



the move to  
city-wide concrete  
improvements  
for vertical living

# Tower Renewal

## Implementation Book

Draft



# **Tower Renewal**

## Implementation Book

**June 1, 2010 Draft**

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## Message from Mayor David Miller

*Tower Renewal is a program to drive broad environmental, social, economic, and cultural change by improving Toronto's concrete apartment towers and the neighbourhoods that surround them. The Toronto region contains North America's second highest concentration of these buildings, but only in Toronto will you find them integrated with both urban and suburban neighbourhoods. They are some of the city's most inefficient buildings, and they present us with an incredible opportunity.*

*By dramatically improving the energy efficiency of the more than 1,000 high rise residential concrete frame buildings located throughout Toronto, Tower Renewal will reduce greenhouse gas emissions by up five per cent for the urban area.*

*Tower Renewal will also generate social, economic and cultural benefits by creating local green jobs, increasing on-site small-scale retail and markets, upgrading green space around the buildings, providing more space for neighbourhood meetings and interactions, installing solar, wind and geothermal energy solutions, increasing water conservation and on-site management of waste, increasing the demand for locally-produced green and clean technology, and fostering small business, community gardens and local food production at the sites.*

*In 2008, I announced the location of several pilot sites. These are sites where the property owners and managers have agreed to participate in Tower Renewal. Pilot projects in neighbourhoods across the City are now ready to begin work on building upgrades and implementing tenant engagement strategies. The purpose of these sites is to demonstrate a wide range of tower renewal opportunities in*

*different neighbourhood contexts, and to apply the lessons learned to a city-wide rollout of Tower Renewal.*

*The new Sustainable Towers, Engaged People (STEP) program provides an opportunity for all high-rise concrete residential buildings to participate in Tower Renewal.*

*When Mayor's Tower Renewal was originally launched in 2008, it was very much a Mayor's initiative. It fit with the major objectives of my mandate. However, over the past several years, Tower Renewal has evolved and is now consistent with the objectives of many of the City's strategies and programs. Tower Renewal is no longer simply a Mayor's initiative—it has been endorsed by City Council and is an integral part of our vision for a city that is prosperous, liveable and provides opportunity for all.*

*Ultimately Tower Renewal provides us with the opportunity to inspire change by achieving the combined and integrated results of combating climate change while stimulating local economic development including job creation, applying new and innovative green technologies, and renewing and revitalizing neighbourhoods across the city.*



*Mayor David Miller  
City of Toronto  
May 2010*





## A message from City Manager Joseph P. Pennachetti

*Every day, City of Toronto staff work towards building a beautiful, vibrant, and inclusive city that offers rich life opportunities for all who call Toronto home. Tower Renewal supports these same goals. It is a unique and ambitious initiative that will help transform Toronto's aging residential towers into lively, well-functioning neighbourhoods. What I find so impressive about Tower Renewal is that, with the support of City staff, Tower Renewal projects will mesh seamlessly with many of the City's programs and initiatives.*

*Tower Renewal complements many of the City's goals including Transit City – a plan that will deliver rapid public transit to every corner of our city, making vital connections to our priority neighbourhoods where there is the greatest need and limited access to services. It is also consistent with the objectives of the Agenda for Prosperity—including supporting a proactive, global, creative and inclusive Toronto—as well as with our Climate Change, Clean Air and Sustainable Energy Action Plan and with the work of the Neighbourhood Action Teams in the city's 13 priority neighbourhoods.*

*Tower Renewal will require unprecedented levels of cooperation and coordination across all City Divisions and Agencies and a wide array of external partners. This complex work will not be completed overnight but over time will result in cleaner, safer and more exciting neighbourhoods. By renewing many of the city's towers, we will achieve economic, social and environmental improvements:*

- *Water and energy will be more effectively used.*
- *Rapid transit will be more accessible for residents living in the apartment towers and will therefore help connect them with the greater city. Rapid transit will also reduce the need to use cars.*
- *The natural areas in the community will be enhanced.*
- *Construction and green jobs will be created and new businesses, such as local markets, will be added.*
- *Public spaces and facilities for the community will be improved to offer new opportunities for residents to meet and socialize.*

