

# Another Look at the Value of a Master's Degree in Construction Management

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Another look into the value of a master's degree in construction is important to determine if value has changed. Different studies indicate that there exists value, yet there exists other data indicating that value is minimal at best. This study looks again at a smaller sample size to attempt to probe deeper into question. Beyond the immediate, are there other related factors that might be important for graduate education in construction management? This study also peers into possible future directions graduate education might be heading for construction and some of the issues that could be part of the movement.

**Key Words:** Graduate education, internship, partnerships, construction industry

## Introduction

With the rise of sophisticated and complex construction projects, there is little doubt of the need for the construction manager. And with the rapid growth of the construction industry, the need for competent management is ever increasing. Owners and executives no longer are former laborers who used to “swing a hammer” and now own their own companies. Management candidates today are increasingly being chosen from the ranks of college graduates. (Dorsey, 1992; Burr, 2003). Estimates indicate that between the years 2002 and 2008, 550,000 jobs will be created in the construction industry; additionally 240,000 will be needed each year to replace those who are retiring or leaving the business (“Looking for a Job,” 2002). Pulte Homes, ranked number two in the Builder 100 list in 2004 (Builder 100, 2004), had 800 college graduates working for them in 2004 alone (“PULTE HOMES: Recruiting & Mentoring,” 2005). Construction management graduates can provide competent leadership of varying expertise and the adroit management experience that is essential to generate profits year after year (Strischek, 1998).

For many construction companies, a degree in construction management (CM) is a prerequisite to any management position. According to the 2004-2005 U.S. Department of Labor Occupational Outlook Handbook, “employers – particularly large construction firms – continue to prefer individuals who combine industry work experience with a bachelor's degree in construction management (DOL 2005).” Furthermore, the management skills necessary to run highly sophisticated construction companies are now progressively being found in master's degree graduates (Berryman & Nobe, 1999). In fact, master's degrees are specifically designed for middle and upper-level management positions (Jones, 1999) (Gourana, 2004).

CM graduate programs are on the rise. Graduate degrees represent 7% of the total graduating class. Master's degree graduates, especially those with experience, are more

likely to serve as managers in construction (DOL, 2005) (Smith, 2004). Although running today's companies may require higher levels of education, including a master's degree, (Gambatese & Opfer, 1999) the construction industry as a whole still tends to see no added value to a master's degree in construction management (Williamson, 1999). Value refers to the quality (positive or negative) that renders something desirable or valuable in the modern world. Are advanced degrees worth the time and effort? The truth of this looming question of whether or not a master's degree in construction management is a valuable commodity currently spawns debate (Uhlik & Chini, 1998), (Lacy & Crosby, 2005).

This paper contains a study directed to determine the value of a master's degree in construction management within a specific area of the United States. A telephone and internet survey was employed to assess the value that members of the construction industry place on construction management (CM) degrees, both graduate and undergraduate. The survey includes 27 self-described general contractors who are members of The Associated General Contractors of America (AGC) in regions three and four in the state of Idaho. These companies surveyed represent regional, national, and international presence. Although the population of the study represents a rather small sample, reasonable conclusions can be generalized to many other areas of the United States who would educate or hire construction managers.

### Related Literature

Running any successful business takes an increasingly sophisticated skill set. With construction spending topping \$1.1 trillion in 2005 (US DOC, 2005), or 8.7% of GDP (US BEA, 2005).

The U.S. Census Bureau of the Department of Commerce announced today that construction spending during November 2005 was estimated at a seasonally adjusted annual rate of \$1,146.4 billion, 0.2 percent ( $\pm 1.4\%$ ) above the revised October estimate of \$1,114.2 billion. The November figure is 7.8 percent ( $\pm 2.4\%$ ) above the November 2004 estimate of \$1,063.4 billion. During the first 11 months of this year, construction spending amounted to \$1,031.2 billion, 9 percent ( $\pm 1.6\%$ ) above the \$946.3 billion for the same period in 2004 (US DOC, 2005).

Most CM graduates have not had a problem finding a job following graduation. "Recent United States construction graduates have witnessed strong competition for their services during the recruitment period." (Burt, 2003) While the demand for qualified workers is increasing, studies indicate the supply is not matching growth. A recent survey conducted by Bilbo, Fetters, et al (2000) found that, "In most construction education programs, institutions report a 100% placement rate, with many indicating that each graduate has three or four offers to choose from." Bilbo, et al. also predicted "given the continuation of current market growth and production levels of accredited construction programs, the results suggest a widening gap in the supply and demand of graduates for the near term."

At Boise State University, which graduates about 30 construction management majors each year, Professor Marv Gabert stated that “recruiters who show up in the spring hoping to hire go away empty-handed (Caldwell, 2005).”

University programs recognize the lack of construction management graduates, but many lack the funding to enhance their programs. For example, “one of the two Pullman [Washington State University] positions is paid for entirely with \$250,000 in industry contributions renewed every three years (Caldwell, 2005).”

Berryman and Nobe commented that “the recent trends in the competitive global market dictate that construction management students must manage at higher levels of sophistication. This is especially important at the graduate level where the focus of education is on ‘management’.”

UNLV added a Master of Science in Construction Management in 1999. Its program “is designed to improve and enhance the capabilities of those already in the construction industry, as well as those seeking middle- and upper-level management positions in the field (Jones, 1999).” Researchers at Arizona State University considering adding a master’s CM program found that the “construction industry acceptance of graduate construction education is increasing (Badger & Segner, 1989).”

