

# Building for Tomorrow

## The Indian River Inlet Bridge Newsletter



A publication by the Delaware Department of Transportation (DelDOT)

March 2011



David Duke  
(DelDOT)

In this month's issue of *Building for Tomorrow*, we are celebrating the beginning of spring. It's been a long, cold winter at the site of the new Indian River Inlet Bridge. As the snow and ice of winter are fading into the flowers and warmth of spring, work continues on the new bridge. Roadway sections are starting to be constructed over the inlet using the form travelers and distinctive blue stay cables are being installed. For people who haven't

seen the site in a while, there have been a lot of changes, which is very exciting. You can see some of the work in the pictures on page 4.

This month's featured guest is David Duke, Project Resident at the bridge. Dave has worked in construction for 28 years on projects all over Delaware, including the Roth Bridge over the C & D Canal and the construction of SR-1.

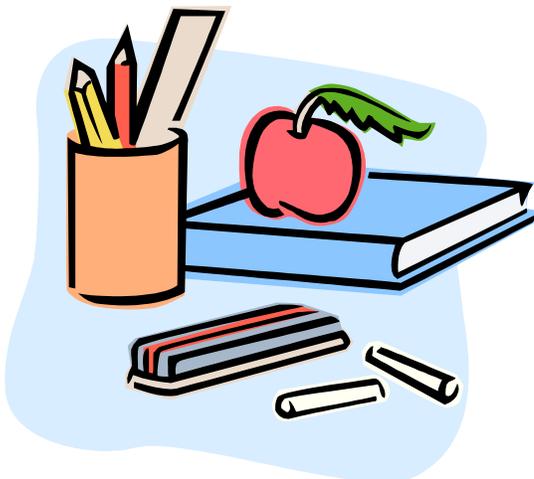
### What's Happening at the Bridge?: Spring Construction Activities



Spring will be a busy time of year on the Indian River Inlet Bridge project. Both form travelers are now in place and the contractor is working on pouring a 24 foot deck section approximately every few weeks. A total of 24 segments will be constructed to form the bridge deck over the inlet. Cable stay installation will continue as the concrete sections are poured.

At the end of March, George & Lynch will start work on the Roadway Approach/Bridge Demolition contract. This project will build the approaches to the new bridge structure. This work will require a new traffic pattern to be put in place by Memorial Day. Effective in May, motorists will move through the area using one lane in each direction over the existing bridge along SR-1. While the new bridge itself is expected to be available to traffic at the end of 2011, the roadway approach and tie-in work will not be completed until 2013.

### What Does Building A Bridge Have To Do With School?!



In this feature, we want to share with you how the construction of the Indian River Inlet Bridge correlates to the science, math, and technology (STEM) curriculum standards that students are required to learn.

Deborah Judy, a teacher in the Smyrna School District, brought her class to Indian River Inlet for a presentation and walking site tour in 2010. As you might expect, she had to justify how the field trip meets curriculum standards.

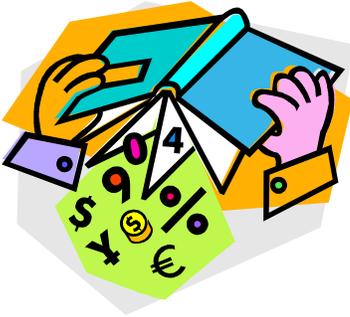
#### Science and Technology

One such standard involves nature and the application and investing in science and technology. DelDOT meets this requirement by teaching students about the bridge's state of the art fiber optic monitoring system that consists of sensors built into the bridge structure which allows data to be sent to the DelDOT's Transportation's Management Center. This

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data will allow technicians to monitor the bridge to determine if it is under stress due to wind, rain or other environmental elements. This savvy monitoring system is just one way the state is using cutting edge technology to improve its infrastructure.