*Through the new STEP program, City staff will supply an array of tools and supports that will make it possible for apartment towers city-wide to take part in Tower Renewal. The STEP program together with other supporting City initiatives will see Tower Renewal projects that begin small, develop into large-scale transformations with dramatic impacts.*

*I am excited by the opportunities that are inherent in Tower Renewal projects. In a city where so many residents call these towers home, I believe that Tower Renewal is critical to building a successful Toronto.*

*Thank you for your interest in this ambitious initiative—an initiative that will help Toronto remain strong for generations to come.*



Joseph P. Pennachetti  
City Manager  
May, 2010

## Executive Summary

**In September 2008**, City Council recognized Tower Renewal as an opportunity to make tremendous progress on a wide range of City initiatives. The Tower Renewal Office was formed in early 2009. Since this time, staff have worked to operationalize the opportunities that were set out in the *Mayor's Tower Renewal Opportunities Book*. Practical applications were investigated at a number of pilot sites. The way that the buildings use their resources (energy, water, and recycling) was measured and then assessed to determine the most efficient ways to reduce usage. The manners in which the buildings and surrounding areas meet the needs of residents who live in the community were documented and opportunities for improvements identified.

Overall, the positive impacts that Tower Renewal can generate are dramatic. Water and energy use and greenhouse gas emissions can be drastically reduced; the production of renewable energy can be achieved; social networks, a sense of safety, and the ease of traveling in the community can be considerably strengthened; and significant economic growth through job and local business creation realized. These findings are detailed in this book.

**The conclusion is that Tower Renewal is a program that is well worth undertaking. The challenge is how to make it happen.**

Our studies have shown that the most comprehensive projects will provide the best overall range and depth of benefits. These projects are not typically undertaken today because they are frequently viewed as too complicated and the benefits are not commonly understood. Despite providing a positive return on investment, the financial commitment and amount of funding required often deters owners and property managers from undertaking these more complex projects.

**A city-wide rollout strategy has been created that includes three components:**

- **Sustainable Towers Engaging People (STEP) program**
- **A financing option**
- **A community revitalization process**

The STEP program will:

- provide the opportunity for all apartment buildings to participate
- build the capacity of property owners and managers step-by-step so that they may undertake projects of greater complexity and with greater benefits
- build the capacity of residents to participate in Tower Renewal
- assess the performance levels of buildings on an ongoing basis
- integrate social, cultural, economic and environmental initiatives in one program.

Consultation activities are planned with stakeholders to finalize the components of the program and its structure.

The requirement for financing projects has also been investigated and a plan that will arrange for project financing from a source that is only available for renewal projects have been developed. The City has the opportunity to create a self-financing option based on benefits that the renewal projects create. Another principle of the Tower Renewal financing strategy is to minimize negative impacts to tenants due to Tower Renewal projects.

The STEP program, the finance strategy and the community revitalization process are all described in detail in this book. Although the work done to date has been wide ranging, there are still areas of investigation that will further add to our understanding of how Tower Renewal can benefit the city. In particular, a further review of zoning regulations will help us understand how to unlock the value inherent in making Tower Renewal communities more complete neighbourhoods.

## Background

**Toronto is a city of towers.** There are more than 1,000 residential apartment towers found all across Toronto that were built between 1945 and 1984. During this period, concrete frame apartment towers were the most popular new residential buildings in the city. Thousands of units were built in mixed neighbourhoods that included single-family homes, industry, shopping and open spaces. Today, these concrete frame towers are aging and inefficient and the open space that surrounds them is often underused.

### Multi-unit Residential Buildings (MURBs) in Toronto built between 1945 and 1984 with 8 stories or more<sup>1</sup>

# of Stories	# of MUR Buildings
8 – 11	316
12 – 17	499
18 or more	374
<b>Total</b>	<b>1189*</b>

\*About 800 of these buildings are privately owned rental properties.

