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Comparison of Enterprise Green Communities Criteria and the National Green Building Standard

The National Association of Home Builders (NAHB), in partnership with the International Code Council (ICC), sponsored the consensus-based development of the National Green Building Standard. The Standard has been approved by the American National Standards Institute (ANSI) as ICC 700-2008. The ICC is the author of the nation's building codes and, as such, the National Green Building Standard may be adopted by local jurisdictions as a code requirement or as a designation for residential construction that is considered "green" in its development and construction or rehabilitation.

Program Scope:
• While the Standard may apply to any residential construction, it is targeted at market- rate residential construction.

• The Standard also applies to land development. (Section 4 Site Design and Development).

Construction and Building Type:
• The Standard considers single family detached and attached, as well as multifamily low- and high-rise. Additionally, the Standard applies to renovation of existing structures and additions to single family structures that equal less than 75% of existing square footage.

Point Structure:
• The Standard has few mandatory requirements but requires an accumulation of points by categories and performance levels, as shown below. This was intended to allow builders flexibility in attaining green certification without compromising the environmental performance of the project.

- The Standard includes measures in the following six categories:
  - Lot & Site Development
  - Resource Efficiency
  - Energy Efficiency
  - Water Efficiency
  - Indoor Environmental Quality
  - Homeowner Education

• The final certification level is determined by the number of points achieved in each category. The project can only be certified to the lowest certification level achieved in any category. For example, if the home achieved Emerald in all of the categories, but only the Bronze level in Indoor Environmental Quality, the home can only be certified as Bronze.

Green Building Categories			Performance Level Points			
			Bronze	Silver	Gold	Emerald
1	Chapter 5	Lot and Site Development	39	66	93	119
2	Chapter 6	Resource Efficiency	45	79	113	146
3	Chapter 7	Energy Efficiency	30	60	100	120
4	Chapter 8	Water Efficiency	14	26	41	60
5	Chapter 9	Indoor Environmental Quality	36	65	100	140
6	Chapter 10	Operations, Maintenance and Building Owner Education	8	10	11	12
7		Additional Points from any category	50	100	100	100
		Total Points	222	406	558	697

• For the Green Subdivision Category, the point structure is as follows:

Green Subdivision Category		Performance Level Points			
		One Star	Two Stars	Three Stars	Four Stars
Chapter 4	Site Design and Development	79	104	134	175

Certification Process:

• The Standard states that "The Adopting Entity shall specify performance level(s) to be achieved as identified in Chapter 3 and shall provide a verification process to ensure compliance with this Standard."

• The NAHB Research Center provides national certification services for projects seeking certification under the Standard and also serves as the Adopting Entity. In that role, the Research Center qualifies, trains, and accredits Green Verifiers. For any residential project to be certified, the Research Center requires that all green building practices claimed by a builder must be confirmed through inspection by an Accredited Verifier. The Research Center reviews every verification report and issues the certification to ensure national consistency in the Standard's interpretation and application.

• Green Scoring Tool: Builders, developers and remodelers seeking certification to the Standard use a free, web-based application that simplifies and streamlines the design and certification process. The Green Scoring Tool is available at www.NAHBGreen.org and is designed to help builders incorporate green building practices into their projects.

• After using the Green Scoring Tool, the builder would contract with an Accredited Verifier. Currently, there are over 373 Accredited Verifiers in 48 states. The list of Accredited Verifiers can be found at http://nahbgreen.org/Certification/findverifier.aspx. The verifier must inspect the project at least twice, for a rough and final inspection. Verification fees are set by the verifier and vary by market.

• The Research Center's certification fee is $500 per home, but NAHB members receive a discounted price of $200. Multifamily buildings have the same fee and an additional $20 cost per unit.

Similarities and Differences with Green Communities Criteria:

Similarities:

• Both programs cover all forms of residential construction type - new construction and rehabilitation of existing buildings – and building typologies – single family and multifamily buildings.

• Both programs include many of the same environmental performance categories, with the exception of Enterprise Green Communities Criteria inclusion of an Integrative Design category.

Differences:

• The Enterprise Green Communities Criteria requires mandatory compliance with key environmental criteria. Compared to the Criteria, the Standard has fewer mandatory standards and relies on accumulating optional points much more than meeting mandatory requirements. The Enterprise Green Communities Criteria uses optional points as a way of going beyond the threshold criterion which is included as mandatory measures.

• Projects meeting the Standard can be certified to four performance levels: Bronze, Silver, Gold, and Emerald. Those meeting the Enterprise Green Communities Criteria are either certified as meeting the Criteria or not. In other words, there are no levels of certification.

• The Enterprise Green Communities Criteria references national industry standards where appropriate, such as Energy Star®, ASHRAE, GreenSeal and others as mandatory requirements without indicating the specific component requirements. The Standard also references the same industry standards but breaks out components or percentage level increases in efficiency (in some instances, with minor variations) as individual optional measures.

- For example: Under Standard measure 704.2 Lighting and Appliances, a project can achieve 4 points for 50% Energy Star hardwired lighting fixtures or Energy Star bulbs, or 8 points for 50% Energy Star fixtures. Neither of these qualify as the Energy Star Advanced Lighting Package (a Green Communities criterion), which requires 60% Energy Star hardwired fixtures and all ceiling fans.

• The Standard references numerous national industry standards, and it is unclear in some instances whether these are the same referenced in the Enterprise Green Communities Criteria and other green building programs. It is complicated to compare specific requirements between the Criteria and the Standard.

For example:

o Under Standard measure 701.1.3 the alternate Bronze level compliance states that any building that qualifies as Energy Star automatically achieves the Bronze level (30 points). However, it appears that by working with the various components of the Energy Star standard, including the Thermal Bypass Checklist, a project could achieve far more than 30 points, but that is unclear and would have to be examined step by step. Furthermore, if a project selects the alternative Energy Star Bronze compliance path, the highest certification the project can receive is Bronze.

• The Research Center has developed a Green Approved Products program to complement the Standard and help builders comply with the Standard. Building products are "green approved" when they have been pre-qualified to meet specific green building practices in the Standard. For example, points can be claimed for section 604.1 if building materials are used with recycled content for at least two minor components, and a number of products have been pre-approved for meeting this practice. The list of Green Approved Products is embedded in the Green Scoring Tool for builders to access as they are designing their buildings and selecting the green practices they would like to use.

• The Enterprise Green Communities Criteria references GreenSeal for paints and South Coast Air Quality Management District rules. The Standard in similar situations references GreenGuard and the California Department of Public Health (CDPH), specifically CDPH 01350 that addresses acceptable VOC levels. Builders hoping to qualify under more than one program will have the task of comparing the technical requirements from different agencies to determine what materials would comply with both.