

**Utilities**

electric · stormwater · wastewater · water  
700 Wood Street  
PO Box 580  
Fort Collins, CO 80522

**970.221.6700**

970.221.6619 – fax  
970.224.6003 – TDD  
[utilities@fcgov.com](mailto:utilities@fcgov.com)  
[fcgov.com/utilities](http://fcgov.com/utilities)

**R-TRAC****Meeting # 2**

**Topic: TRAC Process and NGBS Overview**

**Wednesday May 12, 2010, 3 – 5:30 pm**

---

**PARTICIPANTS****Utilities Green Building Team**

Amanda Sutton – Green Building Program Coordinator

Doug Swartz - Green Building Program Manager

Felix Lee – Green Building Code Manager

**Facilitator**

Susanne Durkin-Schindler

**Consultant**

The Brendle Group

John Butler

Julie Sieving

**R-TRAC Members**

<b>Company</b>	<b>Representative</b>
Armstead Construction	Jeff Schneider
Aspen Construction	Gil Paben
Aspen Homes of Colorado	Rob Sabin
Dana McBride Custom homes	Dana McBride
Energy Logic	Steve Byers
Highcraft Builders	Gordon Winner
Institute for the Built Environment	Laura Barrett
Larkspur Homes, LLC	Michael Bello
Merten Design Studios	Rob Ross
National Center for Craftsmanship	Nick Benson
Sovick Design Builders	Dennis Sovick
The Green Team Real Estate	Lara Williams
Vaught-Frye-Ripley Design	Linda Ripley
Vignette Studio	Terence Hoaglund

<b>Jurisdiction</b>	<b>Representative</b>
Larimer County	Tom Garton
Safe Built	Russ Weber
City of Loveland	Tom Hawkinson
City of Longmont	Chris Allison

### **Key Points:**

#### ***Review of Committee Expectations – Susanne Durkin-Schindler***

#### ***Meeting Ground Rules:***

TRAC participation expectations

1. Arrive on time
2. Minimize interruptions by turning off your cell phones, pagers, etc.
3. Raise your hand before speaking
4. Respect groups time and meeting time table
5. Listen as allies
6. Treat all participants with respect – ideas may be challenged-not the speaker
7. Notify a staff person if you are going to be absent - do your homework and let us know if you have any comments.

#### ***Green Building Standards Comparison Review – Doug Swartz***

Staff received a lot of feedback about the standards comparison tool. Based on your comments, Staff decided that the comparison tool may be more valuable to Staff and City Council in comparing the NGBS with other green building standards. We are not going to focus on the comparison tool at the TRAC meetings, but we will share the tool with the group as needed.

#### ***NGBS in Perspective – Part II***

#### ***Julie Sieving – The Brendle Group***

Update on the Benchmark Project:

The intent of this project is to fundamentally see where a “real” Fort Collins project falls in comparison to the NGBS and other standards. Want to address questions such as:

- What changes are necessary to get a Fort Collins home up to standard?
- What are the challenges?
- How does the performance of the building change?

This process will also help:

- Inform mechanics and ID glitches in NGBS.
- Develop a process for benchmarking that can be applied to a variety of homes in Fort Collins

- This is an evolving process –committee input is encouraged and appreciated.

Based on committee feedback, a track home built by Aspen Homes has been selected as the initial project to benchmark.

At the end of this pilot The Brendle Group will have come up with a building definition and a costing definition. The building definition will be developed from builder specifications, existing Fort Collins codes and regulations and the New Homes Study that was completed in 2007.

It is important to note that throughout this pilot project all cost and other sensitive information will be kept confidential. Confidentiality is important because developers may not want to share cost information from their projects to the public or their competitors. The goal is to provide meaningful data that is representative of the market. To do this, The Brendle Group is going to be taking several data points and aggregating them into a final product.

The benchmarking process will look at all levels of the NGBS – Bronze, Silver, Gold and Emerald and the costs associated with reaching each level. One option is to use the pilot project as a way to relate back to the code and see where the pilot project lies. For each chapter the benchmark home will be used to give an idea of the costs associated with certain aspects of the code.

