

# NCTPTC—ICC



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**NCTPTC** is a non-profit organization dedicated to:

Support and participate in education seminars and training programs relating to permitting procedures and practices and administration and enforcement of those regulations.

Advance the standardization of this profession, engaged in the administration of building, land use and development regulations through a certification program.

To promote the value and recognition of permit technicians and provide sufficient qualified personnel to establish minimum standards.

To apply the distinctive knowledge and skills of the permit technician for the benefit of the community and public.

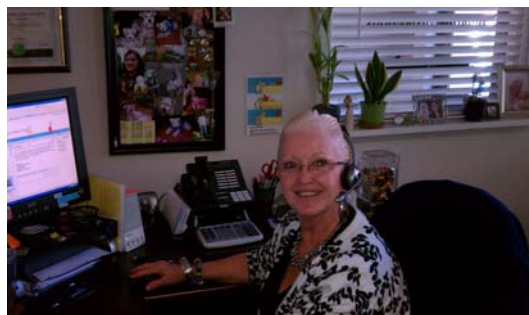
To do all such things as are incidental to or desirable for the attainment of the above objectives.

This year, the chapter collected multiple items for our community:

- Canned and non-perishable foods.
- Socks, blankets and coats.
- Supported Heifer International—An organization that helps families in need with an animal donation. Helps the family become self sufficient.
- Scholarships were handed out to current college students and to current members for CEU classes and education within the profession.

Current information regarding scholarships for 2012 can be found on the website.

The scholarship program has been renamed the Dianna Brawner Scholarship in honor of our friend and colleague. Dianna had a passion for knowledge and education.



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# Drilling & Completion



Natural gas is found throughout the world in underground formations, such as sandstone, carbonates, coal and shale. These resources are accessed by drilling vertical, horizontal or multi-lateral wells to the target formation. Various completion techniques, such as hydraulic fracturing, are then used to create an effective connection between the well and the targeted hydrocarbon-containing formation, thereby providing a pathway for the gas to be produced

A brief overview of the drilling and completion process for a typical shale gas development is outlined below. Many of the steps described are common to all oil and gas well planning and operation efforts, regardless of well design or the formation being targeted for development. Once a target formation has been identified and appropriate land leases have been acquired, environmental and regulatory reviews are conducted to assess related environmental impacts. Social and local issues are addressed, and stakeholder engagement commences. The permitting process then begins as prescribed by federal, state and local regulatory requirements.

Before drilling begins engineers, geoscientists and environmental work with regulatory staffs to collect and analyze information on the geology and surface conditions of the potential drill site. Drilling, surface use and water management plans are developed to maximize natural gas production while protecting the environment and minimizing our overall footprint. Following the construction of a well pad, a large hole is drilled to a shallow depth. A relatively short length (typically 40 to 120 feet) of large-diameter steel pipe (conductor casing) is set to stabilize the ground at the top of the well. Drilling continues to a depth below the base of usable water. This depth is specified by state or federal regulators and is based on local geology. While drilling this section, drilling mud – a mixture of fresh water and clay – is pumped into the hole to cool the drill bit, remove any cuttings, and create a boundary between the well and surrounding rock. The drill pipe and bit are removed, and a steel casing is inserted. Cement is pumped through the casing, filling the annular space between the outside of the casing and the wellbore. This creates a sealed container that extends from the surface to below the base of freshwater zones. The blowout preventer is then installed at the surface. Following a series of tests, drilling resumes until it reaches the kick off point – when a specialized motor is added to the drilling assembly that allows the curved and horizontal sections of the well to be drilled. The kick off point is typically thousands of feet below the freshwater zones. Once the target depth is reached (based on the length of the horizontal section required), the drilling assembly is removed and steel casing is inserted through the entire length of the well. More cement is pumped through the casing, creating another cement-reinforced container. Next, the casing is perforated at the desired depth along the horizontal section to access the shale. Then a pressurized fluid is injected down into the well. This step is called hydraulic fracturing. The fluid is a mixture consisting of water, sand and a small amount of chemicals – some of which are found in common household items or even food products. The fluid penetrates the shale and creates cracks, or fractures, in the rock. The sand or ceramic particles, called proppant, being carried by the fluid are deposited in the narrow fractures, propping them open so gas can flow into the well. A plug is set inside the casing to isolate the stimulated section of the well. The entire perforate - inject - plug cycle is then repeated at regular intervals along the horizontal section of the well. Finally, the plugs are drilled out allowing the gas and fluids to flow into the wellbore and then up to the surface inside the casing or tubing. The gas/fluid mixture is separated at the surface, and the fracturing fluid (also known as flowback water) is captured in steel tanks or lined pits. The fracturing fluids are then disposed of via government-approved methods. The entire well construction process generally takes only two to three months, compared to the 20 to 30-year productive life of a typical well.

