Automated Design Algorithms

EtFlocSedFi

EtFlocSedFi file (located in the ADT Designs file within Final Designs) is the central file where values are inputted, functions are called, and parameters are returned and displayed. EtFlocSedFi is the driver of the automated design program and calls the functions that define the individual pieces of the plant, and the functions that write the scripts to draw the plant.

Design Program Algorithms

User Inputs
Design Assumptions
Math Functions
Pipe Database
Minor Loss Coefficients
Fluids Functions
Sedimentation Tank Dimensions
Floc Hopper
Flow Control Module
Flocculation
Sedimentation Tank- All Programs
Entrance Tank
Coagulant Stock Tank
Rapid Mix Chamber
Materials List
AutoCAD Design Algorithms
Master Program Organization
Inlet and Exit Weir Tank Design Program
Drain Channel
Operator Access
Chemical Doser Controller

Code Structure

An explanation of coding structure can be found here.

Wrapped Shape Functions

A guide to using wrapped shape functions can be found here.

Plant Element Functions

A guide to using the plant element functions can be found here.

This page is especially useful for drawing hydraulic components.

Plant Element Function Writing Guide

The Plant Element Function Writing Guide outlines the general steps taken to write plant elements drawing functions.

Program Writing Guide

The Program Writing Guide outlines some general rules to use when writing a program.

Design Specs Automation Instructions

Instructions on how to edit the customized Design Specifications Document so that specific variables and fields are customized with each design can be found here.