

The Land Development Design Initiative (LDDI) 2014 Annual Report



LAND DEVELOPMENT
DESIGN INITIATIVE

Program Coordinator's Message

This 2014 Annual Report of the Land Development Design Initiative at Virginia Tech is a collective effort as is the Initiative itself. Creating this report reminds us of all the great things that are happening in the program and all the wonderful help we get from our professionals. Let me express my sincere gratitude to all of you that make this possible, including the hard working LDDI Advisory Board Members and others who give freely of their time and energy to the program.

Believe it or not, we began this program only eight years ago and it has continued to evolve and mature to be a program of unparalleled excellence in land development design. Our organic growth model, from the ground up, has been a story of a collaborative vision to improve the land development design profession by creating a new type of young professional. We've had two primary missions during this period, dramatically improving our educational offerings, and involving professionals into the university experience of our students. I believe we're succeeding at both, with your help. We're now sending out our newsletter and eUpdates to more than 500 professionals. This includes designers, developers, municipal engineers, home builders, service providers, equipment manufacturers, and professionals in many vocations linked to land development. We continue to spread our graduates across the broad canvas of the industry where they are digging in and making a difference. Time and time again, employers tell us that with the LDDI program, our students are productive from day one on the job and loving every minute of it.

Within this report, you'll read about this past year's events and course improvements. We've been working hard on making sure we continue to improve the curriculum and bringing new ideas to the program. With your help, we stress both the technical and the social aspects of a professional; client relationships are a key to success. You'll also read about our vision for the future and our need for sustaining the program over the long term; we are making a difference and need to plan for success whether we have a growing or lagging economy. On that note, please notice that our sponsorship drive has continued to be strong, with the number of sponsors growing again this year. We've established a Research and Development arm of LDDI, with projects underway. The student club has been extra busy this year with plenty of plans for the upcoming year.

There are so many exciting things underway, I hope that you'll stay in touch and get involved. If you are not already active in LDDI, I encourage you to seriously think about it; we'd love to have your input. We've outlined numerous ways to get involved at the end of this report, so join in and have some fun working with our students!

Best regards,



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Diamond and Platinum Corporate Sponsors

In our 2013-14 fiscal year, Diamond and Platinum Corporate Sponsors contributed over \$75,000 to LDDI. The following section highlights each of these corporate sponsors and their involvement with LDDI.

Diamond Level:

Bohler Engineering

Bohler Engineering was founded in 1981 with a small office in New Jersey. Today, they have 15 offices in 8 states along the East coast with a new office in Raleigh, NC. They offer services in Civil Engineering, Landscape Architecture, Land Surveying, Environmental Consulting, and LEED & LID Civil Design Consulting. Bohler has been ranked as one of the best places to work in the DC Metro Area and New Jersey by the Washington Business Journal and NJBIZ. Bohler Engineering has been a sponsor of LDDI since 2007. Ginger Greunke, Recruiting Manager from the Sterling, VA office, and Charlie Yowell, a Project Manager from the Warrenton, VA office serve as Outreach Committee Co-Chairs on the LDDI Advisory Board.



Bowman Consulting

Bowman Consulting was founded in 1995 with 5 people in Fairfax, VA. Since that time, the firm has been recognized as one of the fastest-growing consulting firms with 32 offices distributed across the United States. They offer services in Civil Engineering,

Planning, Landscape Architecture, Surveying, Environmental Consulting, Transportation, and more. Bowman Consulting has been a sponsor of LDDI since 2007. Roy Waugh, Principal from the Chantilly, VA office, served as the Vice Chair of the LDDI Advisory Board over the previous year, and took over as Chair in April, 2014.

Kimley-Horn and Associates, Inc.

Kimley-Horn and Associates, Inc. was founded in 1967 in North Carolina, and over the past 46 years has grown to include over 70 offices in 18 states. The firm has been repeatedly recognized as a top place to work over the years. They provide an array of engineering and land planning service including transportation, water resources, land development, and more. Kimley-Horn and Associates has been a sponsor of LDDI since 2007. Derrick Cave, Principal and Senior Vice President from the Vero Beach, FL office is a Life Member on the LDDI Advisory Board.