However, recent studies on improving graduate programs are still asking the question, “What is the value of a GRADUATE vs. UNDERGRADUATE degree in Building Construction? (Uhlik and Chini, 1998).” Despite current efforts, Williamson stated in 1999, “the industry has yet to accept that graduate students are more valuable than undergraduates.” Kimbrough-Robinson (2005) also argue, “Having a graduate degree does not guarantee you more money, more promotions, or a bigger market. It’s a gamble. I repeat: There are no guarantees.” In response to this study, some said, “a person is much better equipped to succeed with a graduate degree;” however, others answered “[there is] very little difference between graduate and bachelor salaries, when compared with other majors.”

This study addressed the construction industry to ascertain any shifts or change in the acceptance of construction management graduate degree employee candidates.

## Methodology

The questionnaire for the survey was developed in several stages. First, Graduate Management Admissions Council (GMAC®) project staff consulted with the MBA Career Services Council’s members, school career management and admissions staff, company recruiters, and other school administrators to identify current issues. Paper-and-pencil versions of the questionnaire were developed, reviewed, and revised. At the conclusion of this process, the questionnaire was uploaded to the survey site, reviewed, and pilot tested. Finally, several recruiters participated in an online pilot pretest and

provided input on the understandability and functionality of the final online questionnaire. GMAC® granted its permission to use the survey for a study of construction management graduate students and the companies who hire them.

Due to the close proximity and the willingness of the Idaho Chapter of AGC, all of the 27 self-proclaimed general contractors in regions three and four of the Idaho AGC were chosen as the population for the study. Even though this represents a small sample of the entire population of contractors, there is considerable data that can be reasonably generalized to the United States who would otherwise hire or educate construction managers. Twenty-one companies responded to the survey representing 78% of the population. Twelve of the twenty-one companies were considered local, six were regional, two were national, and one was global. Nineteen of the companies were headquartered in the western part of the United States. One company was headquartered in the Northeast, and another single company in the mid-Atlantic. Six companies stated that they had revenues between \$10MM and \$24.9MM in 2005. Five companies grossed \$3MM-\$5MM and another five grossed \$5MM-\$9.9MM. Two companies had revenues between \$25MM and \$49.9MM. Two other companies had revenue totals between \$50MM and \$99.9MM. One company marked \$1B – \$4.9B in revenues. Seven companies completed between 1-11 units in 2005, four completed 12-25 projects, six companies had 26-50 projects completed, three companies marked 51-100 projects completed, and one company marked 500-1000 projects completed for 2005. The primary business for nine companies was commercial, three were residential, four were industrial, and five were civil/heavy highway. Two companies had 1-11 employees who worked for them, six companies employed 12-25 people, four companies had 26-50 employees, three companies had 51-100, five companies had 101-250, and one company employed between 5,000 and 10,000 people.

Although the entire survey was online, some respondents were contacted via telephone and their responses were included in the study.

## Results

Just more than half of the companies had never hired a construction management graduate, barely more than one third had hired one to five, and one company had hired more than ten. When asked about hiring a person with a graduate degree versus an undergraduate degree, companies had a variety answers. However, most of the companies were concerned about the lack of hands on experience. Most of the companies indicated that there would be little to no difference in preference for hiring a graduate versus an undergraduate candidate.

When asked about recruitment of college graduates, 71.4% said that they did not have any relationships with colleges for recruiting. Out of all of the companies in the study, 42.9% said that they were unaware of colleges with graduate degrees in construction management. Thirteen companies (62%) did not hire any CM graduates or undergraduates in 2005 and 14 of the 21 companies surveyed said that they did not plan

on hiring any management positions for 2006. The seven remaining companies all said that they would hire collectively anywhere from 24-28 new management employees in 2006. The main reason for those who did not hire any graduates in 2005 (57%) was because they did not have any job openings that required a degree. When asked about the possible differences in salary between undergraduate and graduate candidates for new management hires, 18 (86%) companies responded that they could not justify a difference. Most of the companies (57.1%) who are recruiting on college campuses are, however, looking for management candidates. Other areas of interest to recruiters varied between accounting, entrepreneurship, finance, Information Technology/MIS, marketing, or field operators.

When the companies were asked to share additional information that would be important to this study, almost all respondents stressed that they would like more hands-on experience to be required of both undergraduate and especially graduate candidates. Respondents also noted that estimating, project management, budget control, and scheduling are all critical areas for instruction emphasis.

## Conclusions

Has the climate of the industry changed its perception of a graduate degree as it pertains to construction management? The results of this study found that many in the construction industry still do not understand and, therefore, do not comprehensibly value a graduate degree in construction management. However, there are many other aspects of note gained from this study that are important to all constituents of the construction industry, including education and builders alike.

### Graduate to experience, or experience to graduate

One of the major underlying findings of this study was the petition from industry that graduate students especially, and also undergraduate students, engage in useful experience gaining opportunities before applying for management positions. Management theory through education is not sufficient.

Education needs to create more opportunities for graduate students to obtain appropriate construction related experience before they graduate. Experience could be a requirement for application or acceptance into a CM graduate program. Graduate programs should also require significant internships similar to those required for most undergraduate programs. Additionally, business partnerships could be arranged with graduate programs to rotate graduate students through several business types over an extended period of time, allowing the graduate student to gain substantial experiences from a variety of construction companies representing many aspects of the business and differing directions of construction. Perhaps then the value of the graduate program would rise as

not only evidence of increased theory, but also increased practice qualifies the graduate student over the undergraduate student.

