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# Selecting the Construction Industry as a Career: An Analysis

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The success of the construction industry is highly dependent on the success of its skilled labor force. In recent years there have been several forecasts that have predicted a shortage in the skilled labor forces. This is attributed to several factors, including a decrease in the labor pool, an overall poor image of the construction industry, the work is physically demanding, and the individual's educational system. This paper will analyze reasons that individuals would or would not be interested in a career in the construction industry. The information in this analysis was complied from three separate surveys: junior and senior high school students, students of associated degree programs in construction, and skilled labor forces employed in the construction industry. The main concentration of this study was the survey used on high school students since they will be the main contributors to the future pool of labor required for construction. The questions were designed to interpret the students' perception of the construction industry and whether or not they have an interest in construction as a career. This paper presents the survey data, data analysis and rationale, and also suggests how this information may be used to help promote construction as a career choice.

**Key Words:** Construction Careers, Construction labor, Construction Workers, Labor Force

## Introduction

The basis for surveying high school juniors and seniors is supported by the fact that these individuals will be making decisions about their future career choices within the next two years. Whether they decide to enter the work force, attend trade schools, or receive degrees from four year colleges, their decisions will determine if the predicted shortage will occur. How these decisions are made, and who influences these students, are key factors. The Jobs Rated Almanac reported that "employment as a construction worker ranked 248 out of 250 occupations based on a rating system that measured factors such as physical demands, stress and long-term security. Construction foreman ranked 228, while civil and electrical engineer ranked 16 and 32, respectively." (Korman, 1992) This ranking either stems from or creates a bad image of construction workers and "provides a glimpse at what information the general public, through respected publishers, are provided. Given the uncertainty many youngsters have with regard to what job/career to pursue, it is clear that for most who consult The Jobs Rated Almanac, the choice is not likely to be a construction worker." (Federle, Rowings, & DeVany, 1993)
In addition, ENR reported that "The reputation of the industry is bad even among school children who picture it as a haven for Neanderthals and ne'er-do-wells and not a provider of sophisticated services". (Korman, 1992) Another study found:

> The term "construction worker," embodied as the unskilled manual laborer, has negative connotations for young people. To youngsters, "construction workers"

are ditch diggers they see calling obscenities to passerby, loafing on the job. Most commonly associated with dirt, sweat, and a gruff demeanor, the construction worker lacks prestige, class, and respectability (Rosenthal 1990).

## Methodology

*The High School Survey*

The high school survey (Appendix A, first page) was a one-page questionnaire, intended to take 5 to 10 minutes. It was administered by teachers in five different high schools and given to students in homeroom or a class attended by juniors or seniors. The five high schools are identified as follows:

A. Small community high school (Cozad High School, Cozad,NE)
B. Large inner city high school (Lincoln High School, Lincoln, NE)
C. Large inner city high school (Lincoln Northeast High School, Lincoln, NE)
D. Medium outer city high school (Norris High School, Norris, NE)
E. Small community high school (York High School, York, NE)

Five hundred twenty-nine (529) surveys were completed. There was no screening of the students as to enrollment in technology related courses ("shop classes") or to the participants gender, race, GPA, etc. This enabled a diverse consensus of the high school students' perception of the industry.

In designing the high school survey questions, three categories were established:

1. general awareness of the industry,
2. training/pay, and
3. opinion or perception of the industry's image.

Questions 1,2,3,4,8,9, and 10 are general awareness questions of the industry. Of these questions, 1,2,3, and 4 deal with knowing someone in the industry, and having knowledge of a construction company and a construction project. Questions 8,9, and 10 pertain to classes related to construction in their respective school while, questions 5 through 7 address pay and training. Finally, questions 11 through 13 are opinion or perception oriented. Question 12 allowed the students to offer their opinions, and many of them did. (Appendix B - Results) Their enthusiastic answers told exactly what some of them thought about construction. Question 13 stemmed from an article by Cliff Hicks entitled "But we all have to go to college after high school ...don't we?" (Hicks, 1994) He had many valid arguments that high school counselors should not try to steer every high school senior into a four-year college. Hicks wrote the "concept that everyone must go to college", is an attitude that is prevalent today especially among counselors and parents. He states that he "rarely hears counselors talk about trade schools" but Hicks thoroughly believes that "people who are good with their hands should go to a carpentry school or get an apprenticeship." Hicks cautions, "if the high school system isn't changed and isn't altered into a

preparation for life instead of a preparation for college, the unemployment rate will keep rising and our work force will continue to decline".

