



**The**

# **Green Building Policy**



**for Government of Manitoba Funded Projects**

**Manitoba**



# The Vision

To create a **significant improvement** in how new and renovated buildings funded by the Government of Manitoba perform over their **entire life cycle** from an environmental, energy and economic perspective.

# The Goals

- **Reduce overall expenditures** through improved building performance, **full cost accounting** and a life-cycle approach to costing.
- **Reduce Manitoba's exposure to the price volatility** and long-term supply concerns associated with the use of non-renewable fossil fuel imported from outside the province (ex: natural gas, fuel oil and propane).

# The Goals

- **Create a common and consistent framework for green building standards** across provincial government departments, Crown corporations and agencies and other levels of government
- **Minimize the negative environmental impacts** associated with building site selection, construction, renovation, operation, maintenance, repair and demolition or deconstruction, without impairing the intended use or function of the building.

# The Goals

- **Reduce greenhouse gas emissions** from Manitoba's building sector by improving energy efficiency and expanding use of clean, renewable energy.
- Capitalize on other benefits often achieved by green buildings such as **Healthier, more productive indoor environments** and improved asset values.
- **Create economic opportunities** for Manitoba business by stimulating the demand for green building products and services.

# The Scope

## 1. Organizations and Projects Affected

Provincial Government Departments; Crown Corps.; RHAs; Schools  
Other projects receiving provincial government funding

## 2. Building Project Type and Size

Commercial/Institutional; New Construction >600 m<sup>2</sup>; Major Renovation

## 3. Future Scope

Residential Buildings; Existing Buildings; Leased Accommodations

# The Requirements

Integrated  
Design  
Process

1.

Energy  
Efficiency

MNECB+33%

Power Smart

2.

Life  
Cycle  
Costing

3.

Minimum  
LEED® Silver  
Certification

or Green Globes™ equivalent

4.

Preference for  
Low or Zero  
Carbon  
Energy

5.

# Currently:



Courtesy of MIT

- **80+ projects** are currently participating
- **4+ Million sf** of construction
- **40%** ICI permitted activity in Manitoba



# Currently:



Courtesy of Prairie Architects

- **80+ projects** are currently participating
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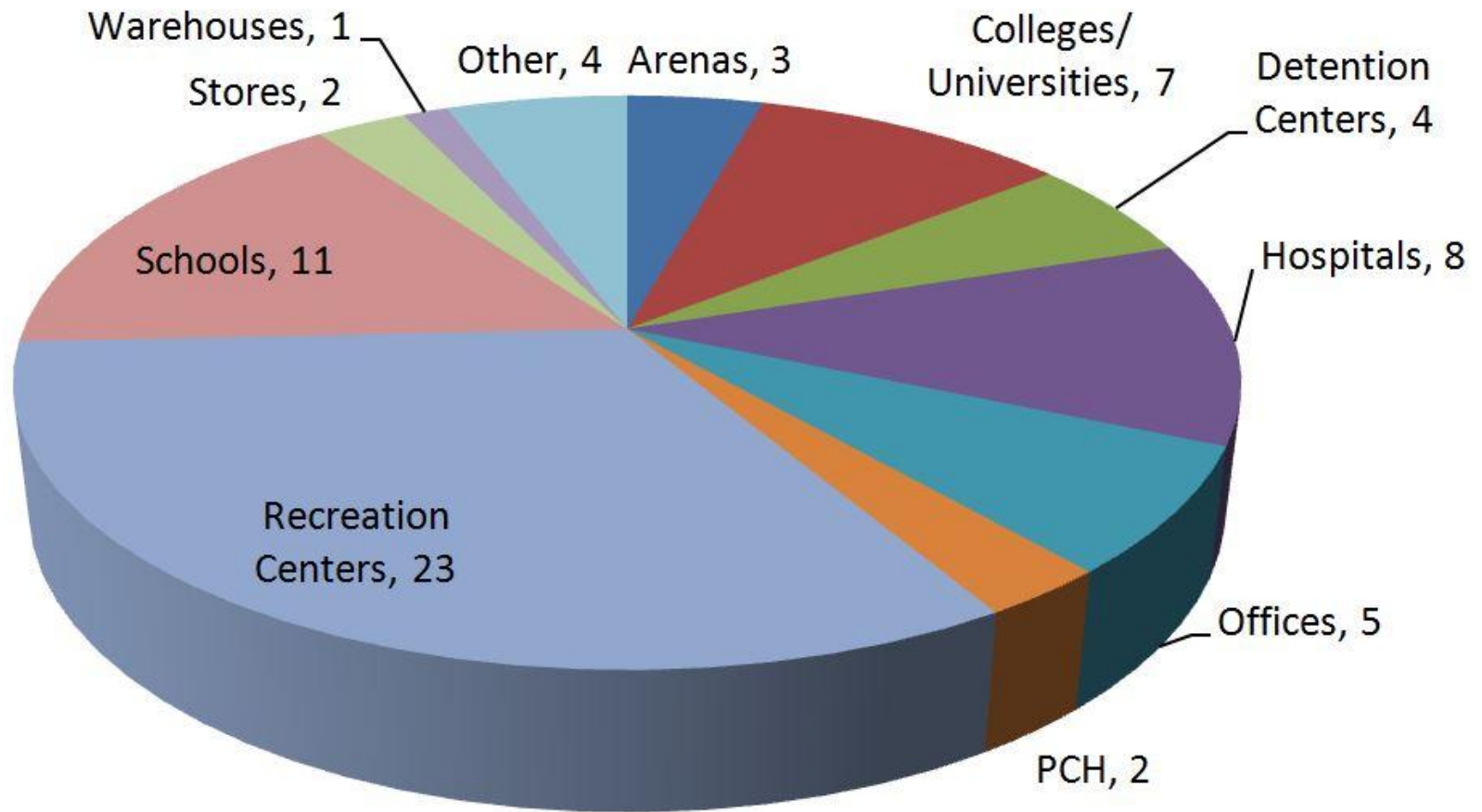
# Currently:



