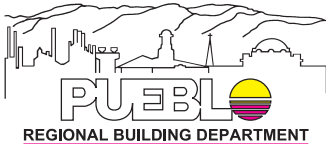


# PRBD CHAT

## CODES – FOUNDATIONS



**Holidays in the Next Quarter:**

Independence Day	July 4, 2011
Farmer's Market "Riverwalk" (every Thurs.)	Jun. 23 – Sept. 15, 2011
Rocky Mountain Street Rod Nationals	Jun. 24, 25, 26, 2011
State Fair	Aug. 26 – Sept. 5, 2011
Labor Day	Sept. 5, 2011
Chile Festival	Sept. 23, 24, 25, 2011
Autumn Begins	Sept. 23, 2011

MARK YOUR CALENDARS FOR THESE HOLIDAYS COMING UP!

**SPECIAL POINTS OF INTEREST:**

- Code Changes
- Pueblo Workshop Information
- Mechanical
- Plumbing
- Colorado State Fair History



Dave Vaughn, Building Official

Now available at the front counter and online at [www.prbd.com](http://www.prbd.com) are "How Are We Doing Customer Survey" forms and "The Customer Complaint" forms for anyone wishing to file a complaint or evaluate the Department's customer service. These forms can be mailed, dropped off or e-mail to Dave at [dvaughn@prbd.com](mailto:dvaughn@prbd.com).

- Dave Vaughn -

In our current construction market, the bulk of our business has turned to building additions, patio covers, decks and detached garages. These all require foundation/footing systems to adequately support them. Some of these systems are required to extend down to frostline depth and some do not. You can find the requirements for each application in Chapter 4 Foundations of the 2009 International Residential Building Code.

This newsletter we will discuss the requirements for garage monolithic slabs. The minimum depth and width requirements can be found in section R403 Footings, they are as follow:  
**R403.1 General:** All exterior walls shall be supported on *continuous solid* or fully grouted masonry or concrete footings, crushed stone footings, wood foundations, or *other approved structural systems* which shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character of the soil. Footings shall be *supported on undisturbed natural soils or engineered fill*. Concrete footing shall be designed and constructed in accordance with the provisions of Section R403 or in accordance with ACI 332.

**R403.1.1 Minimum size:** Minimum sizes for concrete and masonry footings shall be as set forth in *Table R403.1 and Figure R403.1(1)*. The footing width, W, shall be based on the load-bearing value of the soil in accordance with *Table R401.4.1*. Spread footings shall be at least 6 inches in thickness, T. Footing projections, P, shall be at least 2 inches and shall not exceed the thickness of the footing. The *size of footings supporting piers and columns* shall be based on the tributary load and allowable soil pressure in accordance with *Table R401.4.1*. Footings for wood foundations shall be in accordance with the details set forth in Section R403.2, and Figures R403.1(2) and R403.1(3).

**R403.1.3.2 Slabs-on-ground with turned-down footings:** Slabs on ground with turned down footings shall have a *minimum of one No. 4 bar* at the top and the bottom of the footing.

Exception: For slabs-on-ground cast monolithically with the footing, locating one No. 5 bar or two No. 4 bars in the middle third of the footing depth shall be permitted as an alternative to placement at the footing top and bottom.

**R403.1.4 Minimum depth:** All exterior footings shall be *placed at least 12 inches* below the undisturbed ground surface. Where applicable, the depth of footings shall also conform to Sections R403.1.4.1 through R403.1.4.2.

**R403.1.4.1 Frost protection:** Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods: Extended below the frost line specified in *Table R301.2 (1)*; Constructing in accordance with Section R403.3; Constructing in accordance with ASCE 32 or Erected on solid rock.

Exceptions: (1) Protection of freestanding accessory structures with an *area of 600 square feet or less*, of light-frame construction, with an eave height of 10 feet or less shall not be required. (2) Protection of freestanding accessory structures with an *area of 400 square feet or less*, of other than light-frame construction, with an eave height of 10 feet or less shall not be required. (3) Decks *not supported by a dwelling* need not be provided with footings that extend below the frost line..

Economic & Workforce Development

UPCOMING CLASSES

Public Training Events

**Safety Training**

(7 hours)

New class every Wednesday through July 27, 2011

8:00 am – 4:00 pm

Cost: \$129/person

This course is ideal for anyone with safety and health responsibilities and for employee safety & health awareness. Attendees will be introduced to safety and health principles.

**Electrical Components of High Efficiency Heating**

(8 hours)

July 7-12, 2011 (Tuesdays & Thursdays)

5:00 – 8:00 pm

Cost: \$159/person

This course is designed to cover vent dampers, thermostats, pressure sensors, temperature sensors, and zone control.

**Air Distribution**

(4 hours)

July 19-21, 2011 (Thursday & Tuesday)

5:00 – 7:00 pm

Cost: \$79/person

This course provides participants with a basic understanding of combustion air-carriers and venting air-carriers.

**Industrial Motors & Controls**

(28 hours)

August 2-30, 2011 (Tuesdays & Thursdays)

7:00 – 11:45 am

Cost: \$630/person

This course provides participants with a basic understanding of industrial motors & controls, including theory, control relays, motor starts, and single & three phase motors.