*The Associate Degree Program Survey*

The basis for surveying students of associate degree programs in construction was that these people made the decision to seek specialized training for the construction industry. How this choice was made, their level of satisfaction with this choice, and their expectation of their future careers are important issues to analyze. When designing the associate degree program survey questions, four categories were established:

1. programs that their school offered,
2. who or what influenced their decision to attend school,
3. pay/job market, and
4. their opinion of the industry's image.

The results of the four associate degree programs were compiled from one hundred fourteen (114) surveys as illustrated in Appendix B, 2nd page.

Questions 1,2,5,6,7,8, and 9 were developed to determine whether or not the schools are offering the type of programs that are high in demand by both the students and the companies who hire them. The type of classes required shows depth and diversity of the programs. The availability of the classes, the qualifications of the teachers, and the quality of the equipment all relate to the quality of the programs. If, through the surveys, it is found that these categories are scoring low, then it is understandable why high school students are not entering these programs at a higher rate. If the surveys show the programs rate average or above average, then the problem lies with the people who influence high school students such as their peers, parents, and counselors. Who or what influenced these students was covered in question 3.

Questions 4, 10, and 11 pertained to pay and job market expectations upon graduation. The answers are indicative of how the student feels about the value of his or her degree. If they expect numerous high paying job offers upon degree completion, they are more likely to complete the program. If the students feel their endeavors will not benefit them in the future, they are more apt to quit school, seek employment, and have their employer train them in the field. Question 12 asks the participants to state their opinion of the construction industry.

*The Skilled Labor Survey*

The basis for surveying skilled labor (Appendix A, 3rd page) from area construction companies was to compare their answers with that of the high school students and associate degree students. Full-time employees of two general contractors and one concrete specialty subcontractor were surveyed. One hundred nine (109) surveys were completed.

When designing the skilled labor survey questions, three categories were established:

1. questions related to the company they are employed with,

2. training, and
3. their opinion of the industry's image.

Questions 1,2,3,4,5, and 6 related to the employee's company, specifically, benefits, safety, equipment, and employee turnover. These questions were designed to establish the worker's job satisfaction. If these areas rated low, the company possibly has some personnel problems or the employee may have chosen the wrong career. A high rating establishes that the employee is satisfied with his or her career choice, which in turn initiates the question as to why other people are not attracted to this type of career.

Questions 8,9, and 10 dealt with the training received by the worker, both before and after they joined the company. These questions were asked in order to prove that construction workers are not uneducated and lazy, but are well-educated, well-trained, and hard-working individuals instead. Based upon the fact that the highest level of education required in the U.S. is a high school diploma or equivalent, questions were included to show that a majority of the skilled laborers had achieved or surpassed this goal.

Finally, questions 7, 10, and 11 dealt with the workers opinion of the construction industry's image, who or what influenced their career, and what they would change if they could.

## The Results

This paper will mainly focus on the results of the high school surveys with some comparison to the associate degree program surveys and the skilled labor surveys. Due to the massive amount of information gathered, the last two surveys mentioned will be further analyzed in future papers. The number of surveys from each high school are as follows (Table 1):

Table 1

*Number of surveys*

| | | |
|---|---|---|
| A - | Small community high school | 33 |
| B - | Large inner city high school | 280 |
| C - | Large inner city high school | 42 |
| D - | Medium outer city high school | 82 |
| E - | Small community high school | 92 |

Appendix B gives the results of all surveys, divided by school. The discussion below uses the total composite number of surveys listed in Appendix B. The variance in the total response number of 529 is due to the fact that some questions were answered with more than one answer, and some of the questions were not answered at all.

### *High School Awareness Category*

Questions 1 and 2 indicated that nearly 72% of the students knew *someone* or some *company* in the construction industry. Question 3, awareness of a construction *project* in the local area dropped to about 57%. This may indicate that the construction industry needs to make

themselves more known to the general public. A local ABC executive director agrees with this assessment as he stated that "a good percentage of young people see the construction industry as one in which people can earn very good livings, he also noted the construction worker is ahead of only the migrant farm worker in terms of jobs they would actually like to have for themselves. Not good. What the industry needs to do is to show-and-tell the general public that this industry is not so bad. That contractors are safety-conscious and that it's not as dangerous as it used to be. That people from all backgrounds can earn a decent wage - and respect" (Midwest Contractor, 1995).

The list made from Question 4 was not surprising. Many students answered "housing projects". This may be due to the fact that many of these high schools had programs that helped with the actual building of homes for the Habitat for Humanity projects. What was surprising was that 223 of the 529 students (42%) did *not* know of a construction project, even though all of the schools except one had a major remodeling or large addition project under construction at the their respective school.

