

# Building for Tomorrow

## The Indian River Inlet Bridge Newsletter



A publication by the Delaware Department of Transportation (DelDOT)

December 2010



Douglass Robb  
(DelDOT)

In this month's issue of *Building for Tomorrow*, we'll be looking at jobs and careers in transportation, specifically jobs at the Indian River Inlet Bridge. While one might think that engineers are the only profession used in building bridges, there are actually several different trades that are used to build a bridge of this magnitude. Everything from general laborers and carpenters to professional engineers are needed to create this landmark bridge. If you think you may be interested in working in the transportation industry, read on

to see if this is the field for you.

This month's featured guest is Douglass Robb, a Civil Engineer, licensed professional engineer, and DelDOT's Project Manager on the Indian River Inlet Bridge project. Doug brings over 17 years of civil and structural engineering experience in both the public and private sectors. He specializes in the design, inspection, review, management, and construction administration of bridge projects. He has worked on over 100 bridge projects to date. He graduated from the University of Delaware with a degree in civil engineering.

### Education and Salaries



Salaries vary depending on the job you have. A job in the construction field ranges from \$20,000 to \$50,000 based on the type of construction work and years of experience.

A job in the management field may range from \$40,000 to \$100,000. Salary increases are typical for project managers that continue their education, obtain professional engineer license, vary their expertise (ie., structural and civil) or for having many years of experience.

A job in the "other" category can range from \$30,000 to \$100,000 depending upon skills, knowledge, experience and education.

Some Delaware colleges/universities you may wish to contact to investigate their programs are:

- University of Delaware College of Engineering
- Delaware State University
- Delaware Technical and Community College
- Wesley College
- Wilmington College

### Jobs At the Bridge!

You probably have a while before you have to start thinking about what job you want when you get out of school, but it's never too soon to start. There are all types of jobs within the transportation industry – everything from truck drivers to crane operators to engineers, and a few you might not think of like public relations officers, archaeologists, and photographers.

Here we will examine three different levels of transportation related jobs - ones you can find right here at the bridge. We will focus on jobs in the construction field, management, and other positions that may not seem to fit on the job site.



**Construction Field** – These are jobs like laborers, carpenters, painters, electricians, masons, etc. Most construction jobs require a high school diploma. If interested in pursuing this, check out the links to various Delaware colleges listed on our website, [www.irib.deldot.gov](http://www.irib.deldot.gov).

**Carpenter** → need schooling or work experience in Carpentry → Find a technical school that offers a Certificate Program in Carpentry → get work experience in the field of carpentry

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**Management** – These are professional engineers or managers that have extensive experience in civil engineering, project management, etc. Becoming an engineer requires at least a Bachelors of Science Degree in Engineering. Examples of job titles in this classification are various types of Professional Engineers (civil, chemical, mechanical, structural and electrical), Project Manager, Superintendent, etc.

To further their career, engineers need additional years of schooling or work experience in a particular field of engineering. Many employers require the engineer to obtain a Professional Engineer's license by passing a two-day test. Visit [www.engineeringlicense.com](http://www.engineeringlicense.com).

As you may expect, prospective engineers must be good at math and science.

**Civil Engineer** → need Bachelor of Science Degree in Civil Engineering → Find a college that offers a Program in Civil Engineering

**Other** – Likewise, there are a host of jobs at the site that one would not think of. One of those is Public Relations. DeIDOT is responsible for informing the stakeholders, media and the general public about the construction progress. In additional Public Relations officials share the project with the public via site tours, public workshops and via the internet. Other positions like archaeologist, photographers, and others are vital communicating information about the project.

**Public Relations Person** → need Bachelor of Science Degree in Communications → Find a college that offers a Program in Communications



### What's An Engineer of Record?



You may not know this, but there is actually a job that has the title of Engineer of Record. Though it's not something you hear all the time, we wanted to get to the bottom of what that job is all about. To find out, we went to Ken Butler of AECOM, the Engineer of Record for the new Indian River Inlet Bridge.

An Engineer of Record is an engineer who is in responsible charge of the design and who signs and seals the plans. Responsible charge means someone who controls the design, setting design criteria, methods of analysis, assigns staff with the appropriate expertise and makes decisions that effect the design and plans.



Do you want to take a tour at the site of the new Indian River Inlet Bridge

You can sign up your class or group to take a tour by clicking on the link below!

