

Ludgate Loop

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"Ludgate has provided engineering services for Reading-Berks Habitat for Humanity for many years. We have found them to be **great partners** and an invaluable asset to our program. The very **high quality** of their work and the fact that I can always rely on Ludgate to provide a **prompt reply** to my questions makes it easy to recommend them."

Jay Worrall, Exec. Dir.
Reading-Berks
Habitat for Humanity

Ludgate design featured in Showcase of Stormwater Best Management Practices

The Montgomery County Conservation District has invited engineers and municipal officials to participate in a self-guided or virtual tour titled "Seeing Is Believing: A Showcase of Stormwater Best Management Practices (BMPs) in Montgomery County." Engineers from Ludgate who visited the tour were excited to find one of their own designs! The stormwater design for the Shelly Square Shopping Center (Harleysville, PA) is featured on the tour. The site, the only retail center on the tour, used a stacked BMP approach which features three best management practices: underground infiltration with a detention basin and a sediment forebay for overflow which drains into a wetland mitigation area that allows for further detention and infiltration.



The Conservation District wrote: "This commercial development showcases an innovative way to manage storm water runoff while maintaining natural, environmental and aesthetic qualities. The storm water BMPs fit well with the surrounding landscape and enhance the shopping center's appearance." The BMPs used for this site were designed to help protect the Perkiomen Creek, which flows through the south side of the property.

A self-guided tour of the 12 sites is available for interested parties, however appointments are needed at some sites. The Montgomery County Conservation District has also launched a virtual tour. Please contact the Conservation District for more information or visit www.montgomeryconservation.org.

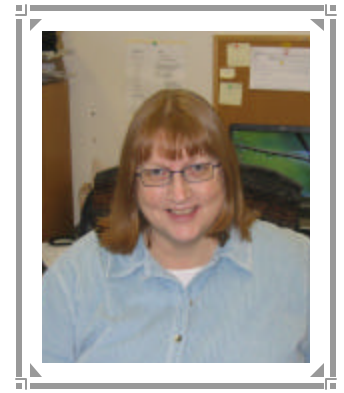
Photo provided by Spring Hill Realty.

Municipal Watch: Property Maintenance

Many PA municipalities have adopted International Property Maintenance Code (IPMC). Equally important to adopting this code is the enforcement of this code by municipalities. Enforcement ensures that all properties are kept in an orderly, sanitary and safe condition for the protection of the health, safety and welfare of the general public. Enforcement also protects the quality of life and property values throughout the municipality. Municipalities not only have the right to cite property owners for any IPMC violation but also prosecute them in a court of law. The most common violations involve overgrown lawns or noxious weeds, inoperable vehicles, structures in disrepair (homes with missing siding, broken windows or sagging rooflines) and junk, debris and construction waste. Property owners who follow the code not only enjoy the health and safety benefits, but also avoid costly fines and save the municipality money in enforcement costs.

Permitting with Pat: An Environmental Permit Primer

Environmental Permits are required for your project whether it is a subdivision or a land development. The three main agencies that may be involved in the permit process are your local conservation district, PA Department of Environmental Resources (DEP) and the US Army Corps of Engineers. The permits required range from simple to complex depending on the scope of your project. These permits have been put in place to protect our natural resources and have become more stringent over the past several years. **It is the developer's responsibility to prove that the project will not stress the environment.** The following addresses the types of permits required depending on the size and features of the site.



Any earth disturbance over 5,000 sq. ft. requires an Erosion and Sediment Pollution Control Plan (E&SPC) that will need to be approved by your local conservation district. Plans and a narrative are submitted to the conservation district. These plans outline present conditions, proposed work and steps that will be taken to control erosion during and after construction.

For earth disturbance over 1 acre, a National Pollutant Discharge Elimination System (NPDES) permit will be required. This DEP permit is made up of several components and will either be considered a general or individual NPDES depending on the rating of the watercourse that will receive stormwater from the project. You will need to submit a Notice of Intent (NOI), which is a synopsis of the project and your guarantee to DEP that you will take full responsibility for controlling erosion during the construction of the project.

One of the components of the NPDES is a PA Natural Diversity Inventory (PNDI) search which is conducted to identify any endangered or threatened plant, vertebrate, or invertebrate species in your project area. If a conflict is found studies may need to be conducted to determine if an endangered species is present and what will need to be done to protect the species and its habitat. Other components include an E&SPC plan, county and municipality notification and a Post Construction Stormwater Management Plan (PCSM). The PCSM is composed of a narrative and stormwater calculations which prove that the erosion controls constructed will adequately control stormwater on the site. Stormwater facilities will require a Stormwater Maintenance Agreement designating the person who will be responsible for the maintenance of that facility.

Any individual NPDES with an earth disturbance over 10 acres will require an additional clearance from the PA Historical and Museum Commission (PHMC). If PHMC determines that significant archaeological resources may be present on your site, further studies will be required by approved consultants.

