### Memorandum

To:	Natick Select Board
CC:	Melissa Malone, Town Administrator
	James Errickson, Deputy Town Administrator, Operations
	James White, Health Director
	Anna Nolin, Superintendent of Schools
	John Gadson, Director of Facilities Management
	Thomas Hladick, Deputy Director of Public Works
	Jeremy Marsette, Director of Public Works
From:	Jillian Wilson Martin, Sustainability Coordinator
Date:	September 9, 2020
Subject:	Clean Air + Energy Efficiency Lighting Project



The enclosed contract is for the LED retrofit of Town Hall and the Gravel Pit in combination with clean air technology by ThinkLite, a Natick-based company located on West Central St. It has been reviewed with Town Administration, Facilities Management, Public Works and the Health Department. The Superintendent of Schools has also been alerted of the project, given her department's location on the third floor.

#### **Request of the Board**

The use of efficient lighting is a core part of Natick's current energy reduction plan, and the Town has been working to convert its buildings' existing lighting technology. We have an inventory of each building's lighting fixtures and assess the costs and benefits of converting fixtures to LED on a regular basis.

This project, which will retrofit all incandescent and halide lighting at Town Hall and the Gravel Pit, is estimated to result in the reduction of approximately 70,000 kilowatt-hours and \$15,000 in annual electricity cost savings. The project has a simple payback of 4.3 years and has been pre-approved by Eversource for a \$25,000 incentive.

This project qualifies as services for energy conservation as allowed under M.G.L c.25A section 14 and is subject to prevailing wage. It will be fully funded by a Fall 2019 Town Meeting capital appropriation for energy efficiency, and we are here today to request your approval to award a contract of \$64,887 to ThinkLite.

#### **Pilot Project**

This project is unique in that it seeks to pair the energy savings of a traditional LED upgrade with clean air technology that can help treat and monitor the presence of pathogens. It will start with a pilot in the Select Board's meeting room that will pair the installation of an air quality monitoring system with UVA LED lighting and the application of a photocatalytic purifier, titanium dioxide, to the walls and hard surfaces of the meeting room.

It also includes the installation of an air quality monitor in the School Committee room as a "control", since it is similar space, and will allow us to see how air quality varies in both rooms before and after the Select Board room is sprayed with the photocatalytic purifier. The monitors, UVA-level lighting and titanium dioxide treatment of the Select Board room will be fully paid by ThinkLite as part of the pilot.

Based on the success of the pilot, Town Administration will follow up with the Select Board and will either ask to deploy the LED + clean air solution throughout Town Hall or choose to complete the more traditional LED retrofit in the rest of the building, as contracted. Should the Town elect to install the clean air technology throughout Town Hall, the total price for this project (Town Hall and Gravel Pit) will increase by \$21,500 and the payback will lengthen from 4.3 to 5.8 years.

## How the Clean Air Technology Works

There are three components of the "clean air" technology: the application of titanium dioxide, UVA-spectrum LED lighting, and air quality monitoring.

The application of titanium dioxide has self-cleaning qualities and can disinfect surfaces for about three years when activated. It is FDA approved and is used to add whiteness to products such as food, toothpaste and cosmetics.

The UVA lighting helps kill germs and activate the titanium dioxide treatment in place of sunlight in interior spaces.

The air quality monitors measure particulate matter over a certain size (PM2.5), Total Volatile Organic Compounds, CO2 levels and more (see attached brochure with more information), and will allow the Town to understand both how well the UVA and titanium dioxide treatment are working, but also the overall quality of air in the space. The Town may use this information to adjust the fresh air intake for the room/building and consider other ventilation and treatment measures.

### **Other Applications**

The Town is also investigating an opportunity to deploy air quality monitors (monitors only; not the spray or lighting) in other public buildings, including schools. The monitors are relatively low cost, and funds from a grant may be available to cover the expense. The intent in this instance would be to use the monitors to learn what is and isn't working in different buildings and adjust accordingly.

# **Gravel Pit**

Also included with this scope is the retrofit of metal halide lighting at the gravel pit, in the employee shed. No clean air measures are planned for this portion of the scope.