

# ITHACA AREA WASTEWATER TREATMENT FACILITY

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TOWN OF ITHACA

CITY OF ITHACA

TOWN OF DRYDEN, OWNERS

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ITHACA, NEW YORK 14850  
(607) 273-8381

Special Joint Committee  
Special Meeting  
Wednesday, July 19, 2023 12:00pm

- 1) Welcome
- 2) Voting Item
  - a) Phase 4 Boiler Replacement Project – *Scott Gibson, Assistant Superintendent of Water and Sewer*
- 3) Adjournment

*Upcoming Meeting Dates: August 9, September 13*

Out of consideration for the health of other individuals, please refrain from using perfume/cologne and other scented personal care products at City of Ithaca meetings.  
Thank you for your cooperation and understanding.

## **Resolution for Ithaca Area Wastewater Treatment Facility (IAWWTF) – Phase 4 Boiler Replacement**

WHEREAS, in 2022, the Special Joint Committee (SJC) recommended to its municipal boards the approval of Phase 1 and Phase 2 funding for the replacement of a non-functional IAWWTF cast iron boiler in an amount, not to exceed, Six Hundred Fifty Thousand Dollars (\$650,000), and

WHEREAS, in 2023, additional related work under a Phase 3 project included pump replacement, boiler exhaust flue modifications, enhancements to combustion air intakes, glycol feeder improvements, automated controls, plumbing modifications for heat control, bonding, and engineering services for a cost, with contingencies, not to exceed, Two Hundred Fifty-Five Thousand Dollars (\$255,000), and

WHEREAS, during efficiency improvement work in Phase 3, plumbing, heat exchanger, valving, and general mechanical reconfiguration was made to eliminate unnecessary boiler capacity, invoke energy savings measures, and offer seasonal operational variability, and

WHEREAS, said modifications revealed several additional supportive improvements in other areas around the plant to ensure that efficiency and operability are mutually maintained, and

WHEREAS, J.W. Danforth has provided an 8 Item, Phase 4 cost proposal in an amount, not to exceed \$2,514,300, for the following items:

Item 1: Additional Boiler Replacement - There are three remaining boilers that feed process specific systems at the plant including the digester, turbines, and general gallery areas. Two condensing Camus Boilers are in various states of disrepair and a recently non-functional HB Smith “dirty” methane boiler dating to the age of the plant must be replaced to meet upcoming winter demands. The cost for this work is \$658,210;

Item 2: Boiler Zone Control Valves - There are five heating zones at the plant that currently have no means of valving control. With the various mechanical modifications made to improve efficiency during Phase 1 – 3 of the cast iron boiler replacement, it is recommended to furnish and install new and replacement valves, gauges, electrical, and accessories to allow for proper process control. The cost for this work is \$124,945;

Item 3: Waste Gas Burner - Excess methane gas generated by the plant is automatically sent to a waste stack burner which is currently mounted on the plant rooftop near the existing digesters. The stack is out of code, has no proper auto ignition and is required to be located at least 50 feet from a combustible source. At present, treatment plant operators ignite the burner by hand which is a serious health and safety issue. This project proposes to locate a new burner external to the plant with proper instrumentation and auto controls to meet current code. The cost for this work is \$658,210.00;

Item 4: Admin Building VPF Heat Pump Improvements - The Administration Building air handling system is undersized, poorly designed, and requires duct, blower, condensing, coil, and filtration work. It is currently fed by a long boiler loop located approximately 300 feet from the Boiler Room. Aside from the length of run, this method is largely inefficient requiring a nearly constant feed of circulating hot water to ensure that the building is adequately regulated. With calls within local municipal government for environmental sustainability commitments such as the

Green New Deal, a proposal to eliminate the boiler feed by retrofitting the building with a heat pump system is supported by staff in the amount of \$392,975;

Item 5: Turbine Room Supply and Exhaust Venting - Existing turbines are located in an unconditioned room adjacent to the existing Boiler Room. These turbines are being treated with in room high temperature atmospheric air that is not stable for operation which will cause short- and long-term efficiency and maintenance problems. The cost to bring outside makeup and exhaust venting will be \$59,400;

Item 6: Influent Building Air Handling Units - Air handling units in the Influent Building are blocked and corroded leading to hazardous atmospheric conditions for both equipment and personnel. The project involves the repair and coil replacement of three units in the amount of \$52,160;

Item 7: Sluice Gate Replacement – Influent slide gates which help to isolate flow into the Headworks Building no longer function and have deteriorated to the point where one has collapsed into the channel. The cost to replace the two units is \$168,400.

Item 8: Administration Building Roof Replacement – The Administration Building roof is now 35 years old, has been repaired multiple times and is in need of an entire replacement. With the potential funding of Item 4, which will require modifications to the existing roof, it is recommended that the roof be replaced for a cost of \$400,000.

Now, therefore be it

RESOLVED, that the Special Joint Committee recommends its municipal boards expand the Boiler Replacement Project Scope to include the replacement of the Camus Condensing Boilers, the replacement of the HB Smith Methane Boiler, waste gas burner, air handling improvements, the retrofit of the Administrative Building heating and cooling system, boiler and air handling controls, a Administration Building roof replacement for a cost, not to exceed three million seventeen thousand one hundred and sixty dollars (\$3,017,160.00) , which includes a 20% contingency, and be it further

RESOLVED, that funds necessary for said replacements, modifications and improvements be derived from the following sources as determined by the City Controller: amendment to capital project 423J, operating funds, Fund balance, serial bonds, capital reserves, grants, and Federal stimulus funds.