Question 8 dealt with the students' awareness of their schools offerings of construction related classes. Approximately 91% of those who responded knew the school offered such classes. When asked to name a construction related class offered at their respective school, 65% (344) of those who answered (479 students answered) named "Residential Construction". Finally, when asked if they had to take an industrial technology class, only 93 of the 318 responses listed "Residential Construction". This is a significant drop from the number of students aware of the class, and one could conclude that many students would not even take a class in the construction related area.

*Training and Pay Category*

Question 5 shows that students believe construction workers earn middle class salaries. It is obvious that they believe this profession does not secure salaries above $50,000 a year but they also do not believe construction workers are living just above the poverty line. Many construction workers are paid by the hour, reflecting an inaccurate perception by the high school students as most indicated these workers were paid on salary. Question 7 dealt with training. Almost half of the students (46%) were aware that most construction workers are trained in the field. The majority of the skilled labor surveys reflected this same response (74%). In reviewing questions 5 through 7, the authors became aware that the correct answer for each would have been that it differs according to the different areas of specialization. For example, electricians are one group who obtain their license after a period of apprenticeship. In the local area, electricians can expect to make $26,000 to $34,000 a year, and are paid hourly. A foreman in the area can expect to make $30,000 to $40,000 a year, and are often paid on salary. (AGC, 1994) Out of the 529 surveyed, only about 10 students answered that it depended on the area of specialization. If students knew more about the industry, more students would have recognized this.

*Opinion/Perception Category*

High school students answered "no" over 100 times more than they answered "yes" when asked if they consider a career in construction (61% no, 39% yes). Their justifications are listed in Appendix B, Question 12. The number one reason was simply that they were "not interested". A close second was the "work conditions", third was that they "did not know enough about it", and fourth was "low pay". Some of the answers did reflect the attitudes of the students as to why they would not chose a career in construction. Answers like "construction is hard labor"," boring", "I'm a girl", "I like 'thinking' jobs", and "I don't want to be dirty all the time", indicate what people of this age group think about the industry. From these answers, it seems the industry has a not so favorable image with these students.

The participants answered question 13 with an almost even split. This proves that almost 50% of the teens believe a four-year college is the next step after high school, because it would not be cool to do anything else. The problem with this way of thinking is that not everyone ready to attend college immediately after high school. The result is wasted time and money, and ultimately a feeling of failure.

## Correlations and Analysis

There are many correlations and comparisons that can be made between the surveys. The high school survey can be compared to the associate degree program survey in the area of pay. It also correlates to the skilled labor survey in the areas of training and safety. The associate degree program survey and the skilled labor survey can be compared in the areas of influence and opinion of the industry.

The high school survey had a few questions about pay. Almost half of the high school students (48%) believe construction workers earn $25,000 - $35,000 per year while less than 1/3 of the associate degree program students (30%) believe they will earn this amount upon graduation. A relatively high percent of the high school students (38%) believe a construction worker makes more than $36,000, in contrast to the associate degree program students where, only 3% believed this. The vast majority of associate degree students (67%) believe their salaries to be in the $10,000 -$24,000 range. Whereas 14% of the high school students believe construction workers earn $10,000 - $24,000. The Table 2 below compares these three salary ranges.

Table 2

*Salary Ranges*

| SALARY | High School Students | Associate Degree Students |
|---|---|---|
| $10,000-$24,000 | 14% | 67% |
| $25,000-$35,000 | 48% | 30% |
| Above $36,000 | 38% | 3% |

The associate degree students have a realistic idea of their salaries. The moderate range for the associate degree students' majority selection reflects that the student is aware that starting pays maybe low with hope for future advancement.

Correlations can be made between how high school students believe the skilled labor forces are trained and how the skilled labor forces actually responded to a similar question. The following comparative results illustrate that the actual workers depend on field training versus the more formal training that the high school students perceived.

Table 3

*Field Comparative Results*

| TYPE OF TRAINING | High School Students | Skilled Labor |
|---|---|---|
| 4 year bachelor degree | 6% | --- |
| 2 year associate degree | 23% | 6% |
| License after apprenticeship | 25% | --- |
| Trained in the Field | 46% | 74% |
| Other | --- | 20% |

The above table reflects that the questions were asked in different formats. Question 9, was used to tabulate the skilled labor force answers listed above by including answers a, b, d, and e for "Trained in the Field". The high school students do recognize that a large amount of training is hands-on experience. For the sample of workers used, the vast majority had field training with some additional trade association and/or company training. The low amount of workers having a formal training (associate degree), is positively reflected in their answer to Question 11, which shows their higher desire for more schooling.

The only time job safety was discussed by the high school students was when answering Question 12. Three students believe they could get hurt easily on the job. This is a relatively low percentage of students; thus the vast majority are not aware of any safety problems. This is surprising since the media usually highlights major construction accidents and there is rarely any *good* news portrayed about the construction industry. On the positive side, 95% of the skilled labors surveyed rated safety regulations average to excellent.

