

# ANGLE and LINE

A Quarterly Newsletter by COWAN ASSOCIATES, INC.

Engineers • Geologists • Surveyors

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## PENNSYLVANIA PREPARES TO ADOPT UNIFORM CONSTRUCTION CODE

By: Nicole A. Schantz, EIT

In 1998, Act 45, also known as the Pennsylvania Construction Code Act, was passed. This was the first step in an effort to establish a state-wide construction code. This decision came after years of discrepancies from municipality to municipality, making it difficult for contractors, engineers, and architects to determine which codes and regulations were governing their project. Additionally, the lack of uniformity created differences in the construction standards and requirements in the municipalities statewide. The recent efforts in this standardization occurred on November 20, 2003, when the Independent Regulatory Review Commission approved the Uniform Construction Code (UCC) Administration and Enforcement Regulation. Most recently, the Attorney General has approved the UCC Administration and Enforcement Regulation. The Regulation was published in the January 10, 2004 PENNSYLVANIA BULLETIN.

The UCC and associated standards will go into effect 90 days from the date of publication in the PENNSYLVANIA BULLETIN. The published notice indicates that the required final-form regulations have been adopted. Municipalities have an additional 90 days from the time the standard goes into effect on April 9, 2004 to pass an ordinance adopting the UCC and repealing their current building codes. This election period ends on July 8, 2004. Municipalities will then have 30 days from July 8, 2004 to notify the Department of their decision to either opt into the system, effectively accepting responsibility to enforce the UCC, or to opt out of the system. A municipality must make a formal decision regarding local enforcement and notify the Department of their decision. If the municipality opts in, the effective date is the date of the adoption ordinance. Consequently, there is not one effective date statewide. The

effective date for a municipality that chooses to opt out will be determined by the postmark on the election notice. The program has made available to municipalities special election forms and a model UCC adoption ordinance. As the election forms are received, an electronic listing of the decisions will be available.

The end of the municipal election notification period is August 7, 2004. Municipalities which have not responded will be opted-out by default. After the initial election period, the Department will require 180 days notice should a local municipality choose to alter their decision.

Once the code has gone into effect, the local government will act as the primary enforcement agent, should they choose to opt-in to the system. In this situation, the local

government can choose to use its own employees to administer and enforce the UCC. They may retain one or more construction code officials or third-party agencies to act on its behalf. Another option for the local jurisdiction may be to enter into a contract with neighboring municipalities. They may choose to form a joint committee to enforce the UCC. Finally, they may choose to enter into an agreement with the Department of Labor and Industry for plan reviews, inspections, and other aspects of code enforcement for non-residential structures only. The Department cannot guarantee this final option until after the municipal election period concludes and their workload is established. The municipality may also choose to perform certain aspects of both residential and non-residential plan approvals and inspections, and contract for other aspects. A list of Uniform Construction Code certified and registered code officials is available on the UCC website.

If during the municipal election period the local municipality chooses to opt out of the system, the Department

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of Labor and Industry will provide the administration and enforcement for non-residential construction within that municipality. One and two family residential construction within the municipality will be performed by certified third-party agencies hired by the property owner to perform plan/specification reviews and inspections.

The Department of Labor and Industry has issued the following fee schedule at this time for permit for the construction, alteration, or demolition of a building or structure:

New structures and facilities other than buildings ~ \$300

New building and additions ~ \$100 plus \$0.20 per square foot of floor area or each fraction of floor area.

Alterations, renovations, or modifications of existing buildings or structures ~ \$100 plus \$20 for each \$1,000 of estimated cost of alterations, renovations or modification certified by the permit application.

Revisions of approved plans and accelerated approval ~ \$300.

