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LDDI Bridges is a publication of Virginia Tech's Land Development Design Initiative

**Editors:**

Kelly Shayne Young  
ksyoung@vt.edu

Kevin Young  
keyoung@vt.edu

**Virginia Tech**  
The Via Department of  
Civil and  
Environmental  
Engineering

Land Development Design Initiative • www.lddi.cee.vt.edu • Blacksburg, VA  
Phone: (540) 231-9023 • Fax: (540) 231-7532 • E-mail: dymond@vt.edu



Warm summer greetings from the campus of Virginia Tech! While the town of Blacksburg is currently exhibiting its quiet summertime charm, we're just over a month away from the whirlwind of excitement and energy that will surround the beginning of the 2016-17 academic year. While the summertime pace on campus tends to be a little slower, those of us involved with LDDI know that now is the time to prepare for success when classes begin in late August. In fact, LDDI's Practitioner Involvement Committee is already planning numerous events for the fall semester, and our Course and Curriculum committee is preparing for fall course offerings. This fall, LDDI will be offering three courses: CEE 4274 – Land Development Design, CEE 3274 – Introduction to Land Development Design, and CEE 4264 – Sustainable Land Development. It promises to be another fun and exciting semester!

On July 22<sup>nd</sup>, LDDI will host its annual summer meeting in Richmond. This is the first meeting of LDDI's general membership since our January 2016 meeting in Ashburn. These semiannual meetings provide an opportunity for the LDDI Advisory Board to update our industry partners on program activities, as well as opportunities for practitioners to get involved both inside and outside of the classroom. This summer's meeting will feature a panel of guest speakers focusing on redevelopment trends and challenges in and around Richmond, and meeting attendees will be awarded two PDH credits. LDDI's Advisory Board will convene to meet on the eve of this meeting of the general membership.

I hope you will enjoy reading this edition of our newsletter and learning more about the people and companies that enable LDDI and Virginia Tech to offer the most comprehensive land development curriculum in the entire country. As always, I welcome your feedback on how we can continue to build LDDI!

Dr. Randy Dymond, PE, VT LDDI Coordinator

## LDDI Thanks 2015-2016 CEE 4274 Mentors

by Kevin Young

CEE 4274, Land Development Design, remains a popular course among Virginia Tech's CEE students despite a well-deserved reputation for being among the most demanding courses available to our undergraduate students! Beginning in the fall 2006 semester, and facilitated through LDDI, students taking CEE 4274 have been paired with a professional engineer who serves as their mentor throughout the entirety of a semester-long design project. LDDI would like to recognize and thank the following firms for their time and energy to serve as mentors to CEE 4274 students during the 2015-16 academic year:

- Bohler Engineering
- Burgess & Niple
- Bowman Consulting
- Dewberry
- Draper Aden Associates
- GORDON
- Pennoni Associates
- Rinker Design Associates
- Tri-Tek Engineering
- Walter L. Phillips
- Youngblood, Tyler & Associates



Maggie Shelton and Seehoon Lee (Rinker Design Associates) meet with a student team during the spring 2016 semester.



*Covering more than one hundred acres, Dania Pointe is poised to be one of South Florida's largest mixed-use developments and one of Broward County's premier destinations.*

## **Kimley-Horn Provides Services for South Florida's Dania Pointe Development**

*edited by Kelly Shayne Young*

Once home to the Dania Beach Hurricane, a 100-foot-tall wooden roller coaster, the 102-acre Dania Pointe site is one of South Florida's most visible destinations. With 1,600 linear feet of I-95 frontage and immediate proximity to the Fort Lauderdale-Hollywood International Airport, Port Everglades Cruise Port, and the DCOTA Design Center, Dania Pointe's proposed mix of shop, work, live, play, and stay options will make it one of Broward County's premier destinations.

At completion, the \$800-million center is expected to contain more than one million square feet of retail and restaurant space, as well as Class A offices, 300 hotel rooms, luxury apartments, and public event space. Ground was broken on the massive redevelopment project earlier this year, and the initial portions of Dania Pointe will be constructed in two phases. Phase I will consist of a typical regional shopping center and is scheduled to open in late 2017, while Phase II will house a mix of apartments, office, hotel, high-end retail tenants, and

restaurants in a lifestyle setting. The project will also include two parking decks.

Kimley-Horn is providing a wide variety of consulting engineering services for this project, some of which include site planning, zoning and planning assistance; site and offsite approval and entitlement assistance; design and permitting of Florida's largest underground storm drainage system, including deep water injection wells and over five miles of underground exfiltration trench; design and permitting for the relocation of 2,000 linear feet of 72-inch culvert draining I-95; floodplain modeling and FEMA flood map revisions; and the preparation of onsite and offsite construction documents.