Work conducted in a wetland or waterway will also need approval from DEP through a General Permit. This includes utility line crossings, road crossings, etc. An E&SPC plan usually accompanies the submission and a bog turtle screening is required in specified counties.

If the lots are new or existing lots that have not previously been identified by the municipality's Act 537 plan, a Sewage Facilities Planning Module must be submitted to DEP. The planning module helps DEP identify all sources of sewage effluent and determine if the area can support an increase in sewage flows while protecting our drinking water.

The permitting process is arduous, time consuming and can be expensive, however until the regulating agencies are satisfied that the environment and our natural resources will be protected, no construction activity may proceed.

Pat Follweiler is a Project Manager for Ludgate Engineering. To contact Pat, email her at pfollweiler@ludgate-eng.com.

Where we belong ...

In the New Year we'd like to remind you of the organizations we actively participate in. We look forward to seeing you!



BTI Drafting Technology Students Visit Ludgate

“Wow did you see how he flipped those layers?” said Gabriel D’Annunzio, a Drafting Technology student from Berks Technical Institute, as he watched Ludgate Engineering computer aided drafting (CAD) technician Eric Baker show different layers of a standard plan. Eric and professional engineer Ed Nordahl took students from concept through the permitting process to erosion and sedimentation plans to the municipal approval process and the construction phase as they demonstrated the typical land planning process while highlighting the role of the CAD technician.

The seven students were introduced to Ludgate Engineering by their instructor Pat Smith. Mr. Smith, a Ludgate Engineering client, saw the opportunity to get his students out of the classroom, expose them to an actual CAD workplace and teach them about teamwork. Smith and Nordahl stressed the importance of synergy between the CAD technician, engineer and project manager.

As a Berks Technical Institute graduate himself, Baker was able to provide insight into coursework and make suggestions for employment after graduation. The Ludgate Engineering staff was impressed by the enthusiasm, knowledge and participation of the Drafting Technology students and wishes them the best!



Below: Students review a plan with Ed Nordahl, PE.

To the left: BTI students and instructor Pat Smith pose for a picture with Ludgate Engineering's Kirsten Deysher



Ludgate partners with Habitat for Humanity

When Marketing Coordinator Kirsten Deysher learned that Ludgate had been hired by Reading-Berks Habitat for Humanity to survey and conduct land planning for two homes on Monroe Street in Reading, she saw an opportunity. The principals at Ludgate had already decided to donate some of the firm's professional services, but she wanted to do more. Many of the other employees and the Ludgate family jumped on board. It was decided that the group would spend a Saturday volunteering labor for Habitat.

Employees had a great time working together outside of the office environment. Some of us honed our painting skills, while others laid flooring or moved topsoil to prepare for the seeding of the lawn. “I do many service projects, however it was very rewarding to give back to my immediate community as a team with my co-workers. It was also fun to get our spouses involved,” said Stacey Norman, who works in the accounting office at Ludgate and brought husband Sam along for the cause.

Volunteering is a great way to promote teamwork within your organization. It is also very rewarding. Feeling blue this winter? Get out and volunteer!



Bob Ludgate Jr. digs in.

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Above: Ground clearing is underway for a new Quaker Homes development in Elverson, PA. Ludgate Engineering was responsible for surveying, permitting and site design for this 11-home site.



Above: Construction nears completion on the new Weikel Sportswear location in the borough of St. Lawrence, PA. Ludgate Engineering was responsible for the surveying, permitting and site design for this commercial site.

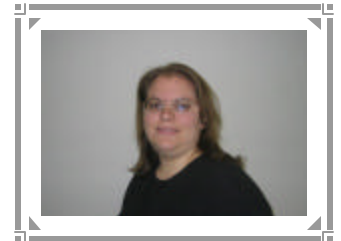
At Left: At 16 weeks old, Carter Mack, son of Ludgate engineer Matt Mack, learns how to mark up a plan.

Promotions and Certifications

Ludgate Engineering is pleased to announce that **Jackie Hollenbach** has been promoted to Municipal Services Coordinator. Jackie has over six years of service at Ludgate, most recently serving as Office Manager. In November, Jackie received her Building Codes Official certificate.

Adam Bender, Zoning and Sewage Enforcement Officer, has also received his Building Code Official certificate.

Patricia Follweiler has been promoted to Project Manager.



Alsace Manor Sanitary Sewer Project Groundbreaking Nears

Ludgate Engineering is pleased to announce the Alsace Manor Sanitary Sewer Project bids were released and bids will be opened on February 7, 2007. A list of bidders will be available at the Alsace Township building. This project is being funded by the Pennsylvania Infrastructure Investment Authority (PennVest). PennVest Loan closing is scheduled for March 22, 2007. Following the closing, contractors will be authorized to commence work. Groundbreaking is expected in April. This sanitary sewer project was incorporated in the Alsace Township Act 537 plan, which was completed by Ludgate Engineering Corporation and approved in Spring 2002.