

# Best Practices for Preparing for the Reno Commercial Problem

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The ASC Region 7 Commercial competition is one of the largest and most popular student competition in the country. Students from some of the most prestigious construction management and construction engineering schools compete in a rigorous eighteen hour competition. These teams have around 6 months to prepare for the competition. Their preparation methods have a significant impact on how they place in the competition. The amount of time spent with the teams industry sponsor, number of practice problems completed, hours spent practicing, number of team bonding events, and many other factors contribute to the team's success. Many of the schools that compete have never placed in the top three. There is a clear relationship between the mentioned factors and whether the team places in the top 3. The main idea is that there is a best practices method that every team should follow when preparing for the competition to give their team the best chances at placing.

**Key Words:** Student competition, Best practices, Commercial competition, ASC

## Introduction

According to their website, the Associated Schools of Construction, or ASC, "is the professional association of construction educators and industry practitioners working together for the development and advancement of construction education." There are currently one hundred and forty three schools that are members of the ASC, and it's broken up into eight regions: seven in the United States/Canada and one in Europe ("General Information"). The major focus of the ASC is enhancing student, educator, and curriculum growth within all construction management and construction engineering related schools. One way they achieve this is through multiple conferences and student competitions.

Every February, the Associated Schools of Construction hosts one of the nation's largest Construction Management student competitions in Sparks, Nevada. The competition is commonly referred to as the Reno Competition, or simply Reno. Schools from Alaska to Montana to Florida participate. Teams consist of six competitors and two alternates, all who must be currently enrolled at the university. There are a total of twelve different problem statements spread across three regions. The open competition consists of schools from all over the country. Any ASC member school is allowed to compete in these problem statements. The open region hosts the following problem statements: IPD, Mechanical, Electrical, VDC, Sustainability, Preconstruction, Project Management, and Concrete solutions. Region six consists of schools from Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. This region hosts the following problem statements: Commercial, Design-Build, Heavy Civil, and Mixed Use. Region seven is comprised of schools from California, Hawaii, Oregon, and Washington and hosts the same problem statements as region six.

The focus of this paper is the region seven commercial problem since that was the competition I competed in. Every year about fifteen to sixteen teams participate in this problem statement, and Hensel Phelps Construction is the problem sponsor. The competition takes about twenty-four hours from start to finish. On Wednesday, the day before the competition, teams arrive at the hotel and set up their war rooms. The war room is where the team prepares their request for proposals and their presentations. The problem statement is handed out to every team Thursday at 6:00am and must be turned in by midnight, meaning teams only have eighteen hours to complete their binder which consists of their request for proposals. Once the binder has been turned in, teams have until 7:00am on Friday to turn their presentations in. Presentations run from 7:00am until 6:00pm. Once a team gives its presentation, the competition is over and they wait to receive the results on Saturday morning. Figure 1 shows what the typical presentation looks like.

Being on the Cal Poly commercial team for three years, I was able to see a rather familiar trend in the teams that placed from year-to-year. Many of the same teams were on the podium every year. After being on the first place team in the 2017 competition, I started wondering why we did so well compared to everyone else. Every person who competes in the competition is among the top students of their class, so it couldn't have had anything to do with that. That's when I realized that it had to have been a difference in the way we practiced compared to other teams. Our team spent countless hours in meetings, practice problems, and team bonding events. I set out to prove that there was a correlation between time spent practicing and whether a team places or not.

After diving deeper into the subject, there's a large amount of factors that can lead to how well any given team does at the competition. After completing extensive research, it's clear that the main factor is the way teams prepare for the competition. This paper will give an in depth analysis of preparation methods to make every team in the competition as effective as possible.



*Figure 1.* Cal Poly Commercial Teams 2017 presentation

## **Methodology**

The purpose of this study was to show that there is a significant difference in preparation methods between teams who place and teams who do not place. When determining the most effective way of gathering information for this study, it was decided that the majority of the information should be quantitative. Quantitative data has much more structure and can be analyzed better than qualitative data can. When comparing two groups, as done in this study, qualitative data is the most accurate way to determine differences between the groups.

