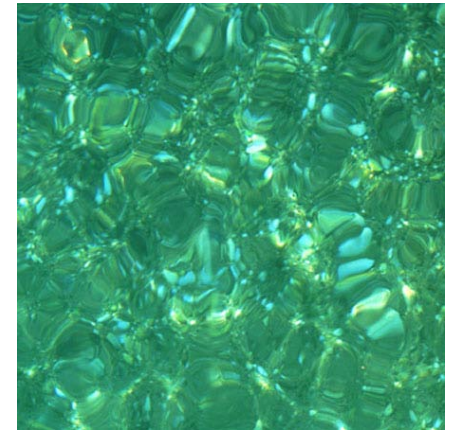


# This presentation premiered at WaterSmart Innovations

[watersmartinnovations.com](http://watersmartinnovations.com)





# ICC Green Code

Safe & Sustainable By The Book



SAFE & SUSTAINABLE BY THE BOOK



# History



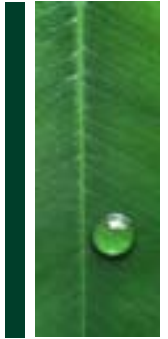
- The ICC Family of International Codes has been referred to as the Green Code.
- ICC's International Energy Conservation Code (IECC) is the most widely adopted energy code in the world.
  - The introduction of this code marked the beginning of the green movement in the code arena.
  - The IPC is the only plumbing code that correlates with the IECC

# Scope



- Will apply to traditional commercial and high performance buildings
- Consistent and coordinated with the ICC family of Codes & Standards
- Applicable to the construction of buildings, structures, and systems, including alterations and additions
- Residential portions of buildings, except institutional, shall be covered by ICC-700 (NGBS)

# Scope



- Will provide a new regulatory framework
- Designed with leading recognized rating systems in mind
- Will provide criteria to measure compliance & drive green building into everyday practice





# Key Steps

# Stages of development

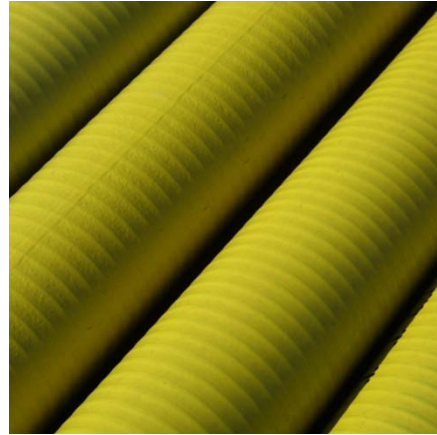
1. First Sustainable Building Technology Committee (SBTC) meeting was on July 27 in Chicago; four subsequent development meetings scheduled through January 2010
2. Update November 2 at the ICC Annual Business Meeting (ABM) in Baltimore
3. Draft complete April 2010, available as resource tool for short deadline jurisdictions seeking 2010 legislation
4. Public Comment period commences when draft issued
5. Hearings to review comments in Summer 2010
6. Revised draft submitted for code development and final action hearings in 2011





# Subject Areas

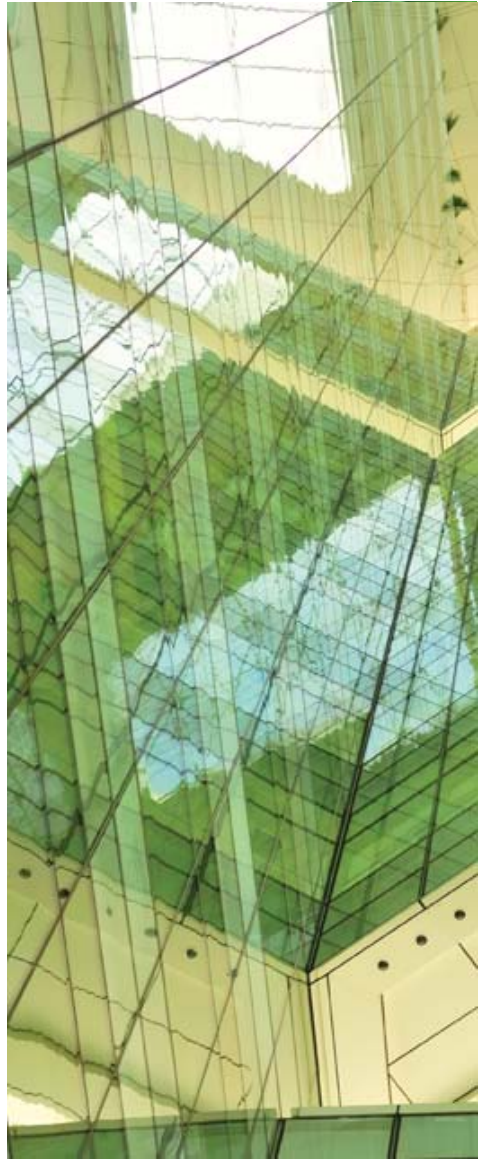
- Energy use efficiency
- Water use efficiency
- Materials and resource use
- Indoor environment quality
- The buildings impact on environment (Greenhouse Gas)
- Site design
- Sustainable building owner/facility management education
- Existing buildings