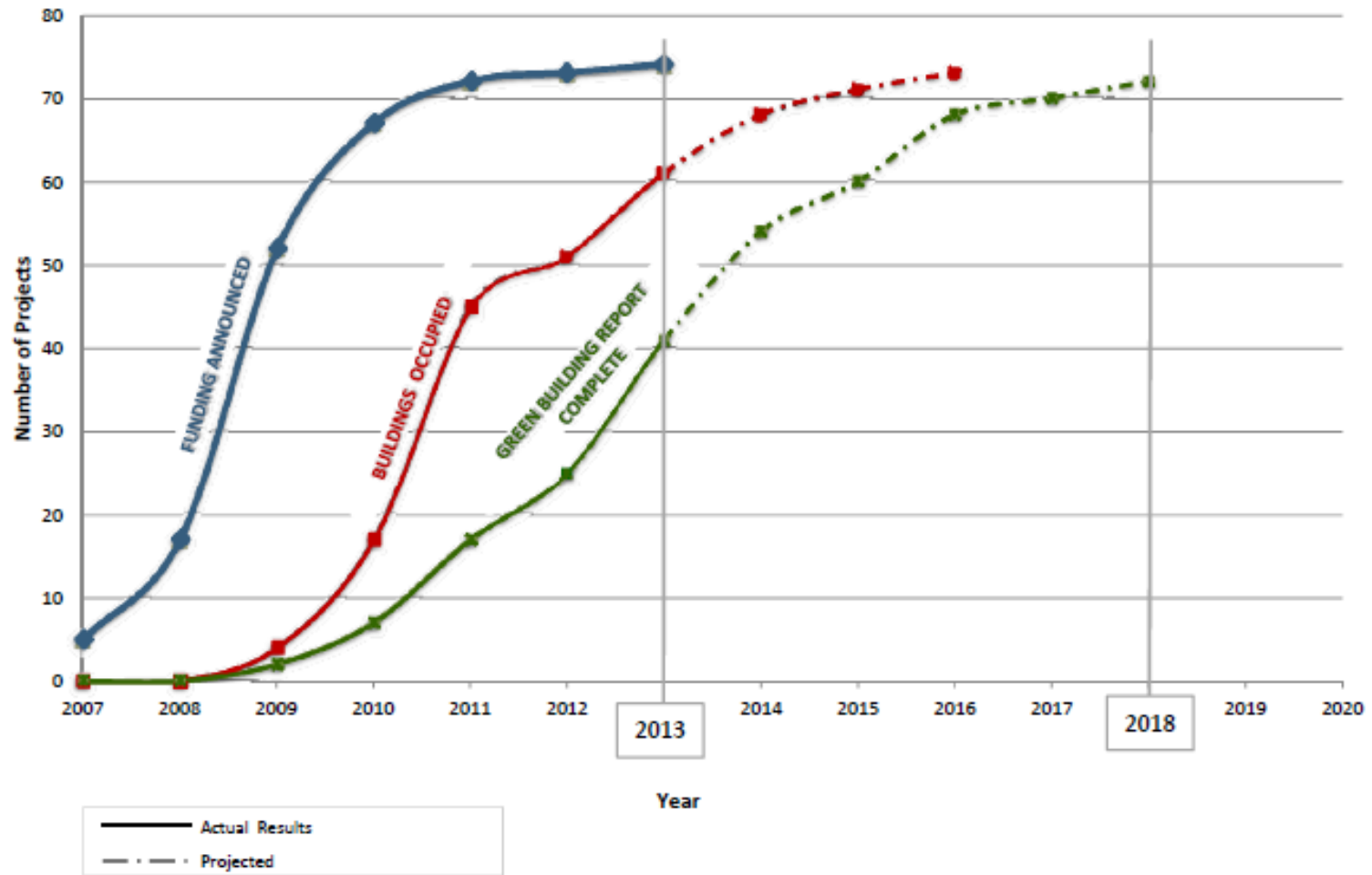
Courtesy of Mb Communication Services

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- **4+ Million sf** of construction
- **40%** ICI permitted activity in Manitoba