Surveys were sent to students who competed in the 2017 competition. The results were then broken up into two groups. Teams who placed in the top three and teams who did not place in the top three. Averages were taken for both groups and those numbers were compared. All information asked in the survey is vital to determining a best practices method. The following questions were asked in the survey and are where all data for this study come from.

1. Did your team place in the top 3?
2. Did your team have an industry sponsor?
3. How many times did your team meet with your industry sponsor?
4. How many total hours did your team spend with your industry sponsor?
5. Did your team go to your industry sponsor's office or did they come to your school?
6. How many days would your team meet per week?
7. Did your team have any team bonding events?
8. How many practice days did your team have?
9. How many of the previous year's problems did your team practice?
10. How many hours did your team spend practicing not including the hours spent with your industry sponsor?
11. How many team members were on the team the previous year?

12. How many teammates were competing for their first time?
13. How many teammates were competing for their first time?
14. How many team members had completed internships prior to competing?
15. What was the team chemistry like?

This case study has the following main objectives:

- Determine a best practices method that all teams can follow to better prepare for the competition
- Give the schools who don't do as well as others a better chance at placing in the top three
- Make the region seven commercial competition more competitive overall

## Results/Discussion

After careful analysis of the results of the survey, it became extremely clear why some teams were consistently placing while others were not. The original thesis that some teams were placing more often than others proved to be true. Almost every category showed a significant difference between the answers of each group. Some of the responses were not did not show a significant enough difference to be included in this report. While all information gathered was important to the study, the three most significant differences seemed to be in the number of team bonding events, the number of hours spent with industry sponsors, and the number of practice problems.