When analyzing the associate degree students and skilled labors selection of construction as a career choice, many of the same reasons are cited. Self/family/friends was the top reason given in both surveys, with 60% of the community college students and 20% of the skilled laborers supplying this answer. The second most common response for both was that they enjoy building and working with their hands. In addition, other common responses were "liked working outside"," became interested through past experience", and "needed money". These answers are interesting when they are compared with the high school students answers because *work conditions* was rated second and *low pay* was rated fourth on the high school students' list of why they would <u>not</u> consider a career in construction.

When asked their opinion of the construction industry's image, the people about to enter the workforce had a higher opinion than those already working in the industry. This is no surprise. Individuals usually have higher expectations prior to having actual experience in an area and after working several years, an individual's career choice can become routine. A majority of the associate degree students (40%) believe the industry's image is excellent, while only 13% of the skilled labor force agree. That is a significant drop. The numbers drop again when rating the

image as better than average. The following table reflects the view of the image of construction industry in the eyes of the associate degree students compared with the skilled labor force.

Table 4

*View of the Image of Construction Industry*

| IMAGE PERCEPTION | Associated Degree Students | Skilled Labor |
|---|---|---|
| Excellent | 40% | 13% |
| Better than Average | 38% | 22% |
| Average | 21% | 41% |
| Below Average | 1% | 18% |
| Minimal | 0% | 6% |

The above table was tabulated using Question 11 in the associated degree program survey and Question 7 in the skilled labor survey. As you can see, the majority of the associate degree students rate the image excellent in contrast to the skilled labor majority rating of average.

## Conclusion

In the high school response to why they would not choose the construction industry, the highest response was "not interested". The question should then be asked: Why aren't they interested? Is it because of the pay, the image, or the work conditions. The authors suspect that a poor image is the main problem the industry faces in enticing new workers. Part of the solution is to change this poor image. The president of the American Subcontractor Association recently wrote, "if the industry is going to attract quality workers in the years to come, we need to change our image today. We work in a truly challenging and rewarding field. It's time that we start showing people the positive aspects of our industry instead of allowing the press to focus only on the disasters. The bottom line is fairly simple. If we as an industry want to recruit quality workers, we must improve our tarnished image" (Graff, 1994).

Companies can have an extremely large impact on the public. Leaders in the industry have to "pursue a more aggressive path for recruitment and retention in their industry, including specific programs aimed at attracting minorities and women, co-op programs and summer jobs for technical students, support programs in the civil engineering and construction fields at universities, and public education through the media" (Jones, 1990).

Other image building techniques that companies can implement include placing company signs in prominent places on job sites, making clean trucks and equipment a priority, displaying their logo on their trucks and equipment, insisting that all employees keep their work clothes clean and tidy, and exhibit appropriate behavior. Another way is to enlist the help from the media. Start playing show-and-tell with them. Instead of running newspaper crews off of work sites, call them up and ask if they would like to come view the site. If a time is set-up beforehand, the company is in control rather than the public. Employees can even write brief project descriptions and send them to the local newspapers and to trade magazines.

Advertising on television and radio is another great source. Who better to look to for an example of this but the U.S. Army. There was a time after Vietnam war where the Army was having trouble getting people to enlist because of its new found bad reputation. The Army began showing commercials and even came up with a catchy slogan: "Be all that you can be, in the Army". They pushed the positive rewards they had to offer. Construction companies, and even the industry as a whole, could use this concept of advertising. Participation in community activities and agreeing to outside speaking engagements at conventions, conferences, forums, or civic, philanthropic, and youth clubs are excellent public relations tools as well.

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# Appendix A

Circle or fill in the blank for your best answer to the following questions.

1) Do you know someone who works in the construction industry? Yes No
2) Do you know of a construction company in your local area? Yes No
3) Do you know of a construction project in your local area? Yes No
4) If you answered yes in question #3, what is the type of project or name of the project.

For #5-7, circle the letter that corresponds to the best estimate of you answer.

