

ANGLE and LINE

A Quarterly Newsletter by COWAN ASSOCIATES, INC.
Engineers • Geologists • Surveyors • Landscape Architects
Serving Business, Municipalities, and Industry since 1958



COWAN ASSOCIATES HELPS BRING HIGHER EDUCATION TO SCHUYLKILL COUNTY

By: Scott P. McMackin, P.E.

Cowan Associates has partnered with Roth Marz Architects of Orefield, PA and other professionals to design a fast track project bringing a new satellite campus of Lehigh Carbon Community College to Tamaqua, Schuylkill County. The project consists of demolishing the majority of the existing 78,000 square foot former Tamaqua Junior High School and providing a new 37,000 square foot facility providing credit and work force training opportunities in biotechnology, business management, computer specialist, criminal justice, education, liberal arts, nursing, chemical technology, and other adult evening classes.



Cowan Associates joined the design team in August, 2002 with a daunting task – provide civil engineering services for the site design aspects of the project, and secure all approvals necessary for a November 2002 construction start to allow the facility to be opened in August 2003. This construction schedule was further defined by the upcoming appearance by Governor Mark Schweiker on August 28 to announce the project and planned opening. CAI was to proceed with the design and be prepared to submit for all permits after the formal announcement on August 28; however, all work was not to be publicly known until the announcement was made, given the announcement was intended to be a surprise. CAI worked overtime in August to perform all surveying and site engineering design for the project. Within three weeks, by August 28, CAI had coordinated with the other design professionals and developed a set of land development plans for submission.

On August 28, Governor Schweiker, the first sitting governor to visit Tamaqua in 85 years, announced the news of the project for the "John and Dorothy Morgan Center for Higher

Education" to 400 Tamaqua Area High School students and approximately 600 spectators. The announcement consisted of two main parts. First, the project was being funded by a \$4.75 million contribution from the John E. Morgan Charitable Trust and a \$4.75 million state match. The late John E. Morgan was a long-time Tamaqua resident and businessman who owned J.E. Morgan Knitting Mills and established the trust to assist education and health care projects in Schuylkill County. The second part of the announcement was that not only did the John E. Morgan Charitable Trust provide the grant to construct the facility, a second gift was being bestowed to allow every graduating senior of Tamaqua Area High School, starting in 2003 and continuing on, to attend Lehigh Carbon Community College tuition-free for an associate degree.

Once the announcement took place, CAI submitted the plans and began the process of formally presenting plans and seeking approvals. Due to excellent coordination between the design team and tremendous cooperation by reviewing agencies, particularly Tamaqua Borough, by the end of October, necessary approvals from the Tamaqua Zoning Hearing Board, Tamaqua Planning Commission, Schuylkill County, and Schuylkill County Conservation District were obtained and the project went out for bid in early November.

Cowan Associates is excited to be part of a project team whose efforts will have such a profound impact in the Tamaqua and Schuylkill County area. While there was considerable pressure given the time constraints associated with this project, it was refreshing to work in cooperation with the different parties involved in the land development process and experience how efficiently the process can operate.

ASBESTOS: A Regulatory Review

by George W. Buchanan, P.G.
Director, Geotechnical Services

\$9,000!!! That's the amount of the fine a prominent Montgomery County developer was assessed for failure to notify the Pennsylvania Department of Environmental Protection that the buildings they owned were to be demolished. These fines were assessed for asbestos demolition notification violations. The following article represents a timely review of asbestos regulations in order to assist our clients in avoiding being fined.

Asbestos has been used for various purposes for over 2000 years. Since the 1930's, the uses for asbestos exploded because various manufacturers found that the properties of asbestos fibers – fire resistance, chemical resistance, insulating properties, and high tensile strength – were very useful for thousands of products. Unfortunately, workers who were exposed to airborne asbestos fibers typically contracted insidious health problems which showed up decades after exposure.

A series of laws which regulate asbestos were passed at the federal level. The Toxic Substance Control Act first authorized the United States Protection Agency (EPA) to regulate asbestos in schools under the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires school districts (referred to as Local Education Agencies) to perform initial and tri-annual asbestos inspections and prepare management plans for asbestos-containing materials (ACM). The Asbestos Hazard Abatement and Reauthorization Act (ASHARA) re-authorized and made some minor changes to AHERA. The Asbestos School Hazard Abatement Act (ASHAA) provided grants and loans to help needy and private schools correct asbestos problems. The Clean Air Act established the National Emission Standard for Hazardous Air Pollutants (NESHAP) for asbestos. NESHAP regulations pertaining to asbestos are intended to minimize the release of asbestos fibers from renovation, demolition and abatement activities when friable asbestos is involved. Friable asbestos is defined as ACM which can be crushed or reduced to powder by hand pressure, or the surface of the material is not sealed to prevent small pieces from escaping.

