



# PERFORMANCE MEASURES DOCUMENT

*The Markham Centre Vision for  
Sustainability and Smart Growth*

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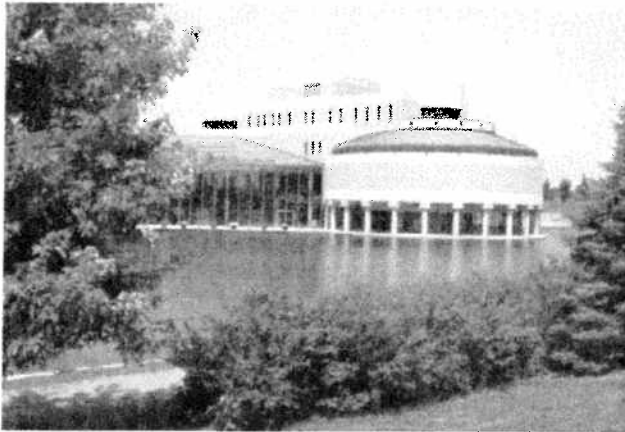
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## SECTION #1: *Delivering Markham's Downtown Vision*



### INTRODUCTION

A Message from the Mayor  
(Currently being updated)

#### A Special Thanks

A Citizen Advisory Committee was formed in early 2002 to help us shape our downtown and develop these Performance Measures to ensure our success over the long term.

A special thanks goes out to the founding members of our Citizen Advisory Group for their tremendous endowment of time, dedication and experience. These group members represented a wide variety of stakeholder interests.

Since the adoption of the performance measures in 2003, the Advisory has been instrumental in assisting staff in the processing of development applications and providing input on key strategic initiatives in Markham Centre. As part of their continued involvement in the evolution of Markham Centre a working group of Advisory members was formed in 2007 to assist in revising the Performance Measures Document to up-date it and incorporate appropriate L.E.E.D. cross-references. It is anticipated that future updates will be required upon the release of the Canada Green Building Councils' L.E.E.D. Neighbourhood Document.

#### Founding Members

Gary Atkins	Markham Resident	Richard Jarrell	Markham Conservation Committee
Neil Bannerjee	Village of Unionville Property Owners Assoc.	Robert Jarvis, Q.C.	Markham Resident
Hal Brooks	Unionville Resident	Susan Lawton	IBM Canada
Rudy Buczolits	Remington Group, Developers Round Table	Jane Ross	York Region District School Board
Ruth Burkholder	Markham Board of Trade	Kira Sheppard	Motorola Canada
Karen Chadwick	Unionville B.I.A.	Ted Spence	York University, Office of the President
Allen Chan	Unionville Resident	Charles Sutherland	Markham Resident
Ron Christie	Chair of the Rouge Alliance	Bryan Tuckey	York Region Commissioner of Planning
Bryson Eldridge	York Catholic District School Board	David Vince	Mayor's Youth Task Force
Alan Graf	Unionville Ratepayers Assoc.	Jayne White	Lucent Technologies

For more information, visit our website at:  
[www.markhamcentre.com](http://www.markhamcentre.com)

## **Markham Centre Belongs to the People of Markham**

Markham Centre will provide Markham's citizens with a unique urban experience while ensuring that our community values are maintained. It will become the new downtown focus for the whole of the Markham community.

The downtown will include residential, retail, commercial, hospitality, entertainment and educational venues. Interconnected parks and open spaces, complete with walking and biking trails, will provide a number of active and passive recreational opportunities.

Tree-lined Enterprise Boulevard will provide sweeping views of the downtown's major features while enabling both vehicles and pedestrians to easily connect all parts of the downtown.

With rapid transit running right through it, the Civic Mall will interconnect the downtown neighbourhoods with public spaces including public spaces within a new central park. This open space amenity and the retail and entertainment district will offer exciting shopping opportunities in the core of Markham Centre.

The Employment District will attract top companies to the area and deliver a high quality business environment served by well placed and efficient parking structures.



An open space amenity will be the centerpiece of the development and will feature charming shops, recreational activities and a fabulous view of the valley lands.

The purpose of this document is to identify performance measures that will guide and monitor the implementation of Markham Centre over time to deliver the downtown vision.



## BACKGROUND

### Building on a Solid Foundation of Community Values

The vision for Markham Centre was built on the recommendations and input gathered from an extensive public consultation process that began in 1992 through to the present.

### Markham Centre & Smart Growth

Smart Growth/sustainable development, supported by the Provincial and Federal governments as a vision for fostering and managing growth, is based on building strong communities, a strong economy and a clean, healthy environment.

Markham residents expressed their desire to embody all three Smart Growth Goals in an innovative new downtown area bordered by Highway 407 on the south, Highway 7 and the Civic Centre on the north, Kennedy Avenue on the east and Rodick Road on the west.

## STRUCTURING FOR SUCCESS

### Markham Centre Represents a Smart Departure from Urban Sprawl

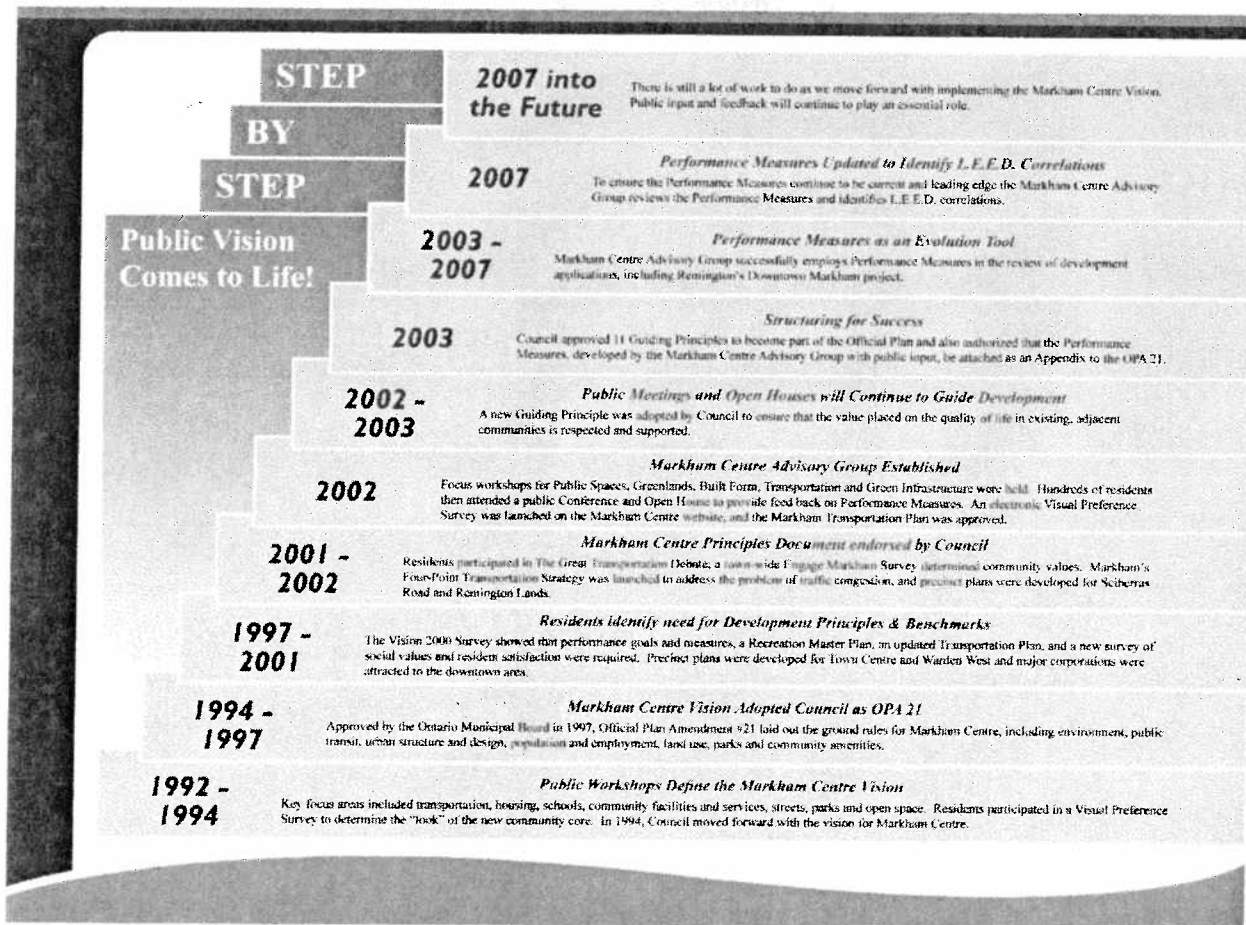
Based on the principles of new urbanism and sustainable growth, Markham Centre will provide a

central focus and future gathering place for Markham residents and businesses for generations.

Markham Centre is consistent with the Provincial and Regional growth management initiatives, having been identified as an Urban Growth Centre in the Provincial Growth Plan and as a Regional Centre as part of York Region's "Centre's and Corridors" strategy. Markham Centre will be developed on the principles of balanced live/work opportunities, compact urban form, natural heritage protection, transit supportive development and housing choice.

Markham Centre will have a distinctly urban character, with higher density, mixed-use developments, strong streetscapes and world-class parks and public amenities. It will set new standards for sustainable communities by ensuring the following goals are met:

- ✓ Celebrate Markham's community values
- ✓ Enhance Markham's quality of life
- ✓ Be sustainable for future generations
- ✓ Protect and enhance the natural environment
- ✓ Build upon transit initiatives and existing infrastructure
- ✓ Enhance the economic vitality of our Markham community
- ✓ Provide a central location for arts, cultural and social activities on a year-round basis



### Public Input Defines Markham Centre Vision

Markham residents have been engaged in a dialogue with the Town over the years to define their vision for the future. Through numerous workshops, open houses, conferences and surveys people have shaped the plan and will continue to guide its implementation.

### The Vision Becomes the Town's Policy as OPA 21

Approved by the Ontario Municipal Board in 1997, Official Plan Amendment #21 (Markham Centre Secondary Plan) laid out a strong planning foundation. Some of the key essentials OPA 21 addresses are:

- ✓ Protection of the natural environment;
- ✓ Building a supportive public transit infrastructure;
- ✓ Promotion of a mixed-use, high quality and compact urban form;
- ✓ Setting targets for population and employment land AND; providing for a range of parks, public squares and community amenities.