# Concepts

- Will use the “model” code approach that provides communities the ability to modify
- Minimum & advanced levels of performance (Green & high performance buildings)
- Work as an overlay to the ICC Family of Codes
- Written in mandatory language that provides a new regulatory framework



# Concepts

- Will provide performance, prescriptive and pre-engineered solutions
- Code should account for local conditions
- Reflect the 2030 Challenge
- Designed with local, state & federal law in mind



# Background

The IGCC initiative builds upon the good work of many organizations and advocates concerned with a more sustainable built environment.

- It is not designed to compete against, or minimize, the systems and standards that are already in place.
- We anticipate our code development process will utilize existing work as a resource

The timing of this activity is appropriate in the evolution of the sustainability efforts in the U.S. and around the world.

- Now that various approaches have been tested and implemented, we have a clearer picture as to what is required in a code
- We also better understand how a code can be useful and why a code is necessary

# Background

For measurable progress to occur there needs to be a regulatory framework in place. Only a code offers that tool.

- A code has the best chance of truly being enforced at the local level, due to its familiarity to the enforcement community
- A code will carry with it the input of multiple disciplines who are all necessary to its success, ranging from code officials, architects and standards experts to contractors, building owners, tradespersons and other experts.
- This alliance of the pre-eminent code, architect and standards organizations makes a strong statement regarding the usefulness and necessity of the IGCC.





## Frequently Asked Questions

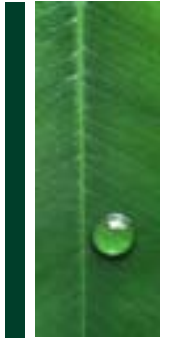
## What about residential properties?

The ICC co-developed the National Green Building Standard (NGBS), otherwise known as ICC-700, with the National Association of Home Builders (NAHB). While NGBS/ICC-700 provides optional approaches to designing and constructing, it can be used as a tool in developing codes addressing green practices for residential construction.



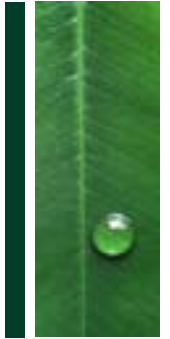
## Who is supporting the ICC in this effort?

The AIA and ASTM-International are the “cooperating sponsors” for this initiative, and as such will have an active role in the development process. Other organizations indicating their support are the U.S. Green Building Council (the purveyor of the LEED rating system) and the Green Buildings Initiative (GBI). Interest in participating on the development committee has been expressed from a variety of government, private sector and non-profit sources including ASHRAE, PCA, AISI, as well as state and local officials.



## **How does the development process work?**

The ICC Board has created a “Sustainable Building Technology Committee,” composed of 28 individuals from multiple sectors and charged with the drafting process and chaired by Board Member Ravi Shah.





## How does the development process work?

The SBTC will conduct open meetings around the U.S. between July and January as it moves forward in creating a draft IGCC useable as a tool for jurisdictions wishing to develop a code based on the ICC process. The Draft IGCC will be posted for public comment followed by a week of hearings to review the public comments, resulting in open Code Development Hearings and a Final Action Hearings. The Final Action Hearing vote is restricted to ICC governmental members as they will be charged with enforcing the code.



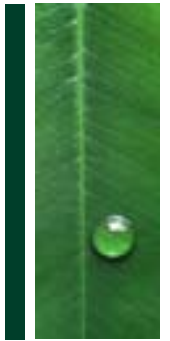
## **How does the development process work?**

This process tracks the development of the other codes in the I-Codes series. Once a final code is created, it will be revisited every three years along with the other I-Codes, through the two-hearing process as outlined.



