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C-TRAC
Meeting # 3
Topic: IgCC Chapter 5
Wednesday June 2, 2010, 3 – 5:30 pm

PARTICIPANTS

Utilities Green Building Team

Amanda Sutton – Green Building Program Coordinator
Felix Lee – Green Building Code Project Manager
Gary Schroeder – Energy Engineer – Commercial GB Code Review

Facilitator

Susanne Durkin-Schindler

C-TRAC Members

Aller Lingle Massey Architects PC	Brad Massey
Beaudin-Ganze Consulting Engineers	Corey Rhodes
BHA Design	Angela Milewski
Brinkman Partners	Josh Guernsey
Bellisimo Inc.	Gino Campana
Institute for the Built Environment	Josie Plaut
Starwood Construction Mgmt	Sandy Willison
Greg D. Fisher, Architect	Greg Fisher
Trane / IFMA	Matt Horner
Architecture West	Steve Steinbicker
Bella Energy	Rick Coen

Building Officials

City of Longmont	Chris Allison
City of Fort Collins	Russell Hovland

Key Points:

Follow up Chapter 4 - Gary Schroeder

There were a few sections from chapter 4 that the group was unable to discuss at the previous meeting. Staff would like input from the group on those sections before moving on to the next chapter.

Pervious Pavement

The intent of this section is to reduce stormwater runoff form a site and improve water quality.

Committee Comments:

There have been several projects in Fort Collins that have used this type of pavement for parking lots and sidewalks. These projects include the CTL Thompson building, Odell Brewing Co. addition, and the new Union Place development.

There is a built-in incentive for using pervious surfaces because it reduces stormwater regulations and fees. One incentive is through lower detention requirements for less impervious surface. This could be incentivized further through fee reduction for reducing hard surfaces on the site (e.g. pervious pavement).

Changing and Shower Facilities:

The intent of this section is to encourage bicycle commuting by providing employees with changing and shower facilities in the building.

Committee Comments:

Even if chapter 4 is excluded from the code and existing City regulations are used, the sections that relate directly to the building should still be available to the builders as electives. One way that we can do this is to keep Chapter 4 and defer to City code for land use and zoning related issues. However, it may be better to amend the IgCC to take out the land use and zoning sections and leave the rest. This can be done by striking through the parts that are covered already.

Changing and shower facilities in a building are an example something that could be considered as a project elective that would count towards meeting the code. It is currently a base requirement of buildings that are larger than 10,000 sq. ft.

Carpool/fuel efficient vehicle parking:

The intent of this section is to promote the use of low emitting and fuel efficient vehicles and carpools.

Committee Comments:

There has been some opposition to this in the past. For example, there was a lot of push back from the community regarding the parking at the Mitchell building in Old Town. This was an issue when they tried to put parking for fuel efficient/low emitting vehicles in a public parking area. A point made relative to this is that clarity of policy is needed before implementing these kinds of things (e.g. is it enforceable, etc.). There are private lots in town with special parking for carpool and fuel efficient/low emitting vehicles. New Belgium's employee parking allows more fuel efficient vehicles to park up front and seems to work well.

There is an educational and enforcement issue with this type of project. This would be a difficult thing to require because it is not enforceable, partially because it's not straight forward to define the kinds of vehicles that can park there. That being said, this is a conversation starter for people and gets them thinking about this issue. The sign says that our community values this. It could be left as an elective to implement, but will this elective actually challenge people to go above and beyond? This is a land use and zoning issue and may be a decision for council to make.

It was also noted that motorcycle parking is easier (less controversial?).The only thing to be careful about with motorcycles is that while they are fuel efficient, they may not be low emitting. Staff needs to define the intent of this standard so it is clear as to what types of vehicles are included.

Next Steps:

Staff will take the feedback from the group to each department that is affected. At that point it is up to the department to make final decisions about changes. The green building team and TRACs are only going to be providing recommendations on Chapter 4. If there are conflicting opinions they will be noted and we will let the decision makers decide which way to go.

IgCC Chapter 5: Material Resource Conservation and Efficiency
Felix Lee
See Appendix A for Presentation

502.1 Construction material and waste management plan

The intent of this requirement is to divert construction materials from the landfill. The requirement is set at a 35% diversion rate. To get the elective credit the builder must go at least 20% above the requirement.

Committee Comments:

It has been difficult for some projects to find a hauler that is stable enough to provide this service for the entire length of the project. For one project, the hauler was able to provide a detailed report of what was recycled, but it was difficult to get them to stay on site. This would be difficult for a project superintendant to manage without assistance. Another issue is that recycling takes up a lot of room on a commercial construction site. This may be an issue for some infill sites in town, especially if this requirement applies to all projects regardless of size.

Is this something that should apply to all scales of projects? It might add too much complexity to a small remodel project vs. a 25,000 new building.

There have been several LEED projects in northern Colorado that have been able to achieve a 90% diversion rate. All LEED projects have achieved at least a 50% diversion rate. If a diversion rate of 35% were a requirement the City might need an introductory phase where the market is supported while it is getting started or offer an exception if the builder can show that it is not possible for a project.