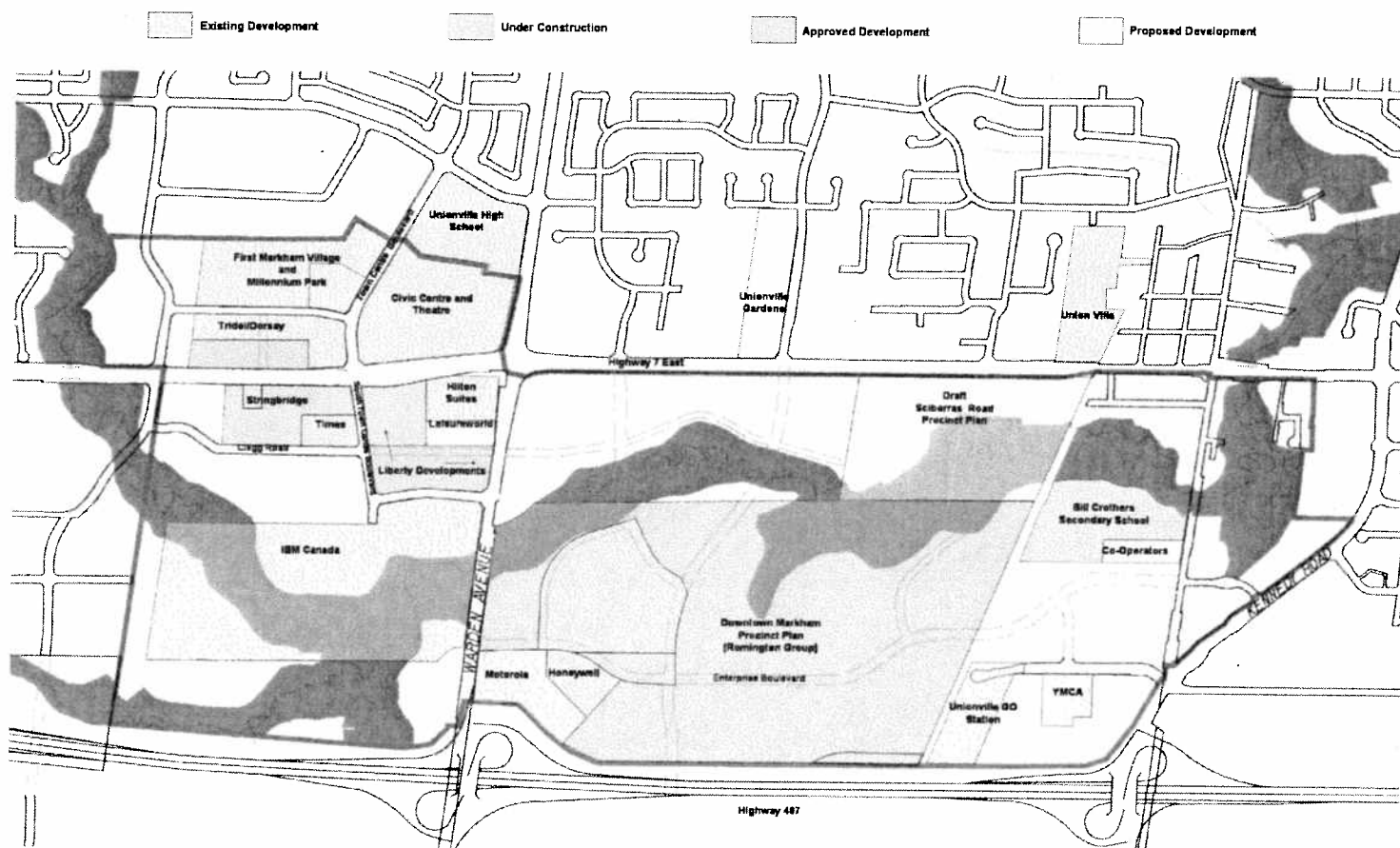
### The Vision for Markham Centre is based on Guiding Principles

11 Guiding Principles were developed to ensure that Markham Centre continues to promote a vibrant, family-oriented, people place with pedestrian-friendly streets, high quality parks and buildings.

Council adopted ten guiding principles in early 2002 to provide clarity and direction to the vision for Markham Centre. An eleventh principle was adopted by Markham Council on April 1, 2003 to highlight the value placed on quality of life for residents and communities not only within and adjacent to Markham Centre, but also throughout the Town. Endorsed by Markham citizens, the principles were embodied in the Markham Centre Secondary Plan (OPA 21).

## MARKHAM CENTRE MAP

*As of November 2007*





***The vision for Markham Centre is based on the following Guiding Principles:***

- 1. Protect and Enhance the Rouge River Valley**  
The Rouge River and Beaver Creek valley systems are powerful influences on Markham Centre. The downtown core will be designed to protect and enhance this natural environmental system.
- 2. Support Public Transit**  
A rapid transit system will facilitate movement to and around the Centre.
- 3. Transform Highway 7 into an Urban Boulevard**  
Highway 7 will be transformed from an inter-regional highway to a major urban boulevard with a concentration of activity, mixed uses and high-quality urban design and landscaping.
- 4. Develop an Effective Street Network**  
A grid of major and minor streets will provide easy access to support the mix and intensity of activity and define the structure of Markham Centre.
- 5. Provide a "Sense of Place"**  
Markham Centre will provide high-quality public spaces, pedestrian-friendly streets and courtyards to contribute to a strong "sense of place."
- 6. Enhance Pedestrian Activity**  
In Markham Centre, the pedestrian will gain equality with the automobile. Well-defined streets, architectural design, parks and trails will create a "walkable" downtown.
- 7. Ensure Ecological Sustainability**  
Lands will be developed to protect and enhance the natural processes of the landscape. A cogeneration energy plant will further support environmental goals.
- 8. Provide Cultural and Social Focus**  
Markham Centre will provide a town wide focus for arts, cultural and social activities. The Centre already houses the Markham Civic Centre and Markham Theatre, and will be home to Markham YMCA.
- 9. Manage Traffic and Parking Issues**  
Parking and traffic will be controlled to maintain quality of life.
- 10. Deliver a Financial Framework**  
A new financial plan will be developed to build and sustain a superior public environment.
- 11. Respect Quality of Life in Markham**  
The value placed on quality of life in existing, adjacent communities is recognized, respected and supported.

From these Guiding Development Principles the Performance Measures were developed by the Markham Centre Advisory Group to further articulate the objectives for Markham Centre and provide a clear direction of expectations for development. The Advisory Group works with Town staff to ensure that implementation plans for Markham Centre adhere to these principles.



### **Markham Centre Citizen Advisory Group Terms of Reference**

#### **Planning doesn't end with the adoption of a plan-and neither does public involvement!**

The Markham Centre Secondary Plan adopted by the Town in 1994 and approved by the Ontario Municipal Board in 1997 establishes a broad framework to create a vibrant, mixed-use, pedestrian oriented Town Centre. That framework is now in the process of being realized in actual buildings, streets, schools and parks. The role of the Markham Centre Advisory Group is to assist the Town in reviewing and confirming the principles and objectives of the Markham Centre Secondary Plan and developing and evaluating the performance of the implementation measures to realize our Town Centre.



#### **Composition of Advisory Group**

The Advisory Group consists of representation from throughout Markham and includes various Town-wide interest groups, residents and businesses as well as representation from local area stakeholders.

Representatives from the following groups were selected to form the inaugural membership:

- ✓ Unionville Ratepayers Association
- ✓ Village of Unionville Property Owners Association
- ✓ Unionville resident at large
- ✓ Markham residents at large including representation from Milliken, Markham Village and Thornhill
- ✓ Unionville Business Improvement Area
- ✓ Markham Board of Trade
- ✓ Major Local Business Representatives (Lucent Technologies, IBM Canada, Motorola, Hydro One)
- ✓ Markham Conservation Committee
- ✓ Chair of Rouge Alliance
- ✓ Commissioner of Planning, York Region
- ✓ Academic Community
- ✓ York Region School Board(s)
- ✓ Markham Accessibility Committee
- ✓ Developer's Group

Approximately 20-25 representatives sit on the Markham Centre Advisory Group. Members of Council are also notified of and invited to attend Markham Centre Advisory Group meetings.

Council appoints members of the Markham Centre Advisory Group for a one-year term. Replacement members are identified through a nomination process to fill vacancies within the basic composition of the group's representation.





## Role & Responsibilities

The Markham Centre Advisory Group will advise and assist Markham Council in creating the new Town Centre. The Advisory Group will:

- ✓ Be familiar with the planning and design principles for an urban Town Centre and act as a focus for the entire Town of Markham
- ✓ Assist in developing criteria, benchmarks and indicators to achieve the principles and objectives of the Markham Centre Plan
- ✓ Provide commentary on the application of the Performance Measures as reflected in development applications

The responsibility of each member will be to attend and participate at Advisory Group meetings in order to:

1. Become familiar with the Markham Centre Plan, its principles, objectives and policies and its current context in the local, regional, town-wide and GTA wide setting.
2. Contribute to the development of the criteria, benchmarks and indicators that will be used to achieve the goals and objectives of the Plan
3. Participate in workshops, focus groups and public events/activities on the Markham Centre Plan
4. Comment on the degree to which performance measures have been achieved/reflected in specific development applications within Markham Centre.
5. Assist in providing feedback, information and enhanced opportunities for residents, business and associations represented by the Advisory Group.

The focused work of the Advisory Group will be valued input to Council as the Markham Centre Plan and various implementation measures are brought forward for discussion. This consultation process provides an excellent opportunity for Council to have a clear understanding of the progress and evaluation of the measures through the Advisory Group's detailed work, discussion and through further stakeholder/public input.

Policy and implementation issues are discussed and are focused on the following key areas:

- ✓ *Infrastructure* to support the concentration of activity within the Centre while ensuring hard and soft services are provided
- ✓ *Financial Package* that attracts investment to build a high quality of urban design for residential, retail, institutional and employment uses
- ✓ *Consultation Strategy* to ensure the Plan and its implementation provide an overall benefit to the quality of life and investment for the Centre and surrounding uses
- ✓ *Environmental Protection and Enhancement* of the Rouge River and natural features
- ✓ *Community Amenities* in a range and scale to ensure community life within the Centre is supported at a scale that creates a vibrant urban Town Centre
- ✓ *Clear Criteria, Benchmarks and Indicators and Supportive Legislative Framework* that will result in a high quality of urban design and investment for the full implementation of the Plan.

The meeting discussions will focus on performance criteria, benchmarks and implementation issues. For example, one of the principles of the Plan is to create a pedestrian oriented centre. The Advisory Group will assist in articulating how this principle is achieved through built form criteria and indicators, mix of uses and treatment of the public realm. This principle and the mechanisms to achieve its implementation would also be discussed with a broader group through the efforts of each individual member, so that a plan that is truly representative of Markham's interests is realized. The Advisory Group will also assist in evaluating the progress of implementation by providing input and commentary on specific application of the performance measures as reflected in development proposals.



### **Reporting Procedure**

Discussion and directions from the Advisory Group meetings will be reported through the Development Services Committee to Council.

### **The Subgroup Structure**

The Advisory Group members were divided into 5 subgroups focused on the following areas of interest: Greenlands; Built Form; Open Spaces; Green Infrastructure; and Transportation. Members could also be involved in one or more subgroups. The Subgroup structure allows individuals to become more intimately involved and provide input and knowledge into their special areas of interest.

### **Remuneration**

The Advisory is a volunteer membership.

### **Frequency of Meetings**

The inaugural meeting was scheduled for May 2, 2002, from 6:30 p.m. to 8:30 p.m. Further meeting dates and times were finalized at the first meeting. The expectation is that meetings would be held on a monthly basis throughout the year. Additional meetings may be required during the months of April to October with a minimum of 2 weeks notice.

### **Duration of Appointment**

1 year

### **Chair**

The Chair of the Markham Centre Steering Committee chaired the meetings of the Advisory Group for the inaugural year. The Advisory Group has since elected and will on an ongoing basis, select a chair or co-chair from amongst its membership.