**What is the difference between the IGCC and other systems and standards such as LEED, Green Globes, etc. ?**

The IGCC creates a regulatory framework for new and existing commercial and high performance buildings. Rating systems are not written in the form of enforceable codes, acting as optional approaches, such as awarding points based on the inclusion of certain design elements and other features with the assumption is that the combination and concentration of favored elements will result in a positive environmental impact. The IGCC will build on that foundation to ensure that measurable building performance and an adherence to building safety will be featured in the model code language. It is anticipated that the IGCC will look to existing rating systems and standards as resources in developing the regulatory framework.



**How will the IGCC differ from a national or federal mandate?**

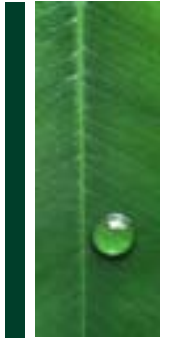
The IGCC will be a “model” code, requiring adoption by a governing jurisdiction before it becomes law. In this way, the model language can, if necessary, be adapted to address local conditions and allows for publicly elected legislative bodies to have the final voice in adoption. Many of the I-Codes are adopted without amendment at the state or local level; amended versions often take into account local weather and hazard conditions, regional approaches to building design and construction, and other factors.





**How will the IGCC differ from other International Codes addressing Energy Conservation, commercial buildings, high performance buildings or from the International Building Code (IBC) itself?**

One of the values of the IGCC is that it will be designed to coordinate and integrate with existing I-Codes. The IGCC will most likely present various tiers for jurisdictions to apply to commercial and high performance building stock, but in a manner that incorporates the health and safety features of the other I-Codes.



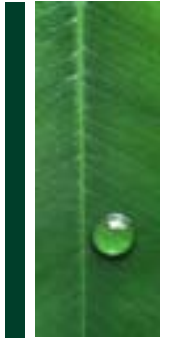
**Why is the ICC promoting its Green Construction Code when other options already exist?**

The development of a code occurs when there is a clear need indicated from regulators and others in the building safety industry. In the case of the IGCC, there has been an increasing call for an actual code that is clear and enforceable. We have heard this not only from our members in local and state government, but from stakeholders across the spectrum. This is why the AIA and the ASTM have joined the ICC as “cooperating partners.” Architects want a code book that will guide their design activities just like the other I-Codes. Standards experts want a code that reflects the appropriate attention to consensus, enforceability, science and metrics.



## Conclusion

For years, the IPC has incorporated innovative technologies like waterless urinals and detailed engineered designs permitting the installation of smaller, more precise water and drainage systems — resulting in the savings of millions of gallons of water, not to mention countless miles of conduit materials.

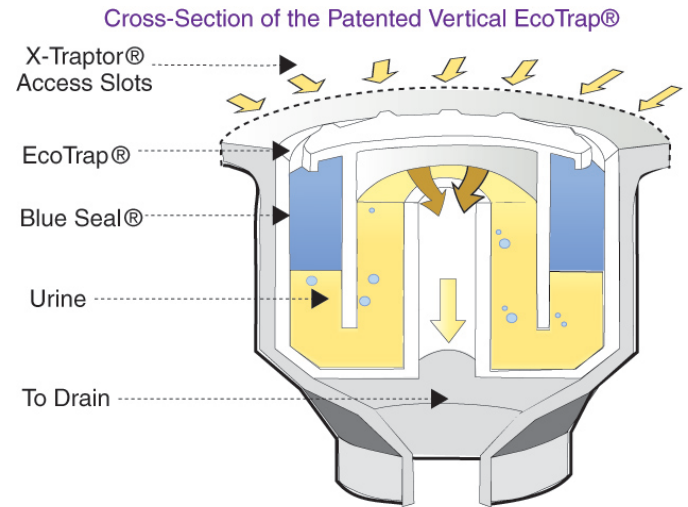


# IPC Promotes Water Conservation



Approval (Urinals)

- IPC & IRC allows waterless urinal technology.



Approval (Urinals)

# The IPC Supports Sustainable Plumbing Installation



- Waterless urinals can achieve enormous water savings.
- A Waterless urinal saves on average 45,000 gallons of water a year
- Twenty-two Waterless urinals save approximately 1,000,000 gallons of water per year.