[Click Here to Sign Up!](#)

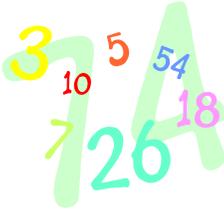


**Do you want to see past issues of "Building for Tomorrow," but don't know where to find them?**

**Past issues are always available 24/7 on the Indian River Inlet Bridge Project site!**

[Click Here to Find Them](#)

## Indian River Inlet Bridge Math Problems for All Ages



### Question 1

Area of a deck section: If a bridge deck (the part that you drive a car on) is 40 feet wide and 20 feet long, what is the surface area of the deck in square feet?

**Answer: 40 feet X 20 feet = 800 square feet**

### Question 2

Volume of a concrete pile: A square concrete pile has sides measuring 3 feet. The length of the pile is 100 feet. What is the volume of the concrete pile in cubic feet?

**Answer: 3 feet X 3 feet X 100 feet = 900 cubic feet**

### Question 3

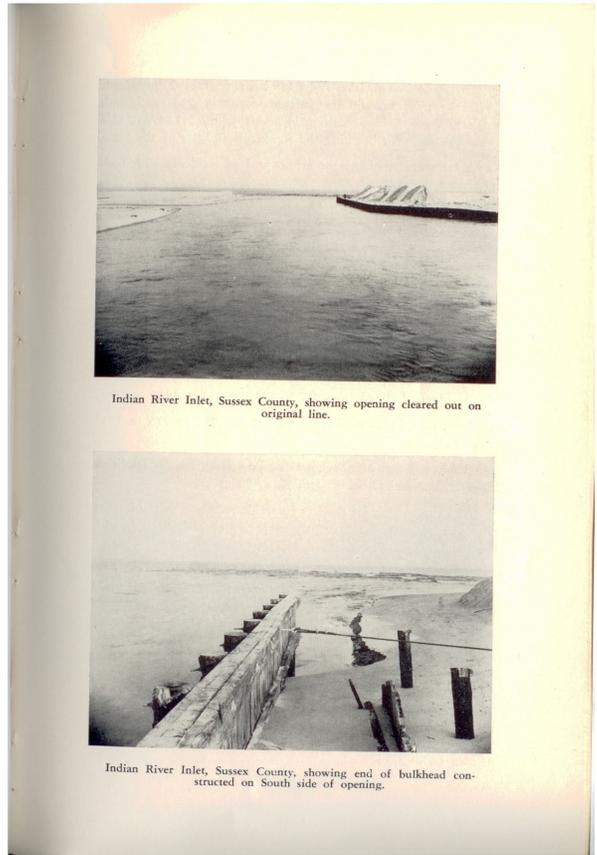
Weight of concrete: A square concrete pile has sides measuring 3 feet. The length of the pile is 100 feet. If concrete weighs 150 lbs/cubic feet (CF), how much does this concrete pile weigh?

**Answer: 3 feet X 3 feet X 100 feet = 900 cubic feet  
900 CF X 150 lbs/CF = 135, 000 lbs**

How many tons does the pile weigh?

**Answer: 135, 000 lbs / 2, 000 lbs = 67.5 tons**

## A Moment of Bridge History



Indian River Inlet, Sussex County, showing opening cleared out on original line.

Indian River Inlet, Sussex County, showing end of bulkhead constructed on South side of opening.

These photos from the 1930s show the mouth of the Indian River Inlet as work was being done to it by the Army Corps of Engineers. The strong current of the inlet is one of the reasons that the new Indian River Inlet Bridge needed to be built. The strong current has made it necessary to make sure that the new bridge doesn't have piers in the inlet.



## Employee Spotlight!



***This is where you get to meet someone who is building the Indian River Inlet Bridge!***



What is your name?: Carlos Garcia

Where are you employed?: Parsons Brinckerhoff; employed for 5 years

What is your job title?: Lead Inspector

Where are you from?: Mexico City

Where do you live now?: Ocean View, DE

What are some special skills that you bring to the job?: I have worked on this project from the beginning and I try to create a teamwork-oriented environment.

What is your favorite part about working on this project?: The challenge of working on something new each day and advancing the project.



# Photos from the Job Site

November 2010



Stay cables are visible on the pylons of the new Indian River Inlet Bridge as the tower crane sits in the distance (Skanska USA Civil Southeast).



Workers at the site of the new Indian River Inlet Bridge work on the form traveler as they ready it to be moved into place prior to building the bridge over the inlet (Skanska USA Civil Southeast).



View underneath the deck of the new Indian River Inlet Bridge (Skanska USA Civil Southeast).



Doug Robb (center with hands raised) gives a site tour at the site of the new Indian River Inlet Bridge (DeIDOT).



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