5) What is the average pay a construction worker makes in 1 year?
a) above $50,000
b) $36,500 - $50,000
c) $25,000 - $35,000
d) $10,000 - $24,000
6) A construction worker is paid?
a) on a salary
b) different for each project that is worked on
c) hourly
7) How are construction workers trained?
a) They must graduate with a degree from a four year college that specializes in their field of work.
b) They must graduate with a degree from a two year college that specializes in their field of work.
c) They must get their Skilled Labor license after a period of apprenticeship.
d) They are hired and then trained in the field by the company they work for.
8) Does your school offer any classes related to construction? Yes No
9) If you answered yes to #8, name the class/classes. _____
10) If you had to take an industrial technology class at your school, what would it be?
_____
11) Would you ever consider a career in the construction industry? Yes No
12) If you answered no to #11, explain why (low pay, work conditions, don't know enough about it, etc.)
_____
13) If you had a friend who was good at/enjoyed working with his/her hands, would you try to talk them into attending a trade school (carpentry, plumbing, etc. instead of a 4 yr. college)? Yes No

Short Answer

1) What program are you currently enrolled in? _____
2) What type of classes do you need to take in order to receive a degree from this program?
_____
3) Who/What was the main influence on you to enroll in this program?
_____
4) What type of pay do you anticipate receiving upon completion of your degree? (Circle the letter closed to your answer)
a) $6.00/hr - $8.00/hr ($12,480/yr - $16,640/yr)
b) $8.50/hr - $10.00/hr ($17,680/yr - $20,800/yr)
c) $10.50/hr - $12.00/hr ($21,840/yr - $24,960/yr)
d) $12.50/hr - $15.00/hr ($26,000/yr - $31,200/yr)
e) more than $17.50/hr (more than $35,500/yr)

Use the following rating system to answer the following questions. Place your answers in the blanks provided.

1 = excellent
2 = better than average
3 = average
4 = below average
5 = minimal
5) Rank you availability to get into classes that interest you and have significant application to your graduation date.
_____

6) Rank your program's teachers (i.e. 1 = many teachers with a wide variety of field experience, 5 = few teachers, each having minimal amounts of experience). _____
7) Rank your satisfaction with the equipment your program makes available to you for coursework. _____
8) Do you find the classes offered to you are more technical related (computers, CAD, electronics, etc.) rather than hands-on construction related (carpentry, framing, metal work, etc.)?
_____
9) Rank your school's job placement service that is offered to graduating seniors. _____
10) Rank the job market that the students who have graduated with construction related degrees in the past few semesters have encountered. _____
11) Of these new graduates, how has their starting pay compared to past graduates' starting pay? _____
12) Overall, what is your opinion of the construction industry? _____

Using the following rating system to answer questions 1 through 7. Place your response in the space to the right of the question.
1 = excellent
2 = better than average
3 = average
4 = below average
5 = minimal
1) How do you feel your benefits (job security, insurance, vacation and sick leave, retirement, etc.) compare to that of other construction companies? _____
2) How do you feel your benefits compare to that of other careers? _____
3) When you are on a construction site, do you feel that the safety regulations you have to follow are adequate enough to make you feel safe? _____
4) How do you perceive your company's accident record (1 = very low accident rate, 5 = very high)? _____
5) Rank your satisfaction with the equipment your company makes available to you for projects. _____
6) How would you rank the employee turnover rate at your company (1 = very low turnover, 5 = very high)?
_____
7) Overall, what is your opinion of the construction industry's image? _____

For questions #8 and 9, select <u>all</u> of the following that apply and place your response(s) in the space to the right of the question.
a) High school industrial technology program
b) Informal training through experience
c) Community College Program
d) Company sponsored programs
e) Association (AGC, ABC, etc.) sponsored programs
f) Other
8) What type of training did you receive before you began working for the company you are currently employed with? _____
9) What type of training did you receive since you began working for the company you are currently employed with? _____

Short Answer
10) How did you become interested in a career in the construction industry?
_____
11) If you could change one thing about your career, what would it be?
_____
12) What is the highest level of education you have achieved? _____

# Appendix B

HIGH SCHOOL STUDENTS 529 Surveys

1) Do you know someone who works in the construction industry?

| Schools | Yes | No | |
|---|---|---|---|
| A | 24 | 9 | |
| B | 190 | 91 | |
| C | 27 | 15 | |
| D | 67 | 15 | |
| E | 76 | 16 | |
| | **384** | **146** | 530 |

2) Do you know of a construction company in your local area?

| **Schools** | **Yes** | **No** | |
|---|---|---|---|
| A | 29 | 4 | |
| B | 191 | 88 | |
| C | 29 | 13 | |
| D | 49 | 37 | |
| E | 84 | 9 | |
| | 382 | 151 | 533 |

3) Do you know of a construction project in your local area?

| School | Yes | No | |
|---|---|---|---|
| A | 19 | 14 | |
| B | 153 | 124 | |
| C | 17 | 25 | |
| D | 41 | 40 | |
| E | 71 | 21 | |
| | **301** | 223 | 524 |

4) If you answered yes in question #3, what is the type of project or name of the project.