## PERFORMANCE MEASURES

### The Purpose of Performance Measures

This citizen-centered approach to performance measures meets a number of community and Town Council needs, including:

- ✓ Translating town-wide community values into actual measurement systems
- ✓ Using measures that are credible to the community
- ✓ Facilitating citizen participation
- ✓ Constructing a system that can:
  - Be fine-tuned and updated to reflect new technologies and best practices
  - Measure progress towards established goals and objectives
  - Be open, accountable and developed from the community interests and issues
- ✓ Communicating community expectations to all stakeholders

### The Benefits of the Performance Measures

These Performance Measures are intended to help guide and monitor the development of the downtown in accordance with the broader community's goals and expectations and the highest quality standards and best practice models.

- ✓ Connect day-to-day decision making with achievement of the vision
- ✓ Provide 'drill-down' detail on key criteria intended to promote best practice solutions.
- ✓ Challenge stakeholders to provide new and better solutions.
- ✓ Level the playing field by ensuring that each development application is assessed using the same evaluation tool.
- ✓ Raise the bar through continuous assessment and improvement.
- ✓ Present a consistent, transparent and clear assessment of how proposals are evaluated, modified and approved.

## PUBLIC INPUT IS KEY

### Performance Measures were Developed & Confirmed Through Public Input

The Performance Measures contained in this document were developed through inclusive, "grass-roots" citizen involvement and will serve as a tool to guide and monitor development applications within Markham Centre.

The Markham Centre Advisory Group hosted a series of themed public workshops to obtain feedback and identify key measures and performance guidelines that would track the success of Markham Centre against the *Guiding Principles* adopted by the Town.

The workshop tasks included developing key performance targets and indicators that would help to guide and monitor development and ensure that every application delivers on *Smart Growth* and incorporates sustainable development practices.



## From Guiding Principles to Practical Application

### Performance Checklists and Performance Indicators

Coming out of these workshops the Advisory Committee confirmed a series of “**Performance Checklists**” within the five theme areas for Markham Centre:

- Greenlands (the natural environment of the Rouge River)
- Transportation
- Built Form
- Green infrastructure (sustainable engineering practices)
- Public space.

A series of key “**Performance Indicators**” were then developed out of the checklists to provide a basis for ensuring all development applications within Markham Centre are evaluated in terms of achievement of goals and measurable targets.

The Checklist and Performance Indicators support a dynamic evaluation procedure, where progress made towards the *Guiding Principles* and the achievement of the new vision for Markham Centre can be monitored and evaluated over the long term.

In March 2003, Council adopted OPA 101 incorporating the Guiding Development Principles that articulate the goals and objectives for the development of Markham Centre, into the Markham Centre Secondary Plan (OPA 21). At the same time, the Performance Measures were adopted as an appendix to OPA 21. It is anticipated that the Performance Measures will evolve over time, as development occurs, new information becomes available, policies and technologies change, best practice techniques and standards are developed, and infrastructure is built.

Since its adoption, the Advisory Group has been using the Performance Measures Document to review and evaluate development applications. This input has been instrumental in ensuring that the Town remains on course and on target in delivering Markham Centre in accordance with the Town and community's goals and expectations, using the highest quality standards and best practice models. The Performance Measures were recognized with an award for Sustainable Community Planning from the Federation of Canadian Municipalities (FCM) in 2003.

### Performance Measures and Performance Indicators have Evolved

In order to ensure the Performance Measures continue to be not only current, but leading edge, staff retained

a consultant in 2006 to work with the Advisory to update the Performance Measures and identify a strategy for relating the document to the Canada Green Building Council's L.E.E.D. (Leadership in Energy and Environmental Design) rating systems. The up-date served to simplify, and clarify the performance measures, eliminate redundancies, rationalize overlaps between sub-sections and ensure that each performance measure had a corresponding performance indicator. Of utmost importance throughout this process was maintaining the original spirit and intent of the Performance Measures Document as a community-based value document for the creation of an intense, mixed-use, environmentally sustainable downtown.

At the outset of the review, there were 153 separate performance measures within the document. This included a significant number of measures which overlapped between various sub-sections. The document as presently configured contains 60 performance measures, each with corresponding indicators. This has resulted in a document which has a better balance between sub-sections and is clearer and easier to apply. The measures are now identified on the basis of a Precinct or Site level of applicability.

The process for the Advisory Group providing input into the review of applications has also evolved to allow earlier consultation. The Advisory, now receives the completed checklist upon submission of a development proposal. In addition development proposals may be presented to the Advisory, prior to a formal application having been submitted.

## L.E.E.D. Relationships have been Identified

The Performance Measures are now benchmarked against requirements of Canada Green Building Council's L.E.E.D. New Construction – Version 1.0. Potential opportunities are identified for developments within Markham Centre to be in a position to qualify for various L.E.E.D. credits based on adherence to the performance measures. The revised performance measures indicate a correlation to L.E.E.D. Canada NC 1.0 individual pre-requisites or credits. In some cases, the correlation is with a complete L.E.E.D. NC 1.0 category. Where appropriate, anticipated correlation to the US Green Building Council's emerging L.E.E.D. Neighbourhood 1.0 is indicated. Since the Canadian version of the L.E.E.D. Neighbourhood document is likely to be significantly different, these correlations must be reviewed when the Canadian Document is released.

## MAKING IT WORK

### The Development Application Process

1. An initial assessment will be made on each development application by staff using a completed **"Performance Checklist"** to identify whether each of the questions has been addressed.
2. Staff will evaluate the application in accordance with the performance indicators.
3. The citizen Advisory Group will carefully assess the application.
4. The development proponent will then present their plans to the Advisory Group to receive comments and recommendations.
5. The proponent's proposals will be modified to reflect the comments and recommendations of the Advisory Group.
6. The proponent's revised proposal will be reviewed again with the Advisory Group.
7. A staff report will then be brought forward to the Development Services Committee and ultimately Council for approval.

8. The Performance Measures Document forms a separate Appendix of the Markham Centre Secondary Plan, OPA 21 for convenience and to provide direction to all those interested in the development of Markham Centre, including the public, developers, land owners, agencies and other stakeholders.

### Annual Report Card

- An Annual **"Report Card"** prepared by staff on behalf of the Advisory Group to evaluate the implementation of development towards the achievement of community values, goals and performance targets.
- This report will identify any areas where further study may be required or where the performance measures may require clarification or fine-tuning.
- The Annual Report Card (Attached as Appendix II) will be submitted to Town Council in the first quarter of each fiscal year and will be available to stakeholders and the general public

## KEEPING IT ON TRACK

### A Living document of Best Practices

Markham is re-engineering its future by carefully managing growth and changing development patterns. To this end, Markham Centre development will continue to be measured and evaluated on the principles and best practices of sustainable development.

Our Performance Measures are designed to be a dynamic part of the living legacy that we're building for future generations. The Measures will be reviewed and the results monitored annually. They will also be updated regularly to reflect the newest technologies and the most up-to-date best practices. Markham's plan to continue to involve its citizens in creating world-class benchmarks for sustainable development is evidence of the Town's long-term commitment to creating a progressive, sustainable urban downtown community



## **SECTION #2: 5 Key Themes for Performance Measures**

### **GREENLANDS**

This key theme focuses on the protection and enhancement of the Rouge River valley lands and its tributaries as an environmental system while creating an integrated open space system. The protection of existing natural heritage features for future generations is the primary goal. A passive recreational trail network is proposed to recognize existing boundaries while affording recreational opportunities in a series of connected urban parks.

### **BUILT FORM**

The Built Form theme focuses on the lots and block pattern, views and vistas, building placement and the promotion of pedestrian oriented streets. Highway 7 is to be transformed into an urban boulevard while keeping its role as an important component of the road and transit network. Additional lighting, sidewalks and trails, and high quality architectural standards will help to make the new downtown core a pedestrian-friendly environment. Built Form will support the urban core while concentrating on ecologically sustainable development.

### **GREEN INFRASTRUCTURE**

To protect the environment of the valley lands, effective management of urban runoff and storm water is critically important. Green Infrastructure strategies will focus on initiatives that affect air quality, water conservation, waste reduction and efficient energy use.

### **PUBLIC SPACE**

In order to make Markham Centre a people place, considerable attention will be given to the design of public parks and facilities, streetscapes and major gathering spaces. Social and cultural considerations will be taken into account to ensure that Markham's new downtown is welcoming to all.

### **TRANSPORTATION**

A focus on rapid transit and other non-automotive modes of travel will help to ensure that the pedestrian gains equality with the automobile in Markham Centre. The Town's Transportation Planning Study identifies existing road network improvements, rapid transit corridors, effective new policies and educational initiatives to relieve congestion.



## Section #3: The Greenlands Master Plan

In parallel with the process of defining objectives and performance criteria for Markham Centre, the Town of Markham undertook the development of a Master Plan for the Greenlands. The Master plan addresses the corridors associated with the Rouge River, East Beaver Creek and Apple Creek both within and beyond the limits of the Markham Centre area. The Greenlands Master Plan sets out a number of objectives that were defined in consultation with the Greenlands Advisory Committee and provides an illustration of how these objectives will be achieved within the Greenlands. The Greenlands Master Plan illustrates the Town's vision for achieving ecological, hydrological, recreational and interpretive goals while ensuring the long-term health and sustainability of the Greenlands ecosystem.



The Greenlands Master Plan provides a blueprint for the following:

- ✓ The establishment of a core area of natural habitat within the valley system
- ✓ The development of a network of trails that are designed to accommodate various types of users and levels of use, including both utilitarian and recreational uses while avoiding fragmentation of the natural heritage system.
- ✓ The implementation of interpretive initiatives and opportunities to celebrate the presence of the Rouge River as a key feature within the Town of Markham
- ✓ The implementation of initiatives aimed at restoring and enhancing the health, diversity and stability of the Greenlands ecosystem.
- ✓ The establishment of an appropriate interface between adjacent development and the Greenlands.
- ✓ The establishment of strong connections to existing communities located beyond the limits of Markham Centre.



- ✓ Implementation initiatives in partnership with landowners along the river corridors

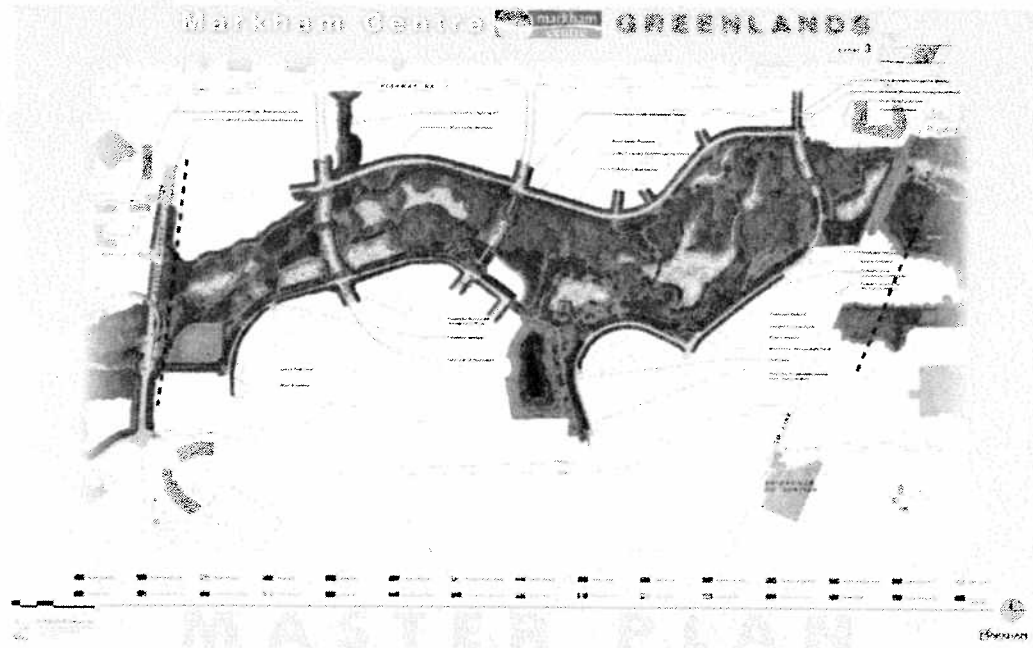
In the future, the Town will be responsible for overseeing the implementation of the Greenlands Master Plan and will work in partnership with landowners and developers to realize the vision illustrated by the Master Plan.



