



October 2015

Volume 9, Issue 4

In this issue:

- Student club lends talents to numerous projects (p. 1)
- New developments come to Virginia Tech and Loudoun County (p. 2)
- A recent graduate and an LDDI Board member reflect on the past and present (p. 3)
- Williamsburg Outlet Mall transforms into a new marketplace (p. 4)
- LDDI newsletter contest winners announced (p. 4)

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



Greetings from Blacksburg, where temperatures are falling and our already beautiful campus is now bursting with the brilliant colors of autumn. We've just passed the halfway point of the fall 2015 semester, and students are perhaps feeling a little overwhelmed trying to juggle coursework with a seemingly limitless number of exciting extracurricular activities. As you read this newsletter, three LDDI courses are underway with a combined enrollment of more than 140 students. Outside of the classroom, the Sustainable Land Development Club (SLDC) continues to plan and host events that bring together students with a shared interest in land development and sustainability in the built environment. The fall semester is always a whirlwind of activity and excitement, and this year is no different!

We have a number of exciting activities planned over the coming months, and I'd like to take this opportunity to tell you about them and invite you to join us! On Monday, October 26th, LDDI will host its Career Night Mixer at the Hokie House. This is the seventeenth consecutive semester that LDDI has hosted this event on the eve of the CEE Career Fair. We expect strong student turnout, and members of all LDDI sponsoring firms are invited to attend. On Thursday, November 12th, LDDI will host a football viewing party at PK's restaurant for the VT v. GT game. If you're near Blacksburg, we hope you'll join us for good food, fun, and football! On Friday, December 11th, students in CEE 4274 will present their final, semester-long design projects. Please let me know if you would like to attend and I can provide you with further details on the time and location. Finally, at a January date yet to be determined, LDDI will host its annual meeting in northern Virginia. Keep a lookout in the coming weeks for a "save the date" with more information on this meeting.

As you read this newsletter, I hope you'll enjoy learning more about LDDI activities and the people that make our program a reality. As always, I welcome your feedback on how we can continue to improve the LDDI program.

Dr. Randy Dymond, PE, VT LDDI Coordinator

Student Club Gears Up for Busy Spring Semester

by Kevin Young

Over the past six years, members of the Sustainable Land Development Club (SLDC) have applied their engineering talents on a number of exciting service projects, including the preparation of a feasibility study for improvements to Mill Mountain Zoo in Roanoke, and the survey, design, and stakeout of a parking lot expansion for the Pembroke United Methodist Church just a short twenty minute drive from campus. One ongoing service project involves working with event planners from the FloydFest music festival. Work with FloydFest first began in 2012, and included updating existing maps and preparing new maps to assist event organizers with setup and the shuttling of patrons in and out of the festival grounds. This work grew over the next two years to include the preparation of both on and offsite parking layouts to accommodate the festival's 12,000+ attendees. This summer, SLDC members continued working with FloydFest and expanded their efforts to also assist with the Vintage Virginia Wine Festival. Work completed this summer included finalizing the operation and program maps for both events; preparing layouts for vendor booths, campgrounds, and parking areas; and developing security grid maps. SLDC Service Project Coordinator and CEE Senior Dylan Hale is currently recruiting students to participate in these service projects as things ramp up in the spring semester.



SLDC members prepared plans for a parking lot expansion at the Pembroke United Methodist Church. The final plan nearly doubled the number of parking spaces previously available.



Virginia Tech's new Indoor Athletic Training Facility houses a full-sized NCAA regulation football field and is the largest facility of its kind, with more than 92,000 square feet of turf and a ceiling over 100 feet tall.

Draper Aden Lends Services to Virginia Tech Practice Facility

edited by Kelly Shayne Young

As a subconsultant to HKS Architects, Draper Aden Associates provided site planning and engineering services for Virginia Tech's new indoor practice facility, including grading, erosion and sediment control, stormwater management, and utilities engineering. Draper Aden also rendered construction phase services including subsurface utilities location, construction stake-out, and site/civil site observation.

In less than 12 months, HKS Architects and WM Jordan, along with Draper Aden Associates, broke ground and completed the soaring, state-of-the-art practice facility, which provides a full-sized, indoor NCAA regulation football field for the university's football and other athletic programs. With more than 92,000 square feet of turf and a ceiling more than 100 feet tall, it is the largest practice facility of its kind and will allow the Virginia Tech football team, as well as the school's highly competitive soccer and lacrosse teams, to practice during inclement weather. It has earned LEED Silver Certification.

Support spaces and features include

storage, convenience restrooms, videography platforms and audio / video systems. The completed Virginia Tech Indoor Athletic Training Facility (ITAF) is constructed as a "punt facility" which provides a clear height of 88 feet along the mid-field axis and 72-feet along the sidelines. The barrel-shaped roof ties the new training facility to the other, adjacent athletic buildings to help enhance the aesthetics of the athletics sector of campus.

