



Tighe&Bond



OUT WITH THE OLD, IN WITH THE NEW: CHALLENGES AND EFFICIENCIES OF DECONTAMINATING, UPGRADING, AND STORM HARDENING A 50-YEAR-OLD WASTEWATER PUMP STATION

2023 NEWEA-NYWEA Joint Spring Conference in Saratoga Springs, NY

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Ryan Palzere, EIT, Tighe & Bond

AGENDA

- **Introduction & Overview**
- **Project Approach**
- **Challenges During Design & Construction**
- **Operators' Perspectives**
- **Questions**



KEY TAKEAWAYS

- **Constructability**
- **Openness (to new ideas)**



ABOUT THE TOWN OF SOUTHTON

- **1779** Year Incorporated
- **43,000+** Population
- **3 Villages** Plantsville, Marion, and Milldale



SOUTHINGTON WATER POLLUTION CONTROL



PLANTSVILLE PUMP STATION

- **1973** Year Constructed
- **204** Customers Served
- **260 GPM @ 34-ft TDH** Pumps
- **7.5 HP** Motors
- **1,180 LF** Force Main
- **0.12 acre** Easement



PLANTSVILLE PUMP STATION



PLANTSVILLE PUMP STATION ISSUES



PLANTSVILLE PS DESIGN GOALS



Meet NEIWPCC's TR-16 Guidelines



Meet Southington MS4 Goals



Safely Abate and Demolish Old PS



Manage Grease and Reduce Maintenance

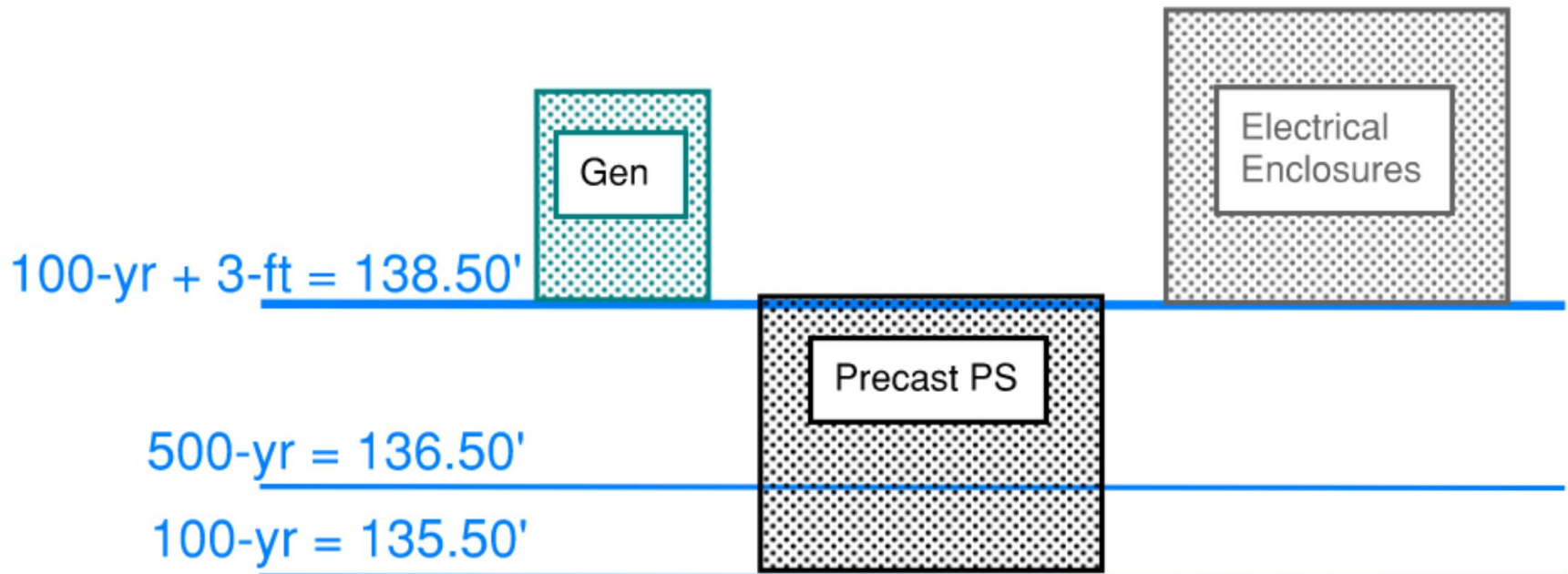


Improve Operator Safety



MEETING NEIWPC'S TR-16 GUIDELINES

- **Protect critical electrical equipment a minimum of 3-ft above 100-yr base flood elevation**