### *Team Bonding*

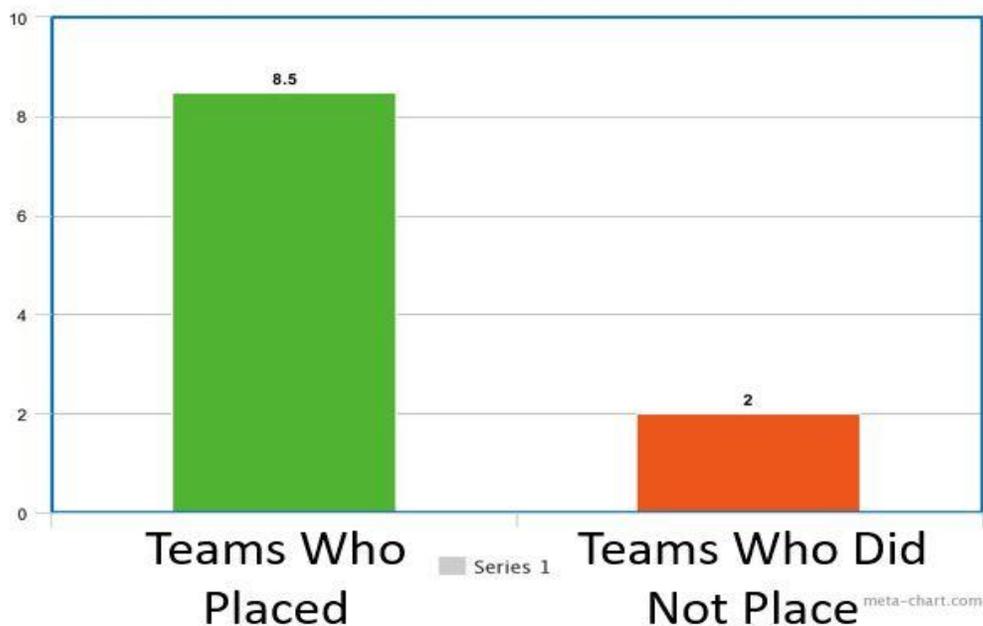


Figure 2. Number of Team Bonding Events

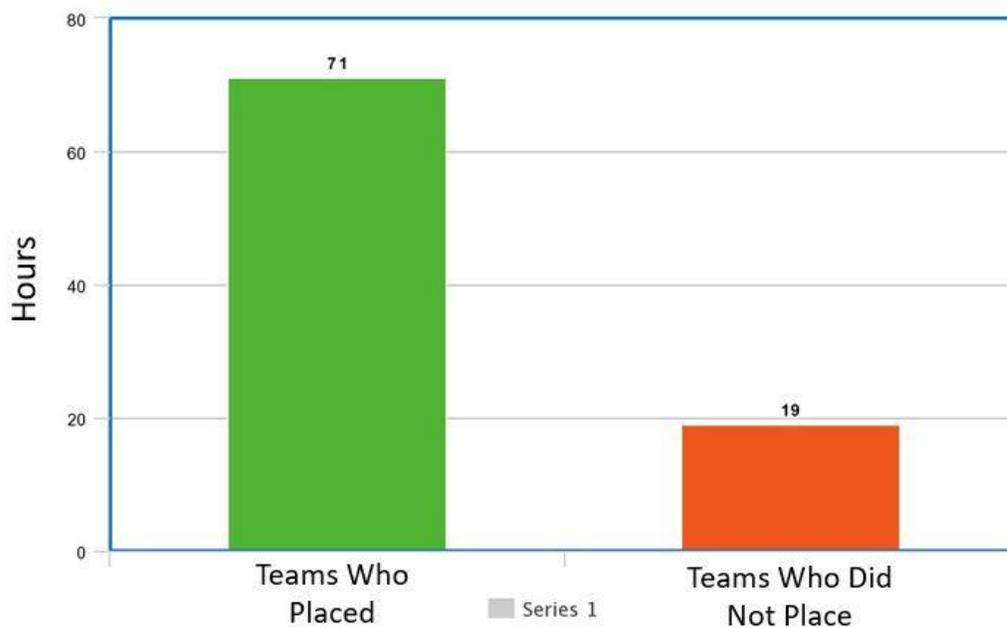
The way teams interact and how well they work together plays a major role in any team's success. The Reno competition is no exception as the construction industry relies heavily on teamwork. There is a reason every project has a management staff called a team. A good team starts with choosing the right members. Everyone should get along very well and be comfortable around each other. In an article written about the importance of team building in construction, Thomas Goubau states, "One of the aspects when you are working in a team is to learn to trust and respect each other. The goal is to increase the teams understanding or the team dynamics and improve how the team works together" (Goubou). Without doing any team bonding events, or even not doing enough of them, team members may not understand the way other team members work. This can lead do a serious problem during the competition if two members start butting heads.

Just like how machines need constant and proper maintenance to function correctly, teams need the same maintenance. Instead of fluid changes, teams need bonding events to continue working well. Figure 2 shows that the teams who placed participated in an average of eight-and-a-half team bonding events before attending Reno. That works out to about one every two weeks leading up to the competition if the teams start at the beginning of the school year. Teams who did not place only had an average of two bonding events. This comes out to about once every other month. There is substantial evidence showing that the teams who place are more comfortable together and they work much better as a team. This can be attributed to the amount of bonding exercises they complete before the competition. There are many different activities teams can do to increase the strength of the bond between their members. The following activities are perfect team bonding idea for teams:

1. Informal dinners or lunches
2. Attend sporting events
3. Athletic activities
4. Escape rooms
5. Camping Trips
6. Competitions between Reno teams

In order to perform at their highest caliber, all teams should participate in some sort of a team bonding exercise at least every other week in preparation for Reno. This will ensure the team works well together and has no issues in the war room.

### *Time Spent with Industry Sponsor*



*Figure 3.* Amount of Hours Spent with Industry Sponsor

Coaches and mentors are important to succeed through any task in life. Christopher Rhodes of the University of Birmingham said coaching and mentoring, “is a potential scaffold to create and appreciation of self-efficacy’s value at all stages of the headship journey” (Rhodes, 2013). These mentors and coaches can improve how well one can handle certain situations. With the right coaching, the outcome of these situations will more often than not be positive. As in many styles of competitions, the goal is to win, which is the most positive outcome (Long).