After its completion, Draper Aden performed a complete indoor and outdoor 3D scan of the ITAF. Using point cloud technology, the 3D scan created a true-scale 3D record of the existing conditions of the new facility. This scan will allow Virginia Tech to access 100% accurate data regarding the facility—information that can be used in future planning, creating a 3D model for building information modeling (BIM) purposes, and even determining how to move large equipment or materials in and out of the building.



rendering by Lessard Design

The Waterside development in Loudoun County, Virginia, will transform the existing quarry into 335 acres of mixed-use development.

christopher consultants Lays the Groundwork for Loudoun County Development

edited by Kelly Shayne Young

The Waterside project, a mixed-use redevelopment of an existing quarry in Loudoun County, Virginia, will encompass 335 acres and include 2,200 multi-family units, 395 age-restricted units, 3.8 million square feet of non-residential development, a 54-acre centerpiece lake, and multiple roadway improvements. This endeavor was under review by the County from March of 2012 until it was approved in September 2015. The project team worked tirelessly to obtain the approval and is comprised of landowner, Chantilly Crushed Stone; land use attorney Cooley; land planners Lessard; traffic analysts Gorove Slade; environmental services firm WSSI; and christopher consultants as the civil engineer and surveyor. Success of the next phases of the project will require continued teamwork.

christopher is providing direct support to the entitlement process team, as well as pre-construction services including site evaluation, topographic surveys, arborist services, and boundary surveys. "A civil engineer is always a small part of a large process," explains christopher Chairman and Virginia Tech graduate Chris Brown, P.E. "In

this project we had the opportunity to show how vital our small part can be. We aren't just putting in the storm drains – we are subject matter experts in the permitting and entitlement process, and leaders in the eyes of our clients, our subconsultants, and our community."

The project team, which also includes Michael Kitchen, P.E., Virginia Tech class of 1983 and Andy Gorecki, P.E., Virginia Tech class of 1995, has performed a comprehensive stormwater management and best management practices analysis for the entire development, and more detailed design services relating to flood plain studies and wetland permitting support have been rendered. Additional services will include water, sanitary sewer, storm sewer preliminary design services, and preliminary landscape planning on the site.

The Waterside development is located roughly a mile from the proposed Innovation Center Metro station on the WMATA Silver Line and will include many phases, with the lofty goal of transforming the formerly industrial site into a walkable, transit-oriented project benefiting the local community.

Who We Are: Alisa Cowen—Owner, AST Cowen Design Group LLC

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

Alisa is the owner and Senior Landscape Architect and Urban Planner for AST Cowen Design Group LLC. She has been a member of the LDDI Advisory Board since April 2015 and has been actively involved in course and curriculum as well as practitioner involvement activities.

What is your specialty within the land development industry?

I have more than 25 years of experience as a Registered Landscape Architect and have been involved as an integral team member on a wide variety of design projects.

Please mention the highlights of your career?

Cowen Design Group regularly participates on multiple architecture / engineering projects for the civil site design and construction of new buildings, building renovations, and security upgrade projects at federal properties and institutions in the Washington DC metropolitan area and at facilities and installations around the world. For the past decade, my firm has focused its work efforts on secure site design for US Government clients, both in the Washington, DC metropolitan area and in approximately 60 other nations.

What motivated you to become involved with LDDI?

LDDI Graduates in the Industry: Andrew Hemmer

Draper Aden Associates Staff Engineer

by Kelly Shayne Young

After earning his B.S. in Civil Engineering from Virginia Tech in May 2014, Andrew Hemmen decided to remain in Blacksburg, Virginia, and went to work for Draper Aden Associates (DAA). The former Hokie currently serves as one of the firm's staff engineers.

During his time at Virginia Tech, Andrew took advantage of several LDDI course offerings, namely Land Development Design and Sustainable Land Development. "The land development design course took me through the steps required to take a site from concept to construction," explains Hemmen. "Thanks to this class, I never felt unprepared when I started my full time job after graduation."

Since joining Draper Aden, Andrew embraced the challenge of transitioning from student to practitioner and realized that, even with the enhanced education and

I was motivated to become involved with LDDI by the VT-LDDI students that I have hired during the past 10 years. They are talented and capable engineers with a well-developed understanding of how civil engineering academics apply to work in the world of design and construction projects.

What do you think are the strengths of this program?

The faculty's engaging and creative connections with the students, the project-based curriculum, and the true integration of industry and classroom academics are what I see as the greatest strengths.

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

My passion for the past four years has been the development and launch of a new full-time high school program within APS called Arlington Tech, which will offer a STEM and sustainable technologies curriculum, with integrated hands-on, project-based learning, leading to college and career preparedness. All students will earn dual enrollment credits with Northern Virginia Community College, earn CTE industry certifications, and participate in annual internships. This new high school program will enhance the existing Governor's STEM Academy also located at the Career Center in Arlington.



