

DEC1702A SENIOR DESIGN II FALL 2017

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## Weekly Report 1

### 1. Brief summary of the activities in the last two weeks.

In these two weeks, we checked our database and software with our sponsors – Algona Municipal Utilities firstly. We dealt with some errors that cause our simulation model breakdown. On the same time, we worked about the extra credit one and two through the online source and literature review. And we find the construction data and cost data from the U.S Department of Agriculture Rural Development and RS mean Cost to calculate our simulation model total cost. About the simulation, we almost finish one route simulation and start to think about the second route.

### 2. Status-summary of the extra credit homework(s) that are due week #10

We already finish the extra credit two and the draft of extra credit one. For the extra credit one, we find some utility companies projects about improvement of distribution system to compare. That helps us to make sure our main directions of design are correct. And for extra credit two, we read some relative literatures to find a better way to design route. Like, use loop feeder to instead of radical feeder to improve the reliability.

### 3. Any exceptions that could affect the demo/presentation.

About the demo, our simulation model includes whole town distribution system. So when we demo our customer distribution system, we need run the whole town distribution system and spend more than a half hour. We try to find some way to solve that.

### 4. Any items more-remotely related to the project that need to be discussed.

We need detail geography data to fix our simulation because our design needs to follow the real geography environment. And we still didn't get the response about the distribution system construction standards from our sponsor. We plan to use U.S Department of Agriculture Rural Development as our construction standards if our sponsor doesn't own construction standards.