## Road Construction

Arlington

The expansion of SH 360 from I-20 to north of

Cresson	<a href="#">US 377 at SH 171</a>	A study to identify improvements to US 377 at SH 171.
Fort Worth	<a href="#">DFW Connector</a>	The reconstruction and expansion of SH 114 and SH 121.
Fort Worth	<a href="#">I-30 Corridor</a>	Improvements to the I-30 corridor between Oakland Boulevard and SH 161.
Fort Worth	<a href="#">I-35W Corridor</a>	Improvements to the I-35W corridor throughout the Fort Worth region.
Fort Worth	<a href="#">SH 114 and SH 121</a>	Enhancements to 14.4 miles of SH 114 and SH 121
Fort Worth	<a href="#">SH 121/Southwest Parkway and Chisholm Trail</a>	The extension of SH 121/Southwest Parkway from I-30 to FM 1187 and a new 13-mile road from FM 1187 to US 67 in Cleburne.
Granbury	<a href="#">US 377</a>	Potential improvements to US 377 from FM 51 to FM 167 South.
Grapevine	<a href="#">SH 26</a>	Rebuild roadway to three lanes with raised curbed medians and left turn bays.
Johnson County	<a href="#">FM 157</a>	The proposed realignment of FM 157 from Business 287 to FM 1807.
Tarrant County	<a href="#">FM 1938/Davis Boulevard Extension</a>	Creates a new roadway that connects SH 114 to FM 1938/Davis Boulevard.
Tarrant County	<a href="#">I-820</a>	The expansion and widening of I-820 from I-35W to I-20.
Tarrant County	<a href="#">North Tarrant Express</a>	Overall mobility plan to expand I-35W, I-820 and SH 121/183 in north Tarrant County.
Tarrant County	<a href="#">SH 121/183 Airport Freeway</a>	Widening of SH 121/183 throughout Tarrant County.
Weatherford	<a href="#">Weatherford Pass-Through Toll Road</a>	Enhancements to nine different highway segments that will be paid through the Pass-Through Financing <a href="#">Program</a> .
Dallas	<a href="#">Horseshoe Project</a>	Upgrade of the I-30 Bridge, part of the Mixmaster and I-35E bridges
Dallas	<a href="#">LBJ-635</a>	Significant improvements to 13 miles of IH 635, from I-35 E to US 75
Dallas/Denton	<a href="#">IH 35E</a>	Proposed improvements to IH 35E from IH 635 to US 380
Dallas/Fort Worth	<a href="#">SH 183</a>	Proposed improvements to SH 183 (Airport Freeway) in Dallas, Irving and Fort Worth.
Denton County	<a href="#">FM 2499</a>	Construction of FM 2499 from FM 407 to FM 2181 in Denton County.
Ellis County	<a href="#">US 77 Waxahachie</a>	Proposed improvements to improve mobility in Waxahachie and to repair existing US 77 Viaduct

## Be Aware of Pipeline Markers in your Neighborhood

For your safety, pipelines are marked by above ground signs to provide an indication of their presence, approximate location, material carried and the name and contact information of the company that operates the pipeline. Markers may be anywhere along the right-of-way or directly over the pipeline itself. These markers are generally yellow, black and red in color. The pipeline may not follow a straight course between markers. While markers are helpful in locating pipelines, they do not provide information such as how many pipelines are below or the depth of the lines. The primary

function of these markers is to identify the location of the pipeline generally as an alert to those who might be working along the pipeline corridor for another utility or during the construction of homes or businesses nearby. You should be aware of any pipeline markers in your neighborhood. As the saying goes, "Know your neighbors." Write down the name and phone numbers appearing on the pipeline markers in case of emergency.

Pipeline markers are important for the safety of the general public. It is a federal crime for

any person to willfully deface, damage, remove or destroy any pipeline signs or right-of-way marker.