All code officials will have to be certified by the Department in an effort to guarantee that they are performing their work in a professional manner. A portion of the certification process will require special training regarding the accessibility requirements. Any current code administrators may be "grandfathered" as long as they register with the Department of Labor and Industry. The current code administrators performing plan reviews or inspections of residential projects may continue to work without meeting the certification requirements of the UCC regulations until three (3) years from the effective date. Those reviewing or inspecting commercial projects may work without certification for a period of five (5) years from the effective date. Once the officials become certified, they will have to register with the Department and meet the certification requirements in a time frame established in the Training and Certification Regulation. With reasonable cause, the Department will investigate complaints about the actions of code administrators and officials. Additionally, the Department will carry out periodic performance reviews in an effort to ensure that code administrators are adequately enforcing the accessibility requirements of the IBC. If the Department deems it necessary, they may decertify code administrators and officials.

CAI is following the progress of the regulations in order to provide the best service to its clients. CAI will stay informed on how these changes will affect structural design, building inspection, and land development design. CAI has been certified by the Department of Labor and Industry, Bureau of Occupational and Industrial Safety, as a Third Party Agency.

The Department has proposed to adopt the following codes, either in their entirety or portions thereof, as the UCC: INTERNATIONAL BUILDING CODE (2003), THE

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## EMPLOYEE SPOTLIGHT

Cowan Associates, Inc. is pleased to announce the addition of Jarrod Black to our staff. Jarrod is originally from Seymour, Indiana. He attended Indiana University where he majored in geology, and Purdue University majoring in civil engineering.

Mr. Black will be assisting us in the survey department as a Survey Crew Chief. He is working toward obtaining a Professional Land Surveyor's license and has been approved to sit for the Fundamentals of Land Surveying test this spring.

Welcome Jarrod Black!

## HUMOR

An engineer was crossing a road one-day when a frog called out to him and said, "If you kiss me, I'll turn into a beautiful princess." He bent over, picked up the frog and put it in his pocket.

The frog spoke up again and said, "If you kiss me and turn me back into a beautiful princess, I will stay with you for one week." The engineer took the frog out of his pocket, smiled at it and returned it to the pocket.

The frog then cried out, "If you kiss me and turn me back into a princess, I'll stay with you and do ANYTHING you want." Again the engineer took the frog out, smiled at it and put it back into his pocket.

Finally, the frog asked, "What is the matter? I've told you I'm a beautiful princess, and that I'll stay with you for a week and do anything you want. Why won't you kiss me?"

The engineer said, "Look, I'm an engineer. I don't have time for a girlfriend, but a talking frog, now that's cool."

ICC ELECTRICAL CODE – Administrative Provisions (2003), INTERNATIONAL MECHANICAL CODE (2003), INTERNATIONAL FUEL GAS CODE (2003), INTERNATIONAL PLUMBING CODE (2003), INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS (2003), INTERNATIONAL FIRE CODE (2003), INTERNATIONAL ENERGY CONSERVATION CODE (2003), INTERNATIONAL ENERGY CONSERVATION CODE (2003), INTERNATIONAL EXISTING BUILDING CODE FOR BUILDINGS AND FACILITIES (2003), AND INTERNATIONAL URBAN-WILDLAND INTERFACE CODE (2003). The INTERNATIONAL PRIVATE SEWAGE DISPOSAL CODE, INTERNATIONAL PROPERTY MAINTENANCE CODE, and the INTERNATIONAL ZONING CODE will not be adopted under this act. The Department will issue regulations with technical standards for

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## SILENT TRAP OR IMPAIRED JUDGMENT?

by Johann F. Szautner, P.E., PLS

### Synopsis

On an early afternoon following a lunch break, the foreman of a mechanical contractor's repair crew climbed via a ladder on a roof of a 27 foot high building to observe his workmen finishing up their job. He walked near the rooftop units being worked on and then attempted to sit on a plastic smoke-dome skylight which broke under his weight, and he fell onto the concrete floor slab below and was killed by the impact.

### Forensic Investigation

Plaintiff's expert determined that the skylight was unreasonably dangerous as it presented a silent trap, not indicating its potential hazard, and that a guard could have been installed to prevent anyone from falling through it.