### *Proposed Costing process*

Committee input will be used as a starting point for this process. Data will be verified as being accurate using the group process. Input from the committee will be combined with data from the pilot project and data from Longmont, as applicable, to come up with data sets for cost information. The Brendle Group will represent the costs in different ways. Specifics will be taken out and data will be presented as a range, normalized factor or a combination of both.

Keep in mind:

- This process is a pilot project and is evolving
- Would like to include multiple project types
- Hope to perform a chapter-by-chapter comparison of multiple homes.

The Brendle Group will be filling in the gaps of information prior to meeting with the group. The group will then decide if the proposed costs are a reasonable estimate. Staff is trying to estimate a range in terms of cost – not put a single example in front of council.

As we go through this process of costs and benefits, we want to make sure that it stays reasonable to fit into the Fort Collins market. This process will involve a lot of back and fourth – the Brendle Group will put information in front of the committee and it is the responsibility of the committee to make sure that the Brendle Group is on the right track.

### ***NGBS Chap. 4/5; Site and Lot Development – Felix Lee***

Chapter 4 and Chapter 5 have similar sections but Chapter 4 relates to the Site and Chapter 5 relates to the Lot.

- The **Site** is defined in the NGBS as, "Any area of land that is or will be developed into two or more parcels of land intended for multiple ownership...Site, as defined, generally contains multiple lots" (pg. 8).
- A **Lot** is defined by the NGBS as, "A single parcel of land generally containing one primary structure or use...A lot can be located within a site" (pg. 6)

The Site development is not counted in the points for the building development. Chapter 4 is totally separate from Chapter 5 and will not impact the level that the building can achieve.

Chapters 4 and 5 of the NGBS overlap with existing City and federal regulations. The NGBS and IgCC are designed to act as a template for any community across the nation to adopt. They are general and do not account for community-specific issues. The City of Fort Collins Land Use code and City Plan are designed specifically for our community. Staff is researching how to mesh the NGBS with existing codes and regulations to create a code that fits our community.

The green building team is meeting with City staff experts to compare both the NGBS and IgCC with existing codes and regulations to see where they overlap as well as areas for improvement. City Staff is most likely heading towards a direction of sticking with Local and State regulations and using the NGBS and IgCC to help update the existing codes. City staff needs to be able to show City Council that the green building codes have been compared to existing codes and that all of the issues have been addressed.

As mentioned earlier, part of this review process is to identify existing City codes and regulations that may need to be updated. The green building program development may not cover those issues directly, but they are being brought to the attention of code officials as we go through this process. While we may not address it directly, it is being discussed.

### **Committee Comments**

- Landscaping – need to be careful about what we require homeowners to do. This would be a good area to promote incentives. Innovative landscaping = paying less for water tap fee.
- Density requirements and how they compare with the zoning for the City. In most cases the builder does not have a choice about density.
- This system may be fundamentally flawed. If you start a project that does not have any landscaping issues (Topsoil, fencing around trees, etc.) you don't get the points that someone else may have access to. If you don't have a problem you don't get any points. There seems to be some penalties in place of incentives. The builder may not have access to a site where they could get points. Need to level the playing field to account for the fact that most of the available sites for development in Fort Collins are infill. All of the lots are already owned – there are not a lot of choices for the developer.
- Longmont took out Chapter 4/5 and awarded the minimum level of points to the developer. This leveled the playing field for development in Longmont.
- While we are focusing on the Code – we need to keep the other aspects of the Green Building Program in mind. The TRAC will be providing input on ALL of the different aspects of the program including incentives and education.
- Not everyone will achieve the Emerald level, but we don't want to discourage people from trying. The incentives should push developers to go for it. We may be able to assign "regional priority" points that can help provide balance to the issues that face the developing community.

### ***Homework:***

Read Chapters 4 and 5 in the NGBS.

### **NEXT MEETING**

May 17<sup>th</sup> – Cost and Benefits Meeting with The Brendle Group:  
3-5:00 p.m. City of Fort Collins Utilities – Training Room  
700 Wood St.