Asbestos is regulated in the workplace by the U.S. Department of Labor Occupational Health and Safety Administration (OSHA). Specifically, OSHA issued regulations which cover general and construction industry workers who may be exposed to asbestos. These exposures may occur not only during the manufacturing of asbestos containing products (such as textiles, friction products, insulation and other building materials) but also during renovation or demolition of buildings containing ACM. OSHA has set Permissible Exposure Limits (PEL) for asbestos fibers in air in the workplace. OSHA requires exposure monitoring, respirator use when exposures are above the PEL, establishment of regulated areas within the workplace, labeling of all ACM, recordkeeping; and mandatory use of protective clothing where exposures may exceed the PEL, clean change rooms for workers, and medical exams for workers who are exposed to ACM.

The Pennsylvania Department of Environmental Protection (PADEP) regulates the removal, collection, transportation and disposal of ACM in Pennsylvania. PADEP enforces the federal NESHAP regulations. If NESHAP regulations apply to a project, for example the demolition of a building, a ten day notification period is required before the project may begin. PADEP does not regulate ACM removal from private residences unless the residence is an apartment which has more than five units.

PADEP regulations define friable ACM as material which

PRESIDENT'S CORNER



Do you ever wonder about the firm you are hiring – their “what” and “why” as journalists are taught to ask? Let me try to answer that in the philosophy of Cowan Associates, Inc. The value of an engineering services company is measured by the professional quality of its staff and the history of successful project experience.

To this end we formulated our mission statement, namely to continue to strive for excellence and the highest level of personalized service.

In addition, as members of the National Society of Professional Engineers, we adopted the “Engineer’s Creed” as a way of life, to uphold high professional and ethical standards. To qualify for an ownership share in Cowan Associates, one must not only be an excellent professional, but also be free of other vocations or prejudicial business affiliations.

We continually reinvest in our people and technology to maintain the highest professional standards of capability, efficiency, and effectiveness. Our engineers, geologists, surveyors, and technicians, as well as office support staff, serve our private and public sector clients in ways ranging from brief consultations to the complete design and coordination of a project, often serving as technical liaison among other professionals, contractors, suppliers, and client. They respond to various challenges by providing unique and innovative solutions to today’s complex problems.

The Cowan firm has served business, government, and industry since 1958, and in 2003, we proudly enter our 45th year of service, documenting our history of stability and commitment.

by William D. Kee, P.E., President

contains more than one percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder merely by hand pressure. Non-friable ACM is material which contains more than one percent asbestos and cannot be crumbled, pulverized or reduced to powder merely by hand pressure. Non-friable asbestos is divided into two categories. Category I includes gaskets, packings, resilient floor coverings or vinyl asbestos floor tile and asphalt shingle products. Category II includes any other ACM material, except Category I non-friable ACM. These materials may include transite paneling, galbestos, and ACM concrete pipe products.

The Pennsylvania Department of Labor and Industry (PAL&I) has the responsibility for enforcing Pennsylvania’s Asbestos Occupations and Accreditation and Certification Act regulations. The regulations require a five day prior notification for any asbestos project in Pennsylvania. An asbestos project may involve not only remedial work, but also renovation and demolition projects. PAL&I also certifies occupations for the following categories: contractor, inspector, management planner, project designer, supervisor, and worker.

Pennsylvania’s regulations make it illegal for anyone to engage in any asbestos occupation as listed above without

certification from PAL&I. The regulations require a five day notification prior to the start of any abatement or demolition project where ACM is present. Any building which is to undergo renovation or demolition must be inspected for ACM at least five days prior to the start of the project. The person performing the inspection must be certified by PAL&I.

Cowan Associates Senior Geologist, George W. Buchanan, P.G., has successfully completed training as an asbestos inspector and expects to receive his PA certification shortly. He is available to assist you with any questions you may have about dealing with asbestos containing materials.

* * *

HUMOR

MORE THAN HE BARGAINED FOR

When a man attempted to siphon gasoline from a motor home parked on a Seattle street, he got much more than he bargained for. Police arrived at the scene to find an ill man curled up next to a motor home near spilled sewage. A police spokesman said that the man admitted to trying to steal gasoline and plugged his hose into the motor home's sewage tank by mistake. The owner of the home declined to press charges, saying that it was the best laugh he'd ever had.