### MS or MBA?

Although not part of this study, the authors did ponder on the different graduate education possibilities for CMs. This reflection was based upon some changes that are occurring in the direction of the graduate program now at Brigham Young University. After facilitating an MS program for the past seven years at BYU, we have come to consensus as a faculty, that this process is doing a disservice to the BYU Construction Management Department and the industry we serve. We have come to understand that the good majority of the students being applying and being accepted to the graduate program come from other undergraduate majors than construction management. Upon graduation from BYU with a MS in construction management, the faculty believes that most do not have the skills that an undergraduate student would have upon graduation.

Based upon this sentiment, BYU is currently not accepting any further graduate students seeking an MS degree unless they are CM undergraduates and are extremely interested in teaching. Also, BYU faculty are exploring the possibilities of factoring a MBA with a construction management emphasis for CM undergraduates with the BYU School of Business. This proposal is now being accepted by all of those parties involved and is slated to begin in the fall of 2008. There are good reasons and potential for further research regarding the continuation from a CM undergraduate degree into a MBA designed specifically for construction management.

### Education to promote education

The literature illustrates that there is a significant demand for construction management students in general –so much so that demand currently outpaces supply. However, there is little data found regarding graduate students and placement or promotion. If anything, the literature indicates that there *should* be a demand in upper-level management. For example, reciting Berryman and Nobe (1999), “the recent trends in the competitive global market dictate that construction management students must manage at higher levels of sophistication. This is especially important at the graduate level where the focus of education is on ‘management’.” Colleges and universities then can project a future need to continue to create new construction management programs for graduate students. If the need is there, then universities don’t need to wait for everyone to get on board, but instead they need to focus on what will happen if you get left behind. Universities need to focus specifically on organizing their programs to meet the demand for upper-level construction management positions. Furthermore, colleges and universities lay the foundation for the future need to not only prepare to educate the next generation of upper level management but also provide candidates to become qualified professors to maintain a flourishing construction management program. The value of the degree should not only

be in the industry, but in the need to support experiential possibilities for graduate and undergraduate construction management education.

### Some still do not know

Lacy and Crosby state,

“If a bachelor’s degree is the most education that is required in an occupation, earning an advanced degree will not always increase median earnings significantly... The financial benefits of advanced degrees might be understated in many occupations because newer workers are more likely to have an advanced degree, and these workers might earn less because they have less experience (2005).”

Perhaps increased earnings of a graduate student should not be expected immediately, not until the value or need increases. There is very little data on the promotion rate of graduates versus undergraduates in the construction industry. Again, given the chance to demonstrate possibly higher levels of cognitive understanding and skills, graduate student candidates could become more valued and therefore, gain more lucrative salaries. Presently, the building industry does not adequately identify the graduate degree as a viable preparation to management. There are some issues that need to be resolved before that can happen. Experience integrated into the graduate degree is one key component.

As companies become more technical, they will identify the need for strategic research to determine future direction. This need will demand persons with graduate degrees adept in research methodologies. Graduate degree holders have been trained in advanced systems and products. They generally are more mature and have been prepared in higher levels of thought processes including problem solving. This study indicates that awareness could change in the industry if graduate programs include a greater emphasis on experience.

Graduate degrees in construction management are still a relatively new concept. Undergraduate degrees have only been common place in the last decade. Many companies, especially the smaller ones, are not aware of graduate degrees in construction management and thus are not aware of the benefits that graduate degrees could offer the industry. As graduate students make more of an impact in the field, more validity will ensue. There must be a push by higher education to elucidate the benefits for success that are integral to those possessing graduate degrees.

This study indicates that higher education is not being adequately proactive in getting the word out about their graduates in construction management. Although this was not a direct question asked in the survey, when asked about the preferences between hiring undergraduate vs graduate, many companies seemed surprised that there existed graduate degrees in construction management. Some companies, primarily large ones like Pulte, McCathry, and Centex etc. have caught onto the band wagon. But, many of the smaller companies remain in the dark. It will require a greater effort through the industry, connected building related associations, and university partnerships to ensure that all are

informed about the resource that higher education is making available with undergraduate and graduate students alike. This effort must be expanded to include small builders. Then perhaps, it is only a matter of time before the majority of the competitive building industry realizes what managers with graduate degrees offer, follows suit with most all other of businesses, and eventually embrace it.

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## Survey Instrument

### 1. How many Construction Management (CM) students have you hired in the past?

0		57.1%	(12)
1-5		38.1%	(8)
6-10			(0)
10+		4.8%	(1)
I didn't know there was a master's degree for CM.			(0)
<b>TOTAL</b>		<b>100.0%</b>	<b>21</b>

### 2. Under what circumstances would you hire a graduate student over an undergraduate (or a person without formal schooling who has experience)?

#	Response
1	All hiring through Union
1	Based upon potential. The type of person rather than education. Value system -training can be worked on. CM grad w/ field experience is critical.
1	Depend on the individual. Need practical experience- smarts. If they were all school w/ no common sense, it wouldn't matter. Don't know of masters degree?
1	Don't foresee that unless the business would grow in near future
1	Education and training and for a long-term fit as owner get older - for a replacement
1	Experience, undergraduate field of studies applicable to the position, don't know of masters
1	If we are looking for long-term professional experience and have time to train.
1	If we changed structure or scope of work
1	If we had a pressing need
1	If we had the work demand. Able to manage their jobs with the people we have. Based on interview and qualifications. CM has grad degree?
1	In most circumstances, we do not consider Master's degree candidates. If the person had some valuable, related experience and was a good fit with our organization, we would consider them.
1	A lot of work experience
1	Maybe 90% of the work is design/build and repeat business
1	Not aware of a graduate student. Not thought about it.
1	Not aware there was a master's degree. If they were more knowledgeable
1	SCHOOLING FOR CREDITIALS AND EXPERIENCE NECESSARY

1 Sharper than the other guy.








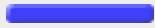






1 Size and scope of the work

1 Son taking over the construction business. Graduate student didn't have enough paperwork here to do. Office workers do field work as well.