| | | | |
|---|---|---|---|
| Housing | 102 | Gas Station/Truck Stop | 3 |
| School Addition | 83 | Roofing | 3 |
| Commercial Building | 37 | Pouring Concrete | 2 |
| Road Construction | 20 | Airport Runway | 1 |
| Building Schools | 13 | Antelope Creek | 1 |
| Church | 7 | Build America Beautiful | 1 |
| Motel | 5 | Driving Range | 1 |
| Waterpark | 5 | Fountain | 1 |
| Hospital | 4 | Library | 1 |
| Nursing Home | 4 | Retaining Wall & Deck | 1 |

5) What is the average pay a construction worker makes in 1 year?

a) above $50,000
b) $36,500 - $50,000
c) $25,000 - $35,000
d) $10,000 - $24,000

| Schools | **a** | **b** | **c** | **d** | |
|---|---|---|---|---|---|
| A | 2 | 17 | 12 | 2 | |
| B | 23 | 80 | 140 | 37 | |
| C | 2 | 17 | 20 | 3 | |
| D | 1 | 18 | 42 | 20 | |
| E | 13 | 27 | 38 | 14 | |
| | **40** | **159** | **252** | **76** | **527** |

6) A construction worker is paid:

a) on a salary
b) different for each project that is worked on
c) hourly

| Schools | **a** | **b** | **c** | |
|---|---|---|---|---|
| A | 6 | 15 | 12 | |
| B | 49 | 100 | 136 | |
| C | 5 | 19 | 12 | |
| D | 9 | 33 | 41 | |
| E | 11 | 48 | 32 | |
| | **80** | **215** | **239** | **534** |

7) How are construction workers trained?

a) They must graduate with a degree from a four year college that specializes in their field of work.
b) They must graduate with a degree from a two year college that specializes in their field of work.
c) They must get their Skilled Labor license after a period of apprenticeship.
d) They are hired and then trained in the field by the company they work for.

| Schools | a | b | c | d | |
|---|---|---|---|---|---|
| A | 6 | 10 | 7 | 11 | |
| B | 11 | 54 | 75 | 132 | |
| C | 2 | 9 | 10 | 20 | |
| D | 6 | 20 | 17 | 33 | |
| E | 8 | 27 | 17 | 42 | |
| | **33** | **120** | **126** | **238** | **517** |

8) Does your school offer any classes related to construction?

| Schools | Yes | No | |
|---|---|---|---|
| A | 33 | 0 | |
| B | 240 | 27 | |
| C | 35 | 5 | |
| D | 67 | 11 | |
| E | 86 | 4 | |
| | **461** | **47** | **508** |

9) If you answered yes to #8, name the class/classes.

| | | | |
|---|---|---|---|
| Residential Construction/Industrial Tech | 344 | Industrial Arts | 5 |
| Woodworking | 67 | Automotives | 2 |
| CAD/Drafting | 28 | Electronics | 1 |
| Metals/Welding | 26 | Graphic Communications | 1 |
| Architectural Drafting | 5 | | |

10) If you had to take an industrial technology class at your school, what would it be?

| | | | |
|---|---|---|---|
| Residential Construction/Industrial Tech | 93 | Graphic Communications | 12 |
| Woodworking | 58 | Machine Tool | 5 |
| Automotives | 52 | Carpentry | 4 |
| Metals/Welding | 33 | Would not | 3 |
| Architectural Drafting | 15 | Computers | 2 |
| Electronics | 13 | Industrial Arts | 1 |

11) Would you ever consider a career in the construction industry?

| Schools | Yes | No | |
|---|---|---|---|
| A | 14 | 19 | |
| B | 114 | 157 | |
| C | 10 | 31 | |
| D | 30 | 51 | |
| E | 37 | 57 | |
| | **205** | **315** | **520** |

12) If you answered no to #11, explain why (low pay, work conditions, don't know enough about it, etc.)

| | | | |
|---|---|---|---|
| Not interested | 88 | Like "thinking" jobs | 2 |
| Work conditions | 61 | Did not think of it | 1 |
| Don't know enough about it | 47 | Don't want to be dirty all the time | 1 |
| Low pay | 32 | I'm delicate | 1 |
| Other plans for a career | 25 | Makes a minority look uneducated | 1 |
| Hard labor | 24 | May not get paid | 1 |
| Don't like | 23 | Not fun | 1 |

| | | | |
|---|---|---|---|
| Would not be good at it/Unskilled | 6 | Seasonal job | 1 |
| Can get hurt easily | 3 | The geometry | 1 |
| Boring | 2 | Want a white collar job | 1 |
| I'm a girl | 2 | | |

13) If you had a friend who was good at/enjoyed working with his/her hands, would you try to talk them into attending a trade school (carpentry, plumbing, etc.) instead of a 4 yr. college?