Located at I-95 and Stirling Road in Dania Beach, Dania Pointe will create 17,000 construction jobs and 13,000 permanent jobs. Kimco Realty is the developer of the project, MCG Architecture of Cleveland is the architect, and Hoar Construction is the contractor.



*Spanning more than 4,000,000 SF in Berkeley County, WV, Procter & Gamble's new manufacturing facility will create more than 1,100 jobs and is projected to be the largest manufacturing facility in the world.*

## **From Olay to Old Spice- Pennoni Assists Procter & Gamble in the Development of New 4,000,000 SF Distribution Center**

*edited by Kelly Shayne Young*

For more than 15 years, Pennoni has provided the Berkeley County Development Authority (BCDA) in West Virginia with site engineering, land surveying, and land planning services for the development of industrial parcels within its jurisdiction. In March 2015, Procter & Gamble (P&G) acquired a 458-acre parcel within BCDA's Tabler Station Industrial Park for a new manufacturing facility. Pennoni, through a contract with Fluor Construction, is now assisting both the BCDA and P&G in the site development of that parcel, providing civil engineering, land planning, transportation planning, landscape architecture, railroad design, and land surveying services.

Pennoni prepared a phased development plan and developed the grading design to accommodate the specified plant finish floor elevation for the 100-acre building in an effort to place as much of the foundation on bedrock as possible. P&G had a zero settlement requirement. Pennoni also determined how best to deal with the 4 million cubic yards of excess material. The earthwork operations alone will take over twelve months to complete.

Major design issues have included the control of runoff and how to meet County and State requirements for stormwater treatment. The site is located in a karst region and the geotechnical evaluation identified at least 13 existing/active sinkholes, therefore, infiltration was not an option. Pennoni engineers developed an intricate plan consisting of a large pond, micro-pools and reservoirs to control runoff and provide the required treatment.

The P&G facility will span more than 4,000,000 SF, employ more than 1,100 people, and is projected to be the largest manufacturing facility in the world. This will be only the second new U.S. construction project for the multinational consumer goods company since 1971 and one of the most advanced and sustainable plants among P&G's global manufacturing and supply-chain operations.

Fluor began the earthwork activities in October 2015 and anticipate the phase one building completion in 2017. The initial production is estimated to start in 2018.

## Who We Are: Meredith Jones - Owner, MJ Services, Inc.; Vice President, Eden & Associates, P.C.

Each issue of *LDDI Bridges* focuses on Advisory Board members who make LDDI happen.

*Meredith is currently a vice president with Eden & Associates, P.C., as well as the owner of MJ Services, Inc. She is the Curriculum Committee Chair for LDDI.*

### What is your specialty within the land development industry?

Land development project management and stormwater management engineering.

### What attracts you to land development?

I enjoy the broad spectrum of this fast paced, changing field that provides daily challenges, adding a new variety of tasks each day.

### Please mention the highlights of your career?

As a municipal engineer, I have helped shape the future of Blacksburg and influenced the design, construction, and operation of several sustainable communities in the New River Valley. I'm currently working on the design and construction of the Virginia Tech Airport Runway Expansion. I also enjoyed serving on the VT Civil Engineering Alumni Board.

### What motivated you to become involved with LDDI?

I was approached by Dr. Dymond early on in LDDI's establishment to create and

teach the Sustainable Land Development class. However, after learning about the goals of the program, I realized that I wanted to support the program in multiple ways. I've enjoyed my role not only as a supporter, but also on the curriculum committee, and through teaching Sustainable Land Development and the Municipal Engineering courses. I'm very excited to now serve on the Board.

### What do you think are the strengths of this program?

Without a program like LDDI, graduates must learn the skills necessary to succeed in the industry "on the job." With this program in place, employers can hire LDDI program graduates confident that they have the skills necessary to complete most design plans with up-to-date technology, and understand the regulations and processes that they will need to go through to do so successfully.

### Could you please share a few of your personal hobbies and/or interests?

I enjoy raising my twin 6-year old boys and playing all kinds of sports: golf, volleyball, biking, basketball, surf-boarding. I'm also a dedicated YMCA volunteer.



*"Many CEE graduates seek employment in the land development field after graduating. The skills they learn through the LDDI program has strengthened our profession immensely."*  
- Meredith Jones, MJ Services, Inc. Owner/Eden & Associates, P.C. Vice President

## LDDI Graduates in the Industry: Kathryn McDaniel *christopher consultants, ltd. Project Engineer*

by Kelly Shayne Young

With more than five years in the industry under her belt, Kathryn McDaniel has successfully completed the journey from student to practitioner. Upon graduating from Virginia Tech in December 2010, she secured a position with christopher consultants, ltd. (christopher) and now serves as a project engineer.