Watch out for unintended consequences. For example, could this be a disincentive for infill projects? Maybe it's better as an incentive or elective.

Tracking methods need to be clear for this requirement. Currently, most contractors will get lift tickets from the haulers when a load is picked up from the site and then a summary can be made. You either need to pick weight or volume and then stay consistent for the entire project. The intent of this section is to keep materials out of the landfill, but it also relates to embodied energy found in materials. If you are looking at the use of heavy materials (concrete, steel, etc) you may want to go by weight. There is a weight vs. volume issue - the landfill charges by volume but most recycling is paid out by weight. Need to have a clear way to calculate this and track it.

This may be something that is more difficult for contractors to do if they are not ready to make this commitment. This requirement would be adding another administrative burden to the project. Need to make sure that this process can be streamlined. The City needs to make this practical and achievable without putting a lot of extra work on the builder. The City could mandate that if a hauler takes trash from a site, they have to haul construction recycling as well.

Staff Notes:

For this to be successful, a lot of integration needs to happen. Who in the City would administer this? There needs to be coordination between the City, recycling haulers, the county landfill and builders. How could this be

implemented/managed to make it as easy as possible for builders to carry out? Council should have a say in this, but they need to be well informed as to what this would entail for a typical building project in terms of logistics, time, and budget costs for builders and the City.

503.2 Material Selection

The intent of this section is to promote the use of environmentally friendly materials in the building. This would require the builder to have at least 55% of materials in the building be from environmentally friendly products (used, recycled content, recyclable, bio-based, indigenous).

Committee Comments:

This code needs to be enforceable and able to be reviewed in a timely manner. Then the inspector needs to look at it and be able to enforce it. Need to make sure that we have the resources to implement this code. This section puts a lot of work on the builder and the review department. There are also a lot of contractors that only want to meet the minimum code. The City needs to make sure that the green building code is attainable and enforceable without creating a lot of extra work for the contractor or the building department.

This requirement may be something that needs to be met at the occupancy phase. It is difficult to know what materials are used in the building until it is ready for occupancy. An example was given of a contractor getting bids from subs. One sub may be bidding a material with 20% recycled content, another with 50%. The contractor doesn't know until they select the subs what kind of material they will be getting. Even then it's not certain that the contractor won't change materials from what was bid. Documentation challenges would be significant. Local experience with LEED has shown that materials documentation doesn't come until at occupancy at best. It would be very challenging to have it as a permit requirement. Even if it was required for the Certificate of Occupancy (CO), there are concerns that it would delay the CO.

When the Brendle Group is doing their cost/benefit analysis they need to look at the peripherals - design costs, time to issue permits, inspection costs, field time, etc. so the City knows what they are getting into with adopting this code.

This could be a section that is optional where recognition is given to people who go above and beyond. It doesn't make sense to make it a requirement. The nice thing about LEED is that it has a handful of prerequisites that are required and the rest are electives. This gives the builder some flexibility and a chance to be creative.

One possible incentive to promoting green building would be to expedite building permits for green development. This would make green building more attractive as opposed to mandating a bunch of requirements that end up repelling people from developing in Fort Collins. Also, these incentives would need to be something that can be awarded after construction is complete (rebates, fee refunds, etc). This would reduce the amount of time that is needed to get a project done. An option for incentives would be to raise all building fees overall and then offer discounts/refunds to builders who reach a certain green building level.

Code Review Process Discussion

The group felt that Staff and TRAC members need to step back and think about what this green building code is going to achieve. One recommendation was to look at the low hanging fruits that will have a bigger impact or should be fundamental requirements and then have the City work its way up to a stronger code. The technology and markets may not be available at this time, but as time goes on these electives may be easier to achieve. Green building should be a fun and creative process. If there are too many regulations it may discourage builders from trying to build exceptional and creative buildings.

Committee Comments:

There may be a process problem here where Staff and the TRAC are looking at each section individually and missing the bigger picture. Instead, the TRAC should be focusing on the big hitters and overall codes. Fort Collins is already ahead of the curve in many areas. The City wants to stay that way. It is not Council's intention to repel development by adopting a bunch of new codes, but to set a high standard for the types of buildings that are developed in our community. Should we be looking at all of the codes as electives initially and then decide which ones should be mandated? Need to look at what we want as a baseline for a building and shoot for it. What is "acceptable" in our community?

A more realistic approach to this project would be to have the TRAC find the "gems" or low hanging fruit in the chapter that can be used to amend existing codes. Change the number of choices from 5 to 3 (1=throw it out, 2=Gem, 3=elective). The Gems would become the core (mandated) code. Staff could use Survey monkey for compiling votes from the group after the discussion and make decisions based on the majority of votes from the TRAC. (It was noted that the existing 5 choices are really 3. #1 use as-is, and #3 Change elective to mandatory are the same as Gems or low-hanging fruit, #2 Change mandatory to elective and #4 Modify GB practice details could both be considered electives, and #5 Eliminate GB practice is the same. If an item needs to be modified to be Gem or Elective then that would have to be called out in the notes section of the matrix.)