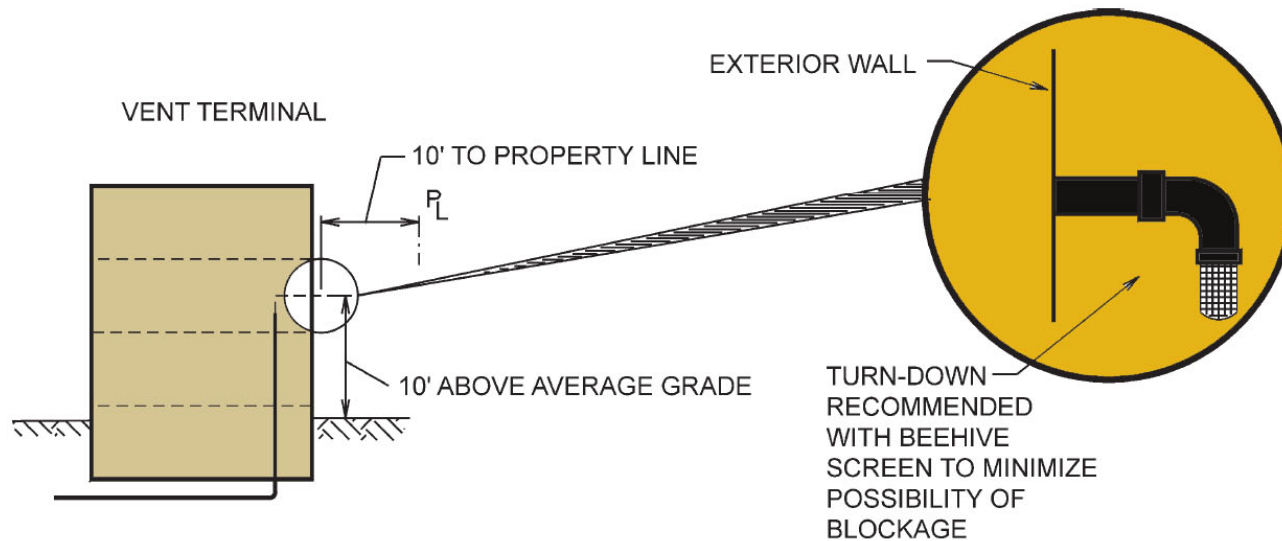


Approval (Urinals)

# The IPC Supports Sustainable Plumbing Installation



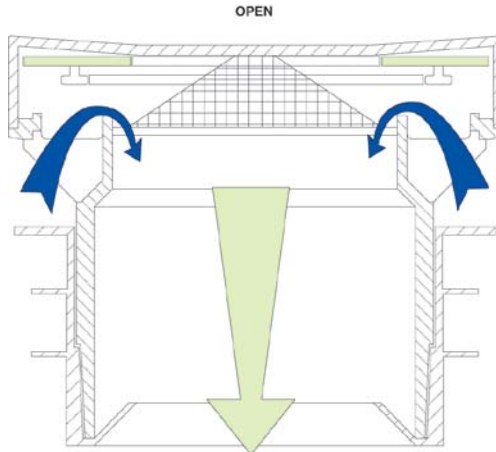
- Vent terminals can terminate through outside walls versus through the roof, thereby reducing vent-piping length.