About 30 years ago, the smoke-dome skylight became a popular replacement for earlier louvered smoke vents as a way to remove smoke during a fire. The smoke-dome skylight, in this case, was fabricated and installed in 1978 during the original building construction. Investigating this accident for the defense of the manufacturer of the skylight, I made the following findings:

1. In 1978, during the construction of the building and fabrication and installation of the skylight, both the BOCA Building Code and the State Construction Code required that skylight ribs support a concentrated load of 200 pounds.

There was no Code definition given for skylight ribs and, in this writer's opinion, the requirement applied to the tubular aluminum cross-bars which are intended to protect the plastic dome of the skylights from damage from falling objects, and workers from falling through them in case they fell on them. These cross-bars were, at the time of fabrication, perceived as adequate by the industry and code enforcement community, and installation was common practice although the free triangular area between the cross-bars is 4' wide and 2' deep, obviously big enough to let a person fall through if sitting or standing in this area.

2. Occupational Safety and Health Standards in effect in 1978 require guarding of floor and wall openings, including skylights, with either a railing or a skylight screen capable of withstanding 200 pounds applied perpendicular at any one area of the screen. The screen is to restrict openings in the grillwork to 2 inches wide or a 4 inch mesh.

3. Occupational Safety and Health Standards in effect in 1999 during the time of the maintenance work and the accident require the mechanical contractor, as employer, to train, educate, and equip their employees in the recognition of avoidance and prevention of unsafe or unhealthy working conditions. The mechanical contractor provided no safety training for working on a roof, nor fall protection systems or temporary guardrails around the work area.

In the course of the accident victim's autopsy examination, samples of tissue and fluids collected and submitted for toxicological testing indicated a blood alcohol level of 0.15 mg/L and 0.04 mg/L valium.

### Conclusion

Based on my investigation, I found that at the time the smoke-dome skylight was manufactured, it met all applicable building and construction codes. OSHA requirements for installation of guarding the skylight or covering it with a safety screen could have been met by the building owner.

Workers' safety on roofs, including fall protection, is the responsibility of the employer sending workers on a roof. Workers also have a general duty of care, and for those whose workplace safety is regulated by OSHA, a specific duty of care to avoid unsafe working conditions, including alcohol and drug use at the workplace.

### Result

Plaintiff settled with building owner and skylight fabricator. This case is an example of an injured party making a third party cause of action in order to circumvent the financial limitations of workers' compensation by accessing deeper pockets.

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elevators and other lifting devices found in the IBC (2003).

The UCC will exclude new buildings or renovations to existing buildings for which a building permit has been issued or for which a contract for design or construction has been signed, prior to the effective date of the regulations issued under Act 45 of 1999, also known as the "Pennsylvania Construction Code Act." Additionally, utility and miscellaneous-use structures (except for swimming pools and spas) that are accessory to detached one family dwellings will be excluded. These structures to be excluded include carports, detached private garages, greenhouses, and sheds that have building areas of less than 500 square feet. Agricultural buildings that are not habitable areas or agricultural product processing structures will not be included under the UCC.

Further information regarding the Uniform Construction Code implementation is available on the Pennsylvania Department of Labor and Industry website, [www.dli.state.pa.us](http://www.dli.state.pa.us).

*Cowan Associates, Inc. is pleased to announce that it has received a "Third Party Agency Certification" from the Pennsylvania Department of Labor and Industry Bureau of Occupational and Industrial Safety. This means that Cowan Associates, Inc. is capable of doing residential and commercial plan review, and building inspections for municipalities which are adopting the Uniform Construction Code for Pennsylvania. We also have the ability to perform these services for builders and developers who are constructing projects in municipalities which choose not to adopt the UCC. Charles R. Tomko, Michael R. Smith, Todd W. Nagle, and David V. Perry are all CAI personnel certified to do this work.*

CAI

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