



# Metro Codes

E—News For Professionals

Metropolitan Government of Nashville and Davidson County

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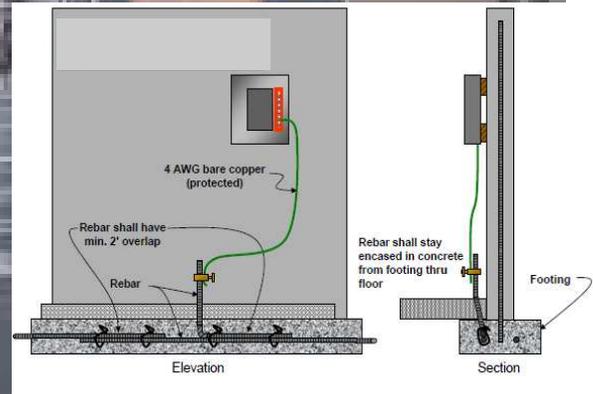
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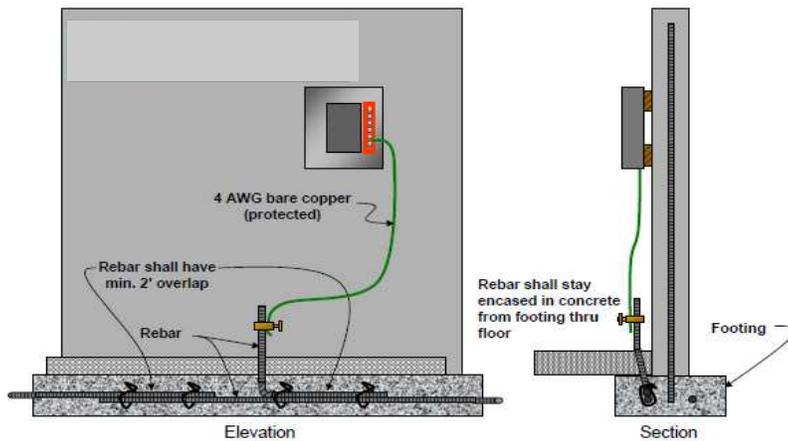
# Metro Adopts 2005 National Electric Code



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## NOTICE OF CODE CHANGE

2005 National Electrical Code  
Department of Codes and Building Safety



Effective July 1, 2009, concrete encased electrode (UFER) grounding will be mandatory for new residential construction. The inspection of this ground will be at the time of the footing inspection and is for the purpose of insuring installation was done in accordance with 2005 National Electrical Code (NEC) Section 250.52.

The minimum requirements are that a bare copper conductor no smaller than four (4) AWG be connected to a rebar that is bent up out of the footing. This rebar shall be connected to one or more bars tied together within the footing to provide a minimum of 20 feet of continuous direct contact with the earth. This UFER ground is in addition to all other electrodes within the building being bonded together to form the grounding electrode system.

### The 2005 National Electrical Code is now in effect for all construction in metropolitan Nashville-Davidson County

The new code, adopted by the Metropolitan Council on June 2 and signed a week later by mayor Karl Dean, has some significant differences from the previously adopted code.

To review the ordinance as passed by the Metropolitan Council, go to:

[http://www.nashville.gov/mc/ordinances/term\\_2007\\_2011/bi2009\\_435.htm](http://www.nashville.gov/mc/ordinances/term_2007_2011/bi2009_435.htm)

To review the top 25 changes to the electrical codes, please go to:

<http://www.nashville.gov/codes/newsletter/Professional/0905.pdf>

### Ufer Grounding Now Required

The 2005 National Electrical Codes (NEC), now in effect for all construction in Metropolitan Nashville-Davidson County, requires the use of Ufer Grounds.

The NEC states that all available grounding sources must be used including the foundation reinforcement steel. Contractors should provide either a section of re-bar at least 20' long that is turned out of the footing to allow connection or an approved connector and conductor to the footing re-bar.

The principle of the Ufer ground is simple: it is very effective and inexpensive to install during new construction. The Ufer ground takes advantage of concrete's properties to good advantage.

Ufer techniques are used in building footers, concrete floors, radio and television towers, tower guy wire anchors, light poles, etc. Copper wire does not function well as a "Ufer" ground due to the pH factor of concrete (+7pH is common).

