

EE/CprE/SE 492 – sdmay20-15

Substation Design

Week 5 & 6

Client:

Burns & McDonnell

Faculty Advisor:

James McCalley

Team Members:

Kaitlyn Ziska – Professor Client Liaison

Brian Mace – Chief Engineer

Brandon Kaas – Scribe

Salvador Salazar – Meeting Facilitator

Justin Fischbach – Test Engineer

Robert Huschak – Report Manager

Bi-Weekly Summary:

This week marks the start of the final phase of the project. The most extensive portion, the wiring and schematics, will take us the remainder of the semester. This week mostly focused on organization and hand drawings of substation connections to prepare for CAD diagrams. This work is mostly over a single week as Burns & McDonnell only provided the necessary materials on Feb 21.

Past Week Accomplishments:

ORGANIZATIONAL ACCOMPLISHMENTS:

- 1) Printed drawings for easier analysis and editing

TECHNICAL ACCOMPLISHMENTS:

- 1) Finalized and Submitted Draft of AC study.
 - a. Outlined the AC draw of the substation so it can be adequately protected from power outages, considers both extreme weather scenarios of Summer and Winter.
 - b. Both AC and DC studies have been approved by the client and are finalized.
- 2) Began work on Protection and Control systems for the substation.
 - a. Initial work is reading and understanding the concepts related to the control systems.
 - b. Began wiring the three 138kV breakers and 2 relays associated with them.
 - c. Draw connections on sample breakers and relays to coincide with scope document

d. Begin to translate drawings into modified CAD cells

Pending Issues:

No pending issues. Ahead of schedule

Individual Contributions:

Team Member	Individual Contributions	Bi-Weekly Hours
Kaitlyn Ziska	Schematic wiring – group meeting	14
Brian Mace	Schematic wiring – group meeting	14
Brandon Kaas	Organization + Planning – group meeting	12
Salvador Salazar	Schematic Wiring – group meeting CAD work	15
Justin Fischbach	Schematic Wiring – group meeting CAD work	16
Robert Huschak	Schematic Wiring – group meeting CAD work	16

Plan for Following 2 Week:

- 1) Complete physical high side schematic drawings & translate into CAD cells
- 2) Edit and refine schematic rough draft
- 3) Finalize expectations and schedule for final submission