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# LEED<sup>®</sup> Canada Registered/Certified Projects by Owner Type





















#### Introduction to LEED

#### What are the pitfalls of LEED?

- lack of focus on regionality: some points are very easy to get in certain locations (regional materials, for example): other points do not recognize the site context and what is best for the local microclimate (the same system is applied in Halifax as in Drumheller as in Yellowknife).
- tendency to point-shop instead of designing according to sound green design principles.
- not performance based: once a building has its designation, it may not be maintained in the order necessary to keep it a green building
- certification can be expensive, putting it out of reach for smaller businesses
- LEED is new: We're still figuring out how to do this. WE ALL ARE!















# **The LEED Documentation Process**

#### Documenting LEED

- Typically a LEED AP is employed on the project to manage documentation.
- Documentation is needed from several different parties.
- The amount of documentation varies between credits: some have a lot of paperwork, some just need a signature.
- A responsible party needs to sign off on each credit on a form called a LEED letter template.







#### **LEED** for Concrete Suppliers

Typical variations from a "typical" project:

- 1. Material brands are important
- 2. Cost information is required
- 3. Increased number of submittals
  - 1. Varies from project to project
  - 2. May include strange items (VOCs, location of manufacture...)
- 4. Waste Reduction (Usually GC responsibility)
- 5. Potential for proof of durable systems

## LEED for Concrete Suppliers: SSc7.1 Heat Island Effect – Non-roof

- Limited to grade level hard surfaces
- Several options:
  - bright white hard surfaces, including paving stones
    - SRI 29 minimum must be proven!
    - Can use a weighted average approach...higher SRI's are good!
  - Pervious paving
  - Shade for hard surfaces
  - Underground parking

#### LEED for Concrete Suppliers: MRc2 Construction Waste Management

- Need to recycle or salvage construction waste- 50% gets you one point, 75% gets you two.
- Everything that leaves the site has to be counted: crushed concrete, land-clearing waste, pallets, mortar.
- Measure waste either by weight or volume- but must be consistent throughout.
- Often request that suppliers and trades reduce the amount of waste (such as packaging) that comes onto site, or take back their waste
- Use waste bins properly (separating metal etc.)
- Does not apply to waste production or management in manufacture process

## LEED for Concrete Suppliers: MRc4: Recycled Content

Typically 6 to 10 materials...the expensive ones

- Concrete and Masonry materials often included
- Follow specs on materials (Use more recycled content materials)
- Collect LEED material information sheets from some material suppliers with the following information:
  - Material product name
  - Cost of material
  - Recycled content- both post-consumer and post-industrial
- Forward the material information sheets to the LEED consultant.
- One important item relates to the concrete: need to get information from the concrete supplier with details on the different mixes used on site and their SCM contents (see the separate MRc4 template).

# LEED for Concrete Suppliers: MRc4: Recycled Content

#### Changes from Previous Version of LEED in Canada

- Based on Portland Cement Reduction (Not % of SCMs)
  - Base Mix = Design Strength (MPa) x K
    - K=10 non air entrained
    - K = 12.5 air entrained
  - Then multiply by 2
- But reduce by factor of 2 because it is post industrial
- Then multiply by cost of cementicious materials (not concrete, and not formwork)
  - If cost of cementicious materials is not available, can use percentage by mass of cementicious material.



# LEED for Contractors MRc5: Regional Materials

Typically 6 to 10 materials...the expensive ones

- Concrete and Masonry materials often included
- Follow the specs on materials (Use materials that have been manufactured and/or extracted locally)
- Complete LEED material information sheets from some material suppliers with the following information:
  - Material product name
  - Cost of material
  - Location of manufacture
  - Location of Extraction
- Forward the material information sheets to the LEED consultant.

## LEED for Contractors MRc7: Certified Wood

- Only applies to wood that stays as part of building
- Does not apply to formwork, scaffolding, tools, etc.





## LEED for Contractors RPc1: Durable Building

- The building science professional will develop the Building Durability Plan READ THIS if available (It should define responsibilities).
  - May require a quality assurance program to be documented
  - Ensure that trades are working according to the requirements of the plan.
- Submittals require signature from GC could pass liability to masonry contractor
- Credit requires use of building envelope materials that last half the life of the building – may need to prove potential for long life
  - Many options for proof









LEED Myths
<ul> <li>You need actual material receipts to document cost         <ul> <li>The reality is LEED does not define how you get costs. It needs to be reasonably accurate but does not need to be a receipt.</li> </ul> </li> </ul>
<ul> <li>The LEED police will get you</li> <li>There are no LEED police. If you follow the rules it will work out. If you make assumptions you take risks</li> <li>"Catch people doing the right thing"</li> </ul>
<ul> <li>LEED APs know everything         <ul> <li>Every person in this room is 16 hours away from being a LEED AP.</li> <li>Some LEED APs took the exam in 2002</li> </ul> </li> </ul>
<ul> <li>LEED never changes         <ul> <li>LEED is in a constant state of change</li> <li>CaGBC recently adopted regular cycle for change</li> <li>CIRs (credit interpretation rulings) adjust requirements a bit</li> </ul> </li> </ul>