| Schools | Yes | No | |
|---|---|---|---|
| A | 16 | 17 | |
| B | 141 | 126 | |
| C | 31 | 11 | |
| D | 34 | 45 | |
| E | 56 | 40 | |
| | **278** | **239** | **517** |

ASSOCIATE DEGREE PROGRAM STUDENTS 114 Surveys

Short Answer

1) What program are you currently enrolled in?

| | | | |
|---|---|---|---|
| Building Construction | 76 | Finish Carpentry | 2 |
| Electrical Residential & Commercial | 17 | Building Materials Mechandising | 1 |
| Drafting & CAD Technology | 10 | Cabinet Making | 1 |
| Construction Technology | 9 | Framing | 1 |

2) What type of classes do you need to take in order to receive a degree from this program?

| | | | |
|---|---|---|---|
| Drafting/CAD | 25 | Computers | 9 |
| Planning and Estimating | 23 | Hands-On | 9 |
| Brick/Masonry | 22 | Human Relations | 9 |
| Math | 19 | Carpentry | 8 |
| Cabinet Making | 18 | Personnal Finance | 7 |
| Basic Electricity | 17 | Woodworking | 6 |
| First Aid | 17 | Framing | 4 |
| Electrical Wiring | 17 | Architecture | 3 |
| National Electric Code | 17 | Concrete | 3 |
| Accounting | 13 | Structural Steel | 2 |
| Oral/Written Communications | 12 | Trimming | 2 |
| Blue Print Reading | 10 | Management | 1 |
| House Building | 10 | | |

3) Who/What was the main influence on you to enroll in this program?

| | | | |
|---|---|---|---|
| Self/Family/Friends | 68 | To work with Electricity/interest | 1 |
| Like to build | 23 | Better Job | 1 |
| Past Experience | 6 | Good Field | 1 |
| Money | 5 | Job Atmosphere | 1 |
| Received Scholarship | 2 | Pride in Building things | 1 |
| To learn Construction | 2 | Unable to work in field anymore | 1 |

4) What type of pay do you anticipate receiving upon completion of your degree? (Circle the letter closest to your answer.)

a) $6.00/hr - $8.00/hr ($12,480/yr - $16,640/yr)
b) $8.50/hr - $10.00/hr ($17,680/yr - $20,800/yr)
c) $10.50/hr - $12.00/hr ($21,840/yr - $24,960/yr)
d) $12.50/hr - $15.00/hr ($26,000/yr - $31,200/yr)
e) more than $17.50/hr (more than $35,500/yr)

| Schools | **a** | **b** | **c** | **d** | **e** | **f** | |
|---|---|---|---|---|---|---|---|
| A | 2 | 2 | 2 | 5 | 0 | 0 | |
| B | 4 | 10 | 3 | 4 | 3 | 2 | |
| C | 5 | 3 | 3 | 2 | 2 | 0 | |
| D | 2 | 26 | 15 | 16 | 2 | 2 | |
| | **13** | **41** | **23** | **27** | **7** | **4** | **115** |

**Use the following rating system to answer the following questions. Place your answers in the blanks provided.**

1 = excellent

8) Do you find the classes offered to you are more technical related (computers, CAD, electronics, etc.) rather than hands-on construction related (carpentry, framing, metal work, etc.)?

2 = better than average
3 = average
4 = below average
5 = minimal

5) Rank your availability to get into classes that interest you and have significant application to your graduation date.

| Schools | **1** | **2** | **3** | **4** | **5** | |
|---|---|---|---|---|---|---|
| A | 6 | 3 | 1 | 0 | 0 | |
| B | 11 | 6 | 3 | 0 | 0 | |
| C | 5 | 4 | 7 | 0 | 0 | |
| D | 29 | 27 | 4 | 0 | 1 | |
| | **51** | **40** | **20** | **0** | **1** | **112** |

7) Rank you satisfactions with the equipment your program makes available to you for coursework.

6) Rank your program's teachers (i.e. 1 = many teachers with a wide variety of field experience, 5 = few teachers, each having minimal amounts of experience).

5) Rank you satisfaction with the equipment your company makes available to you for projects.

| | | | | | | |
|---|---|---|---|---|---|---|
| A | 3 | 4 | 3 | 0 | 0 | |
| B | 7 | 8 | 9 | 0 | 0 | |
| C | 4 | 6 | 5 | 0 | 0 | |
| D | 30 | 25 | 6 | 1 | 0 | |
| | **44** | **43** | **23** | **1** | **0** | **111** |

SKILLED LABOR 109 Surveys

Using the following rating system to answer questions 1 through 7. Place your response in the space to the right of the question.