Platinum Level:

Accumark Subsurface Utility Services

Accumark Subsurface Utility Services was founded in 1994 as a certified small business. The firm now has a total of 5 offices located in three states. Accumark provides their clients with accurate and reliable underground utility information, location, and mapping. Accumark has been a sponsor of LDDI since 2011.



AES Consulting Engineers

AES Consulting Engineers was founded in 1980, and has since grown to have four offices in central and eastern Virginia. They offer services in Civil Site Design, Landscape Architecture, Surveying, Land Planning, and Public Utilities Design.

AES Consulting Engineers has been a sponsor of LDDI since 2007. Firm President Arch Marston currently serves as the Practitioner Involvement Committee Chair on the LDDI Advisory Board.

christopher consultants

christopher consultants, ltd.(ccl) was founded in 1982 and is a full-service civil engineering, land planning, surveying, and landscape architecture firm with five locations in Virginia and Maryland. The firm is organized as a corporation in the Commonwealth of Virginia and is designated a Small Business Enterprise by the Commonwealth's Department of Minority Business Enterprises. christopher consultants has been a sponsor of LDDI since 2007.



Clark Nexsen

During more than eight decades since its inception, Clark Nexsen has planned and designed a wide variety of projects. With 12 offices located in four states and the District of Columbia, the firm offers complete architectural and engineering services from project inception through completion of construction. The firm is committed to designing highly efficient buildings and systems.



Clark Nexsen has been a sponsor of LDDI since 2011. Greg Deubler, Senior Engineer in the Norfolk, VA office, currently serves on the LDDI Advisory Board.



Dewberry

Dewberry was established in 1956 with an office in Arlington, Virginia and has grown over the past 55 years to have more than 40 locations in 18 states. They offer architecture, consulting, and a variety of engineering services.

Dewberry has been a sponsor of LDDI since 2007. Robert "Skip" Notte, Vice President and Business Unit Manager of the Charlotte, NC office, served as the Chair of the LDDI Advisory Board during the 2013-14 year.

Draper Aden Associates

Draper Aden Associates was founded in 1972 with an office in Blacksburg, Virginia and now has five offices located across Virginia and North Carolina. They are a full service consulting engineering firm offering services in site planning and engineering, sustainable design, utilities engineering, and more.

Draper Aden Associates has been a sponsor of LDDI since 2007. Firm president and CEO Jeff Lighthiser is a previous Chair and is a Life Member of the LDDI Advisory Board.



Jansen Land Consulting, LLC

Jansen Land Consulting, LLC was founded in 2008 with an office located in Falls Church, Virginia. They provide development management services for land acquisition due diligence, land entitlement, land development, and bond release.



Jansen Land Consulting has been a sponsor of LDDI since 2010. Bob Jansen, President, is a Life Member on the LDDI Advisory Board.



J2 Engineers

J2 Engineers, Inc. provides high quality professional engineering services on a wide range of design projects, with emphasis on developing creative, cost-effective and environmentally sensitive solutions. Founded in 2007, the firm has built an extraordinary track record of providing distinctive and integrated design solutions for civil engineering, transportation, site design, land planning and surveying assignments. With two offices in Northern Virginia, J2 Engineers is a

Virginia Small Business and a certified business in West Virginia. The firm touts a multi-disciplinary and team-oriented approach to manage complex assignments.

J2 Engineers has been a sponsor of LDDI since 2007, and Principal Jeff Gilliland is a former Chair and Life Member of the LDDI Advisory Board.

Maser Consulting

Maser Consulting is a privately owned, multi-disciplined, engineering firm with a unique balance of public and private sector experience. Headquartered in Red Bank, NJ with 14 other office locations, the firm has consistently been recognized nationally by Engineering News Record as one of its Top 500 Firms and employs an average of 400 professionals throughout the East Coast and Mid-Atlantic regions with a nationally diversified project portfolio. Maser Consulting has been a sponsor of LDDI since 2012.



