

EE/CprE/SE 492 Bi-WEEKLY REPORT 3

August 2019 – May 2020

Group number: 28

Project title: New Design Concept for Residential Electric Meter Adapter

Client &/Advisor: Alliant energy/Zhaoyu Wang

Team Members/Role: Zane Heifner – Communication

Brenden Koenighain- Design/Documentation

Derek Drees- Research

Austin Meyer-Testing

o Bi-Weekly Summary: Over the period of time since the last update more progress has been made in getting the prototype from files on a computer to real life hardware. A manufacturer has been selected by the team and all necessary documentation is being compiled with the hopes that by the end of next week the design will be in the hands of the manufacturer. Additionally, final code compliance checks are taking place in order to avoid any final errors that will result in this prototype not complying with code and therefore not being a final working model for the project.

o Past 2 weeks' accomplishments/individual accomplishments:

Major group accomplishment: We have narrowed down our decision to our final manufacturer and have begun discussions to get the documentation in order for their manufacturing process so that the creation of our prototype can begin

- Zane Heifner: After talks with the employer from his past internships Zane worked out a deal for his former employer to be our manufacturer for the prototype of this design. Zane has begun to update the 3D model to comply with the company's standards and has been assisted by the team in verifying that the model reflects exactly what we need to be produced.
- Derek Drees: Derek has begun doing a final code verification for our design. This has been done at every stage and Derek is simply doing it all again specifically looking for any spacing requirements between our chosen connectors and the outside of the enclosure to ensure that the design is able to meet code and operate safely.
- Brenden Koenighain: Brenden is completing the process of compiling all of the documentation that the manufacturer needs to properly and accurately create our prototype. We need annotated drawings to include notes on what each individual piece of our model represents with the example being that the manufacturer knows what is intended to be a knockout in the design so that it is sealed but easily removeable and they can adjust their process accordingly.
- Austin Meyer: Austin has produced the bi-weekly report document as well as assisted in the final gathering of documentation. He is also assisting in combing through NEC code for any potential violations that our prototype may present as the book is extremely long and we want to get this done in a timely manner. Finally, Austin continues to work to get a formal testing plan together but that is currently of less importance than getting this project to be manufactured.

Team Member	Contribution	Weekly Hours	Total Hours
Zane Heifner	Updated 3D model, chose manufacturer.	6	134
Derek Drees	Chose bill of materials, chose manufacturer.	6	134
Brenden Koenighain	Began additional documentations such as annotated/measured schematics	6	134
Austin Meyer	Began drafting bill of materials and began drafting test plan.	6	134

o Pending issues

- We are simply gathering documents and will continue to go back and forth with the manufacturer to make sure everything is in order. Whenever the design is finalized and all documentation has been sent then it is expected to take two weeks to be complete and shipped so we will be working on documentation for the overall project during that time.

o Plans for the upcoming week: Send finalized design and documentation to the manufacturer once we have done one last code compliance check for the design and the chosen bill of materials. We will then move to project documentation once the actual development is out of our hands for about 2 weeks.