1 = excellent
2 = better than average
3 = average
4 = below average
5 = minimal

**4) How do you feel your company's safety record (accidents, etc.) compare to that of other construction companies?**

| | **1** | **2** | **3** | **4** | **5** | |
|---|---|---|---|---|---|---|
| Gen. Contractor | 0 | 0 | 2 | 8 | 7 | |
| Gen. Contractor | 2 | 4 | 7 | 1 | 1 | |
| Concrete Subcont. | 11 | 26 | 28 | 4 | 4 | |
| | **13** | **30** | **37** | **13** | **12** | **105** |

2) How do you feel your benefits (job security, insurance, vacation and sick leave, etc.) compare to that of other careers?

3) When you are on a construction site, do you feel that the safety regulations you have to follow are adequate enough to make you feel safe?

| | **1** | **2** | **3** | **4** | **5** | |
|---|---|---|---|---|---|---|
| Gen. Contractor #1 | 1 | 2 | 5 | 4 | 5 | |
| Gen. Contractor #2 | 1 | 9 | 2 | 3 | 2 | |
| Concrete Subcont. | 7 | 15 | 25 | 18 | 6 | |
| | **9** | **26** | **32** | **25** | **13** | **105** |

7) Overall, what is your opinion of the construction industry's image?

| | **1** | **2** | **3** | **4** | **5** | |
|---|---|---|---|---|---|---|
| Gen. Contractor #1 | 1 | 3 | 6 | 5 | 3 | |
| Gen. Contractor #2 | 0 | 3 | 10 | 2 | 1 | |
| Concrete Subcont. | 13 | 18 | 29 | 12 | 3 | |
| | **14** | **24** | **45** | **19** | **7** | **109** |

For questions #8 and 9, select <u>all</u> of the following that apply and place your response(s) in the space to the right of the question.

a) High school industrial technology program
b) Informal training through experience
c) Community College Program
d) Company sponsored program
e) Association (AGC, ABC, etc.) sponsored program
f) Other

8) What type of training did you receive before you began working for the company you are currently employed with?

| | **a** | **b** | **c** | **d** | **e** | **f** | |
|---|---|---|---|---|---|---|---|
| Gen. Contractor #1 | 10 | 13 | 2 | 1 | 2 | 4 | |
| Gen. Contractor #2 | 5 | 14 | 1 | 1 | 1 | 4 | |
| Concrete Subcont. | 22 | 50 | 8 | 6 | 7 | 19 | |
| | **37** | **77** | **11** | **8** | **10** | **27** | **170** |

9) What type of training did you receive since you began working for the company you are currently employed with?

| | **a** | **b** | **c** | **d** | **e** | **f** | |
|---|---|---|---|---|---|---|---|
| Gen. Contractor #1 | 1 | 12 | 1 | 1 | 0 | 3 | |
| Gen. Contractor #2 | 0 | 11 | 3 | 6 | 4 | 3 | |
| Concrete Subcont. | 1 | 47 | 5 | 20 | 11 | 23 | |
| | **2** | **70** | **9** | **27** | **15** | **29** | **152** |

Short Answer

10) How did you become interested in a career in the construction industry?

| | | | |
|---|---|---|---|
| Self/Family/Friends | 22 | Faith | 1 |
| Liked it/Like to work with hands | 20 | Forced by Law | 1 |
| Work Conditions/Work Outside | 18 | Heard that minorities were hired | 1 |
| Experience | 16 | Job Corps | 1 |
| Money | 16 | Like Working with Big Equipment | 1 |
| Needed a Job | 3 | Needed a Change | 1 |
| Did not want to work in a factory | 2 | Physical and Mental Challenge | 1 |
| High School Industrial Class | 1 | | |

11) If you could change one thing about your career, what would it be?

| | | | |
|---|---|---|---|
| More schooling/experience | 19 | Own a Company/Self-employed | 3 |
| Better Pay | 16 | Recruit Better People to Learn a Trade | 2 |
| Retirement Program/Benefits | 9 | Better equipment | 1 |
| Nothing | 8 | Heights | 1 |
| Weather | 8 | Image | 1 |

| | | | |
|---|---|---|---|
| Different Job | 7 | More Challenging | 1 |
| Better Position in Company | 6 | More Versatility | 1 |
| Hours | 5 | Move out of State | 1 |
| Start earlier in life | 5 | Not having to work with Bob | 1 |
| Boss | 3 | | |

12) What is the highest level of education you have achieved?

| | |
|---|---|
| 12th Grade/GED | 36 |
| Some College | 32 |
| B.S. College | 18 |
| Technical/Associate Degree | 11 |
| Some High School/not finished | 6 |
| Trade School/not finished | 3 |