2013-2014 General Membership Meetings

Over the past year, LDDI hosted two General Membership meetings. These meetings provide an opportunity to bring our industry partners up to speed on the status of the LDDI program, campus activities inside and outside of the classroom, and immediate and long-term visions for the program. The meetings also provide a wide range of opportunities for industry professionals to become involved with LDDI. In an effort to reach out to professionals, both of this year's meetings were held off campus, one in Richmond and one in Northern Virginia.



Students present their semester-long design project at the January 2014 General Membership meeting in Reston

On Friday, July 12th, 2013 LDDI hosted a meeting at the Virginia Society of Certified Professional Accountants Building facility in Richmond. A diverse mix of consultants, local government officials, developers, and students were in attendance. The agenda included student presentations, an LDDI update, and the featured topic of the meeting – the Innsbrook Redevelopment project. The two guest speakers, Paul Kreckman (Vice President of Richmond Highwoods Development) and Joe Emerson (Director of Planning for Henrico County) discussed the history and ongoing evolution of Innsbrook. Meeting attendees were awarded two PDH credits.

On Friday, January 24th, 2014, LDDI hosted its annual winter General Membership meeting at the Reston Station-Wiehle Avenue Metro Facility. More than 60 attendees braved the cold of the facility to receive an update on LDDI and learn about Public-Private Partnerships specifically focused on the Wiehle Avenue project. The meeting once again featured a number of guest speakers, including Christopher Clemente (Principal of Comstock Partners LC), Robert A. Stalzer (Deputy County Executive of Fairfax County), and Luis Fernandez (Owner of Fernandez and Associates). Meeting attendees were awarded two PDH credits.

2013-2014 Financial Summary

During the 2013-2014 fiscal year, LDDI collected revenue of approximately \$137,000 through its corporate sponsorship program and individual donor campaign. This figure is greater than revenue collected during our previous fiscal year, and reflects our greatest number of corporate sponsors to date. These funds were used to directly support LDDI activities inside and outside of the classroom. The following describes some of LDDI's major expense categories to which this revenue was directed.

Instructor Compensation: Of the seven LDDI courses offered each year at Virginia Tech, the University provides financial support for only three. Private donations to LDDI provide instructor compensation for the remaining four.

Program Expenses: Program expenses include support for LDDI's student club, including field trips, travel to service project locations, and social gatherings. This expense category also includes event catering for LDDI general membership and outreach meetings, publication of the *LDDI Bridges* quarterly newsletter, and past funding of the LDDI student internship program.

Operations Expenses: Operations expenses include general overhead costs such as postage, printing and copying, website development and maintenance, telecommunications, and University Foundation fees.

Travel and Meetings: LDDI has traditionally hosted two general membership meetings each year. Outreach efforts such as these comprise a critical part of LDDI's efforts to ensure continued practitioner participation in the program.

Student Support: Though none were awarded this past academic year, to date, LDDI has administered a total of ten \$2,000 scholarships. Eligibility for these scholarships is restricted to students who have completed or are enrolled in certain LDDI courses. This expense category also provides for a total of 10 high performance "loaner" computers that are made available to student design teams in CEE 4274 – Land Development Design.

Endowment and Long Term Program Sustainability

One of the current major, immediate goals of the LDDI program is to establish an endowment. The principal reason to establish such an endowment is to ensure the long-term sustainability of the program. LDDI has achieved remarkable results since its inception, funded solely by the financial contributions of our generous corporate sponsors and individual donors. While this is one model to operate such a program, recent economic trends have revealed this can be a risky approach to sustain longevity. The establishment of an endowment will assure necessary operating capital in good and bad economic times.

The program's current goal is to establish an endowment of \$5 million. At a yield rate of 5%, this would provide \$250,000 operating revenue annually to the program. Such funds could be used to provide scholarships, endow a professorship within the program, supplement the operating costs of the program, and enable the program to more aggressively pursue research opportunities within the field of land development. Regardless of how the funds may be used in one or multiple areas, the endowment would entrench the program solidly within the Via Department of Civil and Environmental Engineering at Virginia Tech.