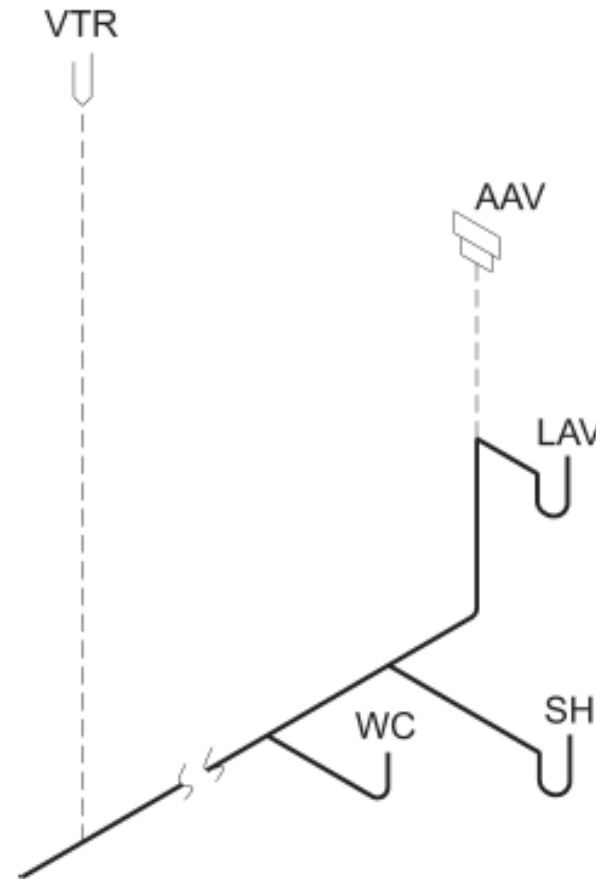


# The IPC Supports Sustainable Plumbing Installation

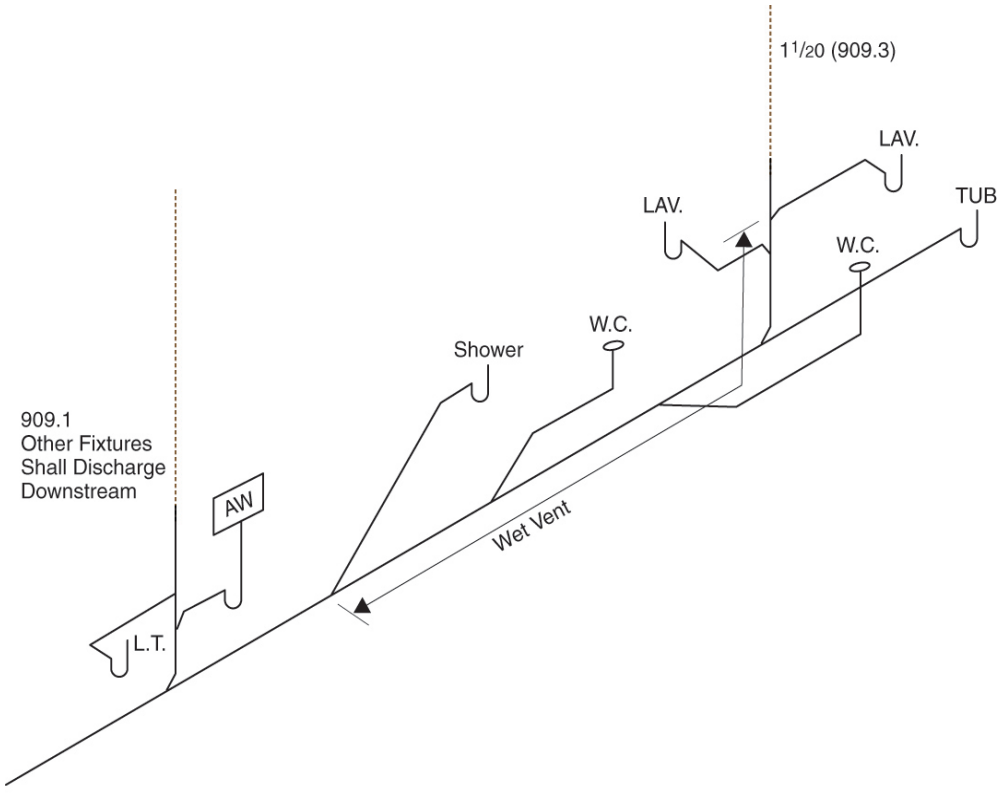
- Air admittance valve venting options can significantly reduce the length of vent piping to outdoor terminals.