Serenity and Serendipity in Real Estate Development

by Johann F. Szautner, P.E.

As we entered the "new" millennium, we saw a resurgence of the "back-to-basics" movement in many arenas of our daily lives. Real estate development is no exception, and the once fundamental mantra of "location - location - location" to determine real estate value demands some scrutiny. Is it location despite location? Is it fitting a user to a site, or fitting a site to a user?

The pillars of success for a real estate development always included cheap land, tax benefits, and abundant capital. This economic superstructure not only supported prosperity, but often led to an over-supply of newly constructed properties which would not move because of a change in economic conditions but, more often, because they did not meet one of our most basic needs - the need to have or at least be near a gathering place - a vibrant and vital community which accommodates our living and working environment within a reasonable distance.

The ancient Chinese principle of "Feng Shui" is that we are and become creative and successful when we live in personal harmony with our homes and surroundings. This axiom transcends the concept of religion and superstition.

We will always need real estate development, be it for our living comfort or to pursue our economic activity. This need must be carefully evaluated as we generally desire no less than spacious homes, functional efficiency, and physical quality, including personal comfort, in our offices, plants, and stores.

To accomplish this we also require a flawless infrastructure providing transportation, utilities, telecommunications, and social

HOME

FOR CHRISTMAS

by Johann F. Szautner, PE, PLS

This is a universal wish shared by many, regardless of their religion, as the Christmas season has become a cultural icon for a time to celebrate, reflect and share, not only with your family and friends, but also with those who are less fortunate.

It has also become a time fraught with commercialism; you needed only to look at your mailbox during this season. You found it overstuffed with catalogs, discount sale offers, seasons greetings cards, and useless trinket gifts from people you barely know or remember.

With this in mind, we at Cowan Associates decided this year to share our spirit of generosity and our gratitude for your friendship and business in a different way. So many of the holiday traditions revolve around our homes - where we can get together and celebrate with our loved ones - something no family should be without, yet many families are. So, in lieu of giving thank-you gifts this year, we made a donation on behalf of all of our clients to Habitat for Humanity.

We encourage you to join us in the effort to realize the true meaning of Christmas throughout the year - to celebrate the spirit of sharing and giving in the name of family and community.

Donations can be made at:

www.habitat.org/giving/donationform.html

services. Can we achieve all of these goals in harmony within the framework of environmental constraints and governmental regulations? If value of real estate is determined by location, and development success, in part, by acquisition of cheap land, then we may be overlooking intrinsic qualities embedded in the nature of cheap land. If we don't understand and respect the environmental constraints typically associated with cheap land, we may propose a real estate development doomed to fail.

Wildfires, avalanches, mudslides, and the ever-recurring coastal and riverine floodings and hurricanes bring the added dimension of potential property loss to the location equation. In addition to banks, insurance companies are one of the principal sources for both debt and equity financing of real estate development and have a vested interest in avoiding environmental hazards and related claims payments.

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REAL ESTATE

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Considering that we all, consumers and taxpayers, end up correcting problems caused by flawed development decisions, governmental regulations pertaining to the environment make perfect business sense as do most land use regulations which are designed to manage growth, not to limit growth.

Enterprise zones and redevelopment, as well as historical districts, add yet an entirely different challenge and dimension to the location equation.

In the end though, it is not only the real estate developer's instinct and grit which make a real estate development successful, but also a creative marketer's selling skills, experienced property managers and a well-run municipal government with a stable tax base, providing efficient services.

The "Feng Shui" principle of achieving harmony with our surroundings requires a little bit of rethinking priorities, bringing balance to our competing interests, supplementing calculation with passion and ultimately rewarding ourselves with livable communities, enhanced by touches of serenity and serendipity.

JOIN US IN CELEBRATION OF
NATIONAL ENGINEERS' WEEK

February 17 thru 23, 2003

"Turning Ideas into Reality"

Look for a special supplement in the
Eastern Pennsylvania Business Journal

Cowan Associates, Inc. is a proud sponsor of the banquet being held on February 21 and organized by the Lehigh Valley Engineering Council.

Please join us at the Radison Hotel located at 437 Main St., Bethlehem for the festivities beginning with a 6-7 pm social hour and dinner 7-8 pm. Awards immediately following.

Guest Speaker: Dr. John Fisher, Professor Emeritus of Civil Engineering at Lehigh University

Topic: Engineering Analysis of the World Trade Center Disaster

Registration will be held outside of the 2nd floor ballroom

CAI

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