Over the past two years, various LDDI Advisory Board members have met and will continue to meet with endowment candidates to accomplish this endowment goal. Endowment may come from one individual, one company or a consortium of multiple businesses and individuals. The feedback we've received thus far from our initial meetings is that the lingering, fragile economy is the only impediment to one of more individuals or groups from establishing the endowment. We will continue to pursue meeting with as many individuals as possible to get the word out about

this important measure. We welcome input and ideas also from you, the general membership of LDDI.

Program Goals and Strategic Planning

From rather modest beginnings in 2006, LDDI has grown considerably over the past eight years. What started out as series of outreach meetings held across the state has evolved into the premier undergraduate land development engineering program in the country. With a comprehensive curriculum made up of six different course offerings, frequent practitioner involvement inside and outside of the classroom, and a rapidly growing Research arm it can be challenging for LDDI's Advisory Board to stay on top of things. The primary means by which LDDI's Advisory Board organizes, prioritizes, and achieves program goals is through its Strategic Plan. The first LDDI strategic plan was crafted over six years ago, and has since that time evolved considerably into two distinct components: goals and action items. The "big picture" goals represented in LDDI's current strategic plan are as follows:

1. Maintain awareness of land development as a career opportunity for undergraduate students
2. Continue to improve the educational experience in the land development area
3. Increase opportunities for practitioners to interact with students
4. Provide for the long term sustainability of the program
5. Solicit and promote interdepartmental collaboration and university support
6. Promote and sustain the LDDI research program

In direct support of these program goals, a collection of detailed action items comprise the remainder of the document. The LDDI Advisory Board conducts a formal review of the strategic plan during its annual April and October meetings, as well as periodically throughout the year. During these meetings, the status of each action item is critically reviewed and items that have been completed are removed from the plan, while those that are either ongoing or not yet begun are evaluated and organized by priority and feasibility. If you would like to review this dynamic document that serves as the LDDI program roadmap, please email a request to Kevin Young at keyoung@vt.edu.

Curriculum and Course Enhancement

Prior to creation of LDDI, students at Virginia Tech had only one land development design course offering available to them (CEE 4274, Land Development Design). Due to the efforts of LDDI, there are now a total of six different course offerings in land development design, with seven course offerings each academic year. The six individual courses comprise the most comprehensive undergraduate land development design curriculum in the country. As a direct result of LDDI's efforts over the past eight years, the 2014 Virginia Tech CEE graduates have the best foundation for a career in land development design of any students Virginia Tech has ever produced. Of the seven land development course offered at Virginia Tech each year, the University provides financial support for only three. The remaining courses are funded through LDDI's corporate sponsorship program and individual donations to the program. On behalf of the students

benefitting from these courses, LDDI wishes to thank all of our business partners and individual donors!

The following section briefly summarizes these courses, including CEE 4254 Municipal Engineering, which had significant changes during Spring 2014.

Introduction to Land Development (CEE 3274)

During the 2013-14 academic year, CEE 3274 was offered during both the fall and spring semesters. In total, the two offerings saw a combined enrollment of 178 students!

The course is intended to introduce CEE students to a wide range of topics in the field of land development design. These topics include governmental roles and basic engineering principles underlying the land development process. Students get an overview of transportation, hydrology, utility design, and erosion and sediment control as it relates to a land development project. In conjunction

with these topics, students are exposed to GIS and Civil 3D as tools to communicate and facilitate design. Additionally, the course covers a diversity of non-engineering topics including population growth, planning, landscapes, neighborhood dynamics, finance, and sustainability.



CEE 3274 students working on an in-class Civil 3D exercise.