# Green Building Policy Projects



### Manitoba Green Building Policy Projects Current Status & Future Projections



\*Note: Results shown after Dec 2012 are projected. Actual results may vary.

# Trends and Observations

- Adoption of **green building language** and understanding has increased
- Adoption of **green design practices** such as commissioning, energy modeling, and green product specification
- Adoption of **green construction practices** such as waste diversion, erosion control





# More Trends and Observations

- **One size does not fit all.**
- Delivery of a green building is **not just the consultant's deliverable.**
- Clarity of the deliverables: **GBP is not just LEED**
- The green building momentum fades at **occupancy.**

.... therefore ....



# VERSION 2

## The Green Building Policy



for Government of Manitoba Funded Projects

Manitoba




# Green Building Program Ver. 2.0

- **Enhance Accessibility.** Ensure Manitoba's green building standards and practices, reporting requirements, forms, team roles and responsibilities are readily available to stakeholders.
- **Provide Clarity.** Translate Manitoba's Green Building Policy document into a manual.
- **Expand Program.** Ensure the advantages of building green are preserved. Identify GBP standards and practices for existing buildings, leases and residential.

# Enhance Accessibility

Printer Friendly | Site Map | Contact Us (1-866-MANITOBA)

Search   Enter Keywords

**Manitoba** 

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## Manitoba Green Building Program

Manitoba.ca > Infrastructure and Transportation > Manitoba Green Building Program >


### Get Started

- Home Page
- Reports and Expenses
- Highway Conditions
- Legislative Tour
- Manitoba Green Building Policy
- Manitoba Green Building Program
  - GBP Manual Index
  - FAQs
  - Archive
- Official Highway Map
- Flood Information
- Manitoba's Spring Road Restriction (SRR) Program
- Divisions
- Boards and Agencies
- Tenders Information
- Ferry Schedules
- Organizational Chart (PDF, 30 KB)
- Annual Reports
- Contacts

The draft of the Green Building Program Manual,v2 is now available. GBCT invites comments until September 4, 2013.



**GREEN BUILDING PROGRAM MANUAL**  
Version 2.0 (2013)  
By Environmental Agency Funded Projects

Manitoba 

### Need More Info?

Green Building Coordination Team  
 Accommodations Services Division  
 Infrastructure & Transportation  
 1700 Portage Avenue  
 Winnipeg, MB R3J 0E1  
 email: [greenbuilding@gov.mb.ca](mailto:greenbuilding@gov.mb.ca)

### Quick Links

- Expression of Interest Industry Advisory Group - Invitation
- Expression of Interest Industry Advisory Group - Terms of Reference

### Resources

- Departments
- Phone Book
- Manitoba Laws
- News Releases
- Government Inquiry
- Proactive Disclosure

Foreword [The Manitoba Green Building Policy](#)  
[The Manitoba Green Building Program \(GBP\) Legislation](#)

Section 1 [GBP Administration](#)

Section 2 [GBP Standards & Practices for New Construction, Additions, and Renovations](#)  
[Project Audit \(PA\)](#)  
[Planning and Design \(PD\)](#)  
[Adoption and Resilience \(AR\)](#)  
[Material Selection \(MS\)](#)  
[Construction Protocol \(CP\)](#)  
[Building Operation \(BO\)](#)

- Updated Web site
- The Green Building Coordination Team
- Internal and Industry Advisory Groups
- Presentations

# Provide Clarity



- The Green Building Program Manual
- The Green Building Program Forms
- Green Building Program Guidelines

DRAFT 2013

# Provide Clarity



- **NO SUBSTANTIVE CHANGE TO THE 2007 REQUIREMENTS**
- **2013 V2 just unpacks the original requirements for Commercial Institutional: New Construction Projects**

# Provide Clarity: Criteria for New Construction

- **Verification**
- **Planning and Design**
- **Adaptation and Resilience**
- **Sustainable Materials**
- **Responsible Construction**
- **Transition to Occupancy**

# Criteria for New Construction:

## Verification:

*Protect owner investment, confirm delivery of green building criteria and provide quality assurance.*



