

REE 307: Final Project – Pipe Line Network Design by using a commercial software

Please use one of the following softwares (click on the name of each software to download it):

1. [WaterCad](#)
2. [Pipe Flow Expert](#)

Perform only one the following simulations

1. Fire Fighting
2. Irrigation System

Fire Fighting Description

Design a Fire Fighting network for the 4th floor (200 m by 300 m) of a hospital by using sprinkler system. The pump is located 500 m away from the most far sprinkler in the buildings.

1. Find the maximum area covered by a single sprinkler and flow rate per sprinkler
2. Find the maximum area should be covered by sprinkler system according to code
3. Find the required pump pressure and flow rate
4. Choose the pipe line diameters for the whole network

Irrigation System Description

Design an irrigation network for a land (1 km by 1 km) by using sprayers. The pump is located 500 m away from the most far sprayer.

1. Find the maximum area covered by a single sprayer and flow rate per sprayer.
2. Find the required pump pressure and flow rate
3. Choose the pipe line diameters for the whole network

Due Date

- Each student should submit by Jan 10, noon
 - the report.
 - The simulation files