These buildings are important to Toronto. They provide the majority of our rental housing and, compared to the typical size of condo units built today, often have large units. They are also fundamentally sound and with appropriate care and investment will provide housing for future generations. However, there are challenges. Many have poor performance in energy efficiency, and are isolated from shopping and other services. These challenges provide excellent opportunities to strengthen apartment neighbourhoods and the surrounding areas in several ways.

### Tower Renewal Opportunity: improving resource use

These apartments demand high levels of energy per square metre. When the towers were built, energy conservation was not yet a consideration. Today, these aging buildings require upgrades that will reduce rising utility costs and greenhouse gas emissions. Projects to reduce energy use might include replacing windows and balcony doors with double-pane windows and doors, updating heating and lighting systems or even over-cladding the towers.

Tower Renewal will promote the best in green technology to make stronger, greener communities across the city.

<sup>1</sup> Draft numbers from study to be published in fall 2010 by the Ontario Growth Secretariat at the Ministry of Energy and Infrastructure, using MPAC property Data.

## Tower Renewal Opportunity: improving community life

Many apartment neighbourhoods do not have enough services (e.g. childcare, doctors' offices, restaurants) and retail (e.g. groceries) close by. Because of this, residents have to travel far for their daily errands.

A significant number of residents living in apartment neighbourhoods are newcomers to Toronto. Many of these communities remain isolated from the rest of the city. Older apartment buildings are prominent in the City's 13 priority neighbourhoods—neighbourhoods that have been identified as being underserved by City services and facilities (community centres, recreation programming, etc.)

Tower Renewal provides an opportunity to bring together a better mix of land use that will allow residents of apartment neighbourhoods to walk or cycle when running errands, or even going to work. Tower Renewal will apply City strategies like Transit City, the City's Walking Strategy and the Agenda for Prosperity to revitalize Toronto neighbourhoods.

Increasing the number of local retail shops, social services and employment opportunities will allow these neighbourhoods to grow into strong, vibrant communities that Toronto's diverse residents are proud to call home.

**Concrete frame apartment buildings** were typically built in clusters, with several buildings located close together. 'Apartment neighbourhood' in the context of Tower Renewal refers to the area where several of these buildings exist. It includes the high rise residential buildings (typically 8 storeys or more) where a concentrated number of residents live as well as the space and amenities (e.g. parks, schools, retail stores) in the immediate surrounding area.

## **Tower Renewal Opportunity: improving the economic environment**

In a time of globalization and outsourcing, construction jobs are important as they cannot be outsourced to an offshore facility.

Tower Renewal retrofit projects will create a significant number of jobs and will require construction and building industries to provide training on the latest technologies and retrofit methods. In this way, Tower Renewal will contribute to a strengthening of local construction and building industries and will see Toronto prepare itself to respond to the changing economy.

Tower Renewal projects will require workers and professionals who are skilled in these cutting-edge green technologies. This requirement would stimulate growth in these industries by encouraging the development of a labour force that is skilled in the latest technologies.

Having a localized highly innovative labour force will have beneficial impacts on future building projects right across the city.

In the context of Tower Renewal communities, residents who live in the apartment neighbourhoods often have to travel quite a distance to places of employment. Tower Renewal projects provide an opportunity to create local job opportunities.

## 2. Tower Renewal

## Vision and Goals: three interlocking objectives

Through the Tower Renewal project, Toronto's older apartment buildings will be transformed to achieve:

### **A cleaner and greener city**

by reducing greenhouse gas emissions, increasing energy efficiency, improving transit, cycling and pedestrian options, using renewable and district energy, and improving public spaces, recycling and water efficiency measures.

### **Increased social and cultural benefits and stronger communities**

through local cultural initiatives and improvements to the built and natural surroundings in neighbourhoods, increased job opportunities, better availability of local food and services, safe and enjoyable community connections, improved open space and outdoor recreational space, and tenant engagement.

### **Improved local economic activity**

through on-site retail and services, employment training and business opportunities, particularly in green technology.

To achieve this vision, Tower Renewal will focus on renewal activities that relate to three major objectives: Environmental, Social/Cultural, and Economic. For each objective, a variety of specific elements are addressed. The goals for each objective and the responding elements are shown in **Figure 1**. Each of the three objectives is an important component of Tower Renewal.