- Energy Efficient Design
- Environmental Measures
- Building Commissioning



# Criteria for New Construction:

## Verification:

*Protect owner investment, confirm delivery of green building criteria and provide quality assurance*



- **Energy Efficient Design**

*NOTE: Green Building Regulation applies in parallel to the energy efficiency criteria of the GBP.*

*Applies also to leased buildings that are built-to-suit for a government tenant.*



# Criteria for New Construction:

## Planning & Design:

*Maximize potential for occupant comfort, and community, financial and environmental sustainability.*

# Criteria for New Construction:

## Planning & Design:

*Maximize potential for occupant comfort, and community, financial and environmental sustainability.*



Photo source: [www.southface.org](http://www.southface.org)

- Integrated Design Process
- Life Cycle Cost Analysis

# Criteria for New Construction:

## Planning & Design:

*Maximize potential for occupant comfort, and community, financial and environmental sustainability.*

- Recycling
- Active Transportation
- Natural Light & Views
- Low Water Landscape Planning
- Indoor Air Quality
- Potable Water Management
- Energy Management
- Community Access



Courtesy of ft3 Architecture xLandscape Interior Design

# Criteria for New Construction:

## Adaptation & Resilience:

*Reduce potential risks associated with climate change and energy supply volatility.*



185 Smith Street, Winnipeg, Manitoba, Canada  
Photo source: Manitoba Housing Authority

SolarWall®  
preheating  
intake air

- Energy Sources
- Adaptability of Systems

# Criteria for New Construction:

## Sustainable Materials:



*Augment occupant health,  
support resource conservation  
and support a green economy in  
Manitoba*

- **Low Emitting Materials**
- **Water Efficient Fixtures, Fittings & Appliances**
- **Manitoba Products**
- **Products with Recycled Content**
- **Salvaged Building Materials**

# Criteria for New Construction:

## Responsible Construction:



*Protect the community and the environment from construction practices that produce waste and pollution.*

- **Pollution Prevention Planning**
- **Waste Diversion From Landfill**



# Criteria for New Construction:

## Transition to Occupancy:

*Ensure persistence of green building investments during occupancy.*



- **Purchase Energy Efficient Electronics & Appliances**
- **Purchase Low Emitting Paints, Solvents, Cleaning Products and Furnishings**
- **Use Green Cleaning Products and Procedures**
- **Non-Smoking Policy**
- **Use Local Recycling Programs**
- **Conduct Energy & Water Use Monitoring**

# Provide Clarity: The Manual



- Describes each criteria, reporting requirement, cross-references and general commentary
- Consolidates Manitoba context, codes, programs
- Contains Guidelines for select criteria

## GREEN BUILDING PROJECT CO-ORDINATION GUIDELINE

October 2013

Applies to the Building Construction Project Team

Applies to Government Departments, Agencies and Crown Corporations.

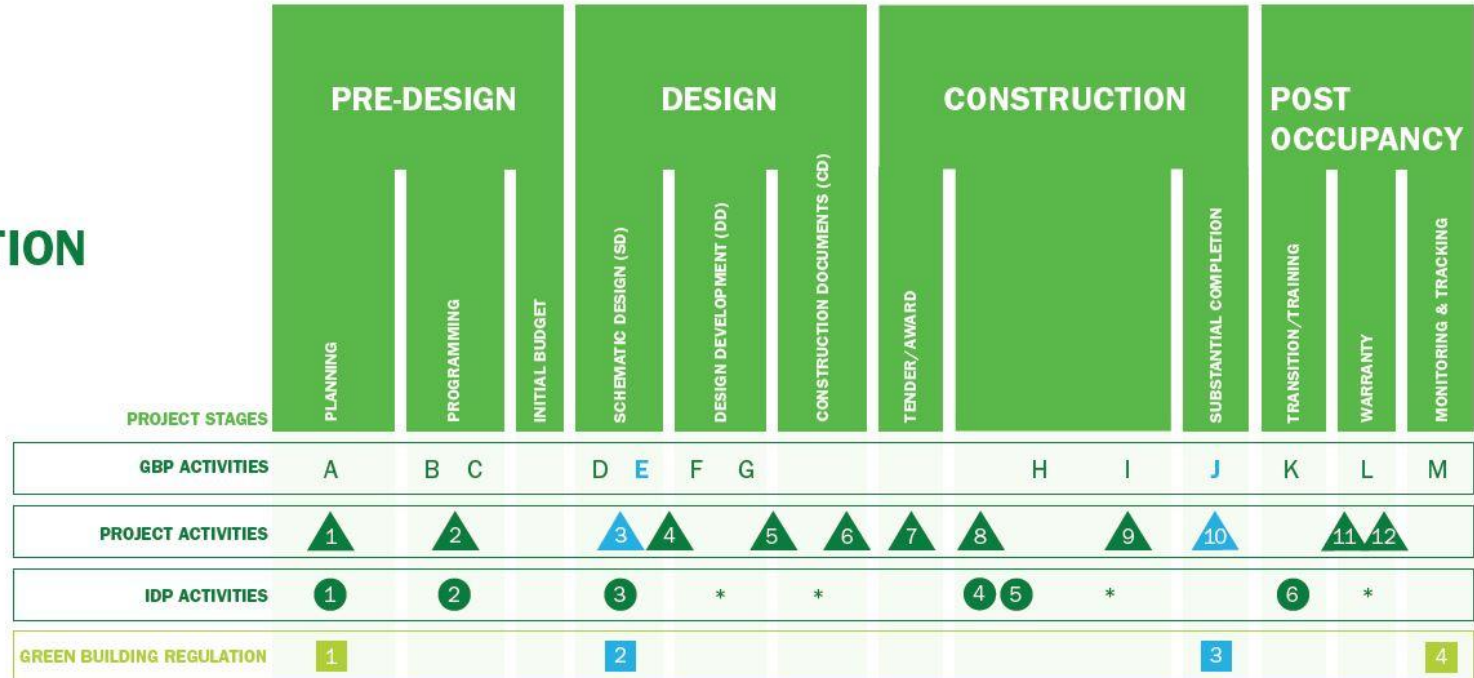
Indicates Green Building Program Milestones