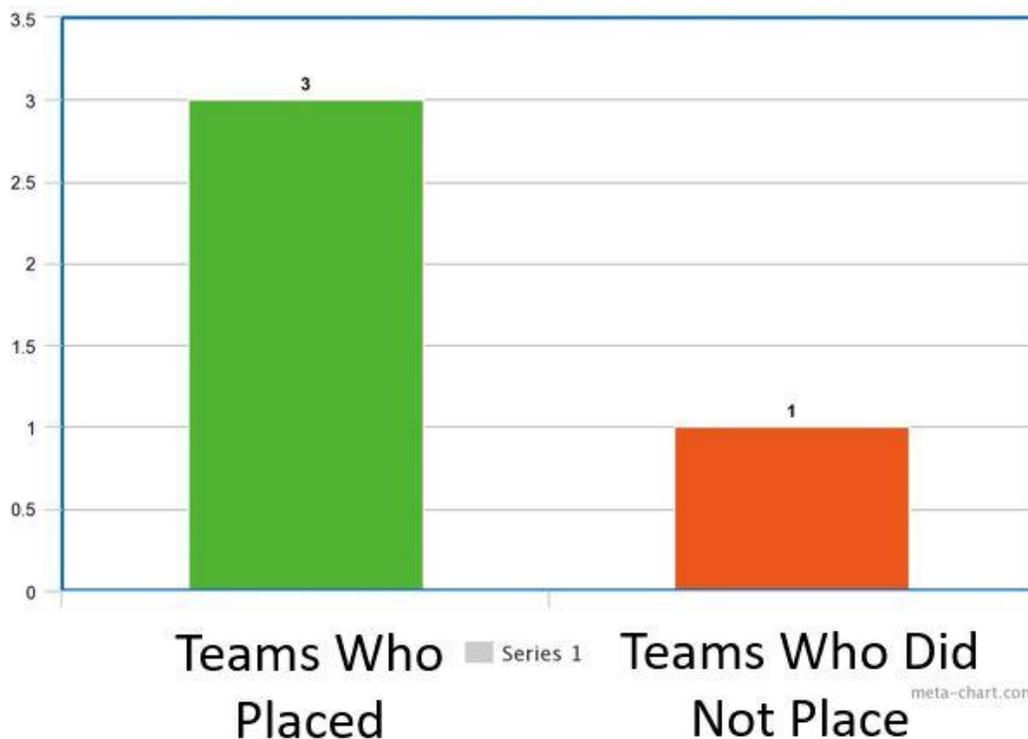
The four main benefits of coaching and mentoring are significance, retention, personal development, and team efficiency. For significance, mentors can be assigned to individuals on the team that they work well with. This will allow the team member to become more comfortable with his or her duties and role on the team. Each member will then have a more positive impact on the team’s overall success. With respect to retention, mentors have the ability to keep members interested in the subject and keep them hungry for wanting to learn more. When members want to be there, it allows for a positive overall team attitude. Personal development is one of the most important goals of

coaching. Coaches want to see their students improve, which is the main reason they are there. The more each member can learn and improve themselves, the more the team will succeed. Last but not least, coaches help improve team efficiency. They can spot weaknesses and turn those into strengths. The most efficient teams are always the ones that come out on top of the competition.

Industry sponsors act as the coaches and mentors to the teams that compete in Reno. They are vital to the team's success in the competition. Figure 3 shows a large difference in the time spent with industry sponsors between the two groups. On average teams who placed spent nearly four times the amount of hours that teams who did not place did. When teams meet with their sponsors, the sponsor can answer any types of questions that might arise. These questions can be general questions about what to expect while in the war room, or specific questions about scheduling, estimating, and more. It's also important to put the right mentor with the right student. If a student's mentor isn't pushing him or her and encouraging them to want to learn more, that student isn't going to do as well. The more drive the student has, the more he or she is going to develop academically and personally. Their attitude will increase, which in turn will increase the general attitude of the team. A better team attitude will then make the team as efficient as possible. The most efficient teams are going to place the highest in the competition.

An extremely effective way of practicing with the team sponsor would be to do a mock Reno competition prior to the event. The team can spend a day doing a full practice problem, acting as if they were in the war room, a few days in advance of meeting with their sponsor. They would then give a full length mock presentation with representatives from their sponsor acting as the judging panel. Judges can ask questions similar to the questions the judges in Reno will ask. After the presentation is over, the sponsoring company can assign someone to each team member to help them with anything they need to improve on. For example, a superintendent could meet one-on-one with the scheduler to show them any areas he or she could improve. The importance of this is that it would allow the students to become more comfortable with what they will face in the actual competition. They will be aware of what kinds of questions they will be asked in the presentation and it will give them an idea of where they need to spend more time in order to maximize their efficiency. Senior at Cal Poly and two time Reno winner said, "Reno is an extremely challenging competition and it was the help of our industry sponsor that allowed our team to overcome any curveball Hensel Phelps threw at us. I believe that is why our team did so well last year" (Maffioli). It is essential for industry sponsors to spend as much time as possible with the teams they coach prior to the competition.