Air admittance valve opens to admit air to relieve negative pressure



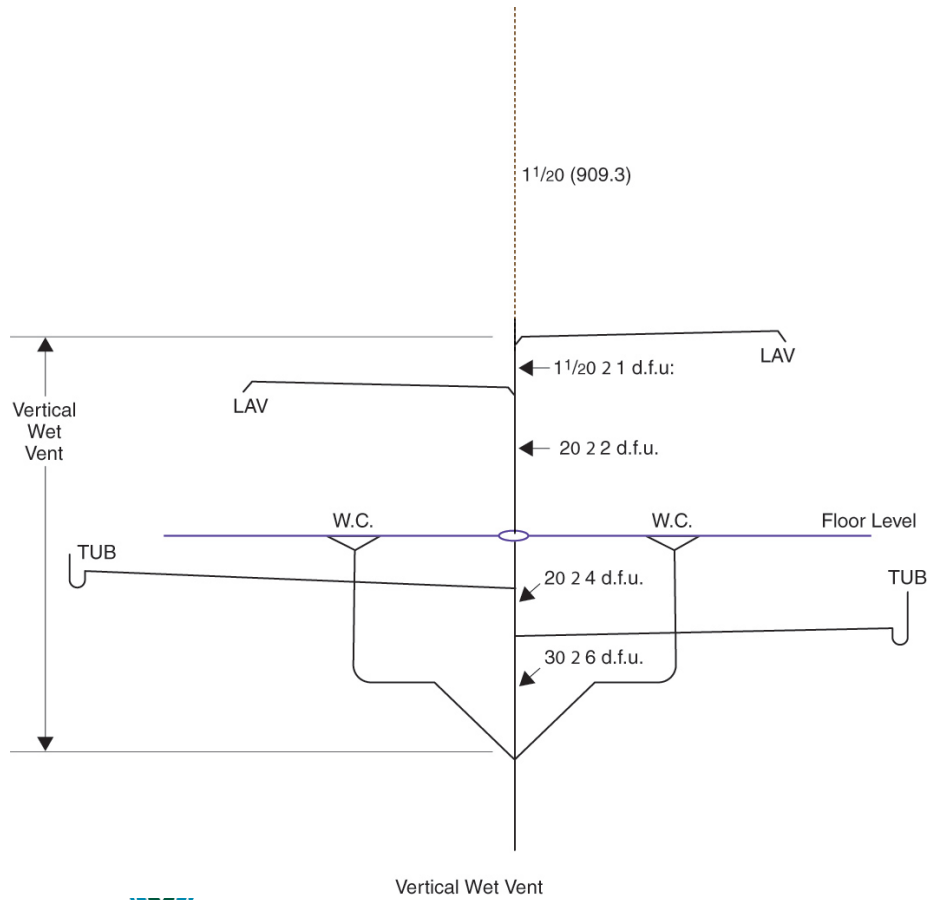
# The IPC Supports Sustainable Plumbing Installation



Horizontal wet venting is a material efficient method of venting a drainage pipe system. Section 909.1 of the IPC allows any combination of fixtures within two bathroom groups located on the same floor level to be vented by a horizontal wet vent.

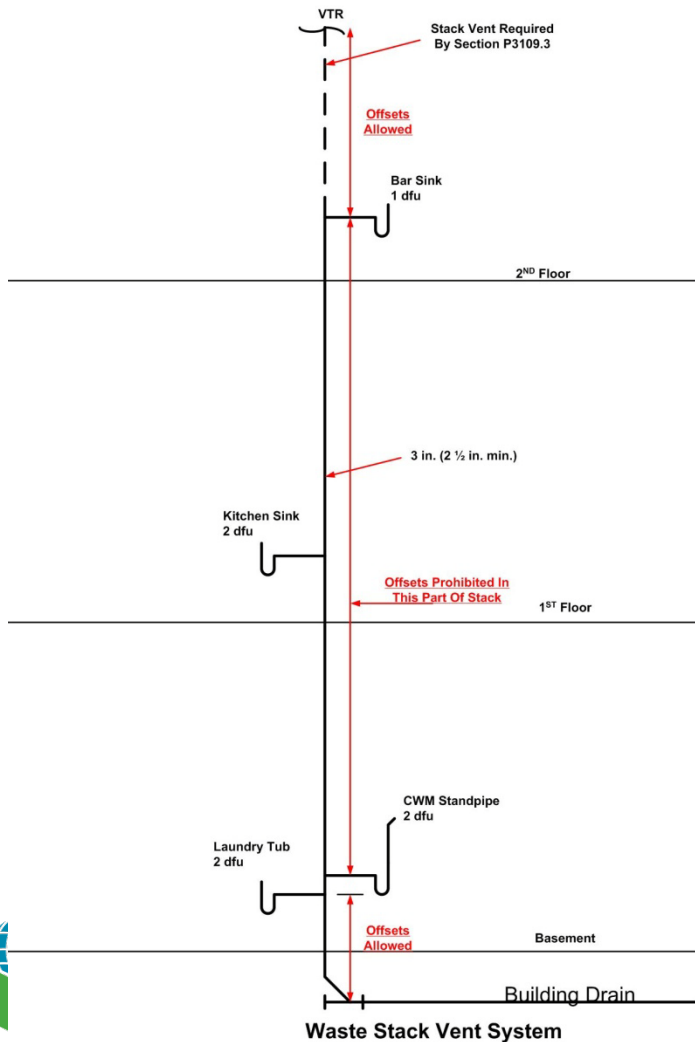
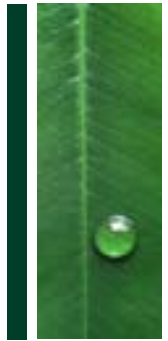
Horizontal Wet Vent