1 We are a family company and do not hire any outsiders.

1 Working experience

**3. How does your company establish and maintain relationships with graduate schools where your company regularly seeks new CM graduate hires? Check all that apply.**

Host off-campus company-site visits for school groups		(0)
Host company information sessions on campus		(0)
Participate in classroom or extracurricular educational and networking activities (case studies, lectures, career workshops, etc.)	 4.8%	(1)
Sponsor employees to serve at their CM alma maters in leadership roles		(0)
Offer corporate goodwill and PR including donations, scholarships, etc.		(0)
Use schools' alumni networks for experienced-direct-from-industry hires	 9.5%	(2)
Support company projects for student course credit or experience	 4.8%	(1)
Post occasional job openings and/or intern openings on campus	 14.3%	(3)
Conduct an interview schedule even though there may be uncertainty about ability to hire	 4.8%	(1)
Grant requests for informational interviews at your company	 9.5%	(2)
Conduct intern interviews and hire interns	 9.5%	(2)
None of the above	 71.4%	(15)
Don't know	 4.8%	(1)
Other: -	 4.8%	(1)
Other: Don't do any of the above, but would like to know which method is most effective and be instructed as to the benefits.	 4.8%	(1)
Other: Have done a safety program with BSU	 4.8%	(1)
Other: Plan on working with BYU, BSU and ASU in the future, but not graduate students	 4.8%	(1)
Other: review annual resume booklets, have not seen one lately	 4.8%	(1)

Other: We do not hire any CM graduates and don't see a need in the near future.	4.8%	(1)
Other: Wouldn't be opposed to having some of those relationships.	4.8%	(1)

**4. If your company does not hire new CM graduates at a school in a given year, to what extent do your relationship-building activities change?**

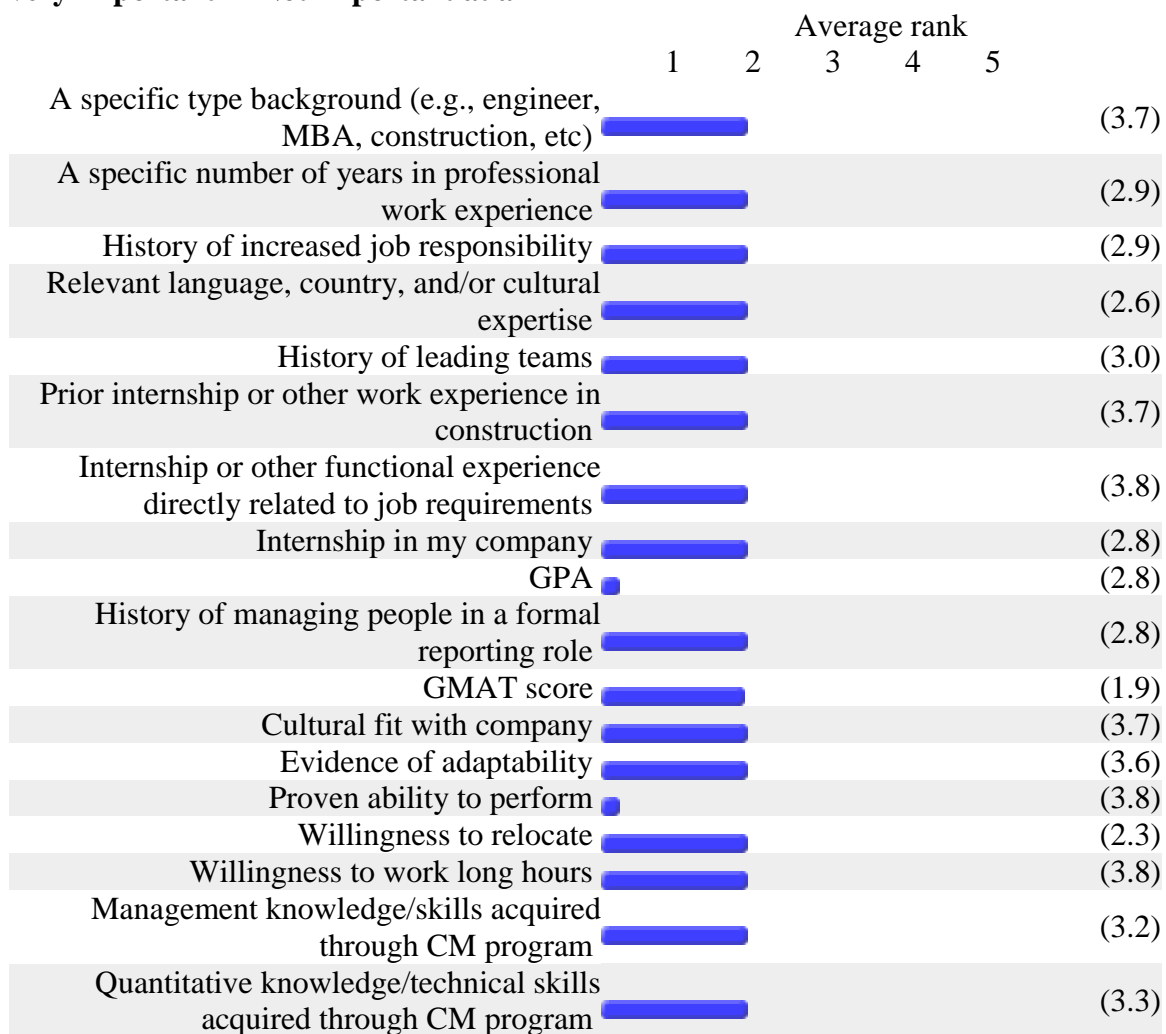
Increases	4.8%	(1)
Decreases	9.5%	(2)
Remain about the same	76.2%	(16)
Not Applicable	14.3%	(5)