Specific Town responsibilities will include the following:

- ✓ Create and maintain an inventory of existing natural and cultural heritage resources of the Greenlands
- ✓ Implement a public education and interpretation program based on the natural and cultural heritage features
- ✓ Implement natural channel design solutions to restore degraded or eroded sections of the river
- ✓ Implement a monitoring program to track the long-term success of protection, restoration and enhancement initiatives.
- ✓ Implement a trail system that minimizes impact on the natural heritage system of the Greenlands while providing clear sight lines and lighting where appropriate.
- ✓ Ensure public safety through the provision of access by emergency vehicles where required.
- ✓ Develop and implement a program to direct the long-term management of the Greenlands that addresses the following:
  - Management or eradication of nuisance species
  - Natural evolution of the river system
  - Evolution of habitats and vegetation communities
  - Mitigation of potential impacts from human use
  - Enhancement of the health, diversity and sustainability of the system
- ✓ Establish a funding program to ensure that the management and monitoring programs are sustainable over the long-term.
- ✓ Establish a program aimed at fostering partnerships to implement the Greenlands Plan, encourage involvement and recognize partner contributions.

The Town has already initiated the process of implementing aspects of the Greenlands Master Plan in advance of the development of the Markham Centre. The future development of Markham Centre presents the opportunity to expand upon this work and realize the vision of the Greenlands Master Plan in its entirety.



## GREENLANDS

### Performance Measures

#### GREENLANDS OVERVIEW

A list of Performance Measures has been developed for the Greenlands component of Markham Centre to aid in the evaluation of the overall plan for the Greenlands, and to be implemented through the combined efforts of developers, the Town and its partner agencies. Based on key sub-categories that include: Knowledge and Understanding; Protection; Restoration and Enhancement; Interface, Cohesion and Connectivity; Implementation; and Management and Monitoring. These measures are fundamental to the creation of a sustainable Greenlands Plan and will add to the future Rouge Park system.

For each sub-category, performance measures are set out based upon the objectives identified throughout the planning and consultation process. Although these performance measures are stated in general terms, they are intended to be interpreted as it relates to each of the specific components which comprise the environment of the Greenlands including:

- ✓ Water – in terms of hydrology, hydrogeology, water quality and base flow
- ✓ Air – in terms of clean air quality and microclimate
- ✓ Vegetation – in terms of health, species composition, diversity, extent and patch configuration
- ✓ Wildlife – in terms of health, diversity, size and extent
- ✓ River Processes – in terms of erosion, slope stability, fluvial geomorphology and sediment transport
- ✓ Social Factors – including recreation, interpretation, education and user experience



Common to all are a set of principles that should be given primary consideration in the process of evaluation the overall plan for the Greenlands, these include the following:

1. Has an inventory of sufficient scope and detail to gain a comprehensive understanding of the features of the site and their interrelated functions been undertaken as the basis for the development of the Greenlands Plan?
2. Do the Greenlands encompass sufficient area to ensure the protection of natural features and ecosystem function in perpetuity, in consideration of future adjacent land-use patterns?
3. Does the Greenlands Plan facilitate the establishment of a core habitat area that is insulated from disturbance from adjacent land uses?
4. Does the Greenlands Plan incorporate initiatives to restore degraded areas and enhance the breadth, vitality and diversity of vegetation communities and habitats?
5. Will an appropriate interface between the Greenlands and adjacent development be achieved through the implementation of the Greenlands Plan?
6. Does the Greenlands Plan make provision for appropriate passive recreational use in consideration of the environmental context and practical circulation patterns?
7. Does the Greenlands Plan provide opportunities for interpretation, education and appreciation of natural and cultural heritage resources?
8. Does the Plan set out a clear strategy to secure funding to facilitate the implementation and management of the Greenlands over the long term?
9. Does the Greenlands Plan include a strategy to facilitate the long-term management of natural heritage resources?
10. Does the Greenlands Plan set out a protocol for monitoring the health and evolution of the ecosystem?

Greenlands					
Item #	Performance Measures	Correlation to LEED	Yes	No	N/A
Implementation of Greenland Plan - Precinct & Site Specific					
G1	<p><b>Is this project consistent with achieving the goals of the Markham Greenlands Master Plan ?</b></p>	<p><b>Some anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b></p>			
	<p><b>Performance Indicators:</b></p> <ul style="list-style-type: none"> <li>• Does the project ensures the protection of existing natural heritage features for future generations?</li> <li>• Does the core habitat area of the Rouge River Valley remain insulated from human encroachment and disturbance as the spine of the Greenlands system?</li> <li>• Are there appropriate strategies to mitigate potential disturbance of the natural heritage system?</li> <li>• Are there appropriate strategies to protect ecosystem functions?</li> <li>• Have the potential impacts of the project development been analyzed and minimized related to                             <ul style="list-style-type: none"> <li>• demand for use ?</li> <li>• storm water management?</li> <li>• habitat preservation?</li> <li>• microclimate modification?</li> <li>• noise attenuation?</li> <li>• light penetration? and</li> <li>• other disturbances?</li> </ul> </li> <li>• Are pedestrian and vehicle crossings consistent with the Greenlands Master Plan?</li> <li>• Are there initiatives to reduce the amount of invasive species present?</li> <li>• Has water quality been considered?</li> <li>• Has air quality been considered?</li> <li>• Has vegetation been considered?</li> <li>• Has wildlife been considered?</li> <li>• Have river processes been considered?</li> <li>• Have social factors been considered?</li> <li>• Is there dedication of greenlands to the Town of Markham where appropriate?</li> <li>• Is a single roadside interface to the greenlands maintained?</li> </ul>				
G2	<p><b>Has monitoring, measurement and reporting been included in this project to ensure consistency with the master plan ?</b></p>				
	<p><b>Performance Indicators:</b></p> <ul style="list-style-type: none"> <li>• The project includes monitoring, measurement and reporting of project impacts, including a protocol for monitoring of water resources, in-stream stability, and aquatic habitat been prepared and provided to the developer for this project along with a set of agreed clear goals and associated metrics. Actual results will be compared to ensure constancy with agreed goals. Records of what was actually achieved will be kept for the project.</li> </ul>				



Greenlands					
Item #	Performance Measures	Correlation to LEED	Yes	No	N/A
Project Interface with Greenlands Plan - Precinct & Site Specific					
G3	Does this project enhance the greenlands ?	Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are the boundaries of the Rouge River Valley been extended and enhance with compatible park and open space uses and naturalized landscape treatments?</li> <li>• Does the project include bike paths, trails, pedestrian walkways that interface with those on the greenlands?</li> <li>• Does the project add a portion of the undeveloped project land in a way that increases the continuous greenlands space?</li> <li>• Are there other features that meet the goals set out in the Greenlands Master Plan?</li> <li>• Is the width of buffers between greenlands and adjacent land uses expanded?</li> </ul>				
G4	Are Water Quality and river processes improved ?	Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the project include initiatives to improve water quality, enhance flow attenuation, enhance hydrological functioning, mitigate thermal impacts and augment base flow?</li> <li>• Are storm water management best practices implemented, showing an appreciation for the adjacency to the greenlands?</li> <li>• Does the project includes restoration activities that enhance river processes?</li> </ul>				
G5	Is Air Quality Improved ?	Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the project contain initiatives that improve air quality?</li> <li>• Is the vehicle traffic generated by the project through greenlands minimized?</li> <li>• Does the project increase canopy coverage?</li> </ul>				
G6	Is Vegetation Improved ?	Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are degraded areas restored, with the goals of the greenlands master plan in mind?</li> <li>• Are there initiatives to reduce the presence of invasive/nuisance species?</li> <li>• Is the quantity of vegetation increased?</li> <li>• Is the biodiversity of vegetation increased?</li> <li>• Are water conservation measures included in the design and maintenance of the landscape?</li> </ul>				

Greenlands					
Item #	Performance Measures	Correlation to LEED	Yes	No	N/A
	<b>Is wildlife protected and enhanced?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is the core habitat area between greenlands and the development buffered to foster a healthy living environment and enhance the biodiversity of the wildlife in the greenlands</li> <li>• Is the connectivity of the greenlands improved by naturalized areas in this project?</li> <li>• Are pedestrian walkways and bike trails located not to interfere with significant wildlife corridors?</li> <li>• Is light penetration into core natural areas mitigated?</li> <li>• Is noise emissions into core natural areas mitigated?</li> <li>• Are animal habitats or crossings accommodated in the design of parks and open spaces?</li> </ul>				
	<b>Are Social Factors addressed, including recreation, interpretation, education and user experience ?</b>	<b>No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are community amenities, such as parks, schools, storm water management facilities and passive uses facilities adjacent to the Greenlands, located with appropriate transitions, and encourages the public to relate to their natural environment?</li> <li>• Is public involvement and support secured through partnerships with local community groups, NGO's and others to implement long-term restoration and management initiatives?</li> <li>• Are initiatives taken to educate the public about the values of the adjacent greenlands as well as this development's alignment with Markham's commitment to environmental sustainability as expressed in the Greenlands Master Plan?</li> <li>• Is interpretive signage used to enhance the user experience and appreciation for this unique green space in their community?</li> <li>• Are recreational uses compatible with the Greenlands Master Plan</li> <li>• Does the design of the project encourage the community to participate in healthy outdoor activities?</li> </ul>				
	<b>Are off-street pathways through greenways designed to maximize connectivity and minimize environmental impact?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Do pedestrian and bicycle paths link to open spaces, parks and community facilities such as "Central Gathering Place", YMCA, Library, and the Rouge River Valley?</li> <li>• Are off-street pathways through greenways designed to maximize connectivity?</li> <li>• Are street sidewalks and urban open spaces directly connected to the trail system in the Rouge Valley lands?</li> <li>• Are parks and open spaces clearly linked with street sidewalks?</li> <li>• Are there clearly defined ranges of functional and desirable pedestrian experiences?</li> </ul>				

## SECTION #4: BUILT FORM

### Performance Measures

#### BUILT FORM OVERVIEW

The Built Form Performance Measures are intended to guide built form in the development of Markham Centre.