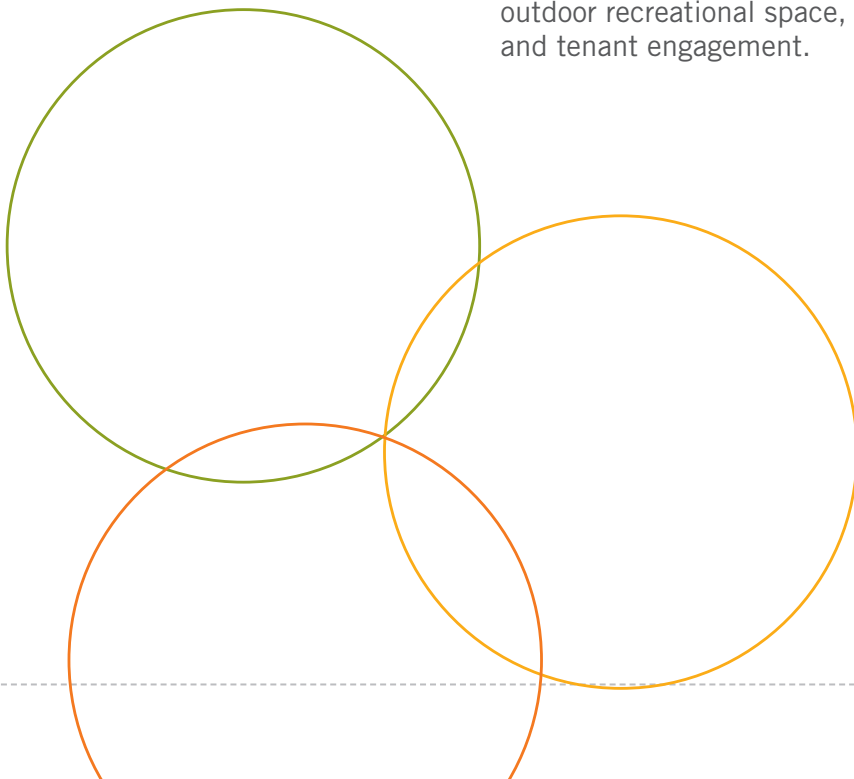
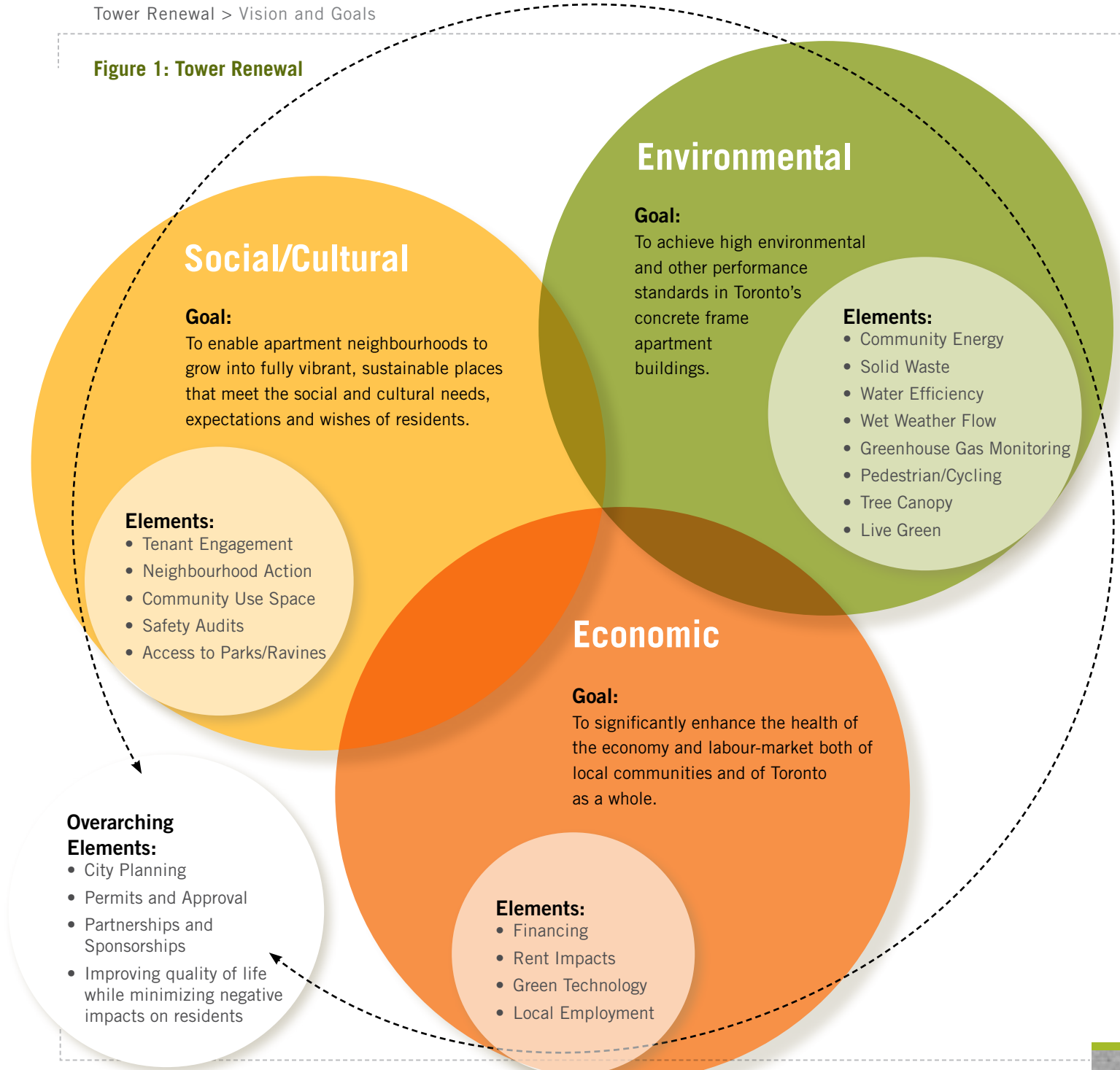




