March 1, 2024

Re: *Proposed artificial turf field in Roosevelt Park*

Mayor Gary Christenson
215 Pleasant Street, 4th Floor
Malden, Massachusetts 02148
cc: Malden City Council, Malden Board of Health, Malden DEI Coordinator

Dear Mayor Christenson,

We write to you as physicians and public health experts to inform you about the health risks of artificial turf and to object to the placement of an artificial turf field in Roosevelt Park in Malden, Massachusetts. We would like to highlight that the use of BrockFill engineered wood particle infill does not obviate these risks.

Artificial turf carries substantial human health risks during its production, use and disposal. The term artificial “turf” is itself misleading, since the material has no relationship to natural turf or grass. Artificial turf is a chemical product composed of plastic, including strips of green plastic that mimic the appearance of grass. Its health risks include extreme heat, toxic chemical exposure, and friction abrasions.

Extreme heat
On hot summer days, artificial turf fields can reach exceedingly high temperatures. At the University of Missouri’s artificial turf field, the surface temperature reached 173° F and head- level temperature reached 138°F on a 98°F day. Such high temperatures pose a significant hazard, especially to children running and playing at high intensity. The risks to these children include dehydration, heat stress, heat stroke, and heat burns. In part because of these health risks, US national soccer teams have refused to play on artificial turf fields. Fields with BrockFill engineered wood particle infill may reach lower peak temperatures than fields with crumb rubber infill, but they nevertheless give rise to temperatures that exceed safe human use on sunny days. Natural grass is the most effective means of reducing exposure to extreme heat.

Toxic chemicals
Even without crumb rubber infill, artificial turf fields contain the many toxic chemicals that go into plastic manufacture of the artificial grass blades. Of high concern are polyfluoroalkyl substances (PFAS, or “forever chemicals”), which are used in the artificial turf manufacturing process and are linked to a range of serious health conditions, including obesity, diabetes, reproductive disorders, thyroid dysfunction, and cancers. Children playing on artificial turf fields are by necessity exposed to these

chemicals, and their exposures are especially intense on hot, sunny days when high temperatures cause the chemicals to vaporize upward into the air children are breathing.

Friction abrasions
Athletes who fall on artificial turf fields can get friction abrasions (“turf burns”) from the abrasive plastic in these fields. These burns can become infected; indeed, the Centers for Disease Control and Prevention (CDC) has reported outbreaks of methicillin-resistant staphylococcus aureus (MRSA) infection in children playing on artificial turf.

As physicians, we urge the City of Malden to pursue bids to renovate Roosevelt Park with living natural grass instead of artificial turf. We agree with Malden residents who have expressed concerns about sacrificing living urban green space for plastic artificial turf, and we encourage you to pursue a safer approach to meeting the recreational needs of the Malden community -- one that does not pose health hazards to children.

Sincerely,

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