The subject of built form is explicitly addressed in the 5<sup>th</sup> principle: *Markham Centre will provide high quality public spaces, pedestrian-friendly streets and courtyards to contribute to a strong "sense of place".* Other principles, such as those addressing transit, major streets, Highway 7, ecological sustainability, even the Rouge River affect the role of built form in realizing an urban focus for Markham that is sustainable and consistent with Smart Growth principles.

The performance measures in this section are intended to test whether development proposals for Markham Centre will achieve intended goals for built form. These measures are presented in the form of questions. To facilitate ease of use they are organized into four thematic areas including:

- ✓ Character
- ✓ Attractive building and lively streets
- ✓ Transit support
- ✓ Environmental support
- ✓ Conservation of energy



<b>Built Form</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Street Form and Landscaping - Precinct</b>					
<b>BF1</b>	<b>Do the building locations define street corridors and open spaces?</b>	<b>No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there consistent building alignment along the edges of street corridors and open spaces?</li> <li>• Is there consistent building alignment along the edges of street corridors and open spaces including a pedestrian scale podium?</li> </ul>				
<b>BF2</b>	<b>Is the building massing, character and design appropriate to the scale and role of each street type?</b>	<b>No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the building massing (location and prominence) up to eight storeys adjacent to streets and open spaces support the role of each street type?</li> <li>• Are building entrances concentrated along street frontages and glazed areas maximized to promote street activity?</li> <li>• Is there sufficient glazing and are there building entrances along the frontage of pedestrian oriented retail streets and adjacent to open spaces?</li> </ul>				
<b>BF3</b>	<b>Do the street cross sections support maximizing pedestrian use and amenity, and minimizing pavement?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the street environment support unimpeded pedestrian activity?</li> <li>• Have buildings been designed to promote extended use adjacent to public streets and open spaces?</li> <li>• Does the building location and height at the street edge support the pedestrian character of the streets and open spaces?</li> <li>• Are pedestrian sidewalk crossings for vehicle entrances to parking garages or service areas minimized along street frontages?</li> <li>• Is there appropriate width and continuity of unimpeded pedestrian sidewalk surfaces?</li> <li>• Are proposed street sidewalks wide enough to allow for: easy pedestrian passage; for sidewalk retail displays and/or outdoor dining; for amenable street furniture and landscaping; and to buffer ground floor residential?</li> <li>• Will the residential, commercial and/or retail uses in the building contribute to activities in the street?</li> <li>• Will the residential, commercial and/or retail uses in the building enhance other street level activities?</li> <li>• Does the urban streetscape treatment integrate with and enhance a high quality, coherent image of Markham Centre?</li> <li>• Does each urban street cross section has a high quality boulevard, median and sidewalk treatments?</li> <li>• Does each urban street cross section has street and pedestrian lighting, furniture and landscaping?</li> </ul>				

<b>Built Form</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Building Form - Site Specific</b>					
BF4	<b>Do the buildings accommodate intensification or adaptation to changes in use over time?</b>	<b>No relation to LEED Canada NC 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Could the building layout adapt to new activities with minimal effort and use of resources?</li> <li>• Are ground floors and building facades designed to be adaptable to changes in use? (e.g. residential to retail)</li> </ul>				
BF5	<b>Are building designs and materials of a consistently high architectural quality?</b>	<b>No relation to LEED Canada NC 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the overall building form express and enhance the sense of place of Markham Centre?</li> <li>• Are the building materials appropriate for the Markham Centre setting?</li> <li>• Are the component forms, colours, and textures appropriate for the Markham Centre setting?</li> <li>• Are the building materials appropriate for the uses?</li> </ul>				
BF6	<b>Is the building designed and outfitted, and is there a programme in place to promote the redirection of waste from landfill?</b>	<b>Relation to LEED Canada NC 1.0, MRp1</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are the building owners and occupants required to implement Waste Reduction Management Plan?</li> <li>• Does the building design provide recycling facilities for paper, cardboard, glass, plastics and metals?</li> <li>• Does the building design provide for composting?</li> </ul>				
BF7	<b>Does the design of roof areas create special places of activity as well and contribute to a distinctive roofscape?</b>	<b>No relation to LEED Canada NC 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the design of the building respond to Green technologies to address such matters as wastewater collection and treatment, water use reduction, etc.?</li> <li>• Does the design of the building envelope respond to Green technologies to address such matters and energy conservation, solar heat gain, reduction in heat island effects, etc.?</li> <li>• Is the roof visually appealing to those viewing from above or within?</li> </ul>				
BF8	<b>Are front yards and facades configured so as to ensure privacy for living spaces immediately facing the street?</b>	<b>No relation to LEED Canada NC 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are there appropriate thresholds between private, semi private, and public spaces to ensure appropriate levels of privacy?</li> <li>• Are the dimensions appropriate to achieve privacy?</li> <li>• Are there effective and visually pleasing screening elements?</li> <li>• Are there appropriate changes in grade?</li> </ul>				



<b>Built Form</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
BF9	<b>Does the building design support the Town of Markham Energy Strategy?</b>	<b>Relation to 3</b> prerequisites and as many as 17 credit points in LEED Canada NC 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is the project connected to District Energy?</li> <li>• Is there emphasis on energy use reduction?</li> <li>• Is there emphasis on high performance envelopes?</li> <li>• Is there emphasis on renewable energy sources?</li> <li>• Is there emphasis on efficient HVAC?</li> <li>• Is there emphasis on other mechanical systems?</li> <li>• Are appropriate climate modifying devices incorporated into building facades?</li> <li>• Is the building positioned and oriented to maximise energy performance and offer best protection from unwanted sun and wind?</li> <li>• Does the building design conserve energy and reduce greenhouse gas emissions?</li> </ul>				
BF10	<b>Does the building design manage water in an ecologically effective way?</b>	<b>Relation to</b> as many as 5 credit points in LEED Canada NC 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there emphasis on returning storm water to natural water cycle, and use of green roofs?</li> <li>• Does the building design conserve potable water?</li> <li>• Is there emphasis on wastewater collection, treatment and reuse?</li> <li>• Is there no potable water used in irrigation?</li> <li>• Is recycled water used for irrigation?</li> </ul>				
BF11	<b>Does the building design conserve materials and resources?</b>	<b>Relation to 1</b> prerequisite and as many as 14 credit points in LEED Canada NC 1.0, MRc1, MRc2, and MRc3			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the building construction process incorporate the recycling and reuse of building materials?</li> <li>• Is there a demonstrated commitment to recycling and re-use of building materials during the construction process?</li> <li>• Is there emphasis on renewable, recycled, locally produced, recyclable materials?</li> </ul>				
BF12	<b>Does the building design achieve high indoor environmental quality?</b>	<b>Relation to 2</b> prerequisites and as many as 15 credit points in LEED Canada NC 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there emphasis on natural light and air, healthy materials, views, controllability indoor environmental systems?</li> </ul>				

<b>Built Form</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Parking - Site specific</b>					
BF13	<b>Where surface parking is proposed, is it limited to future extension and has it been subdivided by a grid of road rights-of-way to facilitate future intensification?</b>	<b>No relation to LEED Canada NC 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the extent of land allocated to surface parking limit extension of surface parking in the future?</li> <li>• Is surface parking sub dividable for future integration into the urban pattern?</li> </ul>				
BF14	<b>Are parking and entrances located and designed to avoid interruption of the continuity of street frontages?</b>	<b>No relation to LEED Canada NC 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are parking facilities along street frontage minimized?</li> <li>• Has access to on street parking been maximized?</li> <li>• Have parking structures adjacent to the street corridor been designed to maximize street face design quality and integration with adjacent development and landscaping?</li> </ul>				
BF15	<b>Is surface parking in the project minimised?</b>	<b>No relation to LEED Canada NC 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Has surface parking been minimized in area? Has parking been incorporated into the building structure?</li> <li>• Is surface parking at the interior of blocks?</li> <li>• Is surface parking screened from streets and public places by buildings or landscape features?</li> <li>• Is surface parking requirements better than recommended in the Markham Centre Parking By-law?</li> </ul>				
BF16	<b>Are above ground parking structures along street corridors designed to accommodate appropriate commercial or retail uses?</b>	<b>No relation to LEED Canada NC 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the design of parking incorporate other activities which address and enhance the street?</li> </ul>				

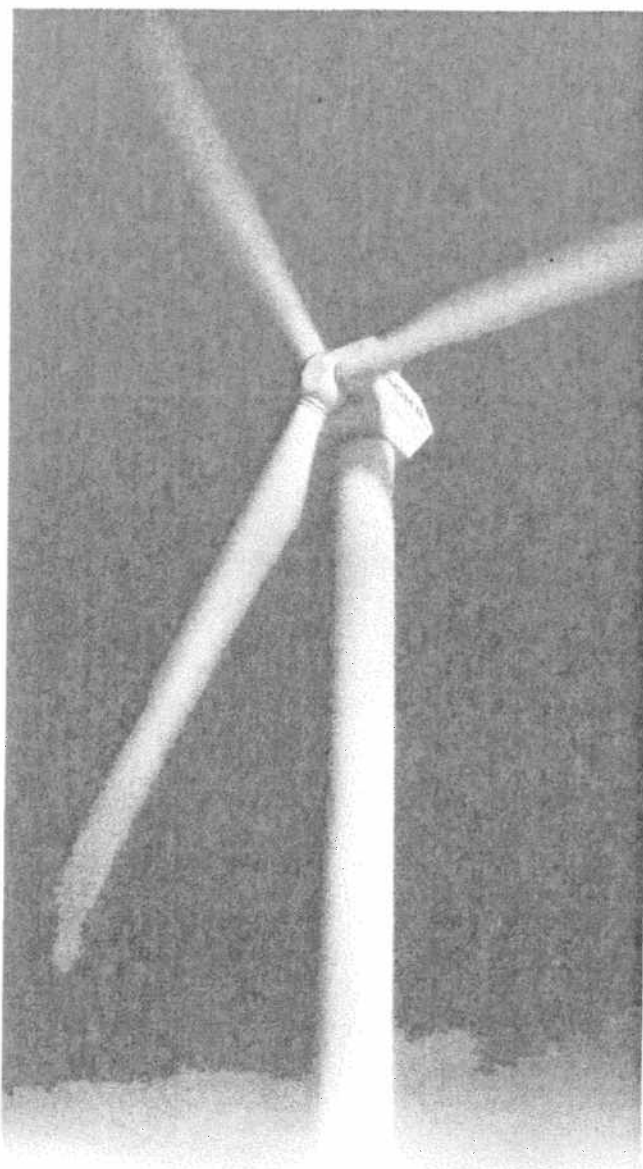
## SECTION #5: GREEN INFRASTRUCTURE *Performance Measures*

### GREEN INFRASTRUCTURE OVERVIEW

Green Infrastructure Performance Measures relate primarily to principle #7 Ensure Ecological Sustainability, Land will be developed to protect and enhance natural processes of the landscape."

