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## EE/CprE/Se 491 WEEKLY REPORT 02

September 2, 2018- September 8, 2018

Group Number : sdmay19-17

Project Title: Substation Design

Client: Burns & McDonnell

Advisor: Craig Rupp

Team Members: Jacob Heiller, Rebecca Franzen, Connor Mislivec, Riley O'Donnell, Tom Kelly, Wilson Pietruszewski

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### **Weekly Summary:**

Burns and McDonnell shared a full GoogleDoc folder with the team members containing all the documents, guides, standards, and examples that we would need for the project. Specifically, these documents included example drawings, files that will be modified for the project, design guides, study guides and examples, a project description and the scope of work document. This was a crucial piece needed by the team to move forward on the project.

A weekly bi-meeting will be held with Burns & McDonnell via conference call on Tuesdays at 4:30 PM. The team members will meet in a reserved meeting room on campus, or call in from a remote location if they are unable to attend with the group. These meetings will be used for the team to update Burns and McDonnell on their progress and ask any questions pertaining to project details and tasks.

A weekly meeting will be held with Craig Rupp, the team's advisor for this project. These meetings will be held on Thursdays at 4:00 PM held in Lebaron Hall. These meetings will be used to update the advisor on the status of the project, ask questions, and meet as a team to go over accomplishments, concerns, and assign future tasks.

### **Past Week Accomplishments:**

- Grounding Study Trial Run - Riley and Rebecca
  - Analyzed soil resistivity data from CDEGS 101 training course primer workbook and research necessary data values for CDEGS software
  - Created trial grounding study based off data in CDEGS 101 course primer workbook.
  - Worked alongside CDEGS 101 training course primer workbook step-by-step

guide to understand the process of grounding studies to prepare for future grounding studies used in our project.

- Preliminary Design Research - Tom and Connor
  - Reviewed client grounding standards
  - Reviewed previous grounding studies run by Burns & McDonnell to have a better understanding of how to develop preliminary design for ground grid
  - Became familiar with Burns & McDonnell grounding study report template.
  
- Protection and controls Design - Jake and Wilson
  - Got in contact with newly joined advisors from Burns and McDonnell in the NIA department.
  - Researched and discussed design work for the Protection and Controls One-line, and consulted the design guide.
  - The preliminary One-line will show the completed connections between all devices in the substation and when completed will be used as a basis for the rest of the schematic.
  
- Prepare Agendas-Everyone
  - Scheduled weekly advisor meetings
  - Scheduled bi-weekly client meetings
  - Created meeting minutes template

**Pending Issues:**

- Create timeline
- Create task checklist of checkpoints and/or deliverables
- Complete team reflection #2

**Individual Contributions:**

Name / Role	Individual Contribution	Hours this week	Cumulative Hours
Rebecca Franzen	Completed Grounding Study Trial	6	11
Jacob Heiller	Protection and Controls Design Research and Point of Contact with client	4	10
Tom Kelly	Preliminary Design Research for	5.5	9.5

	grounding studies		
Connor Mislivec	Preliminary Design Research for grounding studies	5.5	9.5
Riley O'Donnell	Completed Grounding Study Trial	6	10
Wilson Pietruszewski	Protection and Controls Design Research and Design	4	8.5

Comments and extended discussion:

Plan for coming week:

- Discuss and develop tentative timeline for completing tasks with BMcD
  - Identify criteria due 1st semester & 2nd semester.
- Perform grounding study for the substation and interpret results in correlation to layout design.
- Begin creating grounding report using Burns & McDonnell template
- Create a meeting agenda and record meeting minutes during meeting with client.

Weekly Advisor Meeting Summary:

- Discussed project plan
- Discussed need to keep weekly reports concise
- Began to plan and finalize project timeline