

CAREER EPISODE 1

INTRODUCTION

CE 1.1 In this career episode, I worked on Sheikh Abdullah Al Salem Cultural Centre, from Sep 2014 to Mar 2018. My parent company was Al Mulla Engineering and it was located in Salmiya, Kuwait. I worked on this project as an Electrical Engineer. Al Mulla Engineering was established in the year 1938 under Bader Al Mulla groups has more than 70 years of experience in the Construction, Maintenance, Turnkey Project, Oil and Gas. Initially, the company started working in the automobile industry and later added up alliances and dealerships with Mitsubishi motors, Benz car, and Trucks.

BACKGROUND

CE 1.2 Al Mulla Group is the main automobile dealer of Benz, Mitshubishi in Kuwait. Presently the company employs 650 Engineers, 7000 Skilled Technicians, and workers are working as a full-time employee in this company. Al Mulla engineering taking all kinds of projects such as commercial projects, residential projects, Hospital and Hotel Projects.

CE 1.3 This project is a world-class and one of the biggest museums in Kuwait. The Sheikh Abdullah Al Salem Cultural Centre site located in the salmiya area in Kuwait. It consists of eight buildings, basement car parking, and a huge landscape around the project.

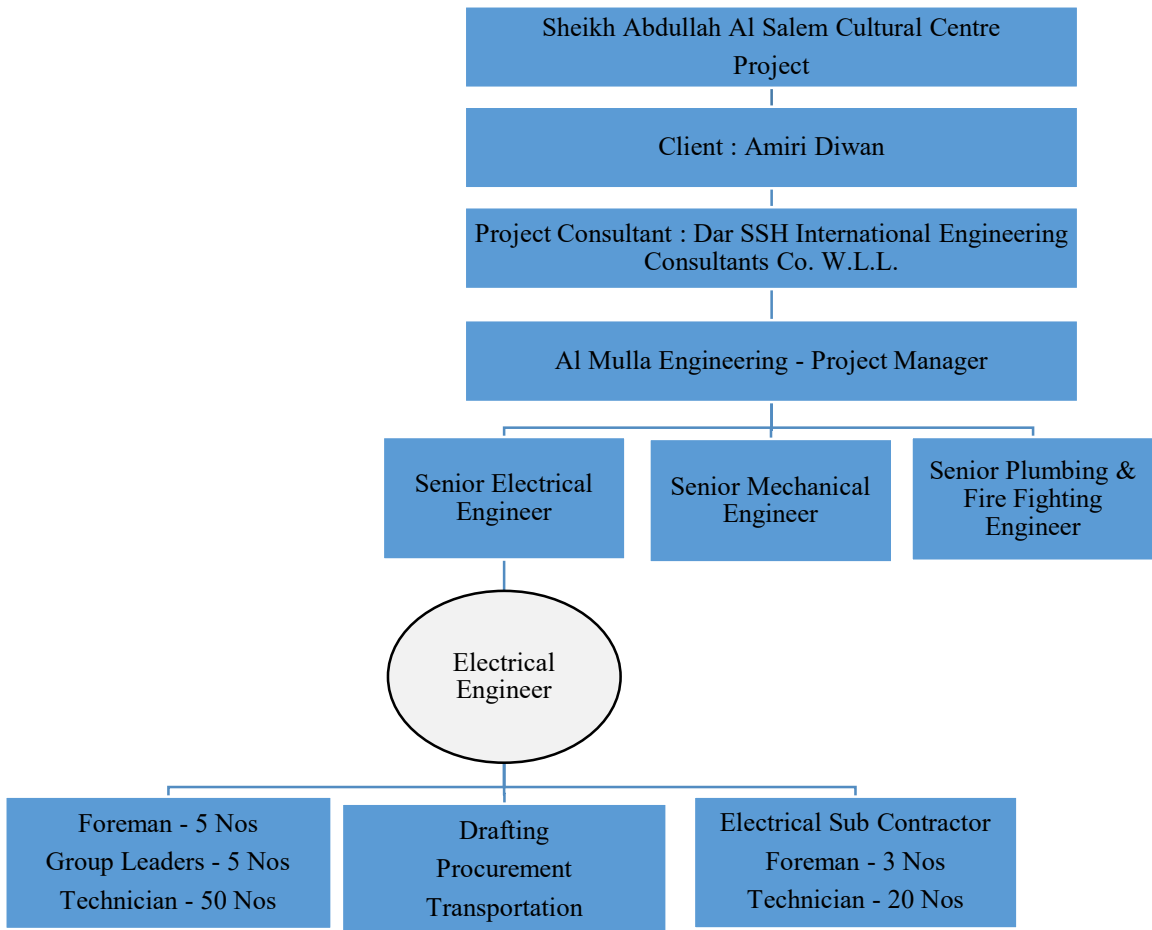
CE 1.4 Each building is divided into different purposes such as earth environment, health and medicine, Human body and mind, planetary science, Space exploration, world-class museums, Fine art centre, and theatres.