**5. Please tell us why CM graduates may be attractive to your company versus undergraduates. Check all that apply. Is it their...**

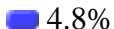







Ability to adapt/change to new situations	23.8%	(5)
Ability to integrate information from a wide variety of sources	14.3%	(3)
Ability to think analytically	19.0%	(4)
Ability to think strategically	14.3%	(3)
Ability to make decisions with imperfect information	9.5%	(2)
Information-gathering skills	19.0%	(4)
Quantitative skills	9.5%	(2)
Technological skills	14.3%	(3)
Initiative/risk-taking ability	9.5%	(2)
Interpersonal skills	9.5%	(2)
Oral communication skills	19.0%	(4)
Written communication skills	19.0%	(4)
Creative problem-solving skills	9.5%	(2)
Leadership skills	19.0%	(4)
Ability to delegate	4.8%	(1)
Implementation skills	4.8%	(1)
Cultural sensitivity and awareness	9.5%	(2)
Skills in corporate ethical conduct	19.0%	(4)

Work ethic		14.3%	(3)
None of the above – My company does not find CMs attractive		28.6%	(6)
Other -		23.8%	(5)
Other All Hires through Union		4.8%	(1)
Other Construction Tech Degrees- those who have a more hands-on experience are what we are looking for		4.8%	(1)
Other Depends on the individual		4.8%	(1)
Other Depends upon the person and the skills they have		4.8%	(1)
Other Small company with no reason to hire at this time.		4.8%	(1)
Other We don't do more projects than we can handle		4.8%	(1)



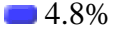

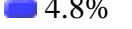
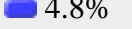





**6. In your opinion, how important is each of the following in new CM graduate hires? 5=Extremely Important 4=Very Important 3=Somewhat Important 2=Not very important 1=Not important at all**




**7. Which of the following assessment methods does your company use with CM candidates? Check all that apply.**

Personality testing/inventories (e.g., MMPI, Hogan, Myers-Briggs)	 4.8%	(1)
Interactive assessments (role plays and simulations)		(0)
Career interest and job fit assessments (e.g., Career Leader, Career Anchors, Strong)		(0)
Performance/work sampling	 4.8%	(1)
Mathematical problem solving		(0)
Case or situational interviews (candidates respond to a hypothetical or real situation)	 9.5%	(2)
Computer-assisted interviews (a computer screens candidates based on their responses)		(0)
Behavior-based interviews (candidates describe specific examples of their skills)	 9.5%	(2)
Knowledge, ability or experience evaluations (measures of job specific knowledge, experience, or abilities such as mental, physical or technical.)	 9.5%	(2)
None of the above – Do not use formal assessment methods	 61.9%	(13)
Don't know	 14.3%	(3)
Other: -	 14.3%	(3)

**8. What barriers are there to effective recruiting and selection of new CM candidates? Check all that apply.**

Limited supply of CM candidates with relevant industry-specific experience	 9.5%	(2)
Limited supply of CM candidates with relevant functional experience	 4.8%	(1)
Limited supply of minorities (ethnicity, gender, or nationality) in CM candidate pool	 4.8%	(1)
Other organizations aggressively competing for the same CM candidates	 14.3%	(3)
Poor interviewing preparation and/or performance of CM candidates	 4.8%	(1)
Difficulty in finding and identifying CM candidates	 4.8%	(1)
Limited recruitment staff and/or budget at your company	 9.5%	(2)
Unrealistic job role/level expectations of CM candidates	 4.8%	(1)
Unrealistic salary expectations of CM candidates	 14.3%	(3)
Unrealistic view of advancement opportunities of CM candidates	 4.8%	(1)
None of the above – I do not feel there are any barriers	 19.0%	(4)

Don't know		(9)
	42.9%	

Other: -		(4)
	19.0%	


**9. Which of the following does your company do to obtain CM graduate talent?  
Check all that apply.**


Sustain a formal or centralized CM recruiting program		(0)
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Recruit new CM graduates on an informal or decentralized basis		(1)
	4.8%	


Recruit new CM graduates on an as-needed basis		(1)
	4.8%	

Recruit new CM graduates on a planned periodic basis		(0)
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Consider CM graduate students, but do not actively recruit them		(2)
	9.5%	

Obtain CM talent through CM intern pool		(2)
	9.5%	

Develop CM talent by sponsoring current employees to attend CM programs		(1)
	4.8%	

Recruit experienced direct-from-industry hires that have graduate degrees.		(2)
	9.5%	


