



Update on Air Filtration Systems at First Unitarian Church of Pittsburgh from the Board of Trustees

As our church building was re-opened and in-person church activities were returning following shut-downs due to the COVID pandemic, many procedures were put in place to reduce the chance of transmission of that virus. At first, we had requirements for masks and vaccinations, limited attendance and social distancing by having empty pews between occupied ones. These requirements were relaxed as community transmission rates lowered and vaccination rates increased.

In addition, we sought to improve air filtration in the part of the church serviced by the geothermal HVAC system – namely the sanctuary building. An Ad Hoc Air Quality Team, consisting of church members Bob Mitchell, Sue Oerkvitz and Peggy Parsons, researched air filtration systems that could provide enhanced air filtration. They conducted extensive on-site test monitoring. The Board decided, based on their excellent research and recommendations, to install electrostatic air filters on top of the MERV-8 air filters that were in place already. This system, installed in 2023, was rated at MERV-13. MERV is an air filtration standard – roughly, bigger numbers mean better filtration.

Unfortunately, the system was plagued with electrical problems that caused frequent shutdowns of one or more of the electrostatic filters on the six air handlers in the building. A substantial effort was made by the Board and the Building and Grounds Committee to resolve these issues. Throughout this process, all parties involved -- the church's HVAC maintenance company, which installed the system; a second company which sold us the systems and a third which manufactured the system -- were acting in good faith to rectify the situation in order to give us what we had paid for. However, we found that the cost of maintaining this system would be going up several thousand dollars per year because of changing economics of the air filtration market, as the market for high efficiency air filtration systems had fallen dramatically after the first few years of COVID.

In recent months, we came to several realizations and conclusions: The system we had, although reliably used in places like hospitals and laboratories, had not been used or tested enough in a place like a church, where such a high level of filtration was not typically sought; we had no guarantee that we would ever get the electrostatic system to work consistently. In addition, since the electrostatic system was installed, our HVAC contractor conducted new engineering studies showing that our HVAC system could handle higher efficiency traditional MERV-11 filters, that they originally thought would not be appropriate.

Accordingly, and with the recommendation of the suppliers of the electrostatic system, the Board voted to have the system removed and to put in MERV-11 filters, which is still a big improvement over the original MERV-8 filters, albeit somewhat less efficient than the electrostatic system. Our HVAC company agreed to do the changeover at no cost to us. The Board also voted to pursue as much of a refund as possible from the manufacturer, with the manufacturer of the electrostatic system agreeing to take back the units and work with us on the amount of refund they could provide.

At no time since the installation of the electrostatic filtration system did we fall below the original filtration quality and to the best of our knowledge we always had some of the units operating with the electrostatic filters.

Going forward, we are confident we are providing as much protection as we can from the air handling system we have. And as always, we suggest that people who are at heightened risk from respiratory illnesses practice precautions such as wearing masks, using hand sanitizer and practicing social distancing.