The use of steel reinforcement as a "Ufer" ground works well and concrete does not chip or flake as has been found with copper. The use of copper wire tied to the reinforcement rods outside the concrete shows none of these problems.

Concrete absorbs moisture quickly and loses moisture very slowly. The mineral properties of concrete (lime and others) and their inherent pH means concrete has a supply of ions to conduct current. The soil around concrete becomes "doped" by the concrete, as a result, the pH of the soil rises and reduces what would normally be 1000 ohm meter soil conditions (hard to get a good ground). The moisture present, (concrete gives up moisture very slowly), in combination with the "doped" soil, make a good conductor for electrical energy or lightning currents.

The minimum rebar necessary to avoid concrete problems depends on:

1. The type of concrete, its content, density, resistivity, pH factor, etc.
2. Amount of concrete surface area in contact with the soil.
3. Soil resistivity and ground water content.
4. Size and length of the reinforcement rod, wire, or plate.
5. Size of the lightning strike current.

When this is not possible then it is acceptable to replace the UFER ground with two grounding electrodes installed per the NEC. Note that when the UFER (or other acceptable) ground is used then a grounding electrode is NOT required.

**CODES GREEN INITIATIVES PRESENTED TO BUILDERS**

Billy Fields, special assistant to Metropolitan Codes and Building Safety Director Terry Cobb, was one of the featured speakers at a "Green Building Lunch and Learn" for builders and architects hosted by Zeitlin NewHomes and Real Green Solutions.

Fields presented details on Green and Sustainable building programs now underway within the department.

"Being green makes sense," Fields told the gathered professionals. "Using renewable resources and practicing common-sense construction means everyone is a winner when construction is complete."

Builders and developers learned the basics of Green Building and were given the opportunity to mingle with event sponsors whose companies provide green building products and services.

"We were so pleased with the large builder turnout for our Green Building Lunch and Learn," said Wendy Monday of Zeitlin NewHomes. "The level of interest in green building continues to grow, and Zeitlin NewHomes is committed to providing builders with the latest information on green building trends and innovations."

Ms. Monday was pleased as she learned of the city's commitment to the environment.

"Green Building will continue to make a huge impact on

residential construction in Middle Tennessee. We are fortunate that Metro Nashville is staying ahead of the curve by making Green Building permits available to residential builders," said Ms. Monday.

Event sponsors included Doc Air, The Tru Solutions, Four Seasons Landscaping, Water Quality & Erosion Control of TN and Weyerhaeuser



Billy Fields, Special Assistant to the Director of Codes & Building Safety was a featured presenter at the "Green Lunch and Learn" event. He is pictured with Wendy Monday of Zeitlin NewHomes and

**Tim Walker Selected as Metropolitan Historical Commission New Executive Director**

At its May meeting, the Metropolitan Historical Commission selected Tim Walker as the new Executive Director. Mr. Walker has served as the interim executive director since Ann Roberts retired in late August 2008.



Photo credit: Gary Layada

Prior to his appointment as interim director, Mr. Walker served as Historic Zoning Administrator for seven years. Mr. Walker joined the staff of the Metropolitan Historic Zoning Commission in 1996. He holds a Bachelor of Architecture degree from the University of Tennessee at Knoxville, and worked as an intern architect for two local architectural firms before joining the MHC.

Mr. Walker grew up in the Bethel community outside of Ridgeway, Tennessee, and now lives in the Lockeland Springs neighborhood of East Nashville in a circa 1890 house he renovated.

**Registration Now Open for 2009 National Preservation Conference**

The National Trust for Historic Preservation will hold its annual conference in Nashville, October 13-17. This year's theme is *Sustaining the Future in Harmony with our Pasts*.

To view the preliminary program, read blog entries from National Trust staff members, and register for the conference, please visit "Conference Central" on the National Trust website: [2009 National Preservation Conference](#).



**Terry Cobb and Wade Hill** welcome your feedback on our e-newsletter. Please send your comments to [Wade Hill](mailto:wade.hill@nashville.gov), at [wade.hill@nashville.gov](mailto:wade.hill@nashville.gov)  
Plans Examination Chief , 862-6520



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Metro Council member Erica Gilmore met with owners of Nashville's first green permitted house, Jim, Jimmy and Kerry McClain. The Phillips Street home will be an example of new construction meeting "green" building standards.