Land Development Design (CEE 4274)

CEE 4274 remains tremendously popular and the spring 2014 semester saw the course at its maximum enrollment of 40 students for the first time since 2007! 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 thank the following firms for their time and energy to serve as mentors to CEE 4274 students during the 2013-14 academic year:

AES Consulting Engineers
Bohler Engineering
Bowman Consulting Group
Burgess & Niple
christopher consultants
Clark Nexsen
Dewberry

Draper Aden Associates
Gordon Associates
Kimley-Horn & Associates
Rinker Design Associates
Tri-Tek Engineering
Youngblood, Tyler & Associates

Municipal Engineering (CEE 4254)

CEE 4254 – Municipal Engineering is offered during the spring semester of alternating years, and was taught during this past 2014 spring semester. The course was taught by Meredith Jones

(Virginia Tech Adjunct Instructional Professor and Owner of MJ Services, Inc.). Meredith was assisted in course organization and design by James Patteson (Fairfax County Director of Public Works and Environmental Services) and Randy Dymond (LDDI Coordinator). The course focused on familiarizing students with the role of the municipal engineer, and the important relationship that exists between municipal engineers and the land development industry. The course included 15 guest speakers and 12 municipal engineering mentors who worked directly with students on projects. Municipal Engineering will next be offered in the spring of 2016.

Sustainable Land Development (CEE 4264)

Sustainable Land Development was first offered during the spring 2008 semester as a one credit seminar and was expanded to a three credit course shortly afterwards. The course continues to be very popular with students and Dr. Dymond had 52 students take the class during the fall 2013 semester (the most ever!). While enrollment in the course is restricted to only those students with senior standing, students from *any* major may enroll. This arrangement introduces various perspectives to classroom discussion and better prepares students for their careers where they will inevitably cross paths with professionals from a myriad of academic backgrounds. The Sustainable Land Development course focuses on the developed site's long term sustainability and preservation of the pre-development quality of its environment. Specific topics include site selection and linkage; neighborhood pattern and design, development impacts on water, air, and soil; microclimate; industrial ecology and materials; energy; and incentive driven sustainability efforts. The course also introduces students to third party site evaluation methods including Leadership in Energy and Environmental Design for Neighborhood Development (LEED ND) and Earthcraft Communities. Students visit development projects employing innovative, sustainable design features and a number of outside guest speakers give interesting presentations.

Advanced Land Development Design (CEE 4284)

With the development and continual improvement of CEE 3274 over the past four years, much of the fundamental material necessary for students to become successful land development engineers is now being introduced during their junior year. This has had a "ripple effect" throughout the LDDI curriculum, allowing instructors to now introduce new and more advanced subject matter in CEE 4274 and CEE 4284. When the course was first developed, CEE 4274 focused on site grading and ADA requirements, storm sewer design and basin routing, and erosion and sediment control. Students are now being introduced to these subjects in CEE 3274 and again, in the context of a design project, in CEE 4274. Because of this, the Curriculum and Course Enhancement Committee undertook a substantial overhaul of CEE 4284 between the previous two academic years, and instituted some major changes in the spring 2013 offering. Some of the new items that were included in the curriculum were:

- Stormwater quantity issues, including channel velocity/energy requirements set forth in the new Virginia DEQ regulations
- Stormwater quality treatment, including
 - Low Impact Development strategies and design of structural BMPs
 - Selection and installation of proprietary BMPs
 - Virginia's "Runoff Reduction Method"

- Site selection, due diligence and project entitlements
- The design-build process
- Infill development and development challenges in urban environments
- Security issues in certain developments

CEE 4284 is offered every other spring semester, and will next be held during the spring 2015 semester.

Geotechnics for Land Development (CEE 4544)

First offered in 2008, the Geotechnics for Land Development course focuses exclusively on geotechnical issues as they pertain to land development projects. Topics include foundations, soil stability, geotextiles, and retaining walls. This course is taught once each academic year by Dr. Joe Dove. 12 students were enrolled in CEE 4544 during the spring 2014 semester.

Student Impressions of the LDDI Program

The core mission of LDDI is to produce civil and environmental engineering graduates who are not only aware of the career opportunities in land development, but prepared to hit the ground running in this exciting field. The following are testimonials from both current and former students in the LDDI curriculum.