CE 1.5 I was appointed as an Electrical Engineer in this project. My main role was to prepare the shop drawings and following up on the site and executed the work accordingly as per approved shop drawings from the consultant.

CE 1.6 I procured the materials as per the project requirement and give the materials request to SAP software. I arranged the work force based on the project planning schedule and area wise priority to complete the works.

CE 1.7 I was in charge of the electrical team under me around 5 supervisors, 5 group leaders, and 50 laborers. I raised the inspection checklist after checking completed works and got the approval from the consultant.

CE 1.8 My reporting hierarchy is shown below, I was reporting to the Senior electrical Engineer.



CE 1.9 My job responsibilities included:

- Preparing material submittals, method statements, sample documents for consultant action.
- Preparing a checklist for the completed work such as first fix, second fix, and installation of electrical services for consultant approval.
- Preparing electrical shop drawings and schedule of point for consultant action.

- Managing and providing work force at the site according to the project plan schedule.
- Verifying the quality of electrical and low voltage services such as LT panel, MSB, SMBS & emergency panels, installation of bus duct, installation of cable trays, data communication system, fire alarm system, BMS system, security systems prior to submitting checklist.
- Reporting to the Project manager about the work status and manpower distribution daily activity.
- Performing good relationship with all related sub-contractors, main contractor, consultant & employer.
- Preparing composite drawing showing all MEP services for better coordination.
- Distributing approved shop drawing to site supervisors for work execution & coordination with other trades.
- Placing material procurement by using SAP software based on material / sample approval from the consultant.

PROFESSIONAL ENGINEERING ACTIVITY

- CE 1.10 I oversaw installation of canopy light, conduit for canopy. Installation of cable trunks for laying of cable from controllers to canopy, installation of main cables of distribution boards from main supply panels, Installation power cables from different DBs to various controllers. During the testing and commissioning, we could not reach the Kuwait national flag in the canopy light.
- CE 1.11 Troubleshooting, I assisted the programmer to achieve the color code Kuwait national flag in the canopy light. After doing all the lights in landscape areas, we were facing the problem to cover up the external façade walls light illumination levels. I rearranged the location of the light fittings in the shop drawings with consultant approvals according to the areas with cover the external façade walls light illumination levels.
- CE 1.12 As per the fire alarm shop drawings, we executed all the works such as conduit cabling, and fire alarm devices installation. During the KFD inspection, our executed works were not divided zone wise as per KFD regulations. I was personally involved in the fire alarm system to add more cards in the fire alarm panels and divide the all fire alarm devices equally in zone wise as per KFD regulations.

- CE 1.13 During the construction period from the client, we received new proposals to make complete electrical design for the new RO building, FM Headquarters, Mosque. I designed the lighting, power, fire alarm system, large power, Emergency lighting, prepared the DB schedules with help of senior electrical engineers.
- CE 1.14 I had installed capacitor panels in low-tension rooms but we could not reach the required power factor 0.8. Using the design based on the power factor, selection method, I increased the number of capacitors to achieve the power factor 0.8 as per Kuwait MEW regulations.
- CE 1.15 We ran the following test during the testing and commissioning to get the approval from the consultant for handing over the project to End-user. I was coordinating with the supervisor to verify the executed work system wise.
- Megger Test: To check the insulation resistance of each earth pits.
 - Continuity Test: To verify the wires and cables continuity.
 - Fluke Test: To check the length of the cat 6, cat5e cables, etc. and verify the cables are meet the required performance.
- CE 1.16 I reviewed and calculated the heating and cooling load separately according to the type of loads and prepared a load form accordingly prior to submit to get the approval from Kuwait MEW.
- CE 1.17 I used SAP software to create a material issue voucher, purchase requisition, local purchase order to procure all the materials for the project. Using this software, we could monitor the status of incoming, outgoing materials, Consumed, and balance materials. This software was used to create a work force purchase requisition and LPO, reorder the budget according to the project requirements.
- CE 1.18 I got knowledge from my senior electrical engineer about how to make power factor correction and calculation, and voltage drop calculations for the selection of cables, selection of breakers, capacitor bank selection. I also studied engineering blogs to refine my understanding of requisite calculations.
- CE 1.19 From my project manager, I took knowledge of how to lead the electrical teams and project management skills. I applied these skills to ensure that the company get the profits to avoid the wastage of materials and execute the work in the right method at the site. I further utilized my knowledge to follow the executed works are as per MEW standard, and comply with IEEE, IEC standard as well.