Source of article:  
Texas 811.

## Why is Lead Paint Dangerous?

Lead gets into the body when it is swallowed or inhaled. People, especially children, can swallow lead dust as they eat, play, and do other normal hand-to-mouth activities. People may also breathe in lead dust or fumes if they disturb lead-based paint. People who sand, scrape, burn, brush, blast or otherwise disturb lead-based paint risk unsafe exposure to lead.

Lead is especially dangerous to children under 6 years of age. Lead can affect children's brains and developing nervous systems, causing:

- Reduced IQ and learning disabilities.
- Behavioral problems.

Even children who appear healthy can have dangerous levels of lead in their bodies.

Lead is also harmful to adults. In adults, low levels of lead can pose many dangers, including:

- High blood pressure and hypertension.
- Pregnant women exposed to lead can transfer lead to their fetus.

*Further information is available from the National Lead Information Center (800-424-LEAD) and on the Internet at [www.epa.gov/lead](http://www.epa.gov/lead).*

## Permit Certification

### Certification Information/ Books:

- 60 multiple-choice questions
- Open book—2 hour time limit
- General Administrative 39%
- Legal Aspects 22
- Plans and Documents 25%
- Zoning and Site Development 14%
- 2009 IBC Chapters 1-3, 6, 12 and 34
- 2002 Legal Aspects of Code Administration

- Basic Code Enforcement—8th printing or later
- 2009 IZC

### Starting January 1, 2012:

(01) Legal/Management - The "Building Official Management Manual" will be replaced with "Human Resource Management In Local Government An Essential Guide, 3rd Edition" and "A Budgeting Guide For Local Government, 2nd Edition".

(E1) Residential Electrical Inspector: The IRC will be updated from 2009 to 2012 with the 2011 NEC being an optional secondary reference.

(E2) Commercial Electrical Inspector: The NEC will be updated from the 2008 to 2011.

(E3) Electrical Plans Examiner: The IBC will

be updated from 2009 to 2012; the NEC will be updated to the 2011 edition; and the 2011 "Ugly's Electrical References" will be added.

Launch of the remaining 2012 International Code-based National Certification exams via computer based testing will occur July 1, 2012.

National Certification exams based on the 2006, 2009, and 2012 editions of the International Codes will be offered via paper-and-pencil testing starting with the first quarterly scheduled administration date in March 2012.

Starting January 1, 2012, ICC will transition from using a hard-copy plan set as part of selected exams to using electronic exhibits. Instead of flipping through a plan set to answer questions on the exam, you'll instead click on a button that will bring up one or more figure drawings or exhibits.

## Construction Education

Nov. 2 was a big day at Construction Education Foundation of North Texas (CEF). CEF partnered with the National Center for Construction Education and Research (NCCER), North Lake College, TEXO and ASA to host a "Build Your Future In Construction" Career Day at the DFW Education Center.

Over 500 students from school Regions 10 and 11 in North Texas got to see crane and equipment simulators, welding demonstrations, perspective employers, and NASCAR as part of NCCER's Build Your Future (BYF) Campaign. In all over 50 companies had booths or demonstrations.

The ultimate goal of the Campaign is to lead new potential construction industry candidates as well as incumbent workers to opportunities for job placement, advanced education and training and ultimately long-term rewarding careers in the industry.

This inaugural event brought over 900 people together all focused on narrowing the skills gap of America's youth by bringing the construction industry and education together.

As part of the event the Craft Championships were held in the HVAC, plumbing and electrical trades. The winners will compete in the

National Associated Builders and Contractors (ABC) competition in April.

### Craft Championship Winners:

#### HVAC

**1st place—Jared Whitehead, Aire Dynamics**

**2nd place—David Grissom, TD Industries**

**3rd place—Juan Carolos Silva, Momentum Mechanical**

#### Plumbing

**1st place—Bobby Hoover, TD Industries**

**2nd place—Nelson Herrera, TD Industries**

**3rd place—Jack Lanham, G & L Mechanical**

#### Electrical

**1st place—Mark Scasta, Amber Electric**

**2nd place—Chris Brown, System Electric**

**3rd place—George Greer, Cummings Electric**

## New Home Construction Surges in September; recovery still elusive.

New residential construction surged 15% in September, turning in its best performance in 17 months, though economists warned that a housing recovery has yet to take hold.