"After a CAD-intensive land development internship last year, I entered this course (CEE 4274) with a leg up on most students. I quickly discovered there was so much more to learn through the different perspectives of our mentors, teachers, and teammates. I cannot emphasize enough how unique and practical this course is in relation to the development field I've only gotten a taste of. The teams and tasks of this design course engage students in real-life problem solving with the selected sites and municipalities, enhance cooperation and teach responsibility to meet critical deadlines, and facilitate learning in all aspects of civil engineering by incorporating various requirements in each step of the site plan process. LDDI Hokies are lucky to have such an amazing opportunity available, as well as such passionate mentors and teachers committed to helping their students leave college with a rounded understanding of the field of civil engineering!" - Michael Roselius, CEE '15, intern with LDDI 2014 Platinum Sponsor Maser Consulting.

"Land Development Design (CEE 4274) is very a interactive design class. After completing the class and the design project, I better understand the process of site development and what a set of plans should look like. The class also teaches one how to use software such as Civil 3D and ArcGIS. Through LDDI connections and networking opportunities, the class definitely helped many students obtain jobs and internships." - Kirstin Bjornstad, CEE '14, Engineer with LDDI 2014 Platinum Sponsor Dewberry

"LDDI has proven to be an excellent networking program that has helped me establish professional relationships with my graduating peers and practitioners. This past semester I took the Land Development Design Course (CEE 4274) and gained practical experience that has helped me land a full-time position in the land development industry. In addition to learning about the land development process, this course also helps with developing valuable teamwork and presentation skills. This exposure helps to make a well-rounded and attractive candidate in the job market

whether looking for an internship, co-op, or full-time job." - Akram Ahmed, CEE '14, Engineer with LDDI 2014 Diamond Sponsor Bowman Consulting

Practitioner Involvement Committee Update

The major objective of LDDI's Practitioner Involvement Committee (PIC) is to develop a strong and sustainable relationship between all sectors of the land development profession and the students within the Via Department of Civil and Environmental Engineering. This involvement is to help students prepare for a career in the land development design profession. The following describes some of the PIC-supported activities during the 2013-14 academic year.

Career Nights

This year, LDDI and the Sustainable Land Development Club (SLDC) continued their tradition of hosting a "Land Development Career Night" on the eve of the Civil & Environmental Engineering career fairs. This was the 14th and 15th consecutive semesters that a student-practitioner mixer of this type has been held by LDDI. The event was very well attended in both the fall and spring semesters with a good ratio of students to representatives from various LDDI sponsoring firms. These career nights are beneficial for both the students and practitioners for numerous reasons. It allows the students to learn more about various roles and career opportunities in the land development field. The event also provides an opportunity for students to meet and mingle with prospective employers in a relaxed atmosphere prior to the potentially stressful atmosphere of the career fair. The casual setting of the Hokie House, a local restaurant and bar in Blacksburg, provides opportunities not only for career networking, but for practitioners to reminisce on their time as a student at Virginia Tech.



Arch Marston (AES Consulting Engineers) and Greg Deubler (Clark Nexsen) chat with students at the spring 2014 Career Night

Football Viewing Party

This fall, LDDI and the SLDC hosted its third annual football viewing party. Those in the the Virginia Tech community know that when fall rolls around, football takes center stage. Practitioners and students in attendance cheered on the hokies as they defeated Georgia Tech 17-10 at the Thursday night away game. The event was held at PK's restaurant in Blacksburg and attendees received a T-shirt commemorating the event and recognizing the firms that sponsored it.



A large crowd of students and practitioners from LDDI sponsoring firms enjoy Virginia Tech's victory of Georgia Tech on Thursday, September 26th

Student Club Activities

With the aid of faculty advisors Kevin Young and Randy Dymond, and working closely with LDDI, the Sustainable Land Development Club (SLDC) brings together students with a common interest in sustainability as it relates to land development design. Graduating senior Charles McKeever served as club president this year, and enjoyed the help of vice president Andrew Hemmen and service project coordinators Jason Kiser and Michael Roselius.