Another science standard that was demonstrated is the requirement for teams of individuals with different abilities to work together to solve a problem. The need for a bridge to span 2600 feet over a high-velocity waterway was the challenge. The bridge builder has hired talented people working in many different occupations (not all are engineers) and from all over the world to meet it. For example, students have the opportunity to meet Peo Halvarsson, a Swedish-born construction project manager/engineer who has helped design and build structures all over the world. Talk about experience!



### Math

Another standard that DeIDOT addresses during the field trip is a math standard regarding making sense of problems and persevering to solve them. As you can imagine, when building a structure of this size and complexity, there are difficult challenges. DeIDOT explains to the students that one such problem was with the form traveler design. Although it had been carefully designed to specific standards, once calculations began for its assembly and placement on the bridge deck, it was determined that adjustments needed to be made for it to carry anticipated weights/loads. DeIDOT further explains to students that mathematics modeling, constructing viable arguments, reasoning, as well as quantifying calculations and anticipating certain results, are all core math standards, which the bridge builders utilize every day.

Many thanks to Deborah Judy, Gifted and Talented Academic Enrichment Specialist Grades 5-12 at Smyrna School District for providing some guidance on curriculum standards.

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## *A Moment of Bridge History*



This photo was taken in 1929 and doesn't show the Indian River Inlet Bridge, but a piece of equipment that was used to create the Indian River Inlet. When this photo was taken, Paul Griesbach was using the bucket in the picture to dig out the mouth of the Indian River Inlet.

## **You Haven't Visited the Bridge Site? Here's Your Chance!**



If you've been wondering what the site of the new Indian River Inlet Bridge looks like, you, your family, and your friends have some chances to get an up-close view over the next few months. For those of you who have not

had the opportunity, site tours are still available.

The site tours are a lot of fun and allow you to get as close as possible to the new bridge. It's a once in a lifetime opportunity and one that we hope you can experience. For more information about site tours, the link on the right is a great resource.

If you can't attend one of our scheduled site tours, we have a great way to spend an upcoming Saturday afternoon. On Saturday, April 30, from 1 p.m. to 4 p.m., we are holding an open house on the north side of the project site. The last open house was held on the south side in April 2010, so this is a great opportunity for everyone to view another area of the construction. For more information, you can call 302-760-2080 or visit [irib.deldot.gov](http://irib.deldot.gov).

Please remember that no matter if you are visiting during a site tour or attending our upcoming open house, you have to dress appropriately. Wear work boots or sneakers, and long pants for protection. Using these safety tips will help your next visit to the site to be fun and enjoyable.



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

**You can sign up your class, group, or  
family to take a tour!**

[Click Here to Sign Up!](#)



### **Employee Spotlight!**

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



Danny Fetterolf

Who is your employer?: DeIDOT; employed for 6 years

What is your job title?: Concrete Inspector

Where are you from?: Dover, DE

Do you still live there?: Yes

What are some special skills that you bring to this project?: 12 years of experience and American Concrete Institute (ACI) Certifications.

What is your favorite part of working on this project?: The whole experience.

Quote: "This is the biggest job I've ever done....I love it! I can't wait to be able to drive over it one day."



## Photos from the Job Site

February 2011



An unusual view of the stay cables that are being placed on the new Indian River Inlet Bridge. As you can see in the photo, the stay cables are installed in bunches for greater strength and stability (Skanska USA Civil Southeast).



Work continues on the form traveler attached on the edge of the north side of the new Indian River Inlet Bridge as decking is laid over the churning waters of the inlet (Skanska USA Civil Southeast).



As the sun sets over the Indian River Bay, a worker at the new Indian River Inlet Bridge inspects the installation of stay cables into the anchor boxes that will hold them on the bridge (Skanska USA Civil Southeast).



The green rebar sits ready to have concrete poured on to create another section of road deck on the form traveler over the new Indian River Inlet (Skanska USA Civil Southeast).



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800 Bay Road, P.O. Box 778  
Dover, DE 19903  
1-800-652-5600 or 302-760-2080  
[dotpr@state.de.us](mailto:dotpr@state.de.us)

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