**Introduction & Intermediate PLCs**

(48 hours)

September 1-October 25, 2011 (Tuesdays & Thursdays)

7:30-10:30 am

Cost: \$1,080/person

This course is designed to cover PLC applications and use, identification of components, RSLogix5 Software, interposing & interlocking relays, ladder logic, and I/O systems.

**Communication Systems**

(16 hours)

September 12-28, 2011 (Mondays & Wednesdays)

7:30 – 10:30 am

Cost: \$295/person

This course provides participants with a basic understanding of fiber optics, encoders, serial communications, data highway, Ethernet, and PA programs.

**Use of Special Measuring Tools**

(24 hours)

September 12-October 5, 2011 (Mondays & Wednesdays)

7:30 – 10:30 am

Cost: \$495/person

This course provides participants with a basic understanding and use of torque wrenches, dial indicators, micrometers, calipers and filler gauges.

**Shop Geometry**

(20 hours)

September 13-October 6, 2011 (Tuesdays & Thursdays)

7:30 – 10:30 am

Cost: \$395/person

This course provides participants with an understanding of geometry formulas and how these concepts apply to work on the job.

Visit our website for the latest training events at:

[www.pueblocc.edu/tec](http://www.pueblocc.edu/tec)

**Bringing customized workforce training to you...**



900 West Orman Avenue  
Gorsich Advanced Technology Center, Room 201B  
Pueblo, CO 81004  
Phone: 719-549-3320  
Toll Free: 866-478-3256  
Fax: 719-549-3462  
E-mail: [Technology@pueblocc.edu](mailto:Technology@pueblocc.edu)

## MECHANICAL NEWS

2009 International Fuel Gas Code Section 504.3.9 Common Vent Fittings. At the point where tee or wye fittings connect to a common vent, the opening size of the fitting shall be equal to the size of the common vent. Such fittings shall not be prohibited from having reduced-size openings at the point of connection of appliance vent connectors.

504.3.9.1 Tee and Wye Fittings. Tee and wye fittings connected to a common gas vent shall be considered as a part of the common gas vent and shall be constructed of materials consistent with that of the common gas vent.

- Terry Nothaft -

## DEEP THOUGHTS FROM THE PLUMBING DEPARTMENT

Water, Water, Everywhere...But not a drop to drink. The first part of the poem sounds fine, full of hope for everyone. But the 2nd part is not nearly so poetic, in fact it is horrific. Look at these statistics:

884 million people in the world lack access to a safe water supply-approximately 1 in 8 people (this is a UNICEF/World Health Organization finding); 3.575 million people die each year from water related diseases (source: WHO); at any given time, half of the world's hospital beds are occupied by patients suffering from diseases related to lack of access to safe drinking water and poor sanitation (source: UN); 88% of the cases of diarrhea worldwide are attributable to unsafe water (source: UN Water Report). Every 20 seconds a child dies from water related diseases. (source: UN) Although some reports vary slightly from these figures, the fact remains that the situation is grim. Per WHO estimates, for each 1 dollar invested for improved water supply, a saving in medical expenses ranging from 3-34 dollars can be expected. There is a public outcry on deaths caused by AIDS, but nobody worries about the death toll due to water-related deaths, which is in fact, more than AIDS toll.

Water scarcity is fast becoming a reality in developed countries as well as 3rd World countries. Plumbers are at the forefront of this battle. We have the expertise to install the latest "Green Plumbing Systems" necessary to help combat this growing problem.

For many of the decision makers in the world water scarcity is not real. For them the first part of the poem-"Water, Water, Everywhere" is a reality; whereas, for more than 884 million people-"But not a drop to drink" is reality.

**"Plumbers protect the health of the World"**

It means more now than ever.

- Dan Daniels -

## Foundations – Continued

With all foundation/footing systems, they must extend above the adjacent grade (ground) a certain amount. To find this information, go to Section R404 Foundation and retaining walls, subsection R404.1.6 Height above finished grade: Concrete and masonry foundation walls shall extend above the finished grade adjacent to the foundation at all points a minimum of 4 inches where masonry veneer is used and a *minimum of 6 inches elsewhere*. Therefore, the proper height (or depth) of most garage monolithic slab footings will be 18" (12" footing depth plus 6" above grade height).

Next, we will touch on deck building requirements. When choosing your lumber for the deck supports, to *refer to Section R317 Protection of Wood and Wood Based Products Against Decay*.

**R317.1 Location Required:** Protection of wood and wood based products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U1 for the species, product, preservative and end use. Refer to *note #2* for supports: All wood framing members that rest on concrete or masonry exterior foundation walls and are *less than 8 inches* from the exposed ground (must be naturally durable wood or pressure treated wood).

Also, see Section R317.1.2 Ground Contact for more requirements on support lumber.

