

Interview: Erin Reidy and Stephen Schuette, Construction Managers from the Chicago 2001 Career Day for Construction Management

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Overview

Although they may hold a variety of job titles, construction managers plan and direct construction projects. They may be owners or salaried employees of a construction management or contracting firm, or work under contract or as a salaried employee of the owner, developer, contractor, or management firm overseeing the construction project. They typically schedule and coordinate all design and construction processes including the selection, hiring, and oversight of specialty subcontractors.

On large projects, construction managers may work for a general contractor, which is the firm with overall responsibility for all activities. There they oversee the completion of all construction in accordance with the engineer or architect's drawings and specifications and prevailing building codes. On small projects, such as remodeling a home, a self-employed construction manager or skilled trades worker who directs and oversees employees is often referred to as the construction "contractor."

Large construction projects, such as an office building or industrial complex, are too complicated for one person to manage. These projects are divided into many segments. Construction managers may work as part of a team or be in charge of one or more of these activities.

Construction managers evaluate various construction methods and determine the most cost-effective plan and schedule. They are responsible for obtaining all necessary permits and licenses and, depending upon the contractual arrangements, direct or monitor compliance with building and safety codes and other regulations. They may have several subordinates, such as assistant managers or

superintendents, field engineers, or crew supervisors, reporting to them.

Construction managers regularly review engineering and architectural drawings and specifications to monitor progress and ensure compliance with plans and specifications. They track and control construction costs to avoid cost overruns. Based upon direct observation and reports by subordinate supervisors, managers may prepare daily reports of progress and requirements for labor, material, and machinery and equipment at the construction site. They meet regularly with owners, subcontractors, architects, and other design professionals to monitor and coordinate all phases of the construction project.

Interview: Erin Reidy

In a way, Erin Reidy began preparing for her job as a little girl. She says she was always "drawing houses, that sort of thing" and liked to build forts. She dreamed at first about becoming an architect. But as she grew older, Reidy came to realize that she "didn't like the idea of sitting behind a desk drawing all day." So at her parents suggestion, she entered Purdue-Calumet University in Hammond, Indiana, as a first step because of its construction technology program. She became hooked.

Reidy has been working as an Assistant Project Engineer for Turner Construction Co. since graduating in June 1999. At the time of our interview, she was working on a five-story office building in Oak Brook, Illinois, a suburb of Chicago. This is the third project she has worked on since joining Turner, which is one of the country's largest builders.

As a recent college graduate, we were interested in learning what insights she could offer to prospective students of construction management and technology.

What is unique about a degree in Construction Technology?

It's really a combination of construction management and engineering. You take a lot of courses in structural engineering, but not all of the science and math courses that an engineering student would take. For example, I had two years of calculus and physics, where an engineering major would have to take more than two years. You also take a lot of management and operations courses.

What about preparation in high school?

If I could do it over again, I probably would have taken more math courses in high school. I also would have taken more English composition. Everybody should write for four years during high school -- you can't have too much writing experience. I took too much English literature, which was not that helpful.

Tell us about your job.

First of all, I start my day a lot earlier than I ever thought I would. The building trades like to start early, basically as soon as the sun comes up. Everything that goes into the construction of a building has to be approved, so a lot of my job as an assistant project engineer is to push issues through to the architect for approval.

What I like about the job is that I'm never in a rut. There is always some new challenge to overcome, not the same old thing. It's like the sign in our office says: "If nothing ever went wrong, we'd be out of a job."

It gets a little hectic at times, particularly as projects get close to completion and you are trying to cram four weeks of work into one. One of my earlier projects, a school construction job, was more hectic. With school jobs you are trying to cram six months of work into three, and you have to get it done. The students are coming back to school in the fall no matter what.

Any negatives about the job?

Well, if you don't like getting up early, or don't like the cold -- at least its cold here in Chicago -- then don't come into this field.

One finally question. Most people would probably consider construction management to be a man's job. What advise do you have for other women?

I don't think girls should be dissuaded from coming into this field at all. I anticipated that there might be some issues, but everyone I've met is really very nice.

Interview: Stephen Schuette

A grimy construction site is no place for an executive, right? Not necessarily. In fact, if you dig a little, you may even find the field has a few college professors like Purdue University professor Stephen Schuette. Now head of the university's building construction management department, Schuette has spent 30 years making his living in construction.

"A common misconception is that construction is a dirty, thankless job with a bunch of people working in mudholes," says Schuette. But a decade as a construction manager and an additional 17 years teaching his job to others has taught Schuette another side, one he loves to spring on his students.

"(Purdue) has computer programs that develop the cost as we draw lines of a building on the screen. We can take instant photos of projects hundreds of miles away and bring them up on our Web site," he says.