During the 2013-14 academic year, the club worked on various service projects. One project entailed working alongside students in the College of Architecture and Urban Studies on the design of Little League baseball fields and associated facilities in Clifton Forge. SLDC students developed grading plans, performed stormwater calculations, and prepared erosion and sediment control plans for the project. For the second straight year, the SLDC also partnered with the FloydFest music festival. From relatively modest beginnings in 2002, the festival has grown considerably, and last year's event saw more than 12,000 attendees. With its rapid growth, festival organizers have encountered numerous challenges, including site layout, shuttling of patrons into and out of the festival grounds, and public safety issues. SLDC members continued to develop site maps to help festival organizers address these issues. Additionally, SLDC members prepared parking lot layouts providing more than 6,000 parking spaces for festival attendees. In April, SLDC members provided stakeout surveying of the track for Virginia Tech's annual Relay for Life Event.

Design Charrette and Competition

In March, Jeff Gilliland and Jim Bishoff of J2 Engineers visited campus and conducted LDDI's second annual Design Charrette and Competition. After introducing a real world site design problem to the student design teams, the teams were given one-hour to work toward a solution. The submittals were judged by local land development professionals, and prizes were given to the top teams. In total, six student teams comprised of 2-4 members participated in the event. LDDI plans to hold another, similar competition during the spring 2015 semester.



Jim Bishoff (J2 Engineers) advises a student group during LDDI's second annual design charrette competition

Field Trip

A major challenge for many young engineers is visualizing the relationship between their plans and specifications and the final, built site. LDDI has long recognized the value of complimenting traditional classroom instruction with visits to active construction sites. In April, LDDI sponsored a field trip to Williamsburg and Richmond to provide an opportunity for students to visit various land development projects in various stages of completion. The sites were chosen and hosted by LDDI sponsoring firms AES Consulting Engineers, Balzer & Associates, and Draper Aden Associates. After making the drive from Blacksburg on a Friday afternoon, the students got an early start the next morning visiting several residential subdivisions in and around Williamsburg. On these active sites, the students observed the installation of wet utilities as well as GPS-controlled grading. The students then had an opportunity to see several institutional development projects on the University of Richmond campus. Finally, the students wrapped up a busy day by visiting a large, phased subdivision where they saw numerous ESC practices, roadway grading, and stormwater infrastructure. LDDI covered all of the students' travel, lodging, and meal expenses. Speaking to the value of the field trip, Draper Aden Associates President Jeff Lighthiser said, "The students learn a lot from seeing, with their own eyes, the solutions to real-world construction challenges."



LDDI students enjoy some time in Colonial Williamsburg prior to their field trip to various project sites

Guest Speaker Seminar

Over the years, LDDI has hosted several high profile speakers during the spring semester. This April, LDDI hosted Dr. Kathleen Hogan, Deputy Assistant Secretary for Energy Efficiency and Renewable Energy in the U.S. Department of Energy (DOE). Dr. Hogan delivered a talk titled,

“Driving Innovation in Energy Efficiency” from the viewpoint of the DOE. Prior to her position at the DOE, Dr. Hogan worked for the U.S. Environmental Protection Agency (EPA) where she was Division Director for EPA’s clean energy programs and brought the Energy Star Program to national prominence. Dr. Hogan’s seminar drew around 150 student and faculty attendees and was very well received. In the past LDDI, has hosted Brendan Owens, Vice President for LEED Technical Development of the U.S. Green Building Council, and Join Eisen, Managing Principal of The Eisen Group. These seminars provide great visibility of the LDDI program to a broad campus community.

Research Committee Update

The past year has seen tremendous growth for LDDI’s research arm. Over the past 12 months, LDDI’s research group has begun work on several new, funded projects. Among these is the development of a BMP Manual of Practice for the Virginia Department of Transportation. This work has been taken on in multiple phases, and also includes the development of a software aided BMP selection tool. Recently, LDDI secured an urban stormwater research contract with the City of Roanoke. This contract is larger in scope, but similar to an ongoing contract with the Town of Blacksburg that is now in its seventh year. LDDI continues to work closely with the Via Department of Civil & Environmental Engineering’s Occoquan Lab and its new director, Dr. Glenn Moglen. Goals for the upcoming year include the establishment of a testing center at the lab for manufactured stormwater treatment devices.