Don't know		(3)
	14.3%	


Other: All hires are family		(1)
	4.8%	


Other: Civil Engineering Students @ ISU		(1)
	4.8%	

Other: Give Rudy Pusey a call @ BYU		(1)
	4.8%	


Other: Look more for engineers than CMs		(1)
	4.8%	

Other: None		(1)
	4.8%	

Other: None specifically, if one applies, then we will look at him		(1)
	4.8%	

Other: We don't		(1)
	4.8%	

Other: We don't recruit graduate students.		(1)
	4.8%	


Other: We would hire internally		(1)
	4.8%	

**10. What channels does your company use to recruit new CM graduate hires?  
Check all that apply.**


On-campus CM interview schedules and supporting activities		(0)
--	--	-----

Internet search engines and job-posting boards		(0)
--	--	-----


Local and/or national newspapers		(2)
	9.5%	

School newspapers		(1)
	4.8%	

Trade publications and magazines		(0)
----------------------------------	--	-----

Government employment services		(1)
	4.8%	

Job fairs/consortiums		(3)
	14.3%	

Off-campus company-site visits by school groups		(1)
	4.8%	

CM internship program and/or company project support by		(1)
	4.8%	

## CM students

Targeted minority recruiting (e.g., NAACP, minority colleges/organizations)		(0)
Partnerships with community organizations		(0)
Professional (industry- or function-specific) organizations/conferences	4.8%	(1)
Company's Web site and job postings	4.8%	(1)
School Web sites and their Web posting services	19.0%	(4)
In-house employee referral/alumni referrals	14.3%	(3)
Professional recruiting/ employment agencies	4.8%	(1)
Don't know	19.0%	(4)
Other: -	23.8%	(5)
Other: @ISU	4.8%	(1)
Other: All Union	4.8%	(1)
Other: BYU Boise state paper	4.8%	(1)
Other: Internally	4.8%	(1)
Other: Recruit on a couple campuses in WY/MT, but it is for engineers	4.8%	(1)
Other: Still working on that	4.8%	(1)
Other: We don't	4.8%	(1)
Other: We don't recruit graduate students.	4.8%	(1)
Other: We haven't looked at it in the past	4.8%	(1)

## 11. Of the recruiting channels used, which is your companies main source for new CM hires?

On-campus CM interview schedules and supporting activities		(0)
Internet search engines and job-posting boards	4.8%	(1)
Local and/or national newspapers	4.8%	(1)
School newspapers		(0)
Trade publications and magazines		(0)
Government employment services		(0)
Job fairs/consortiums	4.8%	(1)
Off-campus company-site visits by school groups		(0)
CM internship program and/or company project support by CM students	4.8%	(1)
Targeted minority recruiting (e.g., NAACP, minority colleges/organizations)		(0)



Partnerships with community organizations	4.8%	(1)
Professional (industry- or function-specific) organizations/conferences	9.5%	(2)
Company's Web site and job postings	4.8%	(1)
School Web sites and their Web posting services	9.5%	(2)
In-house employee referral/alumni referrals	9.5%	(2)
Professional recruiting/ employment agencies	4.8%	(1)
Don't know	14.3%	(3)
Other: -	38.1%	(8)
Other: @ISU	4.8%	(1)
Other: Call Rudy Pusey	4.8%	(1)
Other: Internally	4.8%	(1)
Other: We don't recruit graduate students.	4.8%	(1)

**12. Which of the following BEST describes your company's actual timing in 2005 for campus interviews of CM master's degree graduates?**

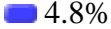



No interviews on Campus	81%	(17)
Interview six or more months prior to graduation/availability		(0)
Interview three or more months prior to graduation/availability		(0)
Interview within weeks of graduation/availability		(0)
Interview on an as-needed basis year-round	4.8%	(1)
Don't Know	9.5%	(2)
Other: -	9.5%	(2)

**13. Which of the following BEST describes your company's expected timing in 2006 for campus interviews of CM master's graduates?**

No interviews on Campus	71.4%	(15)
Interview six or more months prior to graduation/availability		(0)
Interview three or more months prior to graduation/availability		(0)
Interview within weeks of graduation/availability		(0)
Interview on an as-needed basis year-round	9.5%	(2)
Don't Know	14.3%	(3)
Other:	4.8%	(1)

**14. Which of the following best describes your opinion of current economic conditions and their effects on your company's plans for recruiting new professional hires? "New professional hires" includes all categories of new employees in the hiring mix for which a college degree is a minimum requirement. This may include**

**campus hires at undergraduate and graduate/MBA level, as well as experienced, direct from industry hires, some of whom might also have CM or MBA degrees. This does not include company transfers.**

The current economy is weak, and this is constraining my company's recruiting plans.	 4.8%	(1)
The current economy is weak, but this is not constraining my company's recruiting plans	 4.8%	(1)
The economy is not weak and my company's recruiting plans are not strained.	 85.7%	(18)
The economy is not weak, but we are still constraining my company's recruiting plans	 4.8%	(1)

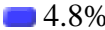

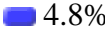
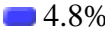
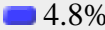
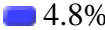
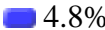


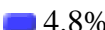


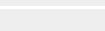
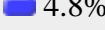

**15. Please tell us the number of new professional hires your company had in 2005. If your company did not hire or does not expect to hire candidates please indicate "-".**

#	Response
10	-
2	1
1	2
1	3
3	4
1	5
1	Don't know not a criteria that is used
1	Interest rates will slow housing down some.
1	~ 5




**16. Please estimate of professional hires in 2005. If your company did not hire or does not expect to hire candidates please indicate "-." "New professional hires" includes all categories of new employees in the hiring mix for which a college degree is a minimum requirement. This may include campus hires at undergraduate and graduate/MBA level, as well as experienced, direct from industry hires, some of whom might also have CM or MBA degrees. This does not include company transfers.**

