



MEMORANDUM

TO: Sean Currier, Town of Hampden Public Works Director
CC: Keefe Cyr, City of Bangor Wastewater
FROM: Kyle Corbeil, P.E.
DATE: May 13, 2016
RE: Proposed MRC/Fiberight Access Road Sewer Pump Station

The Municipal Review Committee (MRC) and Fiberight, Inc. has proposed a Solid Waste Processing Facility, located near Cold Brook Road and served by a proposed access road. The new facility requires several utilities, including gravity sewer main and a sewer pump station to convey wastewater from the proposed project area to the existing Town sewer collection system. This proposed pump station will serve the new MRC/Fiberight facility as well as development along the access road. The Town of Hampden has received a request from CES, who is providing engineering services for MRC and Fiberight, for design standards regarding the proposed sewer pump station serving this facility.

The Town of Hampden has adopted several design standards for its sewer pump stations in the interest of standardization and ease of maintenance. This memo details these design standards as requirements for the proposed sewer pump station serving the MRC/Fiberight Solid Waste Processing Facility and future development along the access road.

The Town should reserve the right to modify these requirements depending on the particular pump station configuration and site conditions for the proposed pump station.

Design and Construction Requirements:

1. Flygt Submersible pumps
 - a. Flygt submersible pumps required.
 - b. Stainless steel guide rails and lift chain required.
 - c. Provide pump leak detection system, Flygt Mix-Flush System, and Flygt Ball Check Valve options.
 - d. Service and Startup to be provided by Stevens Electric & Pump Service, Inc. Contact Tim Stevens for further details.
2. Backup Power
 - a. Backup power generator is required.
 - b. Generator and controls will be housed in a common structure of adequate size and materials of construction, meeting mechanical code requirements for heating and ventilation. Provide all code and maintenance clearances for generator, electrical panels, and appurtenant equipment.
 - c. Design calculations, structural plan, and code requirements need to be detailed for review.



3. Influent channel grinder
 - a. Provide JWC Environmental 30K Series Muffin Monster in-channel grinder. Immersible electric motor is required, hydraulic power pack option is not acceptable.
4. Odor Control, Access Hatches and Lift Hardware
 - a. Provide odor control canister suitable for proposed wetwell structure with removable activated carbon cartridge.
 - b. Orientation of the access hatch needs to allow access by the City of Bangor truck crane.
 - c. Aluminum frame and cover with minimum 300 lb/ft² load rating, stainless hinges and hardware, with pad lock hasp.
 - d. Integral safety grating required meeting OSHA fall protection requirements.
 - e. Include a davit crane socket base for each equipment housing structure matching the City of Bangor's confined space entry equipment requirements. The City uses the "Complete Davit System" by Safe Approach, Inc. of Poland, ME. Match the type of base installed at Route 202 and Mayo Road sewer pump stations.
5. Inlet Piping, Discharge Pipe and Supports
 - a. Excessive vertical drops into the wetwell will not be acceptable. Provide intermediate structures as necessary to prevent air entrainment.
 - b. Schedule 10S 316L stainless steel required for discharge piping.
 - c. 316L pipe supports required.
 - d. Provide sewer air release valve at piping high point with flushing hose connection.
6. Controls
 - a. UL-listed control panel matching Mayo Road and Route 202 Pump Station design required. Contact Stultz Electric of Portland, Maine further details.
 - b. Contact Whitten's 2-Way for SCADA telemetry requirements (City of Bangor telemetry coordination required).
7. Construction Records
 - a. As-built Drawings and Specifications
 - b. Submittal Record
 - c. Service, repair, fitting location plans (tie sheets)
 - d. Factory Testing, Onsite Testing, and Startup Reports
 - e. Onsite training for Town and City of Bangor staff
 - f. Contractor's Warranty Documents
 - i. Individual component/equipment warranties will not be acceptable.
8. Operations and Safety Items:
 - a. Short Circuit Analysis and protective device coordination study



- b. Arc Flash Hazard Analysis Study
- c. Operations and Maintenance Manual

As noted in the review letter regarding the MRC/Fiberight facility dated March 30, 2016, the Applicant is subject to the review process described in the Sewer Ordinance. We expect that a review package for including all of the pump station, gravity sewer, and force main piping will be submitted for review.

We would request that the Applicant provide detailed design information for review, as the proposed sewer system covers a large area with potential for development. Detailed projections of anticipated wastewater use by the MRC/Fiberight facility as well as estimates of wastewater generation along the Access Road corridor will be necessary. The Applicant should provide pump sizing, forcemain sizing, and wetwell volume calculations with the design package for a complete review. The Applicant will also need to provide operational parameters such as estimated pump run time, electrical use, and ongoing maintenance items for use in budgeting Town responsibilities.

The new facility will be subject to the Industrial Pretreatment Program administered by the City of Bangor Wastewater Department. Review by the City's Wastewater Department staff for compliance with Industrial User Permit requirements will also be required.