

EE 491 Weekly Report | May15-01 | Week 7 (10/13/14 -10/20/14)

Advisors: Adam Literski, Dr. Ajarapu **Client:** Black & Veatch Corporation

Members (roles): Matt Backes (Team Leader), Ryan Jerve (Communications Leader), Faran Malik (Communications Leader), Sohail Suryavanshi (Webmaster), Bhargav Gouni (Key Concept Holder), Kiran Rane (Key Concept Holder)

Project Title: 69kV / 12kV Substation Design Project

Weekly Summary:

This week we met as a group on 10/14 and assigned individual tasks for each team member. We also discussed the campus substation tour and further looked in to the control panel arrangement drawing, protection schemes, and the one line diagram that Black and Veatch sent us as a group. Dr. Ajarapu was busy this past week so we were not able to have a meeting with him.

Meeting Notes:

10/08 Group Meeting with Advisors

Dr. Ajarapu was not able to meet this past week. We will discuss last weeks and the current weeks items with him during this weeks meeting.

9/21 Group Meeting

During our weekly team meeting (led by Sohail), we reviewed some panel arrangement drawings, control panel arrangements, protection schemes, and one line diagram as an entire group. We are still confused about the protection scheme since there are many circuit breakers and other components that we are unsure about. These will be discussed with Dr. Ajarapu this week. Individual tasks were also assigned to each team member. They are as follows:

- 1.) Sohail and Matt: Develop/Research Engineering man-hour budget (Task completed)
- 2.) Bhargav and Kiran: Develop/Research One-line diagram (Task in process)
- 3.) Ryan and Faran: Develop/Research Control house Layout (Task in process)

We plan to go through our rough man-hour budget, one-line diagram, and control house layout during our meeting on 10/21 as a group. We will also ask Adam to look through our diagrams once they are completed. In addition to the individual tasks, we will start working on the design documents as a team. We will further divide this work into individual sections in our meeting on Tuesday.

Pending Issues:

1. Continuing the entire design process
2. Need to continue to review all drawings in the folder sent by Adam
3. Not having the same version of AutoCAD as Adam (This might not be an issue)
4. Complete our individual tasks
5. Begin design document

Plans for Next Week:

1. Become familiar with the AutoCAD drawings and panel layout drawings
2. Complete the panel arrangement drawings

3. Finalize man-hour budget
4. Finalize one-line diagram

Tasks for each team member:

- 1.) Sohail and Matt: Finalize/Review Engineering man-hour budget
- 2.) Bhargav and Kiran: Finalize/Review One-line diagram
- 3.) Ryan and Faran: Finalize/Review Control house Layout
- 4.) Look into design document this upcoming meeting and divide work up

Current Individual Contributions

- Matt Backes: Attended group meeting, developed man hour budget, worked on communication panels (5 hours)
- Faran Malik: Attended group meeting, worked on weekly report, designed physical layout, lighting layout, and wiring track layout of control house (4 hours)
- Ryan Jerve: Attended group meeting, researched battery sizing requirements due to control house load, designed physical layout (4 hours)
- Sohail Suryavanshi: Attended group meeting, researched applications for relaying, SCADA, telemetering, and communication panels (4.5 hours)
- Bhargav Gouni: Attended group meetings, worked on single line diagram and cleaned up website. (3.5 hours)
- Kiran Rane: Attended weekly meeting, research for one-line diagram and bus configuration, and design of one-line (3.5 hours)

Total contributions for the project:

- Matt Backes (29.5 hours)
- Ryan Jerve (25.5 hours)
- Faran Malik (25.5 hours)
- Kiran Rane (26 hours)
- Sohail Suryavanshi (26.5 hours)
- Bhargav Gouni (24 hours)