Outreach Committee Update

The major objectives of LDDI’s Outreach Committee are: 1) to promote the field of land development engineering to students and encourage their participation and support; and 2) to promote the Land Development Design Initiative to land development professionals and encourage their participation and support of the program. The committee has been active this year serving as the primary organizer for general membership meetings and the annual spring sponsorship drive. The Outreach Committee also maintains LDDI’s online presence, one of which is the LDDI website. The website serves as a portal for students to easily find information about LDDI courses, upcoming events, career opportunities, and interesting land development projects. Diamond, Platinum, and Gold level sponsors of LDDI may access a student resume bank on the new website, as well as showcase projects that their firms have worked on. We hope you’ll visit the LDDI website at <http://www.lddi.cee.vt.edu>. The committee also maintains several social media sites such as Facebook, LinkedIn, and Twitter. “Liking” LDDI on Facebook, joining our group on LinkedIn, and following our Twitter account are all great ways to stay up to speed on recent happenings and upcoming events.



Search “Virginia Tech Land Development Design Initiative (LDDI)”



Search “LDDI-Virginia Tech CEE Land Development Students and Alumni”



Search “LDDI” or “@VTLDDI”

How to Get Involved with LDDI

To continue the success and sustainability of the Land Development Design Initiative, both time and money is needed from the industry. You and your company can get involved by becoming a sponsor, becoming a general member, or donating your time by serving on a committee or helping with course offerings.

Corporate Sponsorship and Individual Giving

LDDI currently has 38 corporate sponsors and an additional 34 individual donors. There are four levels of annual corporate sponsorship which afford varying levels of student/corporate interaction and exposure. For more information, please contact Kevin Young or Randy Dymond. If you wish to support the program as an individual, you may donate to the Virginia Tech Foundation and earmark the donation to LDDI (fund number 873889).

General Membership

Since its earliest beginnings LDDI has depended heavily on the volunteer efforts of its general membership to achieve program goals. The past eight years have seen LDDI grow to become a nationally recognized leader in undergraduate land development design education. Despite the program’s rapid growth, LDDI continues to embrace an organic, grass roots operational model. This model relies on the participation of industry professionals who sincerely believe in LDDI’s mission. There are currently nearly 600 general members of LDDI, many of whom attend semi-annual meetings, both on-campus and at locations across the state. During these meetings, these general members contribute ideas for practitioner involvement, courses, and other aspects of the program.

Committees

The LDDI Advisory Board is broken into four committees for the purpose of guiding the program in these main areas.

The **Course and Curriculum Committee** focuses on developing the land development design curriculum, individual coursework, and other student help materials. The committee’s primary

objective is to prepare students for a career in the land development design profession. Over the past six years, this committee has generated four new courses including Introduction to Land Development, Sustainable Land Development, Municipal Engineering, and Advanced Land Development. If you would like to become involved in the Course and Curriculum Committee, please contact the Committee Chair, Cameron Palmore at cpalmore@balzer.cc.

The **Practitioner Involvement Committee** focuses on developing a strong and sustainable relationship between all sectors of the land development profession and students at Virginia Tech. This involvement includes student mentoring, providing networking opportunities, and support for the Sustainable Land Development Club. If you would like to become involved in the Practitioner Involvement Committee, please contact the Committee Chair, Arch Marston at arch.marston@aesva.com.

The **Outreach Committee** focuses on promoting the field of land development to students and promoting the Land Development Design Initiative to the land development professionals and encourages their participation and support of the program. This includes maintaining the website, organizing out-of-town meetings, publications, and more. If you would like to become involved in the Outreach Committee, please contact either of the Committee Co-Chairs, Ginger Greunke at ggreunke@bohlereng.com or Charlie Yowell at cyowell@bohlereng.com.

The **Research and Development Committee** focuses on investigating issues in the land development industry that need an objective and scientific viewpoint. There are a number of ongoing research projects that keep VT graduate and undergraduate students working with faculty to discover new knowledge and develop solutions to current problems. If you would like to become involved in the Research committee, please contact the Committee Chair, James Patteson at james.patteson@fairfaxcounty.gov.

For more information on how to get involved with LDDI, please contact:

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