MEETING SOUTHTON'S MS4 GOALS



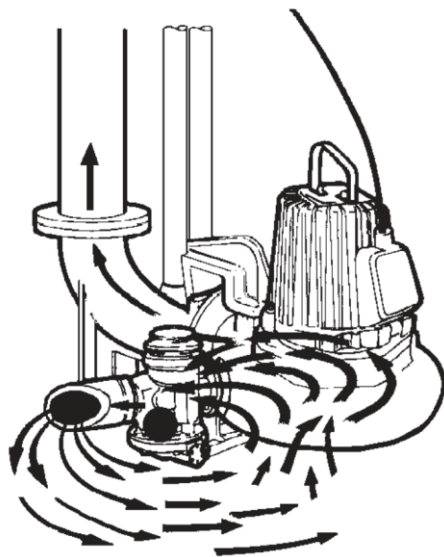
SAFELY ABATING AND DEMOLISHING OLD PS

- ACM
- PCBs
- Universal Waste

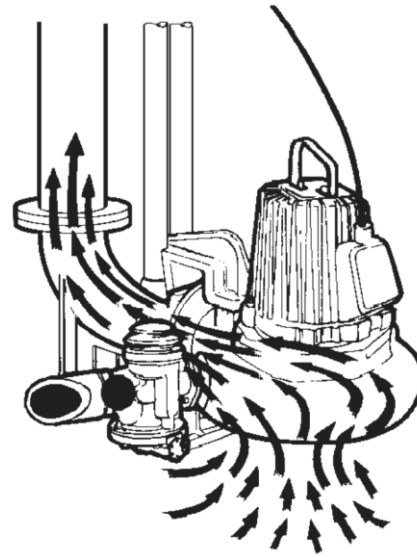


MANAGING GREASE AND REDUCING MAINTENANCE

- Flygt Mix-Flush Valve
- Flygt Cleaning Cycle
- Town's portable mixing system



Valve Open



Valve Closed

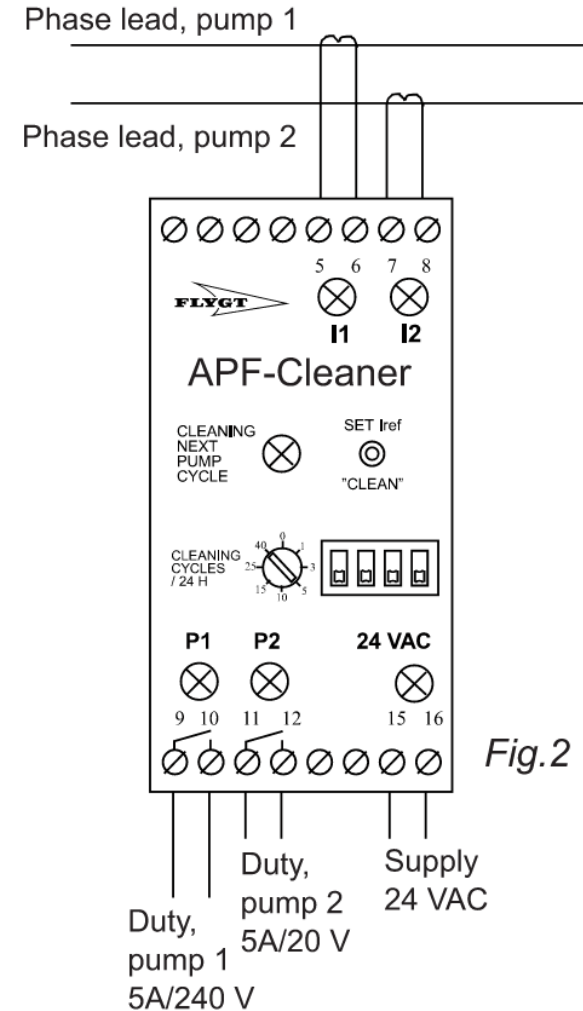
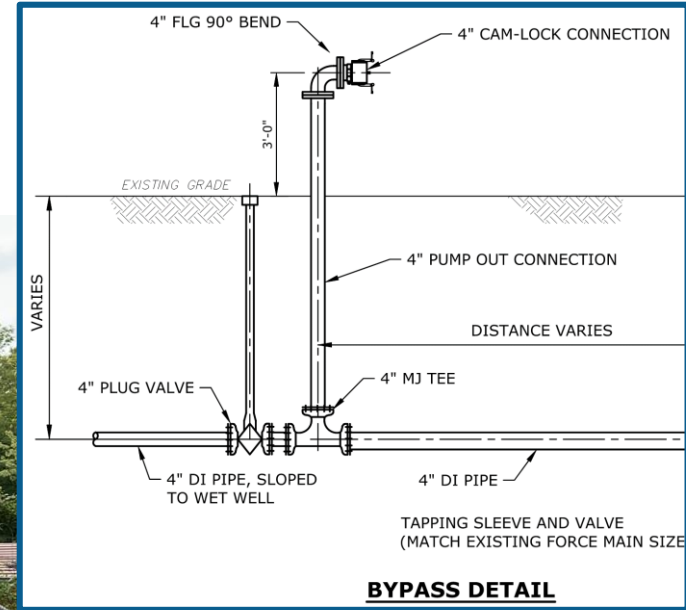