May 26<sup>th</sup> – R-TRAC Meeting #3:  
3-5:30 p.m. City of Fort Collins Streets Facility

# NGBS Ch 4+5 Site + Lot Development

R-TRAC Meeting  
May 12, 2010



## Definitions (Chapter 2)

**Site:** Land that will be subdivided into multiple lots

**Lot:** Single parcel of land containing one primary structure or use (SF or MF)



## NGBS Rating Structure (Ch 3)

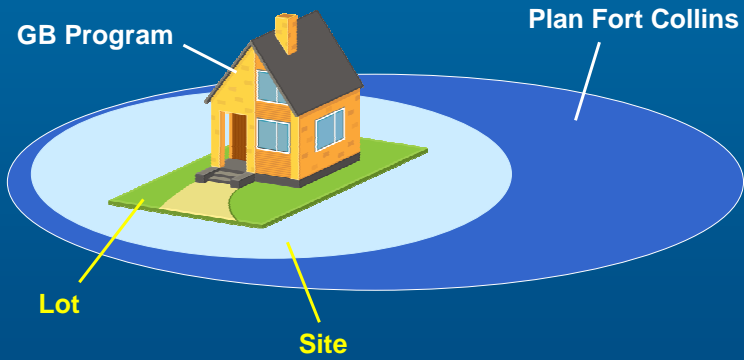
Green <b>Subdivision</b> Category	Performance Level Points			
	*	**	***	****
<b>Ch 4</b> <b>Site</b> Design + Development	NA	NA	NA	NA

Standalone “Green Subdivision” label

## NGBS Rating Structure (Ch 3)

Green <b>Building</b> Categories	Performance Level Points			
	Bronze	Silver	Gold	Emerald
<b>Ch 5</b> <b>Lot</b> Design, Prep, Develop	39	66	93	119
Resource Efficiency	45	79	113	146
Energy Efficiency	30	60	100	120
Water Efficiency	14	26	41	60
Indoor Environmental Quality	36	65	100	140
O+M, Owner Education	8	10	11	12
Additional Pts - any category	50	100	100	100
<b>Total Points:</b>	<b>222</b>	<b>406</b>	<b>558</b>	<b>697</b>

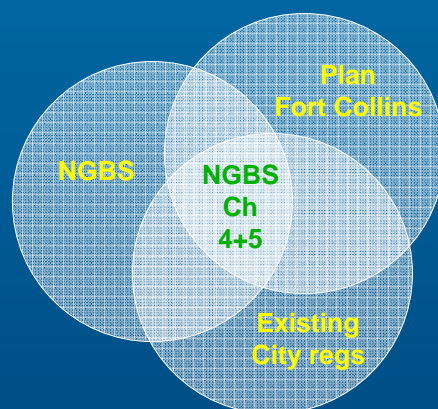
## Overlap + Alignment



5

City of  
Fort Collins

## Overlap and Alignment



6

City of  
Fort Collins



## Options for Adaptation

- Which GB Categories are included?
- How far in each category? (How high is the bar?)

7



## Longmont

- Chapter 4: Not adopted
- Chapter 5: Not adopted, “gimme” points

Green Building Categories	Performance Level Points			
	Bronze	Silver	Gold	Emerald
Lot Design, Prep, Develop	39	66	93	119
Resource Efficiency	45	79	113	146
Energy Efficiency	30	60	100	120
Water Efficiency	14	26	41	60
IEQ	36	65	100	140
O+M, Owner Education	8	10	11	12
Additional Pts - any category	50	100	100	100
<b>Total Points:</b>	<b>222</b>	<b>406</b>	<b>558</b>	<b>697</b>

8

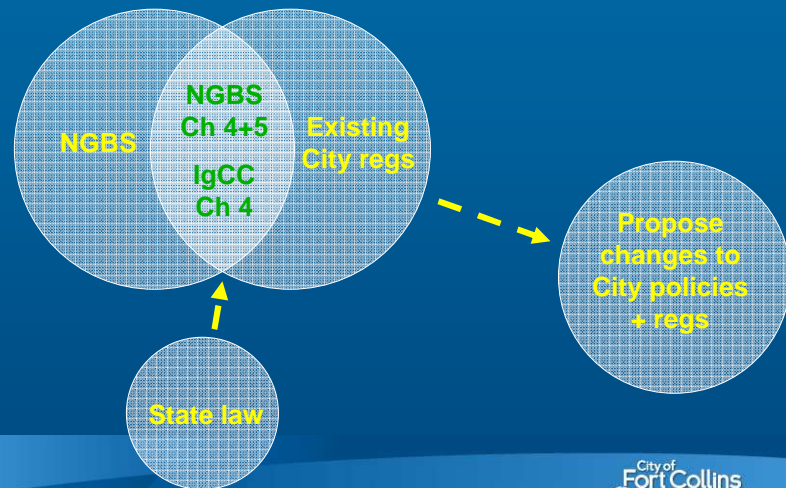
## Site + Lot GB Practices

Add diagram illustrating major topics

## GB Code Review + Development

- City Council
  - Are bases covered?
  - Are processes straightforward?
  - Are barriers/conflicts that slow GB innovation being addressed?
  - Should the bar be higher to advance GB more quickly?