These measures enforce the sustainability of the ecological system by minimizing the impact of developments on the environment and the conservation of energy through the use of sound engineering and innovative technology. The objectives are:

- ✓ Water conservation
- ✓ Air quality
- ✓ Multifunctional stormwater management
- ✓ Conservation of energy



<b>Green Infrastructure</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Site Water Quality and Permeability - Precinct</b>					
GI-1	Are pre-development catchments maintained?	Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Is the catchments area maintained?</li> <li>Are outlet points over the majority of planning area maintained?</li> </ul>				
GI-2	Does the site design (street, park and pathway) maximize the ability of water to percolate into the ground, closer to pre-development natural levels?	Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Are the following criteria met?                             <ul style="list-style-type: none"> <li>Existing rate of infiltration is maintained (+/- 10%)</li> <li>Base flow to Rouge River Valley is maintained or enhanced</li> <li>Erosion rate in Rouge River Valley is reduced or maintained</li> </ul> </li> </ul>				
GI-3	Is the run-off managed in an ecologically sound manner?	Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Is priority given to lot level, then conveyance, then end of pipe storm water management techniques?</li> <li>Is there direct, managed runoff to infiltration trenches, third pipes, swales, rain gardens?</li> </ul>				
<b>Site Water Quality and Permeability - Site Specific</b>					
GI-4	Does the design of the streets, parks and pathways minimise hard surfaces that cannot absorb groundwater, encourage natural percolation?	Relates to LEED Canada NC 1.0 Credits SSc6.1			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Is there an appropriate degree of contribution to water conservation and groundwater recharge?</li> </ul>				
GI-5	Is the stormwater management facility integrated into the landscape, and naturalized to the extent possible?	No relation to LEED Canada NC 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Is the stormwater management system (ponds, streams and other features) designed with a character which integrates a variety of appropriate recreational activities?</li> </ul>				
PS6	<b>Net Environmental Gain:</b> Is there a plan to replace/offset any loss of vegetation?	Relates to LEED Canada NC 1.0 Credit SSc5.1			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Is the total amount of vegetation increased as a result of the project?</li> </ul>				

Green Infrastructure					
Item #	Performance Measures	Correlation to LEED	Yes	No	N/A
GI-7	Has the landscaping plan been designed to conserve and enhance the natural attributes of the site and to conserve potable water?	Relates to LEED Canada NC 1.0 Credits SS5, WE1.1 and WE1.2			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are appropriate windbreaks, natural ground cover, native plant and tree species, drought-resistant species incorporated?</li> <li>Low water irrigation: <ul style="list-style-type: none"> <li>• Is there no potable water used in irrigation?</li> <li>• Are drought-resistant plant materials native plants, rainwater harvesting, drip irrigation used?</li> <li>• What are the number of lots with recycled water for irrigation?</li> <li>• Application of a variety of permeable materials (eg: permeable pavement, porous materials, green roofs)</li> <li>• Have there a variety of measures employed to manage water at the lot level, such as green roofs, rain gardens, cisterns, permeable materials, vegetation?</li> <li>• At what extent area alternative ground covers used?</li> <li>• At what extent of green rooftop treatments used?</li> </ul> </li> <li>wind protection for people: <ul style="list-style-type: none"> <li>• What landscaping or building design for windbreaks on north/northeast sides of buildings used?</li> <li>• How many trees have been planted for windbreaks?</li> </ul> </li> </ul>	Relates to LEED Canada NC 1.0 Credits WE1.1 and WE1.2			
Conservation of Energy Through Landscape Design - Site Specific					
GI-8	Has the landscaping plan been designed and implemented to maximize the natural attributes of the site to capture latent, potential energy efficiencies?	Relates to LEED Canada NC 1.0 Credits SS5.1, SS7.1 WE1.1, WE1.2			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the landscaping plan provide shade to building walls and public places in the summer and allow sunlight to building walls and public places in the winter?</li> </ul>				
GI-9	Are heat island effects minimised?	Relates to LEED Canada NC 1.0 Credits SS7			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are parking lots &amp; roads shaded to reduce heat island effects?</li> <li>• Are light-coloured pavement, building or landscape materials used?</li> </ul>				



Green Infrastructure					
Item #	Performance Measures	Correlation to LEED	Yes	No	N/A
Built Form in relationship to Green Infrastructure - Site Specific					
GI-10	Have the buildings been positioned and oriented to make creative use of green design principles and best practices?	Relates to LEED Canada NC 1.0 Categories: Water Efficiency Energy and Atmosphere Indoor Environmental Quality			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the design maximise water efficiency?</li> <li>• Does the design maximise energy use reduction?</li> <li>• Does the design maximise indoor environmental quality?</li> </ul>	Note that attainable specific LEED Credit points will depend on the specific design features of each project.			

## SECTION #6: PUBLIC SPACE

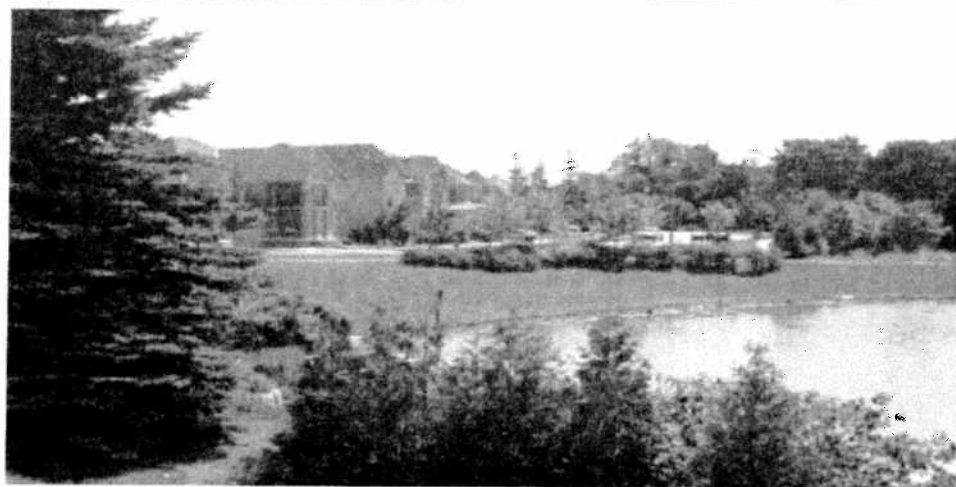
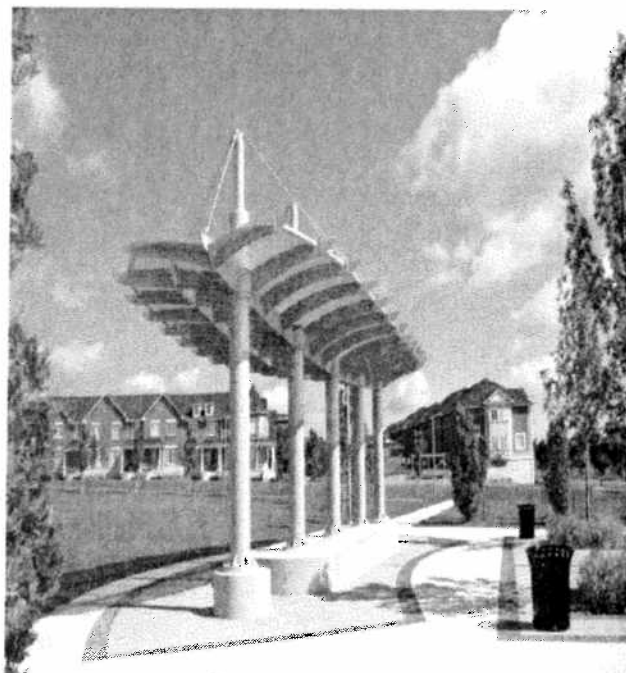
### Performance Measures

#### PUBLIC SPACE OVERVIEW

The Public Space Performance Measures deal with open spaces, including parks (in terms of quantity, quality, typologies, character, streetscapes and public amenities (schools, community centers, and other civic amenities), as well as environmental indicators.

The subject of Public Space is addressed largely through principle #5 – *“Provide a “Sense of Place” – Markham Centre will provide high quality public spaces, pedestrian-friendly streets and courtyards to contribute to a strong “sense of place”.* In this case the measures of this section address public space matters such as:

- ✓ Adequate open space
- ✓ Integration of open space systems
- ✓ Variety of open spaces
- ✓ Pathways, passageways, courtyards
- ✓ Urban street treatment
- ✓ Sustainable site development practices
- ✓ Safe and accessible public spaces



<b>Public Space</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Public Space - Form - Precinct</b>					
<b>PS1</b>	<b>Environmental Integration - Rouge River Valley:</b> <b>Is the urban park system coherent and complementary to the Rouge River Valley while preserving its scenic presence?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Do landscape treatments integrate with and enhance natural systems?</li> <li>• Is there an appreciable amount (include %?) of appropriately located table land consolidated?</li> <li>• Are there visual connection's) to the Rouge River Valley with clearly identified entry points and gateways?</li> </ul>				
<b>PS2</b>	<b>Integration of Movement - Flow &amp; Connectivity:</b> <b>Is there a natural integration of urban open spaces, parks, streets, bridges and paths and interconnectivity to key community facilities and the Rouge River Valley?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Do pedestrian and bicycle paths link to open spaces, parks and community facilities such as "Central Gathering Place", YMCA, Library, and the Rouge River Valley?</li> <li>• Are off-street pathways through greenways designed to maximize connectivity?</li> <li>• Are street sidewalks and urban open spaces directly connected to the trail system in the Rouge Valley lands?</li> <li>• Are parks and open spaces clearly linked with street sidewalks?</li> <li>• Are there clearly defined range of attractive and desirable pedestrian experiences?</li> </ul>				
<b>Urban Form - Precinct</b>					
<b>PS3</b>	<b>Are the buildings and street patterns positioned to maximize visual features?</b>	<b>No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are there sufficient view corridors and vistas terminating in natural or built features?</li> <li>• Are public institutions or landmark buildings located at high visibility locations?</li> <li>• Do building locations create views and vistas to visible landmarks?</li> <li>• Are landmark buildings or open space features distributed to add visual distinctiveness and orientation?</li> <li>• Are sufficient streets perpendicular to the Rouge River Valley provide public view corridors to the valley?</li> <li>• Are the street sidewalks and urban open spaces directly connected to the trail system in the Rouge River Valley lands?</li> </ul>				
<b>PS4</b>	<b>Is the Rouge River Valley defined by public space?</b>	<b>No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are buildings located to complement adjacent topography or features? (e.g. single sided roads next to the Rouge River Valley?)</li> </ul>				

