Osborn Furnace Bond Q&As UPDATED 4-26-16

Q. What happened to the furnace?

A. The Osborn School furnace is no longer working. The furnace dates to 1956 – it was installed when the school was originally built – so it is 60 years old. Most commercial furnaces last about 20-25 years. We have a dedicated custodial staff who have carefully maintained the furnace to make it last well beyond its normal lifespan.

Q. Why do we have to replace the furnace?

A. The furnace has to be in working order for the school to open in September.

Q. Have you tried to repair it?

A. Yes, we have tried to repair the furnace, including a burner replacement in 2006/7 that bought us an additional 10 years of life. Unfortunately, no more repairs can be made. We must replace it.

Q. What is this going to cost?

A. A new furnace and associated installation will cost no more than $1.8 million. The District will go through a competitive bidding process for the job.

Q. What does this mean for my taxes?

A. Long-term borrowing costs have a very small impact on taxes because the costs are spread over the anticipated life of the furnace. The tax implications will be minimal as they are amortized over the life of the equipment. The earliest increase in taxes from this bond would be seen in your 2017 tax bill.

Q. Did the District know this was coming? Why not use reserves to pay for the furnace replacement?

A. The District knew this expense was coming but was not going to replace the furnace until it stopped working. The District carefully monitors all of its buildings and puts money aside to repair them as needed. This is a bigger project – think of it as a kitchen renovation or putting an addition on a house. A homeowner might get a home improvement loan to help pay for it

– bonding is like that. Bonding for long-term, capital expenses like furnaces and roofs is the most fiscally-prudent way to pay for them. The District can borrow money at a low interest rate and pay it back over the long term. It also helps support the District's AAA bond rating not to pay for the furnace out of reserves.

Q. Is geothermal heat an option?

A. The District's engineer, Laurence Barile, provided the District with the response below. For brevity's sake, the answer is that geothermal might be an option for a new construction project, however, given the time, approval and cost constraints concurrent with this project, it is not an option.

From Laurence Barile, PE, LEED AP – Damiano Barile Engineers PC:

Geothermal HVAC systems, also known as geo-exchange systems, are water cooled heat-pump systems used in buildings that are fully air conditioned. The condenser water side of the system is routed through a series of vertical piping loops extending up to 490 feet into the ground. In a conventional water cooled system cooling towers and boilers are connected to the condenser water loop to maintain proper loop temperature in the summer and winter respectively. Geothermal systems rely on the near constant earth temperature of 55-60 degrees F instead. These systems are very efficient and we have specified them on a number of school projects.

However in the case of Osborn several factors weigh against geothermal:

· It would mean air conditioning a building which is not currently air conditioned increasing annual operating costs.

· It would mean digging up a significant part of the site to install the vertical loop borefield.

· It would mean replacing the entire existing HV system which would take this out of the "emergency repair" realm and trigger a full SED review, postponing start of the work until at least next summer and probably pushing completion into 2018.

· The cost of the project would likely triple (possibly quadruple) and would likely include an electrical service upgrade.

The fact that the building is used in the summer would argue in favor of geothermal if the district can get higher rent for an air conditioned building. It is critical for the summer and winter loads to be balanced in a geothermal system or the ground will become progressively cooler over a period of years reducing the heating capacity of the system. In other words the heat that is taken out of the ground in the winter must be put back into the ground in the summer.