"LDDI graduates possess unique competencies in the specialized design skills necessary for success in land development civil engineering careers, especially when participating on multi-disciplinary design teams."
- Alisa Cowen, AST Cowen Design Group Owner



"While many institutions provide a broad overview of civil engineering without delving into any specific discipline, Virginia Tech's LDDI program gives students a firsthand look at the land development industry and what it takes to be a successful land development engineer."
- Andrew Hemmer, Draper Aden Associates Staff Engineer

Thank you

to our corporate sponsors
and individual donors!

DIAMOND:

Bohler Engineering • Bowman Consulting

PLATINUM:

AES Consulting Engineers • christopher consultants, ltd. • Clark Nexsen • Dewberry • Draper Aden Associates • Gordon • Jansen Land Consulting, LLC • J2 Engineers, Inc. • Kimley-Horn and Associates, Inc. • Maser Consulting • Pennoni Associates, Inc.

GOLD:

Accumark Subsurface Utility Services • ATCS, P.L.C. • Brookfield Homes • Burgess & Niple, Inc. • CH2MHill • Contech Engineered Solutions • Cowen Design Group, LLC • Fairfax County • Gay and Neel, Inc. • Pulte Homes • Rinker Design Associates • Tri-Tek Engineering • Walter L. Phillips, Inc. • Van Metre Homes • Youngblood, Tyler & Associates, P.C.

SILVER:

Allsite Contracting • Altizer, Hodges, & Varney, Inc. • Anderson & Associates, Inc. • Balzer & Associates, Inc. • Genuario Companies • Gorove Slade • Mattern & Craig • Ramey Kemp & Associates • Wetland Studies

INDIVIDUAL DONORS:

Legacy: *Julian B. Bell, Jr.*

Diamond: *Gary Bowman*

Platinum: *Tom Rust*

Gold: *Paul Johnson*

Orange and Maroon: *Barry Bryant • Michael Cardman • Tyson Catlett • Derrick Cave • Alisa Cowen • Bob Jansen • Bill Junda • Jeff Lighthiser • Spud Mistr • Charles Nuckols • Lawrence Phipps • Bill Pyle • Mark Richardson • Patrick Shaffner • Jefferson Sinclair • Bryan Stevenson • W.G. Reynolds Foundation*

LDDI Supporters: *Billy Anderson • Joe Arrowsmith • Jessie Berg • Mary Ann Bonadeo • Arvil Catlett • Greg Deubler • Rick DiSalvo • Mark Huffman • Caleb Hurst • Jimmie Jenkins • Meredith Jones • Peter Lazarevich • Greg Stecher • Drew Sullivan • Jack Vega • Joe Whitebread*

LDDI Bridges October 2015

AES Helps Transform Williamsburg Outlet Mall into Lightfoot Marketplace

edited by Kelly Shayne Young

Located at the intersection of Richmond and Centerville Roads in James City County, VA, the recently-demolished Williamsburg Outlet Mall will soon become the bustling Lightfoot Marketplace. This 19-acre, retail and commercial development includes six buildings featuring retail space, offices, and restaurants. The 88,000 square foot shopping center will be anchored by Harris Teeter. The Marketplace will also feature several walking paths, an internal park, and a gazebo covered bus stop.

AES Consulting Engineers is providing services throughout this ongoing redevelopment project. These services include special use permit approval support, site surveying, landscape architecture, and full site engineering. The firm's site plan reduced the amount of impervious cover and the overall building footprint. This, along with new plantings and a substantial buffer along Centerville Road, will significantly reduce the level of environmental impact from the previous use. Lightfoot Marketplace is scheduled to be completely built out by 2016.

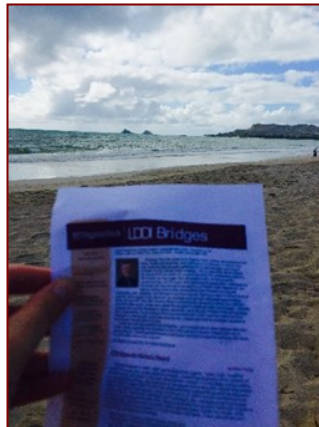


AES will provide services for the transformation of the old Williamsburg Outlet Mall into the Lightfoot Marketplace.

Newsletter Contest Winners Selected

by Kevin Young

This April, and for the third consecutive year, LDDI held a newsletter contest. The rules were simple – submit a photo of yourself holding the *LDDI Bridges* newsletter while on your summer vacation. The prizes, two Frank Beamer autographed footballs, were to be awarded to the most creative submittal and for the photo taken the furthest distance from Blacksburg. LDDI is happy to announce this year's winners. Morgan Padgett (NVR, Inc.) submitted a photo taken from the North Shore of Hawaii, and was given the award for the photo taken the furthest distance from Blacksburg. The prize for the most creative/unique photo goes to Pete Lazarevich (Gordon) who submitted a photo taken aboard a cruise ship in Pisa, Italy. Please join us in congratulating Morgan and Pete, and thanks to everyone who submitted a photo to the contest!



Morgan Padgett kicks back with the LDDI newsletter on the beach in Hawaii.



Pete Lazarevich proudly shows off the LDDI newsletter aboard a cruise ship in Italy.