

## Potential ESSER Air Quality Projects

- ***Replace Jr./Sr. High air conditioning RTUs - Estimated \$30,000-35,000***
  - Currently, there are three classrooms that utilize one piece of equipment for heat and another for cooling. During the cooling season the rooftop air conditioning units bring in approximately 10% outdoor air. During heating season, the original hot water unit ventilators are still used and no longer bring in outdoor air. So for a majority of the school year, these rooms do not receive any fresh air.
  - Installing new rooftop units that provide both cooling and heating will enable fresh air to be brought into those rooms year round. An equipment option we could consider is UV lighting technology that helps remove contaminants from the air such as microorganisms, bacteria, viruses & mold.
- ***Replace Elementary RTUs - Estimated \$45,000-60,000***
  - We plan to replace these (5) units due to age. They provide gas heat & cooling as well as bring in outdoor air to the 1998 addition areas of the building.
  - They could be a justified ESSER expense if we add air quality technology like UV lighting to the new units. We could also consider higher efficiency units if we are able to utilize those funds.
- ***Replace Jr./Sr. High make-up air units with ERV's - Estimated \$30,000-40,000***
  - Currently, outdoor air is provided to most of the water source heat pumps via (3) make up air units with gas heat. These are rooftop units that bring in fresh air but do not exhaust air back out of the building. Due to the type of equipment we are only able to operate them during mild temperature conditions (30-75 degrees). Thus we can only bring in fresh air for these parts of the building for approximately half of the school year.
  - Rooftop installed Energy Recovery Ventilators would provide tempered fresh air year round and exhaust stale air as well. These units would have gas heat & air conditioning so that they can provide 65 degree air to the heat pump system year round.
- ***Replace Jr./Sr. High heat pumps - Estimated \$150,000-190,000***
  - All but four of our thirty-six total heat pumps need to be replaced over the next few years due to age. Nine of the units that need replaced do not receive outdoor air because they serve hallways, restrooms or storage areas. Also, the auditorium & small gym units (2) are connected directly to outdoor air vents
  - There are twenty-one units due for replacement that do receive outdoor air from the make-up air units listed above. If we were to replace these heat pumps as part of the same project as the make-up air units we could potentially use ESSER Funds which would greatly reduce the burden on the SAVE & PPEL funds to replace these units.

- ***Install new HVAC system for Elementary north hall - \$75,000-150,000***
  - *Six classrooms in the north hallway use steam unit ventilators for heat & window air units for cooling. These rooms receive no outdoor air at all and the steam boiler that provides the heat is now 67 years old. We won't be able to remove that boiler until we address the front (oldest) hallway but installing a new system for the north hallway will be a huge step in the right direction.*
  - *There are multiple options for HVAC when looking at an entire hallway. The two most logical options are 1) Rooftop units that take care of a few rooms each or 2) A VRF (Variable Refrigerant Flow) system with an ERV for outdoor air. Rooftops units would bring in outdoor air & involve ductwork.*
- ***Replace Jr/Sr High windows - Estimated \$50,000-60,000***
  - *Eight classrooms from the 1967 & 1970 sections of the building have original windows that do not open or seal correctly. A total of twelve large windows also have transite panels above & below the glass that contain asbestos.*
  - *Window replacement that enables the windows to open and bring in fresh air may meet ESSER use requirements. Aluminum frame casement windows would open & close much easier while matching the windows in newer areas of the building.*
- ***Replace Elementary & Jr/Sr High exhaust fans - Estimated \$15,000-20,000***
  - *The older sections in our buildings contain several exhaust fans in restrooms, locker rooms, hallways, etc. Many are in very rough condition & do not move air like they originally could even after repairs have been completed.*
  - *Installing new units would provide better ventilation, be more efficient & could easily integrate into our energy management system for scheduling purposes.*
- ***Replace High School gym air handlers - Estimated \$60,000-90,000***
  - *The high school gym currently has heat only, hot water air handlers. These units do bring in some outdoor air but only operate during heating season (November-March). These units are original from the 1970 addition.*
  - *New air handlers with heat & air conditioning would operate year round providing tempered air with humidity control. Optional UV lights along with the humidity control & outdoor air year round would all improve air quality.*
- ***Install RTUs for HS gym restrooms & locker rooms - Estimated \$25,000***
  - *These areas use a combination of unit ventilators & hot water radiators with no outdoor air. There is also no cooling.*
  - *A rooftop unit with gas heat & air conditioning would provide tempered air year round with humidity control. Optional UV lights along with the humidity control & outdoor air year round would all improve air quality.*
- ***Install RTUs for Jr/Sr. High cafeteria locker rooms - Estimated \$15,000***
  - *These areas use a combination of unit ventilators & hot water radiators with no outdoor air. There is also no cooling.*
  - *A rooftop unit with gas heat & air conditioning would provide tempered air year round with humidity control. Optional UV lights along with the humidity control & outdoor air year round would all improve air quality.*