#	Response
14	-
1	1-2
1	3
1	4
1	6
1	7
1	Depends on market
1	~ 5

**17. If you did not hire any CM graduate students in 2005, what are the main reasons your company did not hire new CM graduates in 2005? Check all that apply.**

CM graduate skills/resources are not critical in my company	 4.8%	(1)
No job openings	 57.1%	(12)
CM entry-level salary demands are too high		(0)
Hiring freeze in our organization		(0)
Company in process of reducing headcount		(0)
Recruiting resources were allocated to experienced hires direct from industry		(0)
Recruiting resources were allocated to new undergraduate hires	 4.8%	(1)
Limited company growth anticipated		(0)
Availability of candidates does not match my timing needs for hires	 4.8%	(1)
Offers made to CM grads were not accepted	 4.8%	(1)
Obtained CM talent by sponsoring current employees in CM programs	 4.8%	(1)
Restricted recruiting budget		(0)
Difficulty in finding and identifying candidates	 4.8%	(1)
Available CM candidates weren't qualified (no yield on interviews or resume screens)		(0)
All positions were filled by CM undergraduates.	 9.5%	(2)
Don't know	 14.3%	(3)
Other: All Union	 4.8%	(1)
Other: did hire	 4.8%	(1)
Other: Looking for engineers, not CM graduates	 4.8%	(1)
Other: We are looking more for field workers rather than office people.	 4.8%	(1)
Other: We have all the office people we need. It is pretty lean at the top. Manager has a CM degree	 4.8%	(1)
Other: We only hire family	 4.8%	(1)

**18. When making an offer of employment, which of the following factors are stressed with CM candidates to influence them to accept your job offer? Check all that apply.**

Ability to impact results or bottom line	19.0%	(4)
Achieving something that they can personally value	 19.0%	(4)
Challenging and/or interesting work	 19.0%	(4)
Company image and reputation	 23.8%	(5)

Company stability		(4)
Having primary responsibility for a project, budget, or people		(3)
High ethical standards of the company		(7)
Job autonomy		(1)
Job security		(0)
Location		(3)
Work/life balance		(2)
Opportunity for advancement		(2)
Opportunity to learn new things		(3)
Positive organizational climate		(2)
Working with a diverse group of people (culturally, racially, ethnically)		(2)
Don't know		(5)
Other: -		(3)
Other: All Union		(1)
Other: Don't hire CM graduates		(1)
Other: not really anything just review overall attitude and knowledge		(1)
Other: Will be hiring daughter in a couple of years when she graduates with a CM degree. Starting salary around 30K. Insurance, truck, 401k and bonuses		(1)

**19. What is your best estimate of the average expected starting annual salary (not including benefits) for new professional hires in 2004 (in \$US). If you didn't hire anyone enter a -**

#	Response
13	-
1	38,000
1	40
1	40,000
1	40k
1	55,000
1	60000
1	Depends on schooling and experience 35-45K

1 ~ \$50,000

**20. Is there a difference in expected starting salary (or benefits) for an undergraduate versus a graduate student in CM? If NO enter NO. If yes, enter the average difference?**

# Response

10 -

1 15000

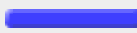







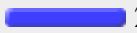





1 Depends

1 Graduate more by a couple thousand dollars

7 No

1 With equal background experience, possibly 2,000

**21. In addition to base salary, which of the following kinds of compensation benefits do you typically extend in a job offer to a new CM graduate hire? Check all that apply.**

Commissions		(0)
Benefits package	 33.3%	(7)
Truck or truck allowance	 33.3%	(7)
First-year bonus		(0)
Housing allowance or reimbursements		(0)
Moving allowance	 4.8%	(1)
Performance-based bonus	 19.0%	(4)
Profit sharing	 23.8%	(5)
Signing bonus	 4.8%	(1)
Starting bonus		(0)
Stock options		(0)
Tuition reimbursement	 4.8%	(1)
Year-end bonus	 23.8%	(5)
Other: -	 28.6%	(6)
Other: 401k, Insurance	 4.8%	(1)
Other: Don't Know	 4.8%	(1)
Other: Health insurance	 4.8%	(1)
Other: insurance	 4.8%	(1)
Other: None	 9.5%	(2)

**22. What is your best estimate of average first-year TOTAL (Base salary plus other compensation) annual compensation for new CM graduate hires in 2005 (in \$US) If you hired no graduates in 2005, please specify "undergraduate" and give amount. If you didn't hire anyone enter -**





# Response

12 -





1 40-60K

1	45
1	45,000 including benefits package
1	45k+
1	50k
2	60,000
1	85000
1	~ \$75,000





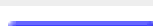







**23. From how many schools does your company recruit CM graduates? Please give us your actual for the end of your 2005-recruiting season.**

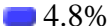
0		71.4%	(15)
1-5		23.8%	(5)
6-10		4.8%	(1)
11-20			(0)
21+			(0)
<b>TOTAL</b>		<b>100.0%</b>	<b>21</b>

**24. From how many schools does your company recruit CM graduates in 2006? (Expected number)**

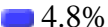




0		61.9%	(13)
1-5		33.3%	(7)
6-10		4.8%	(1)
11-20			(0)
21+			(0)
<b>TOTAL</b>		<b>100.0%</b>	<b>23</b>