<b>Public Space</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
PS5	Has illumination of the public realm been designed to enhance the night time character and attractiveness of Markham Centre as well as contribute to pedestrian amenity and safety?	Relates to LEED Canada NC 1.0 Credit SSc8			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there a clear strategy for lighting for public safety at night?</li> <li>• Is there a clear strategy for night lighting to make the buildings attractive while limiting light pollution for neighbours?</li> </ul>				
PS6	Do the block dimensions promote easy cross movements?	No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are the urban blocks dimensioned to ensure connectivity?</li> <li>• Do streets form a continuous grid pattern of lots and blocks in both directions?</li> </ul>				
<b>Public Art - Precinct</b>					
PS7	Has public art been integrated in public and public accessible spaces to contribute to the cultural legacy of Markham Centre?	No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there integration of public art into the public realm?</li> <li>• Has public art been incorporated into private development to contribute to the cultural legacy of Markham Centre?</li> <li>• If a water feature is incorporated, does it address water conservation?</li> </ul>				
<b>Public Space Amenity - Precinct</b>					
PS8	<b>Usage Diversity:</b> Are the parks distinct yet complementary? Is there diversity in programming of the park and open space system activities?	Possible relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there diversity of appropriate year-round activities?</li> <li>• Does the system of parks both incorporate and contrast with the natural character of Rouge River Valley?</li> <li>• Are facilities available to support park activities, such as telephones, washrooms, bike racks, etc.?</li> </ul>				
PS9	<b>Safety &amp; Accessibility:</b> Do parks and urban open spaces have adequate accessibility, safety and promote year round usage?	No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Do parks and urban open spaces have adequate street frontage and lighting to provide unobstructed visibility, access, public safety day and night, year round?</li> </ul>				
<b>Ecology - Precinct</b>					
PS10	<b>Horticultural Biodiversity:</b> Is there horticultural biodiversity in the development of urban streetscape, parks and open space components?	Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there a sufficient degree of horticultural biodiversity?</li> </ul>				



<b>Public Space</b>					
<b>Form - Site Specific</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
PS11	<b>Bridges and Crossings:</b> <b>Are the bridge valley crossings designed as high quality visual structures complimenting the overall Markham Centre design?</b>	<b>No relation to LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is the design complementary to the natural setting?</li> <li>• Does the design include a variety of viewing points?</li> <li>• Do the bridge valley crossings support pedestrians &amp; bicyclists?</li> </ul>				
PS12	<b>Private Spaces - Integration:</b> <b>Are private open spaces, paths and courtyards minimised and integrated with streets and parks in support of overall open space concept?</b>	<b>No relation to LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the project include public open space and courtyards?</li> <li>• Does the projects public open space and courtyards have appropriate transitions with streets and parks?</li> <li>• Are private open spaces and courtyards within easy year round safe public access?</li> <li>• Is there appropriate proportion of inviting and clearly defined public access space, with minimal exclusively private space?</li> </ul>				
PS13	<b>Growth - Planning:</b> <b>Have each of the urban street cross sections been developed with consistent, high quality boulevard and median treatments, and street tree planting?</b>	<b>No relation to LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are boulevards or medians wide enough to support growth of mature trees in a full canopy and natural branching habitat?</li> <li>• Will there be extension of the tree canopy on public and private lands by 100% at maturity?</li> <li>• Is there horticultural biodiversity and the predominance of native species?</li> </ul>				
PS14	<b>Design Innovation - Art Form:</b> <b>Is the design innovative integrating public art?</b>	<b>No relation to LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there innovation in design supporting overall vision of Markham Centre?</li> <li>• Is public art incorporated?</li> </ul>				
<b>Urban Form - Site Specific</b>					
PS15	<b>Are the street sidewalks and urban open spaces directly connected to the trail system in the Rouge River Valley lands?</b>	<b>No relation to LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are the setbacks to ensure a buffer to greenlands consistent with Markham Centre Master Plan objectives?</li> <li>• Are properties laid out to respect the surrounding area?</li> </ul>				

## SECTION #7: TRANSPORTATION

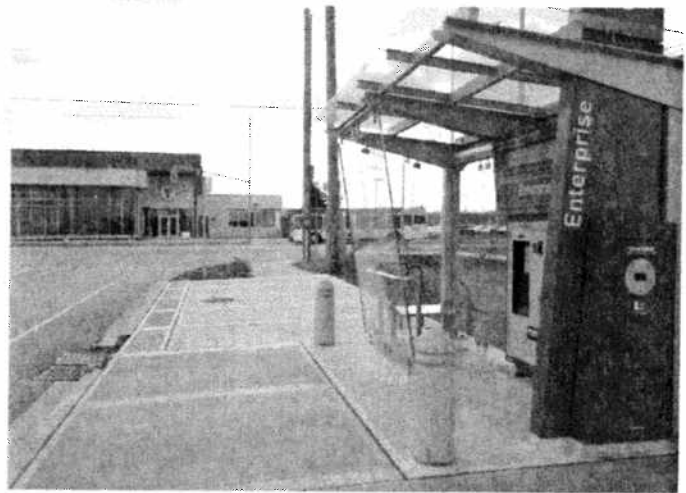
### Performance Measures

#### TRANSPORTATION OVERVIEW

The Transportation Performance Measures have been developed using the principles of sustainable development. The measures promote a balanced transportation system that accommodates all modes of travel. The five component areas of the transportation performance measures set out in this section include:

- ✓ Roads
- ✓ Transit
- ✓ Biking
- ✓ Walking
- ✓ Transportation Demand Management

It is expected that users of this document will apply the criteria in each of the five areas to ensure that the individual development applications not only accommodate automobile based travel but also incorporate and promote non-automobile based forms of transportation. It is through this process that a sustainable transportation network can be achieved.





<b>Transportation</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Transportation Demand Management - Precinct</b>					
<b>T1</b>	<b>Does the Plan reduce the reliance of single occupancy vehicle trips?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the plan promote travel by walking, biking and transit, as viable alternatives to the automobile?</li> <li>• Have arrangements been made (lease and/or purchase and sale) with tenants for participation in a Markham Centre Transportation Management Association (TMA) and the incorporation of Transportation Demand Management (TDM) measures?</li> <li>• Does the plan minimise the amount of parking and the flexibility to relocate parking to structured parking facilities within Markham Centre?</li> <li>• Is the implementation plan for Transportation Demand Management (TDM) measures established with achievable goals?</li> <li>• Is there opportunity to introduce an employee trip reduction program for the onset of occupancy?</li> <li>• Have resources (time, funds, staff) been set aside to implement Transportation Demand Management (TDM) measures?</li> </ul>				
<b>Alternate Modes</b>					
<b>Walking - Precinct</b>					
<b>T2</b>	<b>Are sidewalks and pedestrian pathways integrated into the transportation network and buildings?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the development pattern emphasis connectability and permeability?</li> <li>• Are development blocks dimensioned to promote direct travel by pedestrians?</li> <li>• Does the development plan provide for sidewalks on both sides of the road?</li> <li>• Are pedestrian pathways connected to development sites?</li> <li>• Does the sidewalk design provide direct access between the buildings and the adjacent transit stops or sidewalks along the adjacent roads?</li> <li>• Is there appropriate connectivity between on-street and off-street pathways?</li> <li>• Is sufficient signage and illumination provided on proposed pedestrian routes?</li> <li>• Does the streetscape promote safety and comfort of walking environment?</li> </ul>				

<b>Transportation</b>					
<b>Item #</b>	<b>Performance Measures</b>	<b>Correlation to LEED</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>T3</b>	<b>Are designated bike routes identified to connect with and implement with Town-wide objectives?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are bike routes or pathways integrated with the transit network and development sites?</li> <li>• Are bike routes or pathways consistent with the Town of Markham Bike and Pathways Master Plan?</li> <li>• Is appropriate signage and illumination provided to define the bicycle pathways?</li> <li>• Are the off-street bike pathways connected to development sites?</li> </ul>				
<b>Public Transit - Precinct</b>					
<b>T4</b>	<b>Is there connectivity amongst local, regional and interregional transit systems?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Is there a Maximum 5 minute walk to transit station/stop?</li> <li>• Is an appropriate Right of Way (?) protected to accommodate rapid transit system?</li> </ul>				
<b>T5</b>	<b>Is the development planned in a transit oriented way?</b>	<b>Anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Are transit stops in reasonable proximity to the proposed development?</li> <li>• Is a transit stop integrated into the development plan?</li> <li>• Are Transit stops/shelters designed appropriately and provided?</li> <li>• Is sufficient signage and illumination provided at transit stops and/or stations?</li> <li>• Have buildings been concentrated along the rapid transit stops?</li> <li>• Degree of building concentration adjacent to rapid transit</li> <li>• Are buildings adjacent to transit stops designed to provide protection from the elements?</li> </ul>				
<b>Road Pattern - Precinct</b>					
<b>T6</b>	<b>Does the road network reflect the grid network pattern and promote the urban character inherent to the vision for Markham Centre?</b>	<b>No anticipated relation to future LEED Canada NEIGHBOURHOOD 1.0</b>			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Does the street system provide interconnection throughout Markham Centre?</li> <li>• Where required, are appropriate traffic-calming measures outlined?</li> <li>• Is on street parking accommodated on public streets?</li> <li>• Is there proper spacing for driveway access to individual land uses?</li> </ul>				

T7	Do the crossings minimize impact on the Rouge River Valley?	No relation to LEED Canada NC 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Are the proposed Rouge River Valley crossings located and designed according to ecologically sound principles?</li> </ul>				
<b>Transportation</b>					
Item #	Performance Measures	Correlation to LEED	Yes	No	N/A
T8	Is the project planned and designed to promote Transportation Demand Management?				
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Is preferential parking provided for car pooling?</li> <li>Is an auto sharing programme accommodated?</li> <li>Is there a programme to promote transit passes?</li> <li>Are parking, storage and support facilities for bicycles adequate?</li> </ul>	No relation to LEED Canada NC 1.0			
<b>Alternate Modes</b>					
<b>Biking - Site Specific</b>					
T9	Are bicycle support facilities incorporated into the development?	Relates to LEED Canada NC 1.0 Credit 4.2			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Does the plan provide for showers, change rooms, lockers and bike racks?</li> <li>Does the plan provide for bike paths?</li> </ul>				
<b>Intersections - Site Specific</b>					
T10	Do the vehicle and pedestrian movement patterns integrate well with the overall scheme of vehicle and pedestrian flow?	No relation to LEED Canada NC 1.0			
	<b>Performance Indicators:</b> <ul style="list-style-type: none"> <li>Is there appropriate intersection spacing?</li> <li>Is the appropriate form of traffic control at intersections indicated - is there choice of direction for all vehicles to enter and exit?</li> <li>Are offset intersections or driveways minimized?</li> <li>Are the intersections and pedestrian crossings designed to be clearly visible and safe ?</li> </ul>				

## SECTION #8

### HOW THE RATING SYSTEM WORKS

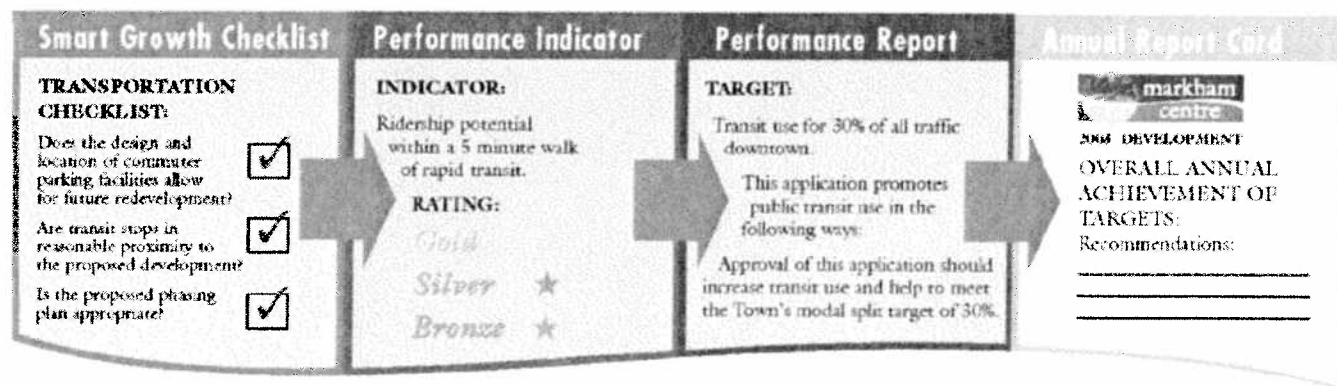
The Performance Measures reflect the work in five key themes areas:

- Greenlands (the natural environment of the Rouge River and its tributaries)
- Built Form
- Public Space
- Green Infrastructure (sustainable engineering practices)
- Transportation

Each theme area contains a checklist of key questions to be addressed in the application and criteria by which the development proposal will be assessed. Development proposals will be evaluated according to the indicators in each area based on a ranking system of 'Bronze, Silver and Gold'. The minimum standard typically used in conventional development practices is represented as the "Bronze" rating, while "Silver" and "Gold" ratings represent those developments, which exceed conventional practices. The Performance Checklist provides a means to aid in measuring the success of a development relative to conventional practices and a basis for promoting continued improvements, cutting edge technologies and best practices models.