# The IPC Supports Sustainable Plumbing Installation

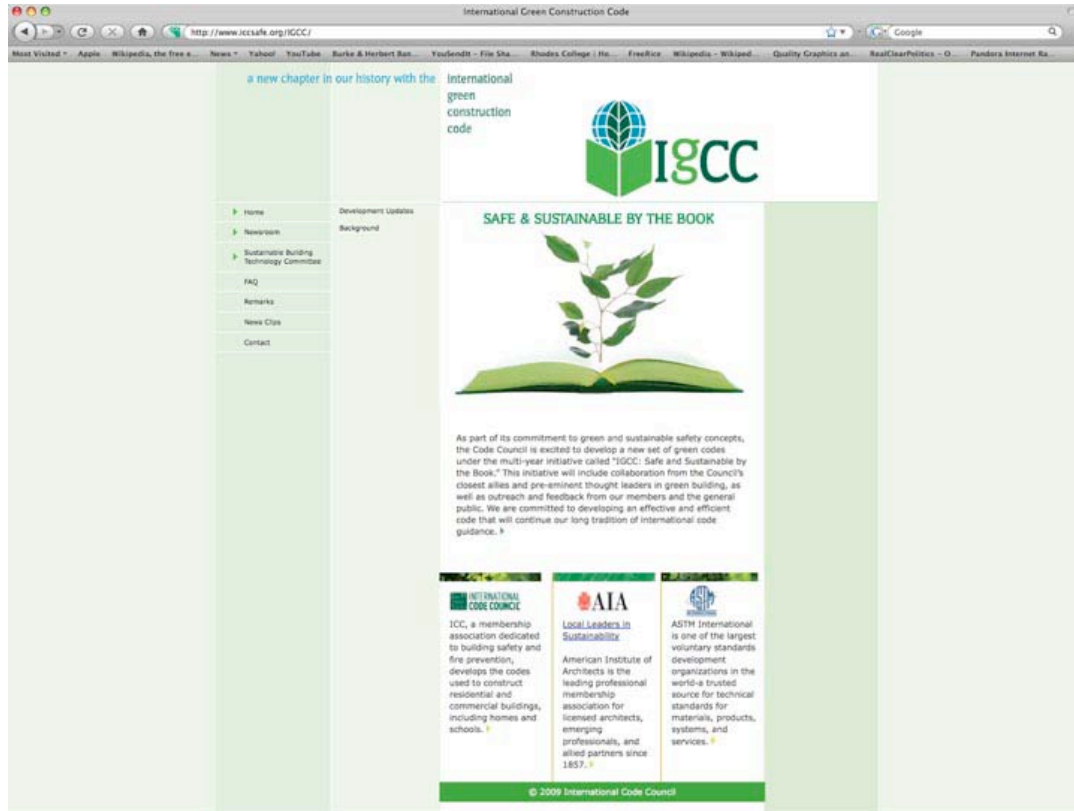


Vertical wet venting is a material efficient method of venting a drainage pipe system. Section 909.1.1 of the IPC allows any combination of fixtures within two bathroom groups located on the same floor level to be vented by a vertical wet vent.

# The IPC Supports Sustainable Plumbing Installation



- Waste stack venting is a material efficient method for the installation of vertical drainage pipe systems.
- Section 910 of the IPC allows the waste stack to serve fixtures on multiple floors. The waste stack vent serves as both a drain and vent. This system has been identified by a variety of names, including vertical wet venting, single stack venting and multi-floor stack venting.



More information and updates, visit the  
ICC website at:  
[www.iccsafe.org/igcc](http://www.iccsafe.org/igcc)