**NOTE:**

This chart is typical of conventional design/bid/project delivery model. Timing for each phase may vary according to project size and scope. Other project delivery models need to adjust the steps and processes to accommodate project conditions.



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greenbuilding@gov.mb.ca



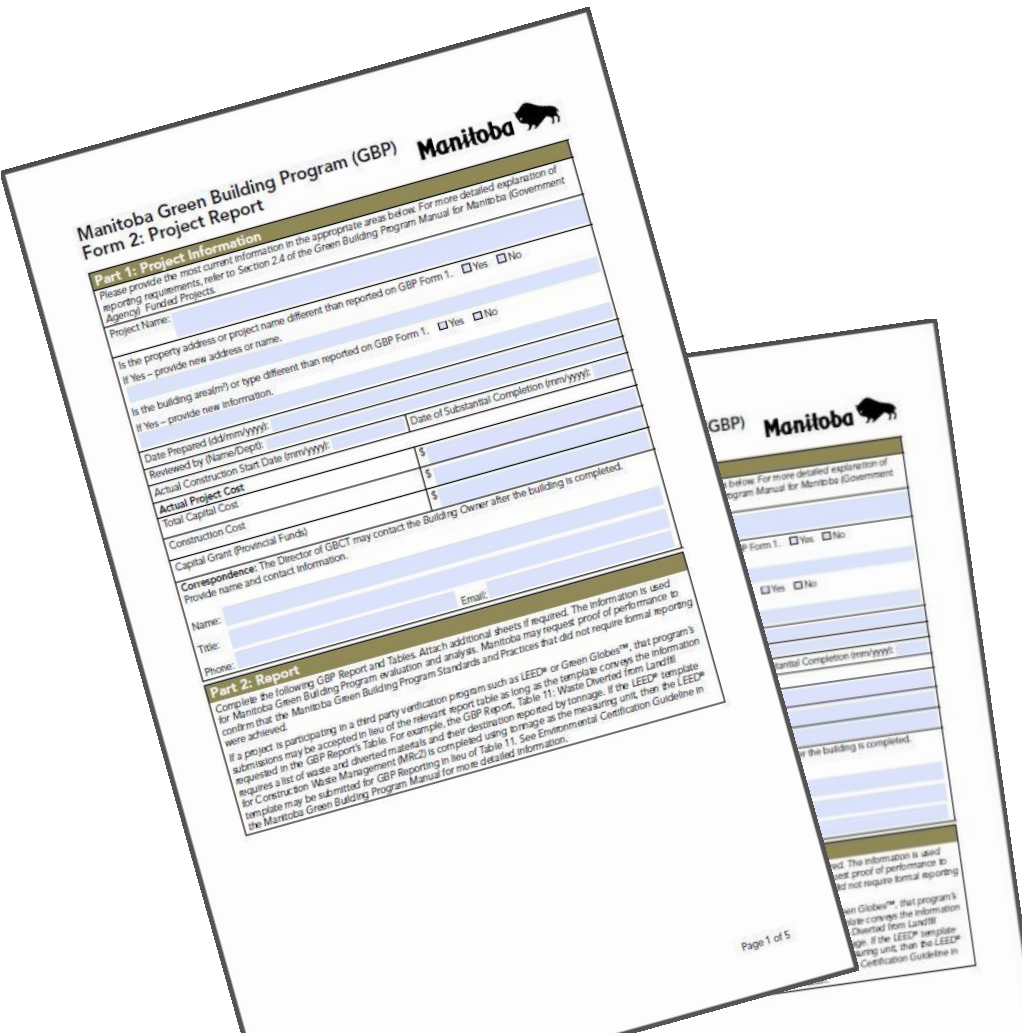
- GBP ACTIVITIES LEGEND**  
(Guide for building owners/ building representatives and funding recipients)
- Review the Green Building Program (GBP) standards and practices
  - Submit MB Hydro Power Smart for Business New Buildings Program (PSNBP) application
  - Complete Owner's Project Requirements (OPR) with consultant
  - Have building simulation (energy) baseline model prepared
  - Submit GBP Form 1**
  - Have building simulation model(s) prepared (at least 3 tested design scenarios)
  - Ensure Basis of Design (BoD) is prepared
  - Ensure building simulation compliance model is prepared
  - Receive Power Smart Designation
  - Submit GBP Form 2 and attachments**
  - Complete commissioning documentation
  - Complete PSNBP Proven Performance Incentive forms (if applicable)
  - Attend post occupancy interview with GBP Representative

