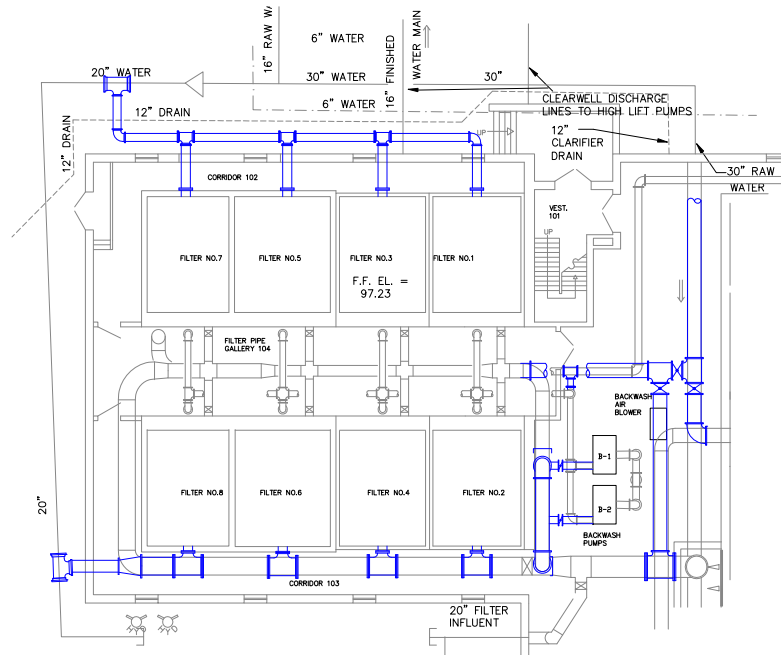


# EVALUATION OF POTENTIAL WATER TREATMENT IMPROVEMENTS TO THE FRANCIS J. O'BRIEN WATER TREATMENT FACILITY BURLINGTON, VERMONT



This study was conducted by Robert E. Dufresne and Naomi Johnson to meet the Burlington Water Treatment Department's need to supplement the treatment facility capabilities to ensure that consistently high quality water is provided to the distribution system on a continual basis. The Water Department has specific finished water quality goals as well as objectives for improving the treatment plant to obtain increased filter run times, compliance with the Partnership for Safe Water recommended filter loading rates, and provision of an additional treatment barrier.

Several potential improvements were identified in the report as possible methods to achieve the water quality goals and overall objectives. These included alternative pretreatment methods, various retrofit projects for the main plant filters and modifications to the traveling bridge filter. The preliminary recommendations were presented by Dufresne Group at a value engineering workshop.

As a result of input received from the engineering workshop, an economic evaluation was completed for inline chemical mixing to replace the rapid mix basin system, conversion of the traveling bridge filter to a roughing filter and future modifications to the main plant filters for mixed media installation.

Conversion of the traveling bridge filter to a roughing filter preceding the main plant filters was recommended for further evaluation and piloting, and Dufresne Group continues to assist the City of Burlington in the evaluation of piloting results.