facilities columns:

Facility Management columns:

- Getting The Heating System Ready For The Cold Weather (November 2018)
- City Water Backflow Prevention and Its Importance to Your Health (September 2019)
- What is Energy Retrofit & Retro-Commissioning? (January 2020)
- Lightning & Surge Protection and Its Maintenance (February 2020)
- Creating An Energy Conservation Operation Checklist (June 2020)
- Is Your Place Safe – A Layman’s Security Walk Around (July 2020)
- A Facility Maintenance Checklist (October 2020)
- Commissioning Infection Control, as well as IAQ (June 2021)
- Failure to Plan-Plan to Fail; taking ownership of a building (July 2021)
- When Do You Repair and When Do You Replace? (October 2021)
- Preventive Maintenance of Light Bulbs and Light Fixtures (May 2022)
- Mechanical System Water Treatment PM (June 2022)
- Preventive Maintenance of Light Bulbs and Light Fixtures (July 2022)
- Pest Control Preventive Maintenance (October 2022)

Asset Management columns:

- Space Comfort versus Occupant Comfort (May 2020)
- Seasonal Maintenance-Why It Is Done (September 2020)
- Deferred Maintenance Doesn’t Mean No Maintenance (October 2020)
- 3rd Party Commissioning (July 2020)
- 3rd Party TAB Testing, Adjusting, & Balancing (August 2020)
- Creating A Deferred Maintenance Plan (November 2020)
- A Security Plan (January 2021)
- Indoor Air Quality & Indoor Environmental Quality for Your Building (August 2021)
- Emergency Planning for Your Building Infrastructure (September 2021)
- Incorporating Your Deferred Maintenance Plan with Your Master Plan (October 2021)
- Fire Protection & Life Safety Certification (May 2022)
- Mechanical System Water Treatment and Filtration (June 2022)
- Lights and Light Fixture-Replace or New (July 2022)
- Pest Control Management (October 2022)

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