Still, it's the students who "used to have the best piles of sand in the sandbox" who tend to excel, he observes. Dirt lovers just need to keep an open mind about changes technology has brought.

So, what is construction management really like? Schuette took some time away from his classroom schedule to roll up his sleeves and, well, give us the real dirt on a career nowadays in construction management.

If construction managers don't dig ditches, what do they do?

A construction manager is a person in charge of a building project, and may handle four or five projects at once. Some companies also call this person a project manager. They're the person in charge of getting things built on time and within budget. For nine years, I was a construction manager for a commercial firm in Illinois that handled construction of commercial buildings like schools, banks and shopping centers. I was in charge of about six estimators, or people who determine the financial costs of a building project before a company builds it.

Do you need a college degree to become one?

You need a bachelor of science degree from a four-year college, with a program accredited by the American Council for Construction Education. There are 47 accredited programs nationwide.

Isn't it dirty work?

It can be if you want to learn the ropes from the ground up. My father owned a construction company and I worked as a construction laborer through high school and college. It wasn't the toughest labor, but by the time I got to college I was handling jackhammers.

Construction is not like it used to be back when large dams were being built. The way construction firms have to get jobs and the wide use of computers and new technology like lazer-guided bulldozers has changed the kinds of jobs available. There are opportunities to be business people, handling communications and estimating building costs.

Course Work

According to the *Occupational Outlook Handbook* published by the U.S. Bureau of Labor Statistics, persons interested in becoming a construction manager need a solid background in building science, business, and management, as well as related work experience within the construction industry. You should be able to understand contracts, plans, and specifications, and be knowledgeable about construction methods, materials, and regulations. Familiarity with computers and software programs for job costing, scheduling, and estimating is increasingly important.

Traditionally, people advanced to construction management positions after having substantial experience as construction craft workers - for example, as carpenters, masons, plumbers, or electricians - or after having worked as construction supervisors or as owners of independent specialty contracting firms overseeing workers in one or more construction trades. However, more and more employers - particularly, large construction firms - want to hire individuals who combine industry work experience with a bachelor's degree in construction or building science or construction management.

In 1996, over 100 colleges and universities offered four-year degree programs in construction management or construction science. These programs include courses in project control and development, site planning, design, construction methods, construction materials, value analysis, cost estimating, scheduling, contract administration, accounting, business and financial management, building codes and

standards, inspection procedures, engineering and architectural sciences, mathematics, statistics, and information technology. Graduates from four-year degree programs are usually hired as assistants to project managers, field engineers, schedulers, or cost estimators.

Around 30 colleges and universities offer a master's degree program in construction management or construction science, and at least two offer a Ph.D. in the field. Master's degree recipients, especially those with work experience in construction, typically become construction managers in very large construction or construction management companies.

A number of two-year colleges throughout the country offer construction management or construction technology programs.

Both the American Institute of Constructors (AIC) and the Construction Management Association of America (CMA) have established voluntary certification programs for construction professionals. Both programs' requirements combine written examinations with verification of professional experience. AIC awards the designations Associate Constructor (AC) and Certified Professional Constructor (CPC) to candidates who meet the requirements and pass appropriate construction examinations. CMA awards the designation Certified Construction Manager (CCM) to practitioners who meet the requirements, complete a professional construction management "capstone" course, and pass a technical examination.

Although certification is not required to work in the construction industry, voluntary certification can be valuable because it provides evidence of competence and experience.

Career Outlook

Employment of construction managers is expected to increase as fast as the average for all occupations through the year 2006, as the level of construction activity and complexity of construction projects continues to grow.

The increasing complexity of construction projects should increase demand for management level personnel within the construction industry, as sophisticated technology and the proliferation of laws

setting standards for buildings and construction materials, worker safety, energy efficiency, and environmental protection have further complicated the construction process.

Advances in building materials and construction methods and the growing number of multipurpose buildings, electronically operated "smart" buildings, and energy-efficient structures will further add to the demand for more construction managers. However, employment of construction managers can be sensitive to the short-term nature of many construction projects and cyclical fluctuations in construction activity.

And The Pay...

Earnings of salaried construction managers and incomes of self-employed independent construction contractors vary depending upon the size and nature of the construction project, its geographic location, and economic conditions.

According to a 1997 salary survey by the National Association of Colleges and Employers, bachelor's degree candidates with degrees in the field of construction management received offers averaging \$28,060 a year.

Bachelor's degree candidates with degrees in the field of construction science received offers averaging \$31,949 a year. Based on limited information, the *Occupational Outlook Handbook* reports the average salary for experienced construction managers in 1996 ranged from around \$40,000 to \$100,000 annually.

Many salaried construction managers receive benefits such as bonuses, use of company motor vehicles, paid vacations, and life and health insurance.