## GB Code Review + Development



11

## GB Code Review + Development

Topic / GB Practice	Intent	Green Building Code Templates			Described where?	Stringency vs NGBS, IgCC (less, =, more)	Existing City regs / policies	
		NGBS Ch 4 (site)	NGBS Ch 5 (lot)	IgCC			Staff SME	Enforcement: Department
Building Orientation (actually Lot Orientation)	Solar-oriented lots make it more likely that solar radiation will be a benefit rather than a problem.	403.2		NA for site, 603.3(2) for building	LUC 3.2.3	City: 65% NGBS: 75%		Planning Zoning
Wildlife habitat	Create habitat where humans and wildlife can thrive.	403.7 404.4	503.6	NA	LUC 3.4.1		Erica Saunders Engineering Inspection (Helen M.) Stormwater	Development review process
Environmentally Sensitive Areas	Ideally avoid env sensitive areas; when that is not possible, encourage mitigation or restoration efforts to offset development impacts.	403.11	503.8	402.2	LUC 3.4.1		Erica Saunders	
Density	Encourage higher density to reduce infrastructure resource costs.	403.12	503.9	402.2.6(1) 407.2.6 407.2.7	LUC 3.7 LUC Article 4 (4.2, 4.5, 4.6, 4.10, 4.26)	NGBS may be more stringent in some areas	P&Z: Peter Barnes, Ted Shepard	
Mixed-use development	Encourage mixed-used development to reduce Vehicle Miles Traveled (VMT)	403.13	503.7	402.2.6(2)	LUC 3.5		P&Z: Peter Barnes, Ted Shepard	

12

## Existing City Regs + Processes

Add slide(s) with diagrams illustrating:  
City Code, Land Use Code, references  
(e.g. Stormwater criteria, Structure Plan)  
Development review, field enforcement

13



## Examples (1 per slide)

- NGBS only: Rainwater collection
- City regs only (+IgCC): Site lighting
- Both: Lot orientation

14

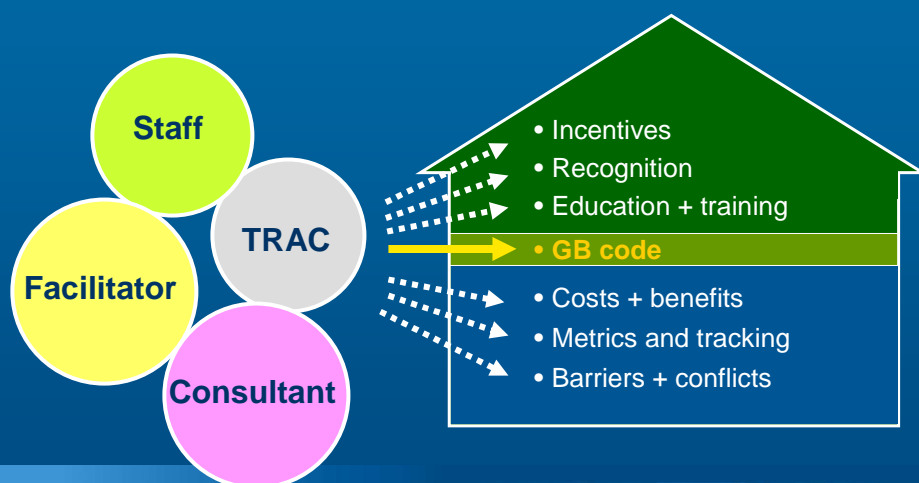


## GB Code Review + Development

- Completing draft X-reference table
- Checking accuracy with SMEs
- Distribute X-ref table + recommendations before R-TRAC Mtg #3

15

## Reminder: Think Beyond GB Code



16