Initially, it may be better to have more of an elective based program where builders have to meet a certain number of electives in addition to meeting basic code. The number of required electives can be ratcheted up over the years. This will provide flexibility but still challenge builders to build better buildings. Electives still need to be understood and enforceable by the building department.

Staff Notes:

Staff is not sure that either "gem" or "low hanging fruit" are quite the terms we are looking for. These are essentially the items in the code we want to make mandatory. There are two categories of these – one being items that are "no-brainers" that people should be doing anyway, like flashings to prevent water damage and keeping your building materials clean and dry. The second category has to do with items that the TRAC and City consider high value, but maybe need some work to implement well. An example might be construction site recycling. As noted above, there are a lot of details to work out with this practice, but it also has a high value. We can call them "Keepers" for now. The idea is that it is something we want to keep in the code, but it may need some modification or work to figure out how it is implemented.

Homework:

Review Chapter 6 in the IgCC.

NEXT MEETING

June 16th – C-TRAC Meeting #4:

3-5:30 p.m. City of Fort Collins Streets Facility

Appendix A

Staff Presentation

IgCC Ch 5
Material Resource Conservation & Efficiency

C-TRAC Meeting
June 2, 2010
Felix Lee

City of Fort Collins

Overview

City of Fort Collins

Chapter 5: Scope

- Building material conservation
- Resource efficiency
- Environmental performance

Section 502: Material & Waste Management

- Sec. 502.1 – requires plan
  - –35% construction waste diverted from landfill
  - –City can increase to 50% or 65% (Table 302.1)

Table 302.1- Req'd by Jurisdiction

502.1	Enhanced construction material and waste management	☐ Yes	☐ No
502.1	Minimum percentage of waste material diverted from landfills - Select a percentage only where "Yes" is selected in the previous row.	☐ 50% ☐ 65%	

Table 302.1- Req'd by Jurisdiction

502.1	Enhanced construction material and waste management	X Yes	☐ No
502.1	Minimum percentage of waste material diverted from landfills - Select a percentage only where "Yes" is selected in the previous row.	X 50% ☐ 65%	

Section 502: Material & Waste Management

- Sec. 502.2 – Post Construction Recycling

  Building occupant recycling areas

Section 502: Material & Waste Management

- Sec. 502.3 – Storage lamps/batteries/electronics
  - Areas for storage provided
  - City designate items for ‘special disposal’

Section 503: Material Selection

Sec. 503.1 – Exception:

If Life Cycle Assessment Project Elective is selected compliance with Section 503 not required

Section 503: Material Selection

- Sec. 503.2 - At least 55% total materials are combination of:
  - ✓Used
  - ✓Recycled
  - ✓Recyclable
  - ✓Bio-based
  - ✓Indigenous

Section 503: Material Selection

- Sec. 503.3 : Environmental Stewardship - at least 75% comply with regs for:
  - ✓Clean Air
  - ✓Clean Water
  - ✓Resource Conservation
  - ✓Noise Control

Section 504: Lamps

- Sec. 504.1 – sets mercury limits
  - ✓Straight fluorescent
  - ✓Compact fluorescent

Section 505: Building Service Life

- Sec. 505.1 – BSLP

  document that describes min. useful service life of building's major components (e.g., 60 yrs)

  Table 505.1.1 p. 54

Section 506: Construction Phase Material Storage, Handling & Moisture Control

- Sec. 506.1 – Storage & Handling

  comply w/ manuf. recommendations

- Sec. 506.2 – Protect from moisture damage

Section 507: Project Electives

Table 303.1

pg. 25

Section 507: Project Electives

- 507.2 Waste management percentage of construction waste diverted from landfills increased to 55% from 35%

Section 507: Project Electives - clarification

- 507.3 Material Selection - 50 % of total building products used singularly

v.

- 503.2 Material selection - 55 % singularly or in combination

Section 507: Project Electives

- 507.4 Building footprint reduction

  reducing footprint by stacking stories:

  ✓ 45% - 1 elective

  ✓ 70% - 2 electives

Section 507: Project Electives

- 507.5 Reduced building volume

  Lower maximum ceiling height uses less materials

  (11’ residential & 12’6” other)

Section 507: Project Electives

- 507.6.1 BSLP

✓ 1 elective BSLP 100 yrs.

✓ 2 electives BSLP 200 yrs.

Section 507: Project Electives

- 507.7 Moisture control special inspections:

  foundation, sub-soil drainage systems, foundation damp proofing & water proofing, flashing, exterior wall coverings, roof coverings & drainage

Discussion

Next C-TRAC meeting

Wednesday June 16th

Streets Training Room

625 9th Street

3 – 5:30 pm

Prep: IgCC Chapter 6: Energy Conservation & Earth Atmospheric Quality – Phase I