Along these same lines, the type of fasteners used with treated lumber can be found in Section R317.3.1 Fasteners for Preservative-treated Wood, they are as follows:

Fasteners for preservative-treated wood shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Coating types and weights for connectors in contact with preservative-treated wood shall be in accordance with the connector manufacturer's recommendations. In the absence of manufacturer's recommendations, a minimum of ASTM A 653 type G185 zinc-coated galvanized steel, or equivalent, shall be used and a *minimum of 6 inches elsewhere*. And as mentioned above, you can find the footing requirements for a deck in Chapter 4 Section 403 Footings. Pay close attention to Section 403.1.4.1 Frost Protection, Exception #3. Basically, the minimum hole diameter will be 12" and the minimum depth will be 26" (Pueblo county frostline depth). For more really good information on deck building can be found on the "American Forest & Paper Association, Inc" website (www.awc.org, deck guide, DCA-6 Prescriptive Residential Construction Guide).

We want to say Thank You to all who helped with the Girls Scout project for 2011!

- Charlie Carty -

## COLORADO STATE FAIR HISTORY



Pueblo Regional Building Dept.  
316 W. 15th Street  
Pueblo, CO 81003

Website: [www.prbd.com](http://www.prbd.com)

Phone: 719-543-0002  
Fax: 719-543-0062  
Email: [prbd@prbd.com](mailto:prbd@prbd.com)

The following history is taken from the 1941 Colorado State Fair Souvenir Program:

"The Colorado State Fair had its actual beginning many years before most persons who read this program were born - from the first exposition on until this great show almost, "three score and ten" years have passed.

Although the exposition did not receive cash assistance from the state until 1903, the first exposition which preceded the State Fair was held on October 9, 1872, when the Southern Colorado Agricultural and Industrial Association held its first show.

The exposition operated with varying degrees of success at the Lake Minnequa grounds and soon after the turn of the century, somewhere around 1901, moved the present 80-acre site.

At this time the show was operated by the State Fair Association, a non-profit organization owned by Pueblo people who were anxious to see the exposition survive. These folks, in 1903, were successful in getting a state appropriation to pay the agriculture and horticulture premiums. This assistance meant much to the struggling exposition and it was able to carry on a few more years.

The campaign to secure additional state assistance with a degree of success, at least encouragement, in 1915 when the state legislature voted an appropriation for the State Fair. Governor Carlson went into office on an economy platform, however, lopped a \$10,000 appropriation from the State Fair, via the veto method, and the exposition received another set-back.

Real action came in 1917, when the late Senator W. O. Peterson, Senator Frank H. Means - who is now manager of the fair, Perry Dunlap and other fighters succeeded in getting a State Fair Commission created.

Pueblo Folks deeded the 80-acre tract to the State. The fair, in addition to receiving official recognition by the appointment of a commission, received a mill levy of .01 of a mill for operation and maintenance.

And that was the real beginning of the State Fair. Its growth and development since that time - especially in recent years - is well known to most persons...

For eight years, from 1917 to 1927, the State Fair got along with the mill levy of .01 of a mill. In 1927, however, boosters for the fair were successful in getting the legislature to raise the levy to .03 of a mill for maintenance and operation, where it now stands [1941]...

The building program at the State Fair Grounds, started more than decade ago and which is going forward, has transformed that original 80-acre tract of barren prairie land into one of the finest and most durable State Fair plants in the nation.

The present steel and concrete bandstand, which seats 4,000 persons - comfortably - was built in 1930. It replaced an old frame grandstand which had weathered the years and served its purpose well.

First among the "durable" type of buildings that were constructed on the grounds were the 4-H club dormitory buildings, the poultry and cattle barns and the Exposition building. All were built in the 1920 - 1930 era and were constructed of red brick. With the construction of these buildings and the new grandstand came the first indication that the State Fair was looking to the future.

Then, starting about 1934, came the start of the real building program. The mammoth hog and sheep barn which is recognized as one of the finest buildings of its kind in the United States was built in 1934 to 1936. It was constructed of native stone, quarried only a few miles from the State Fair Grounds, and was built along sound construction lines. When this building, 100 feet wide and 365 feet long, was completed, it stood as a symbol of what could be done toward building a State Fair plant that would withstand the years.

Federal Government co-operated in its work program. The state co-operated in supplying materials and Pueblo co-operated in every way it could.

The racing plant, composed of 215 separate stable rooms and a large paddock soon came into existence. This plant was laid out, built of the same native stone and completed stood as still another monument to what could be done. Horsemen from miles around inspected the new plant, termed it one of the finest in the United States. This fine new plant replaced the rickety old frame stables which long ago had served their purpose.

Then came more buildings, the 4-H club auditorium, the 4-H club dining hall, the State Fair Office building, the underground stables in the rodeo area, the new stone walls.

And finally, when Governor Ralph Carr spoke at the cornerstone ceremony for the new Agricultural building during the last State Fair, he said, "These buildings...they stand as a promise that the State Fair is forever Pueblo's..."

The State Fair of today, with its 80 acres packed to the brim with something doing every minute...its paved streets and concrete sidewalks...its fine buildings...its shady parks...its splendid program and national reputation, stand as a monument to those men who, in 1879, decided that the products of this vast empire should be displayed to the world."

- internet -