*Number of Practice Problems Completed*



*Figure 4.* Number of practice problems completed in preparation for Reno.

One of the most common sayings happens to be one of the most true sayings, which is “practice makes perfect.” The only way to truly master anything is to practice over and over again. However, it is human nature to practice only what one is good at. In reality one needs to practice the areas that one needs improvement in. This will allow one to become well-rounded in their subject. Malcolm Gladwell states that in order to become an expert in any field, it takes ten thousand hours of practice. On the other hand, in order to go from knowing nothing to being pretty good only takes about twenty hours of practice (Long, 2016). Many people don’t need to become experts, but the more they know the better off they are going to be. Those who compete in national competitions tend to all be leaders. Long says, “As leaders we generally have the intellectual capacity to quickly grasp concepts and ideas. The reality is that we don’t – not until we practice, get feedback, and refine our approach, and practice again” (Long). It is human nature to believe one understands more than her or she does after briefly practicing. That kind of mentality will cause people to fall behind others because they are not practicing enough or asking enough questions. More practice leads to more questions which leads to more learning. In short, more practice leads to becoming the best.

Practicing for Reno is just like practicing any sport or studying for any test. The more hours teams or individuals spend practicing, the higher their scores will be. Figure 4 shows that the teams who placed in the top three practiced an average of three problems, and teams who did not place in the top three only practiced one. Every problem is different, so the more the team does the better they will be able to handle the curve ball thrown to them in the competition. The advantage to doing more problems is that it will make each person on the team well-rounded. For example, if the team only practices the 2013 problem statement the estimator will only know how to estimate concrete. If the 2014 and 2017 problems are practiced then the estimator will know how to estimate framing and drywall. The same concept applies to the whole team. The more types of projects the team knows how to do, the more prepared they will be for the competition. In addition to this, the more practice problems means more hours practicing. Teams who placed practiced for an average of 37.5 hours, and teams who didn’t place averaged only twenty-three. If it takes only twenty hours to go from knowing nothing to being pretty good, imagine how much better the team will be if they practice for forty hours. The best way to prepare for the competition is to practice one type of problem, compare the team’s answers to the actual answers, find which areas need improvement, and practice another type of problem. Doing the same problem twice is not as beneficial because the second time around everyone will know their answers. To enhance the team’s effectiveness multiple types of problems need to be practiced for.

### *Others*

All other questions had similar results across the board. The following list of questions did not have a significant difference between methods:

- Number of days the team met per week
- Number of team members who had completed internships
- Number of team members on the previous year’s team
- Number of team members who were competing for the first time
- Number of team members who were competing for the final time

### **Conclusion**

The Reno competition is a great opportunity for students to see how they compare to other schools and show off their skills to the industry. Every school has one objective while there: to win. However, only one school can win, but three teams have the opportunity to bring home trophies. The region seven commercial problem is one of the most challenging and competitive problem statements in the whole competition. With that being said, it is always the team with the most drive and the most preparation who comes out on top. There are three main areas where teams should focus to improve: team bonding, coaching, and practice. Every team needs a strong bond to work well. Each team should hold at least eight team bonding events in advance of the competition. This will allow the team to understand everyone’s characteristics and thought processes. The stronger the bond between teammates, the higher the better the team will do. In order to succeed, every team needs a coach they can count on. The industry sponsors play a major role in teams’ success. To have the highest chances of winning, teams should spend around seventy

hours with their sponsor. This will allow any questions team members have to be answered before the competition. It creates organization, structure, and comfort in the teams. Practice is the most important part of preparation for Reno. This is where teams learn the most and improve the most. Each team should practice at least three different types of problems. This will allow each team member to understand multiple types of projects and be the most comfortable going into the competition. Preparing for Reno can be very time consuming and seem like a daunting task, but the teams that head home with trophies are the ones who spent the most time preparing. Following the steps outlined in this paper will ensure greater success in future competitions.

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