While a student, McDaniel took advantage of LDDI's course offerings, namely Land Development Design. "Having familiarity with engineering software and a general idea of project flow prior to graduation was extremely helpful and prepared me for my career," says Kathryn. However, the transition from the classroom to the field presented some hurdles. "Learning to apply theory to real-world scenarios proved challenging," explains McDaniel. "For example, shortly after I graduated, Virginia implemented new stormwater management regulations. Applying what I learned in water resources and fluid dynamics, ensuring projects were

in compliance with the new requirements, and advising clients about the impacts to their projects was a great learning experience."

Since joining christopher, Kathryn has worked on projects for Northern Virginia Community College, George Mason, NOVA Parks, Fairfax County, and the Prince William County Service Authority, to name a few. Her projects have ranged from a two-mile waterline alignment study, to a boat launch ramp and trail at a park on the Potomac River, to the redevelopment of a 60+ year old fire station. "Every project is different, which keeps the job interesting."

While she may miss the mountains of Southwest Virginia, Kathryn has made a home in Fairfax, VA for herself and her horse, who she has trained since he was two (he is now 13). The two compete in three phase starter events, which include dressage, stadium jumping, and cross country jumping.



*"Hokies in the LDDI program are provided numerous opportunities to jump-start and further their land development careers. I encourage students to get involved in industry organizations, to never be afraid to ask questions, and to always maintain a desire to continue learning."*  
- Kathryn McDaniel—christopher consultants Project Engineer



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## LDDI Bridges July 2016

### Bohler Engineering Lends Services to 5th Street Station Development in Charlottesville, VA

*edited by Kelly Shayne Young*

Bohler Engineering provided site civil and consulting engineering and related services for the highly anticipated 5th Street Station project in southern Charlottesville. The 470,000 SF shopping center, strategically positioned on 5<sup>th</sup> Street directly off of I-64 and less than five minutes from the University of Virginia, is currently under construction and is expected to open this fall. Spanning 73 acres, the commercial development is anchored by a 140,000 SF Wegmans grocery store and will feature other junior anchor shops and a five-story parking garage. All buildings were designed by LEED standards.

The property, some of which is the former site of the city's Avon Street Landfill, was rezoned in 2008 to allow for the shopping center. Bohler designed on- and off-site road improvements at Bent Creek Parkway, a new road connecting two major streets in the community. All road improvements were tactically designed to ensure the safest and most accessible routes for pedestrians and vehicles entering and leaving the development. Bohler also provided landscape architecture services including tree conservation, code compliance for trees and shrubs, and greenway dedication for a possible future trail.



*The 73-acre 5<sup>th</sup> Street Station shopping center will serve an area of Charlottesville and the region that has not previously had the luxury of choices that the new center will provide.*

### LDDI Students Recognized

*by Kevin Young*

This April, and for the second consecutive year, the LDDI Advisory Board recognized some of the truly exceptional students in the LDDI program. During the spring meeting of the LDDI Advisory Board, Dr. Randy Dymond presented the following student awards. Please join us in congratulating these outstanding students!

**Hokie Stone Award:** This award is given annually to the LDDI student who is as solid as its namesake – a team player whose leadership and motivational skills elevate the performance of all those around him or her. Clint Martin was integral to the success of a 4274 team mentored by Youngblood, Tyler & Associates during the fall 2015 semester. Clint is now enrolled in graduate studies pursuing a master's degree and working with his advisor, Dr. Dymond.

**Leadership in Sustainability:** The Leadership in Sustainability award is given annually to recognize an LDDI student with a commitment to sustainability as it relates to land development design. For the past year, Meghan Hekl served as the president of the Sustainable Land Development Club. During the 2015-16 academic year, Meghan also served on the Drillfield Improvement Committee, as an intern at the Alternative Transportation Center at Virginia Tech, and with the Office of Energy and Sustainability at Virginia Tech. Meghan is now enrolled in graduate studies pursuing a master's degree and working with her advisor, Dr. Dymond.

**CEE 4274 Female Student of the Year:** This award is given annually to the exceptional female student in the fall and spring offerings of CEE 4274. This year's CEE 4274 Female Student of the Year was chosen to be Heather Hutton. Working under the mentorship of a team of professional engineers from Tri-Tek Engineering, Heather excelled in CEE 4274. Early in the semester, Heather assumed the role of team leader, and in doing so was able to successfully elevate her entire team's performance. Having graduated, Heather is now working with Kimley-Horn & Associates in the firm's Baltimore, MD office.

**CEE 4274 Male Student of the Year:** This award is given annually to the exceptional male student in the fall and spring offerings of CEE 4274. During the fall 2015 semester, John Temple was a member of a student design team mentored by Bowman Consulting. From early on in the course, the design team set the pace for the rest of the class due in no small part to the leadership and technical skills demonstrated by John. John graduated this semester, and has just begun his career with Bowman Consulting in its Chicago, IL office.