While new construction is key to getting the economy going, much of the new building came from the apartment sector, which can be very volatile. Many economists also noted that permits pulled for new construction, also an important measure of builders' plans for the future, declined in September. Nevertheless, the news of the increase cheered investors on Wall Street as well as several housing analysts who follow the numbers closely.

"A strong residential construction number is a welcome relief for an economy struggling to hang on to expansion and a hopeful harbinger of better days to come," Celia Chen, a housing economist with Moody's Analytics, wrote in a research note Wednesday morning. "Caution, however, needs to be taken in interpreting the surprisingly strong top-line housing starts for September." Builders started new residential units at a seasonally adjusted annual rate of 658,000 in September, a 15%

increase over the prior month and up 10.2% from the same month the year before, according to the U.S. Commerce Department. Single-family homes were built at a rate of 425,000 units, which is only 1.7% above a revised August estimate, meaning the bulk of the increase came from the building of structures with five or more units.

News of the increase in new home starts came one day after builder confidence in the market rose, according to a closely watched index that measures builder sentiment. The National Assn. of Home Builders/Wells Fargo Housing Market Index jumped by four points to 18 in what was the biggest one-month gain since April 2010, when a tax credit for buyers was fueling purchases. Sentiment remains pretty dismal, however, as a number above 50 indicates more builders view conditions as good than poor.

"A stagnant economy and labor market has meant that housing recovery over the past year has been painfully slow, but we do believe that housing is gradually healing and recovering," Nishu Sood, a home-

building analyst with Deutsche Bank, wrote in a research note Wednesday.

Despite that cautious optimism, economists also pointed to the housing permits number released Tuesday by the Commerce Department, which signaled a more mixed picture for housing. New residential building permits were issued at a seasonally adjusted annual rate of 594,000 units, which is 5.0% below the revised August rate, though still up 5.7% from September 2010.





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### ***ICC and BOAT Chapter Events:***

- *January 18, 2012: NCTPTC Regular meeting—Plano*
- *January 30 thru February 2, 2012: BPI - Houston*
- *February 15, 2012: Code Enforcement Association of Texas—2009 IPMC Fundamentals—Tyler*
- *May 21 thru May 25, 2012: BPI—Arlington*
- *August 7 thru August 10, 2012: BOAT Annual Fall Conference—San Antonio*

### ***Webinars:***

- *January 18, 2012—ICC to the Point Webinar Series: ICC Social Media Outlets—Twitter, Facebook and Discussion Forum.*

**WWW.NCTPTCICC.ORG**

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## **Empire State Building Trivia and Cool Facts**

### **Where is the Empire State Building located?**

The Empire State Building is located at 350 Fifth Avenue (between 33rd and 34th Streets) in New York City.

### **How tall is it?**

There are several numbers to describe the height of the Empire State Building. The total height of the building, including the lightning rod, is 1,454 feet. The height of the building from the ground to its tip is usually given as 1,250 feet. The measurement from the ground to the 102nd floor observatory is 1,224 feet and from the ground to the 86th floor observatory is 1,050 feet.

### **How long did it take to build?**

The building was actually completed ahead of schedule, taking only one year and 45 days to build.

### **How much did the Empire State Building cost to build?**

The building itself cost \$24,718,000 to build (nearly half the expected cost because of the Great Depression). Including the property on which the building sits, the total cost for the Empire State Building was \$40,948,900.

### **How many steps are there to the top of the Empire State Building?**

There are 1,860 from street level to 102nd floor.

### **How many windows are in the building?**

There are 6,500 windows. What a lot to clean!

### **How many man-hours did it take to construct?**

It took 7,000,000 man-hours.

### **How many people worked on the building?**

At peak times, there were as many as 3,400 workers at one time.

### **How much steel did it take to construct the frame?**

It took 57,000 tons of steel to construct the steel skeleton.

### **How much telephone wire is in the Empire State Building?**

There is approximately 17 million feet of telephone wire servicing the building.

### **How many people died while building the Empire State Building?**

Though rumors of hundreds of people dying on the work site circulated during the time of its construction, official records state that only five workers were killed: one worker was struck by a truck; a second fell down an elevator shaft; a third was hit by a hoist; a fourth was in a blast area; and a fifth fell off a scaffold.