- PROJECT ACTIVITIES LEGEND**  
(Guide for project managers)
- Review IDP activities GBP and reporting mechanisms
  - Engage commissioning and programming consultants
  - Review GBP Form 1 (and variance considerations)**
  - SD- Update Owner/Review/Obtain Owner Approval
  - DD- Update/Review/Approval
  - CD- Update/Review/Approval
  - Tender/ Award
  - Construction Start-up
  - System Commissioning
  - Substantial Completion/ Beginning of warranty period. Review GBP Form 2 (confirm variance conditions were satisfied)**
  - Warranty review at 10 months
  - Warranty period ends

- INTEGRATED DESIGN PROCESS (IDP) ACTIVITIES**  
(Guide for Consultant /IDP facilitator)
- Schedule and conduct Business/Project Planning Meeting(s)
  - Schedule and conduct Programming Meeting(s)
  - Schedule and conduct Facility Performance/Multidisciplinary Team Start Up Meetings
  - Schedule and conduct General Contractor and Sub-contractor Start Up Meeting(s)
  - Schedule and conduct Construction Meeting(s)
  - Schedule and conduct Post Occupancy Deliverable Meeting(s)
- \* Schedule and conduct Multidisciplinary Team Meeting(s) at least one in each phase
- NOTE:**  
This Schedule indicates the approximate timing of "first" meetings for the IDP Protocol. It is presumed subsequent meetings will be scheduled as appropriate to the project.

- GREEN BUILDING REGULATION\***  
(Guide for Government Departments, Agencies and Crown Corporations)
- GBP Liaison will advise agencies and branches who fund affected projects to include green building requirements in contracts and agreements and to report using GBP Forms.
  - Agency/branch will return completed GBP Form 1 to GBP Liaison. The Liaison confirms GBP Form 1 is also sent to Director of GBP.**
  - Agency/branch does completeness check and returns completed GBP Form 2 to GBP Liaison. The Liaison does performance and compliance review for organization. Then sends copy of Form 2 to Director of GBP**
  - GBP Liaison retains copies of GBP Forms in the event the organization (government department, agency or Crown Corp.) is audited for compliance to legislation or Green Building Policy directive.
- \* The Climate Change and Emissions Reductions Act, Green Building Regulation (C195-M.R. 38/2013)

# Provide Clarity: The Forms



**Manitoba Green Building Program (GBP) Form 2: Project Report**

**Part 1: Project Information**

Please provide the most current information in the appropriate areas below. For more detailed explanation of reporting requirements, refer to Section 2.4 of the Green Building Program Manual for Manitoba Government Agency/ Funded Projects.

Project Name: \_\_\_\_\_

Is the property address or project name different than reported on GBP Form 1.  Yes  No  
If Yes – provide new address or name.

Is the building area(s) or type different than reported on GBP Form 1.  Yes  No  
If Yes – provide new information.

Date Prepared (dd/mm/yyyy): \_\_\_\_\_ Date of Substantial Completion (mm/yyyy): \_\_\_\_\_

Reviewed by (Name/Dept): \_\_\_\_\_

Actual Construction Start Date (mm/yyyy): \_\_\_\_\_

Actual Project Cost: \$ \_\_\_\_\_

Total Capital Cost: \$ \_\_\_\_\_

Construction Cost: \$ \_\_\_\_\_

Capital Grant (Protectal Funds): \$ \_\_\_\_\_

**Correspondence:** The Director of GBCT may contact the Building Owner after the building is completed. Provide name and contact information.

