

CAREERS IN CONSTRUCTION

Building New Jersey's Future



THE CONSTRUCTION INDUSTRY...

Employs more than 8 million people and contributes more to America's Gross National Product than any other single industry!



TRAINED CONSTRUCTION PROFESSIONALS ARE IN HIGH DEMAND AND OFFER LONG-TERM SECURITY.

Here is what a career can mean for you!

- Excellent salaries & benefit packages
- Cutting-edge training & applications
- Employment security
- Opportunity for advancement
- Personal pride and satisfaction



CAREER ZONE AHEAD: WOMEN ENTERING CONSTRUCTION INDUSTRY

It's not difficult to imagine why construction is considered to be a man's world. Women account for only 12% of the workforce in this industry. These numbers should be changing significantly over the next several years due to the increased efforts of many promotional and awareness campaigns that demonstrate why this is a great career choice for young women.



MONEY TALKS!!

Skilled craft workers can earn up to \$90,000 plus benefits — a foreman can earn over \$125,000 annually. Does that grab your attention? And, here is another "Money Talks" fact: Trade apprentices can earn while they learn! For example, union carpenter apprentices receive educations that can be worth more than \$60,000 over four years and while they are "learning", they can earn \$100,000. Many trained professionals are earning a salary higher than many college-educated professionals — without any student loans to pay back.



"Women are often stereotyped in certain industries and rarely associated with the construction industry. What is often overlooked is the excitement of engineering and constructing a large-scale project, such as a new bridge or highway."

-Ashlee Binder, Director of Marketing
Binder Machinery in South Plainfield



SUMMER INTERNSHIPS PLACE CIVIL ENGINEERING STUDENTS IN THE MIDDLE OF HIGHWAY CONSTRUCTION ACTION

BY CHRISTINE NELSON | For most college students, summer vacations usually mean a break from their rigorous studies and hectic schedules that consume their days on campus. And, while most students do work during the break for financial reasons, the connection between the summer employment and their educational curriculum is not always a consideration.

There are always exceptions! For 35 civil engineering students in the Construction Industry Advancement Program of New Jersey (CIAP of NJ), their summer jobs place them right in the center of the action—more specifically, the construction action. These students are hired by heavy highway construction contractors who are responsible for keeping New Jersey's infrastructure moving along by building and repairing the state's transportation systems including bridges, highways, tunnels and utilities. As part of their 12-week work experience requisite for the scholarship, students step into the roles of civil engineers.

To assist students with the work experience requirement, CIAP hosts an annual Career Fair in January to help them identify and interview with potential employers. The Career Fair brings together all the scholarship students and over 25 participating heavy highway contractors who have developed successful internship programs over the years and rely on these civil engineering students to become a part of their project teams.

During the summer, five of the students shared their experiences and insights about the impact of their internship experience.

Kevin Campbell, Andover



Kevin, a senior at The College of New Jersey, interned with Railroad Construction Company, Inc and was assigned to the Meadowlands Railroad & Roadway Improvement Project as part of the Creamer-Sanzari-Railroad Tri-Venture team. Kevin's interest in math and science subjects steered him to The College of New Jersey for Civil Engineering when he was in high school. This was his first internship in the field. "Interning at the Tri-Venture Project at the Meadowlands has been a great experience. Working on such a high-profile job in one of the busiest construction areas in the U.S. has given me an introduction that will open doors in the future. Construction engineering has become something I love. It's a different challenge everyday and [will be] a rewarding career with great opportunities."

DID YOU KNOW?

- Over \$50,000,000,000 in public work is available in the New Jersey and New York metropolitan area.
- There is a 1.4 million projected shortfall in skilled craft workers by 2008 in the U.S.
- New Jersey colleges produce approximately 150 civil engineers per year, which is far too few to meet the demands of the industry.
- More than 250,000 new craft workers are needed annually to replace openings by retirement and attrition.
- There is a need for civil engineering technologists—requires a two-year degree.
- The Construction Industry Advancement Program of NJ awarded \$100,000 in scholarships in 2007 to 35 students studying either civil engineering or construction technology.