### Restrictive Covenant Recording

The Department of Codes and Building Safety is pleased to announce a new service being offered to its customers. Restrictive covenants for detached structures may now be recorded in our office. These covenants are required to be recorded at the Davidson County Registrar of Deeds Office before contractors can obtain plumbing, electrical, or gas/mechanical permits for a detached structure.

This convenient service is now available to our customers. Previously, those documents could only be recorded at the Register of Deeds offices inside the Sommet Center. Fees for recording of these documents are \$12 and may be paid for by cash or check payable to the Register of Deeds. By recording these in our offices electronically, our customers will be able to save time and money.

### Board of Zoning Appeals, Planning Commission, other meetings will be Closed-Captioned

Starting July 16, Metro 3 will provide closed captioning for live and recorded broadcasts of Metro Council, Planning Commission, Board of Zoning Appeals, and Historical Zoning Commission meetings.

### Mayor Announces Public-Private Partnership

*Plan to be supported by matching funds from The Martin Foundation and Metro Government*

Mayor Karl Dean announced a cooperative partnership today between The Land Trust for Tennessee and the Metropolitan Government of Nashville to develop an Open Space Plan for Davidson County.

The plan will address the strategic conservation and creation of green space, by both the public and private sectors, in an effort to protect the unique landscape of Middle Tennessee. The plan will identify opportunities in urban areas such as the creation of neighborhood parks and gardens, and protecting the hillsides and private lands, as well as opportunities outside of the urban core, such as conserving farms and forests and protecting river corridors. Developing the plan will include a complete inventory of the critical natural and cultural resources of the county, prioritized by input from the community. The plan will also include recommendations for its implementation.

The creation of an Open Space Plan was a top recommendation by the Natural Resources Subcommittee of the Mayor's Green Ribbon Committee on Environmental Sustainability in a summary report released this past April.

"The great cities of our nation have progressive open space plans," Dean said. "The preservation of our private and public lands and natural resources has a direct impact on the economic viability of the region, and quality of life of its citizens. Thanks to the unique mission and expertise of The Land Trust for Tennessee and a generous donation from The Martin Foundation, this project will ensure that open space continues to enhance the environmental, social, and economic well-being of our great city."

The project is being funded through a private donation by The Martin Foundation to The Land Trust for Tennessee with matching funds from Metro that have already been approved through the capital spending plan.

"The conservation of this region's unique places makes economic sense. It is our hope that the plan will be just the beginning of the progress toward long-term conservation by the private sector and by government," said Shannon Martin, Executive Director for The Martin Foundation. "With Mayor Dean's commitment to sustainability shown through his Green Ribbon Committee's work and this partnership with The Land Trust, we look forward to participating in a project that will make a difference in Nashville for generations."

The Land Trust for Tennessee will provide oversight and management of the project, including recruiting a consultant with national expertise to develop the plan and engaging local experts to serve in an advisory capacity.

The partnership proposal will be submitted to the Metro Council on July 10. Pending Council approval, the project will take approximately 12 months to complete.

For more information visit [www.landtrusttn.org/openspace.html](http://www.landtrusttn.org/openspace.html) or e-mail [openspace@landtrusttn.org](mailto:openspace@landtrusttn.org).

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Codes & Building Safety**

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**Mayor—Karl F. Dean**

Director—Terrence Cobb

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## Codes Now Accepts VISA Credit Card Payments



Codes & Building Safety customers can now complete their transactions using their VISA credit card. In addition to VISA, Codes also accepts payments using MasterCard, Discover Card and American Express.

### Save The Date—Codes Announces Annual Golf Tournament

The 13th Annual Metro Codes Charity Golf Tournament will be held on October 17, 2009 at the Ted Rhodes Golf Course.

Last year's tournament, through the support of 128 golfers and 99 sponsors, resulted in yet a new record \$28,000 being donated to three local charities through the Metro Employees Consolidated Charities Campaign (MECCC).

This year, all proceeds will again go to the MECCC for the benefit of local charities.