Fig.2

IMPROVING OPERATOR SAFETY



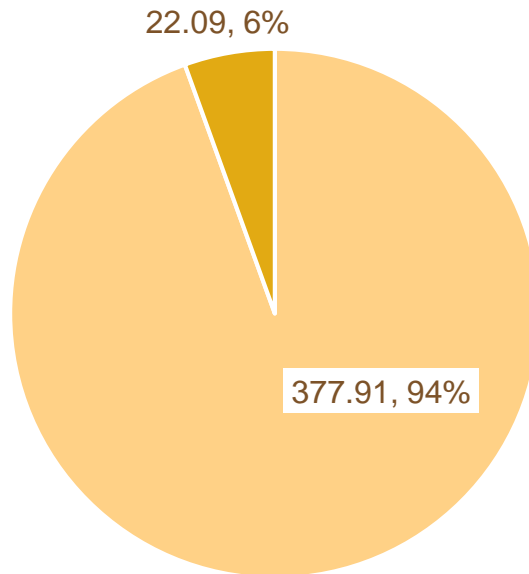
BYPASSING THE BYPASS DESIGN



SOIL MANAGEMENT COMPLICATIONS



Quantity of Contaminated Soil Exc. & Disp.



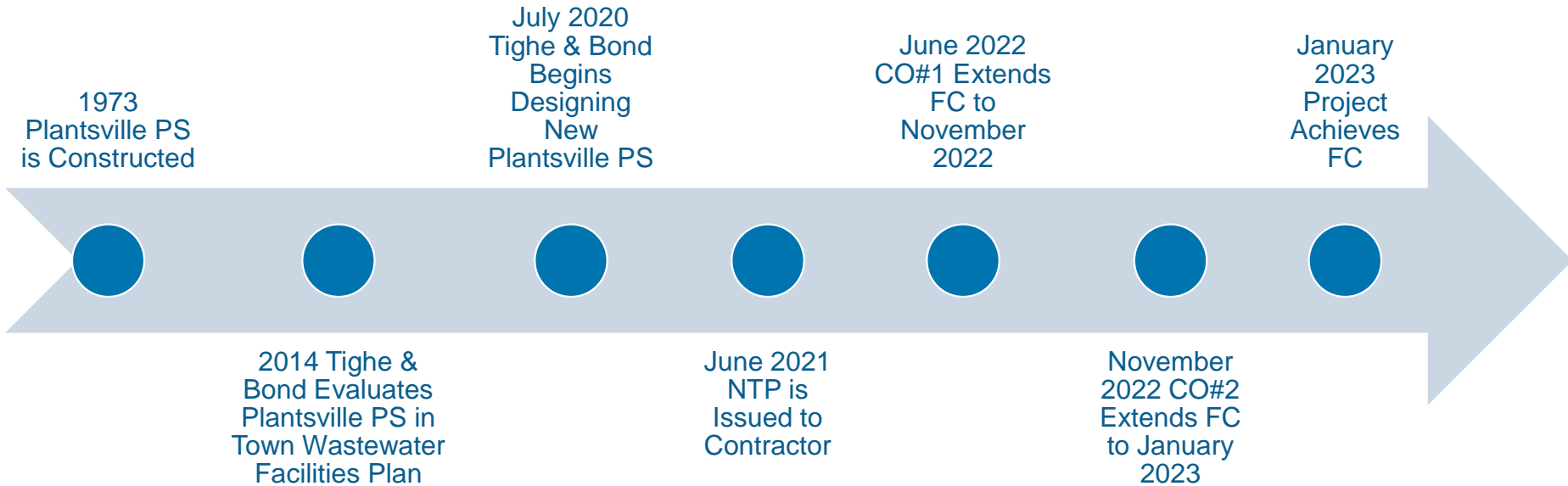
■ Used ■ Remaining

Landfill closures

- Taunton, MA
- Fitchburg/Westminster, MA



TIMELINE & EQUIPMENT DELIVERY



Equipment/Material	Submittal Approved	Installation Date	Lead Time
Ductile Iron Pipe	June 2021	May 2022	11 months
Natural Gas Generator	July 2021	September 2022	14 months
Precast Pump Station	September 2021	May 2022	8 months
Submersible Pumps	October 2021	June 2022	8 months
Pump Control Panel	November 2021	June 2022	7 months



OPERATORS' PERSPECTIVES



KEY TAKEAWAYS FOR PUMP STATION PROJECTS

Constructability

Openness (to new ideas)





THANK YOU!



Questions?



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