**25. For which general job area(s) does your company recruit? Check all that apply.**



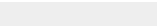
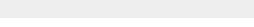
Accounting		9.5%	(2)
Consulting			(0)
Entrepreneurship		4.8%	(1)
Finance		4.8%	(1)
HR/ Organization Mgmt			(0)
Information Technology/MIS		4.8%	(1)
Management (Superintendents, Project Managers)		57.1%	(12)
Marketing		4.8%	(1)
Operations & Logistics			(0)
Don't know		4.8%	(1)
Other: -		14.3%	(3)
Other: All Union		4.8%	(1)
Other: Engineers		4.8%	(1)
Other: field operations		4.8%	(1)
Other: laborers, usually promote and train within		4.8%	(1)

Other: N/A	 4.8%	(1)
Other: we fill them when there is a need	 4.8%	(1)


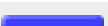




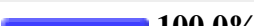
**26. Is your company a global, national, regional, or local (intrastate) business?**

Global	 4.8%	(1)
National	 9.5%	(2)
Regional	 28.6%	(6)
Local	 57.1%	(12)
<b>TOTAL</b>	 <b>100.0%</b>	<b>21</b>

**27. In which US region is your company headquartered?**

Northeast (CT, MA, ME, NH, NJ, NY, RI, VT)	 4.8%	(1)
Middle Atlantic (DC, DE, MD, PA, VA, WV)	 4.8%	(1)
Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI)		(0)
South (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN)		(0)
Southwest (AZ, CO, NM, OK, TX)		(0)
West (AK, CA, HI, ID, MT, NV, OR, UT, WA, WY)	 90.4%	(19)
<b>TOTAL</b>	 <b>100.0%</b>	<b>21</b>

**28. Please indicate the approximate gross annual revenues for 2005 of your parent company (including all plants, branches, divisions, and subsidiaries).**

Under \$1 million		(0)
\$1-\$3 million		(0)
\$3-\$5 million	 23.8%	(5)
\$5-\$9.9 million	 23.8%	(5)
\$10-\$24.9 million	 28.6%	(6)
\$25-\$49.9 million	 9.5%	(2)
\$50-\$99.9 million	 9.5%	(2)
\$100-\$499.9 million		(0)
\$500-\$999.9 million		(0)
\$1-\$4.9 billion	 4.8%	(1)
\$5-\$9.9 billion		(0)
\$10 billion or more		(0)
<b>TOTAL</b>	 <b>100.0%</b>	<b>21</b>

**29. Please indicate the approximate number of units completed in 2005 of your parent company (including all plants, branches, divisions, and subsidiaries).**

1-11	 33.3%	(7)
12-25	 19.0%	(4)

26-50	■ 28.6%	(6)
51-100	■ 14.3%	(3)
101-250		(0)
251-500		(0)
500-1,000	■ 4.8%	(1)
1,001-2,000		(0)
2,001-5,000		(0)
5,000-10,000		(0)
10,000-24,999		(0)
25,000-50,000		(0)
51,000-100,000		(0)
100,000+		(0)
<b>TOTAL</b>	■ <b>100.0%</b>	<b>21</b>

**30. Is your primary business commercial, residential, industrial or civil/heavy highway?**

Commercial	■ 42.9%	(9)
Residential	■ 14.3%	(3)
Industrial	■ 19.0%	(4)
Civil/heavy highway	■ 23.8%	(5)
<b>TOTAL</b>	■ <b>100.0%</b>	<b>21</b>

**31. How many employees are employed in the parent company for which you work?**

1-11	■ 9.5%	(2)
12-25	■ 28.6%	(6)
26-50	■ 19%	(4)
51-100	■ 14.3%	(3)
101-250	■ 23.8%	(5)
251-500		(0)
500-1,000		(0)
1,001-2,000		(0)
2,001-5,000		(0)
5,001-10,000	■ 4.8%	(1)
10,001-24,999		(0)
25,000-50,000		(0)
51,000-100,000		(0)
100,000+		(0)
<b>TOTAL</b>	■ <b>100.0%</b>	<b>21</b>



**32. Please use the space below to share any additional comments that you believe would be valuable to CM schools, to other recruiters, or other graduate students when we design next year's survey.**

#

**Response**

1 -

1 A four-year degree will help a person become more of a project manager than a superintendent. A super will be more hands-on while a manager is more office and business work.

1 Beta test the survey, it has a few glitches. We value hands on construction experience far more than leadership experience in other fields, such as retail sales, manufacturing, waiting tables etc. Even if the pay is not as good, we look for people who worked their way through college in the construction industry so they already have a practical foundation and know they can handle the pressures common to the industry.

1 Common sense and practicality, if they've got a "horse sense" about them, I lean towards that. Being raised on a farm makes a huge difference. Honesty and integrity is part of what we look at.

1 Estimating/project management/budget control/Scheduling

1 Hiring is based upon an individual's desire to achieve and accomplish personal and professional goals and be flexible in doing so.

1 Include childhood development classes for the guys out in the field (Ha Ha)

1 No one has ever contacted us from any school to recruit, placement or to support.

1 Schools- if they could start gearing up for field efforts-field operations. Curriculum that would spark interest for a superintendent rather than project managers.

1 They need hands-on experience 1-year part time ON THE FIELD, to understand the projects.

1 We don't recruit CM graduate students, however, we do recruit CM undergraduate students quite heavily. More emphasis on heavy civil construction would be helpful so that students are aware of the opportunities in this area. Also, resume writing and interviewing skills would help all of the students as well as the companies that come to campus to recruit. Finally, let me say thank you for allowing me to participate in the survey.