Justine Marie Lentini, Newton



Justine, a senior at The College of New Jersey and two-time recipient of the CIAP scholarship, interned this year with Moretrench. Justine was primarily assigned to the Owl's Head WPCP in Brooklyn, where she

To Learn More About Pursuing a Career in the Construction Industry, Visit Any of These Websites:

www.ciapofnj.org

www.chooseconstruction.org

www.constructmyfuture.org

www.careervoyages.gov

www.discoverengineering.org

www.asce.org

www.bls.gov/k12/build.htm

www.societyofwomenengineers.org

is responsible for assisting the general contractors, superintendents and project engineers to ensure that the work is done according to the contract specifications. Justine has also worked on the Dey Street project near the World Trade Center in Manhattan. "This summer has truly pushed me forward both with my civil engineering career and as a person. At Moretrench, I have begun to experience endless aspects of construction, which I had only read about (and sometimes never heard of) before. Travel to and from the work at different construction sites throughout New York City has also challenged me to step out of my comfort zone and move forward." Justine first became interested in civil engineering when her father started his asphalt paving company, Lentini Paving Contractors, Inc. In high school, she would assist with take-offs and bids for various types of jobs.

Elaine Chasse, Green Brook



Elaine, a senior at Rutgers University, accepted an internship with The New Jersey Turnpike Authority with the Engineering-Construction Department. Elaine spent her summer shadowing project engineers as they managed and worked with the contractors, resident engineers and design consultants on var-



ious projects such as the Driscoll Bridge Rehabilitation. "My experience with my internship at the New Jersey Turnpike Authority has exceeded my expectations and everyday is filled with a new learning opportunity." Elaine's responsibilities included reviewing construction plans, specifications and scheduling and performing traffic analysis to find new ways of improving lane closings for field work. Elaine became interested in civil engineering as a career during her freshman year through a class that introduced the engineering and construction of bridges.

Christian Espitia, Dover & Nilov Patel, Jersey City



Christian and Nilov are Civil Engineering students from New Jersey Institute of Technology who are interned with J. Fletcher Creamer & Sons.

TEAMWORK FROM A-Z!

Construction work means teamwork! Highways, bridges, tunnels, dams, buildings and everything else under construction can't happen with just one type of worker. Many different kinds of craftsmen and professional workers are a must when it comes to completing any project successfully. Here is a sampling of potential careers from A-Z, all of which need eager, dedicated workers.

Architect
Bricklayer
Carpenter
Draftsperson
Electrician
Foreman
Glazier
Heavy Highway Laborer
Ironworker
Landscape Architect
Materials Manager
Operating Engineer
Project Engineer
Quality Control
Roofer
Surveyor
Training Instructor
Welder



Christian Espitia shared that this internship was his first hands-on field experience. "This internship with J. Fletcher Creamer & Sons has been a great opportunity for me to learn the differences between the two branches of civil engineering, which are design and construction. This internship has helped me decide to start in the construction field, and later after a few years of field experience, I want to pursue some design experience in order to obtain my PE license."

Nilov Patel shared how he developed his interest in a career in civil engineering. "When I was a sophomore in high school, I did a science fair project titled, "The Design and Testing of Concrete Bars for Industrial and Building Applications." I enjoyed the experiment so much and knew right then and there that this is the field for me. n

Photos courtesy of: Binder Machinery, Building Contractors Association of NJ, Construction Industry Advancement Program of NJ, Ironworker District Council of Northern NJ, J. Fletcher Creamer & Son, Inc., Railroad Construction Company, Inc., Tilcon New York Inc., Waters & Bugbee, Inc.

DO YOU FIT THE DESCRIPTION?

If you possess these qualities, then a career in construction may be in your future!

- Physically fit, both men and women.
- Understanding of basic problem-solving and reading skills.
- Be part of a team or work independently, depends on your job.
- Take pride in creating or building with your hands.
- Diligent about being on time and reliable.
- Willingness to learn and desire to advance.

For more information about CIAP and the spectrum of programs and activities related to careers in construction, please contact CIAP:

- By Phone: (732) 738-8636
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- By Mail: P.O. Box 6553, Edison, NJ 08818-6553
- Or visit the Website at: www.ciapofnj.org