The applicant will be required to provide staff with a completed copy of the Performance Measures Checklist and an explanation of how the development proposal has addressed the Indicators. Staff will evaluate the submission, and provide an assessment of the application to the Advisory Group for their comment. The applicant will then be requested to integrate the appropriate changes and comments of the Advisory Group into a revised application. Results of the evaluation will be included in Staff's final recommendation report to Council.

## Markham Centre Performance Measures



## Performance Measures Checklist

## Appendix I

<b>Built Form</b>					
<b>Street Form and Landscaping - Precinct</b>					
Item #	Performance Measures	LEED Correlation	Yes	No	N/A
BF1	Do the building locations define street corridors and open spaces?	3			
BF2	Is the building massing, character and design appropriate to the scale and role of each street type?	3			
BF3	Do the street cross sections support maximizing pedestrian use and amenity, and minimizing pavement?	2			
<b>Building Form - Site Specific</b>					
BF4	Do the buildings accommodate intensification or adaptation to changes in use over time?	3			
BF5	Are building designs and materials of a consistently high architectural quality?	3			
BF6	Is the building designed and outfitted, and is there a programme in place to promote the redirection of waste from landfill?	1			
BF7	Does the design of roof areas create special places of activity as well and contribute to a distinctive roovescape?	3			
BF8	Are front yards and facades configured so as to ensure privacy for living spaces immediately facing the street?	3			
BF9	Does the building design support the Town of Markham Energy Strategy?	1			
BF10	Does the building design manage water in an ecologically effective way?	1			
BF11	Does the building design conserve materials and resources?	1			
BF12	Does the building design achieve high indoor environmental quality?	1			
<b>Parking - Site specific</b>					
BF13	Where surface parking is proposed, is it limited to future extension and has it been subdivided by a grid of road rights-of-way to facilitate future intensification?	3			
BF14	Are parking and entrances located and designed to avoid interruption of the continuity of street frontages?	3			
BF15	Is surface parking in the project minimised?	3			
BF16	Are above ground parking structures along street corridors designed to accommodate appropriate commercial or retail uses?	3			
		<b>Total</b>			

1. Relationship to LEED Canada NC 1.0
2. Anticipated relation to future LEED Canada Neighbourhood 1.0
3. No anticipated relation to future LEED Canada Neighbourhood 1.0

## Performance Measures Checklist

## Appendix I

<b>Green Infrastructure</b>					
<b>Site Water Quality and Permeability - Precinct</b>					
Item #	Performance Measures	LEED Correlation	Yes	No	N/A
GI-1	Are pre-development catchments maintained?	2			
GI-2	Does the site design (street, park and pathway) maximize the ability of water to percolate into the ground, closer to pre-development natural levels?	2			
GI-3	Is the run-off managed in an ecologically sound manner?	2			
<b>Site Water Quality and Permeability - Site Specific</b>					
GI-4	Does the design of the streets, parks and pathways minimise hard surfaces that cannot absorb groundwater, encourage natural percolation?	1			
GI-5	Is the stormwater management facility integrated into the landscape, and naturalized to the extent possible?	3			
PS6	Net Environmental Gain: Is there a plan to replace/offset any loss of vegetation?	1			
GI-7	Has the landscaping plan been designed to conserve and enhance the natural attributes of the site and to conserve potable water?	1			
<b>Conservation of Energy Through Landscape Design - Site Specific</b>					
GI-8	Has the landscaping plan been designed and implemented to maximize the natural attributes of the site to capture latent, potential energy efficiencies?	1			
GI-9	Are heat island effects minimised?	1			
<b>Built Form in relationship to Green Infrastructure - Site Specific</b>					
GI-10	Have the buildings been positioned and oriented to make creative use of green design principles and best practices?	1			
		<b>Total</b>			

1. Relationship to LEED Canada NC 1.0
2. Anticipated relation to future LEED Canada Neighbourhood 1.0
3. No anticipated relation to future LEED Canada Neighbourhood 1.0



## Performance Measures Checklist

## Appendix I

<b>Public Space</b>					
<b>Public Space - Form - Precinct</b>					
Item #	Performance Measures	LEED Correlation	Yes	No	N/A
PS1	<b>Environmental Integration - Rouge River Valley:</b> Is the urban park system coherent and complementary to the Rouge River Valley while preserving its scenic presence?	2			
PS2	<b>Integration of Movement - Flow &amp; Connectivity:</b> Is there a natural integration of urban open spaces, parks, streets, bridges and paths and interconnectivity to key community facilities and the Rouge River Valley?	2			
<b>Urban Form - Precinct</b>					
PS3	Are the buildings and street patterns positioned to maximize visual features?	3			
PS4	Is the Rouge River Valley defined by public space?	3			
PS5	Has illumination of the public realm been designed to enhance the night time character and attractiveness of Markham Centre as well as contribute to pedestrian amenity and safety?	1			
PS6	Do the block dimensions promote easy cross movements?	3			
<b>Public Art - Precinct</b>					
PS7	Has public art been integrated in public and public accessible spaces to contribute to the cultural legacy of Markham Centre?	3			
<b>Public Space Amenity - Precinct</b>					
PS8	<b>Usage Diversity:</b> Are the parks distinct yet complementary? Is there diversity in programming of the park and open space system activities?	2			
PS9	<b>Safety &amp; Accessibility:</b> Do parks and urban open spaces have adequate accessibility, safety and promote year round usage?	3			
<b>Ecology - Precinct</b>					
PS10	<b>Horticultural Biodiversity:</b> Is there horticultural biodiversity in the development of urban streetscape, parks and open space components?	2			

## Performance Measures Checklist

## Appendix I

<b>Form - Site Specific</b>					
Item #	Performance Measures	Correlation to LEED	Yes	No	N/A
PS11	<b>Bridges and Crossings:</b> Are the bridge valley crossings designed as high quality visual structures complimenting the overall Markham Centre design?	3			
PS12	<b>Private Spaces - Integration:</b> Are private open spaces, paths and courtyards minimised and integrated with streets and parks in support of overall open space concept?	3			
PS13	<b>Growth - Planning:</b> Have each of the urban street cross sections been developed with consistent, high quality boulevard and median treatments, and street tree planting?	3			
PS14	<b>Design Innovation - Art Form:</b> Is the design innovative integrating public art?	3			
<b>Urban Form - Site Specific</b>					
PS15	Are the street sidewalks and urban open spaces directly connected to the trail system in the Rouge River Valley lands?	3			
		<b>Total</b>			

<b>Greenlands</b>					
<b>Implementation of Greenland Plan - Precinct &amp; Site Specific</b>					
Item #	Performance Measures	LEED Correlation	Yes	No	N/A
G1	Is this project consistent with achieving the goals of the Markham Greenlands Master Plan ?	2			
G2	Has monitoring, measurement and reporting been included in this project to ensure consistency with the master plan ?	3			
<b>Project Interface with Greenlands Plan - Precinct &amp; Site Specific</b>					
G3	Does this project enhance the greenlands ?	2			
G4	Are Water Quality and river processes Improved ?	2			
G5	Is Air Quality Improved ?	2			
G6	Is Vegetation Improved ?	2			
G7	Is wildlife protected and enhanced ?	2			
G8	Are Social Factors addressed, including recreation, interpretation, education and user experience ?	3			
G9	Are off-street pathways through greenways designed to maximize connectivity and minimize environmental impact?	2			
		<b>Total</b>			

1. Relationship to LEED Canada NC 1.0
2. Anticipated relation to future LEED Canada Neighbourhood 1.0
3. No anticipated relation to future LEED Canada Neighbourhood 1.0

## Performance Measures Checklist

## Appendix I

<b>Transportation</b>					
<b>Transportation Demand Management - Precinct</b>					
Item #	Performance Measures	LEED Correlation	Yes	No	N/A
T1	Does the Plan reduce the reliance of single occupancy vehicle trips?	2			
<b>Alternate Modes</b>					
<b>Walking - Precinct</b>					
T2	Are sidewalks and pedestrian pathways integrated into the transportation network and buildings?	2			
T3	Are designated bike routes identified to connect with and implement with Town-wide objectives?	2			
<b>Public Transit - Precinct</b>					
T4	Is there connectivity amongst local, regional and interregional transit systems?	2			
T5	Is the development planned in a transit oriented way?	2			
<b>Road Pattern - Precinct</b>					
T6	Does the road network reflect the grid network pattern and promote the urban character inherent to the vision for Markham Centre?	3			
T7	Do the crossings minimize impact on the Rouge River Valley?	3			
<b>Transportation</b>					
T8	Is the project planned and designed to promote Transportation Demand Management?	3			
<b>Alternate Modes</b>					
<b>Biking - Site Specific</b>					
T9	Are bicycle support facilities incorporated into the development?	1			
<b>Intersections - Site Specific</b>					
T10	Do the vehicle and pedestrian movement patterns integrate well with the overall scheme of vehicle and pedestrian flow?	3			
		<b>Total</b>			

1. Relationship to LEED Canada NC 1.0



2. Anticipated relation to future LEED Canada Neighbourhood 1.0

3. No anticipated relation to future LEED Canada Neighbourhood 1.0

## Appendix II



### Markham Centre Report Card Year: 2007

<b>Project Name:</b>					
<b>Project Description:</b>	<b>Location:</b> <b>Total Land Area:</b>				
<b>Project Status:</b>	<b>Preliminary Report:</b> <b>Public Meeting:</b>				
<b>Advisory Process Stages:</b>	<b>Preliminary Presentation:</b> <b>Interim Presentation:</b> <b>Final Presentation:</b> <b>Report Card Review Date:</b>				
<b>Indicators Evaluation:</b>	<b>Sub Group Areas:</b>	<b>Bronze</b>	<b>Silver</b>	<b>Gold</b>	<b>Comments: ✓</b>
	<b>Built Form</b>				
	<b>Public Spaces</b>				
	<b>Greenlands</b>				
	<b>Transportation</b>				
	<b>Green Infrastructure</b>				
<b>Performance Measures Targets:</b>	<b>On Target</b> 	<b>Not on Target</b> 	<b>Comments:</b>		