Name: \_\_\_\_\_ Email: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

**Part 2: Report**

Complete the following GBP Report and Tables. Attach additional sheets if required. The information is used for Manitoba Green Building Program evaluation and analysis. Manitoba may request proof of performance to confirm that the Manitoba Green Building Program Standards and Practices that did not require formal reporting were achieved.

If a project is participating in a third party verification program such as LEED® or Green Globes™, that program's submissions may be accepted in lieu of the relevant report table as long as the template conveys the information requested in the GBP Report's table. For example, the GBP Report, Table 11: Waste Diverted from Landfill requires a list of waste and diverted materials and their destruction reported by tonnage. If the LEED® template for Construction Waste Management (MR2) is completed using tonnage as the measuring unit, then the LEED® template may be submitted for GBP Reporting in lieu of Table 11. See Environmental Certification Guidelines in the Manitoba Green Building Program Manual for more detailed information.

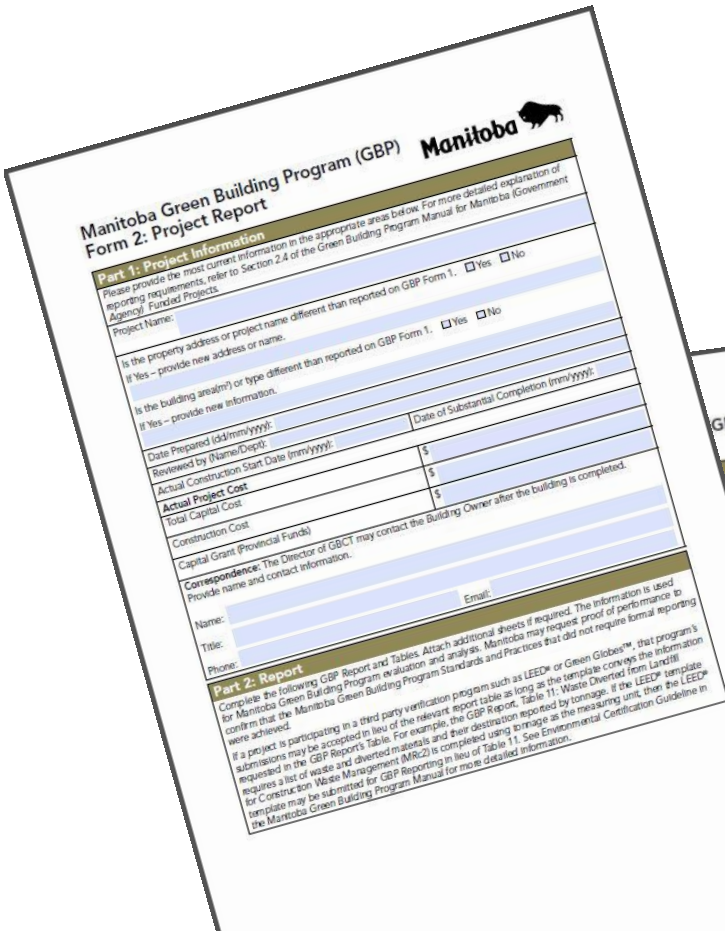
Page 1 of 5

- For use as guidance for Owner's Project Requirements
- Provides program reporting framework
- Guidance for Variance application

# Variations and “The Practicality Clause”

One size does  
not fit all.

Where it is not practical to  
apply a GBP criteria to  
a project,  
apply for a Variance.



**Manitoba Green Building Program (GBP) Manitoba**

**Form 2: Project Report**

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Actual Project Cost: \_\_\_\_\_

Total Capital Cost: \_\_\_\_\_

Construction Cost: \_\_\_\_\_

Capital Grant (Provincial Funds): \_\_\_\_\_

**Correspondence:** The Director of GBCT may contact the Building Owner after the building is completed. Provide name and contact information.

Name: \_\_\_\_\_ Email: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

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# What is next?

- Expansion of the Green Building Program:
  - Residential buildings
  - Leased accommodations
  - Existing building operation
  - Building deconstruction guidelines
- Regulation:
  - National Energy Code of Canada
  - CCERA Green Building Regulation

# What else?



- Final version of the GBP manual will be published Spring 2014
- Next version in 2015/2016

