This paper will explore the trials and tribulations of my senior project, The Poly Canyon Observation Deck. My senior project is a project based senior project located in the prestigious Poly Canyon. The Deck was the first structure to be built in the canyon in 15 years.

**Keywords:** Poly Canyon, Observation Deck, Project based

**How Project Came to Be**

This project was birthed by two structural engineers and designed in December of 2017. These students had hopes for the structure to be built, but ran into permitting and funding issues. The project seemed to be dead until my teammate Harrsion Woods overheard a conversation and volunteered to take the project over. He then recruited me to the team and we began the building process. This meant months of planning, permitting, and funding all beginning in Fall of 2018.

**Process**

The process began with collaborating with FIS, the Foundation for Interdisciplinary Studies. Our team felt that if we could obtain a grant from the foundation then we could fundraise the remaining budget. We were awarded the grant just before spring break and then began funding on our own. We began with a Facebook page to reach as many family and friends as possible. This proved to be helpful as eventually, through Facebook and other avenues reached our fundraising goal. Unfortunately a revised lumber quote and an unfinished stair design left us thousands of dollars short. We began building nonetheless, hoping to receive donations from other sources. We dug furiously through resources, connections, etc. and eventually raised enough money to be comfortable. Please follow this link in order to view one of our deliverables, a Facebook page detailing the entire building process: [www.facebook.com/polycanyonobservationdeck](http://www.facebook.com/polycanyonobservationdeck).

**Deliverables**

The deliverables for this project was the deck itself along with some other housekeeping items as follows:

- Original project budget
- Final budget and expenses
- Actual vs. Estimated project schedule
- Facebook page link detailing all steps of our project.
Lessons Learned

The lessons learned through this project were invaluable and immeasurable. Every day we would run into a multitude of problems which we would have to collaborate to mitigate. One of the biggest lessons learned was that it is very important to spend time planning out your day/week/beyond. Know what materials, tools, and processes are needed each day is very important in staying on schedule. Being able to think ahead makes the site more efficient and allows for areas in which the construction team can save time and money. Another huge lesson learned was to always expect the task to take longer than you think it will. There were many times in which we expected to be at a certain point at the end of the day, only to find ourselves hours away from that checkpoint. These lessons will be extremely helpful and utilized everyday in our future careers.
This senior project paper will delve into the background, setbacks and triumphs that where undergone during the course of this project based senior project- The first permanent structure in Poly Canyon in 15 years. Built in true “Learn By Doing Fashion” in the experimental, hands-on lab that some may better know as “Architecture Graveyard.” The project was one of extreme adversity, from fundraising difficulties and a condensed schedule, to unique site conditions and lack of manpower. The students involved in this project showed a strong sense of purpose and determination to see this structure through to completion.

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**How The Project Came To Be**

The origins of this project were interdisciplinary in nature from the start. Originally a fleeting idea in the mind of Construction Management Student, the design of this project was ultimately taken on by two Architectural Engineering students. Design began in December 2017 and was scheduled to be constructed during Spring of 2018. However, due to delays in design approval and permitting as well as insufficient funds, the project was not able to be completed prior to the graduation of the two designers at the end of Spring quarter 2018. This project was at the risk of being completely abandoned and forgotten about until a conversation between the soon-to-be graduating design team and their project advisor was overheard by Construction Management student Harrison Woods. Having learned of the projects intentions and its present struggles, he volunteered to “carry on the torch” if you will. Harrison then recruited a fellow CM student, Tony Pellegrini, to assist him in doing whatever needed to be done to see this project through to the end. At the time, they knew very little of what was to come.

**Process**

After taking on the project, the designs were approved, the permit was issued, and Harrison and Tony were first tasked with raising the funds to procure building materials. With a wishful original estimate of $8,000 they began applying for grants as well as coordinating with material suppliers in hopes of obtaining/negotiating some form of donation or discount. After some mild fundraising success, the two were still thousands of dollars short of their projected estimate. As graduation and the project’s due date was drawing ever nearer these students elected to essentially gamble on both themselves and the money they had raised to date by beginning construction activities without having fully secured the funds to complete the project. This was a strategic decision that placed the success of the project on the assumption that fundraising would prove more fruitful as potential donors were presented with proof of actual, physical progress.

As the students began building, they documented their progress, largely through photos and videos, which were then showcased on a dedicated Facebook page. The goal of this page was to help reach out to as many potential donors as possible, in a way that would best pitch the significance of their project. Through the Facebook page the two received a sizeable amount of positive feedback and benefited from a notable increase in monetary donations. With the financials of the project seeming to be inching closer and closer to the positive, they were able to begin procuring their big-ticket material items and shift focus more towards the project’s construction.

Harrison and Tony had cleared the site and were laying out for the structure’s footings when they received a lumber quote that was $3,000 above what was expected. As the structure’s primary building material is Redwood, lumber was the largest and most important purchase. Having already struggled to raise what they had, Harrison and Tony were fearful that the unexpected magnitude of this quote could mean the end of their senior project. However, rather
than give up when their backs were against the wall, these two decided to double down on fundraising efforts and really got creative with who they were reaching out to and how they went about it. Enduring plenty of rejection during this period, in the end they were able to raise enough funds to complete the project with minimal out-of-pocket costs.

Throughout the construction process Harrison and Tony were faced with seemingly constant challenges. It was as if a new obstacle presented itself every ten minutes. They had issues with everything imaginable. Whether it be late deliveries, missing tools, lack of manpower or even mistakes that needed to be reworked. This was all made exponentially more difficult by the less than friendly site conditions. On the top of a steep hill, only accessible by dirt roads, and without access to readily available water or electricity the project site proved indeed. Something happened every day and every day the students had to find a way to fix the problem. All of this of course was done in addition to their course loads and other responsibilities both academic and extracurricular. Regardless of the issue, the two tenacious young men found the solution to each challenge and made the time to go resolve it.

Overall, this experience proved to be a very rewarding one in which Harrison and Tony were able to learn and grow in their knowledge of themselves and their future professions in the Construction Industry. In this process, the students were also able to reach out to younger students in hopes on encouraging them to also pursue a project that they are passionate about, and to not be deterred simply because the path to their success may not be an easy one. Ultimately, the process of this senior project culminated in a “Ribbon Cutting” ceremony where all volunteers, donors and interested faculty were invited to come enjoy the completed project and to thank everyone who had a hand in finally bringing this project to life.

**Deliverables**

In addition to the physical structure itself, the project’s deliverables included:

- Original Budget and Schedule
- Actual Budget and Schedule
- Supporting documentation for the fundraising of the project

**Lessons Learned**

Countless lessons were learned in the process of carrying out this project. Some of the obvious lessons would be those directly related to construction. These lessons can be as concrete as how to frame stairs, or as abstract as what motivates workers to reach production goals. Having completed all of the construction themselves, Harrison and Tony were able to see how drastically productivity rates can be affected by environmental factors. These factors could be controllable, such as work place conditions like cleanliness and access to shade and water. But they could just as easily be out of one’s control, like the weather or even another individual’s emotions/attitude. Being able to recognize the very real implications of such factors will allow these two to better form a plan to mitigate the negative effects they might have on production. In an industry so often dependent on cost, quality and timeliness lessons such as these are some of the most valuable and simply cannot be learn from behind a desk or in front of a computer screen. This is the biggest take away gained from this project based senior project.