- CE 1.20 During the project, we received the chiller panel and chiller control panel. Chiller panel terminals did not have provision to connect the higher rating cables. Thus, we additionally installed the terminal box on top of that and extend all bus bars to make suitable for higher rating cables to operate the chillers. It was a big challenge to operate the chillers but we got it to work successfully.
- CE 1.21 This was the beginning of the project for making labors payments, creating purchase requisition, all of which was processed manually earlier. I had proposed to my project manager to introduce the SAP software to avoid delays in all the processes.
- CE 1.22 SAP software was very helpful and saved time and increased the progress of the project without any further delays. Through this software, we could check the budget for each project systematically. Many of the projects got losses due to not proper systematic work.
- CE 1.23 I used the engineering codes of IEEE, IEC, MEW and KFD in my work to ensure compliance with standard regulations. I studied specific points in application of standards from industrial sources and engineering forums on Internet.
- CE 1.24 We were following the entire safety standard at the project site as given below in order to avoid any incidents at the site. I ensured that all scaffolding is safe by having a green tag added by the safety engineer before starting any high level works. Any new workers or supervisor who came to the site were given own toolbox and provided the safety glass, safety gloves before starting any welding and cutting works. I ensured that all the tools/equipment are good conditions on daily basis before use.
- CE 1.25 I attended the training for the lighting management system and conducted by Dynalite manufacturer. I have handled the lightning management system up to complete installation with commissioning along with commissioning teams after attending the training.
- CE 1.26 I have also attended the Central battery system and training given by ABB Emergi Lite Manufacturer. This training was useful to get a clear knowledge and I applied the same to the project until its testing and commissioning.
- CE 1.27 I have interacted with my senior electrical and project managers to discuss all site issues, project development, cost saving, and procurement. Every day I had a general meeting with my senior electrical engineers discussed how to arrange and

distribute the work force according to the site priority and follow up as per project completion schedule planning.

- CE 1.28 Every week I attended the weekly meeting with project managers and we were discussing the progress of the last week's works, remaining materials and discuss to the new order as per the budget plan, increasing the manpower if required at the site.
- CE 1.29 Every week I used to discuss with my project manager the status of remaining materials to keep enough materials for the continuous progress of the project. We discussed the site issues, pending works in each area, quality works, labor distribution as per the site priority. Every day we discussed with the project coordinator the submission of shop drawings and material submittal for the consultant approval.
- CE 1.30 I had handled the worksite for 25% of the overall project. After a few months, I got an opportunity to lead 50% of the overall project with more people. During this period, I gave more output to the company and I managed big teams and completed the priority area electrical works without any delays. Additionally, I maintained quality works at the site as per Kuwait MEW regulations and documented my work accordingly.
- CE 1.31 I had prepared the work progress report as per the executed work at the site to claim the payment from the client. Work progress report consists of area wise, level wise, and type of completed work system wise.
- CE 1.32 I gave a small presentation about how to do the testing and commissioning of the system in order to handover the project to the client. The main concepts of this presentation to give proper instruction to all the foremen before start the testing and commissioning of all the systems to avoiding any problems and delays to handing over respectively
- CE 1.33 The project deliverable Sheikh Abdullah Al Salem Cultural Centre is now one of the largest museums in the country and had won the Public Building of the Year at the prestigious ABB LEAF Awards on 2017.
- CE 1.34 In this project, I used my engineering knowledge to complete all the works on time without any delay. I maintained the project-planning schedule, followed up the testing and commissioning on right methods.

- CE 1.35 I learnt from this project
- How to lead the big electrical team.
 - How to control the project cost and cost saving to the company.
 - Liaising with MEW local authorities to get all the approvals.
 - How to prepare the load form as per the type of electrical panels and equipment loads.

CE 1.36 As an electrical engineer, I followed the work activities of following up the testing and commissioning of generators, switchgear. Preparing the work progress report according to the completed and remaining works. I learnt to follow up and close all snag list works as issued by the consultant. I was handling the project from its start until the handover to the client.

SUMMARY

CE 1.37 As an Electrical engineer at Sheikh Abdullah Al Salem Cultural Centre, I prepared the shop drawings, followed up on the site, and executed the work. I was instrumental in introducing SAP software that saved time and increased the work progress on the project. I closed all snag list works as issued by the consultant while handling the project from its start until the handover to the client.