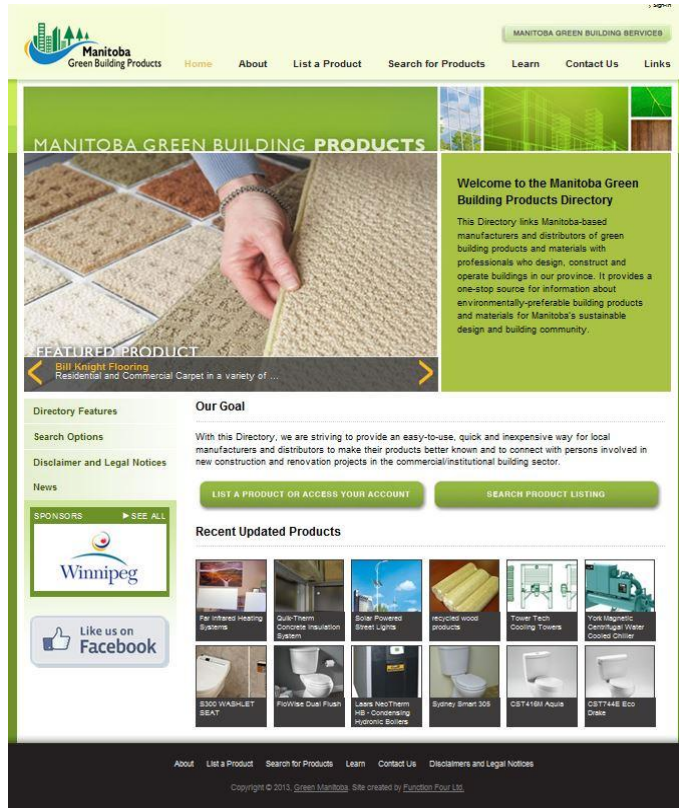


**Thank You**





[www.gov.mb.ca/greenbuilding](http://www.gov.mb.ca/greenbuilding)



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## MANITOBA GREEN BUILDING PRODUCTS

Welcome to the Manitoba Green Building Products Directory

This Directory links Manitoba-based manufacturers and distributors of green building products and materials with professionals who design, construct and operate buildings in our province. It provides a one-stop source for information about environmentally-preferable building products and materials for Manitoba's sustainable design and building community.













**FEATURED PRODUCT**  
Bill Knight Flooring Residential and Commercial Carpet in a variety of ...

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**Our Goal**  
With this Directory, we are striving to provide an easy-to-use, quick and inexpensive way for local manufacturers and distributors to make their products better known and to connect with persons involved in new construction and renovation projects in the commercial/institutional building sector.

[LIST A PRODUCT OR ACCESS YOUR ACCOUNT](#) [SEARCH PRODUCT LISTING](#)

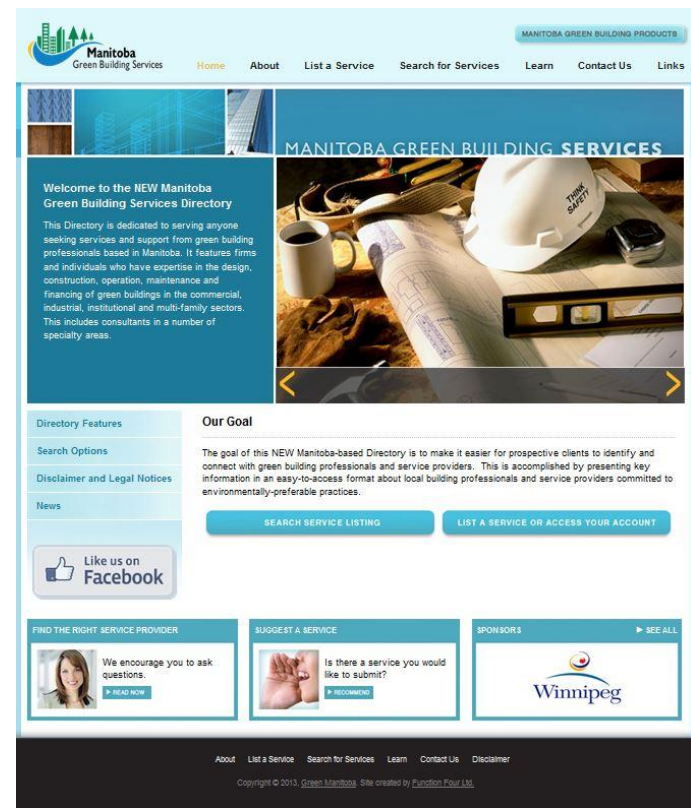
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## MANITOBA GREEN BUILDING SERVICES

Welcome to the NEW Manitoba Green Building Services Directory


This Directory is dedicated to serving anyone seeking services and support from green building professionals based in Manitoba. It features firms and individuals who have expertise in the design, construction, operation, maintenance and financing of green buildings in the commercial, industrial, institutional and multi-family sectors. This includes consultants in a number of specialty areas.


**Directory Features**  
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**Our Goal**  
The goal of this NEW Manitoba-based Directory is to make it easier for prospective clients to identify and connect with green building professionals and service providers. This is accomplished by presenting key information in an easy-to-access format about local building professionals and service providers committed to environmentally-preferable practices.

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