Figure 1: Tower Renewal



## Complementary legislation, strategies and programs

City and Provincial legislation, regulations, strategies and programs exist that correspond with the three objectives, and thus provide an opportunity for Tower Renewal to integrate with existing practices to maximize benefits. Each of the following has been aligned with the appropriate Tower Renewal objective. More information about each of these programs, strategies, regulations and legislations may be found in Appendix A.

Sample municipal regulations, strategies and programs	Tower Renewal Objectives		
	Environmental	Social/Cultural	Economic
Agenda for Prosperity		✓	✓
Better Buildings Partnership*	✓	✓	✓
Climate Change, Clean Air and Sustainable Energy Strategy	✓	✓	✓
The Toronto Green Standard	✓		
Housing Opportunities Toronto Action Plan	✓	✓	✓
Live Green Toronto	✓		
Official Plan	✓	✓	✓
Priority Neighbourhoods		✓	✓
Starting in the Right Place: A new approach to employment and social services in Toronto		✓	✓
Tenant Supports		✓	
The Power to Live Green, Toronto's Sustainable Energy Strategy	✓	✓	✓
Toronto Bike Plan	✓		
Toronto Food Strategy	✓	✓	
Toronto Public Realm Initiatives		✓	
Toronto Walking Strategy	✓	✓	
Transit City	✓	✓	
Sample provincial legislation and regulations			
Green Energy Act	✓		✓
Places to Grow Act	✓	✓	✓
Ontario Building Code	✓	✓	✓

\* The Better Business Partnership has informed Tower Renewal. A sample case study is included in Appendix B.

# City-wide Tower Renewal

**The investigation of Tower Renewal elements at the pilot sites** has provided considerable evidence that Tower Renewal should be implemented city-wide and that doing so will achieve dramatic results across Toronto. The necessary information is now available to develop a successful, city-wide rollout strategy. The pilot sites will continue in their development and will provide additional information that will further inform the implementation of future renewal projects. [See **Figure 2**, next page]

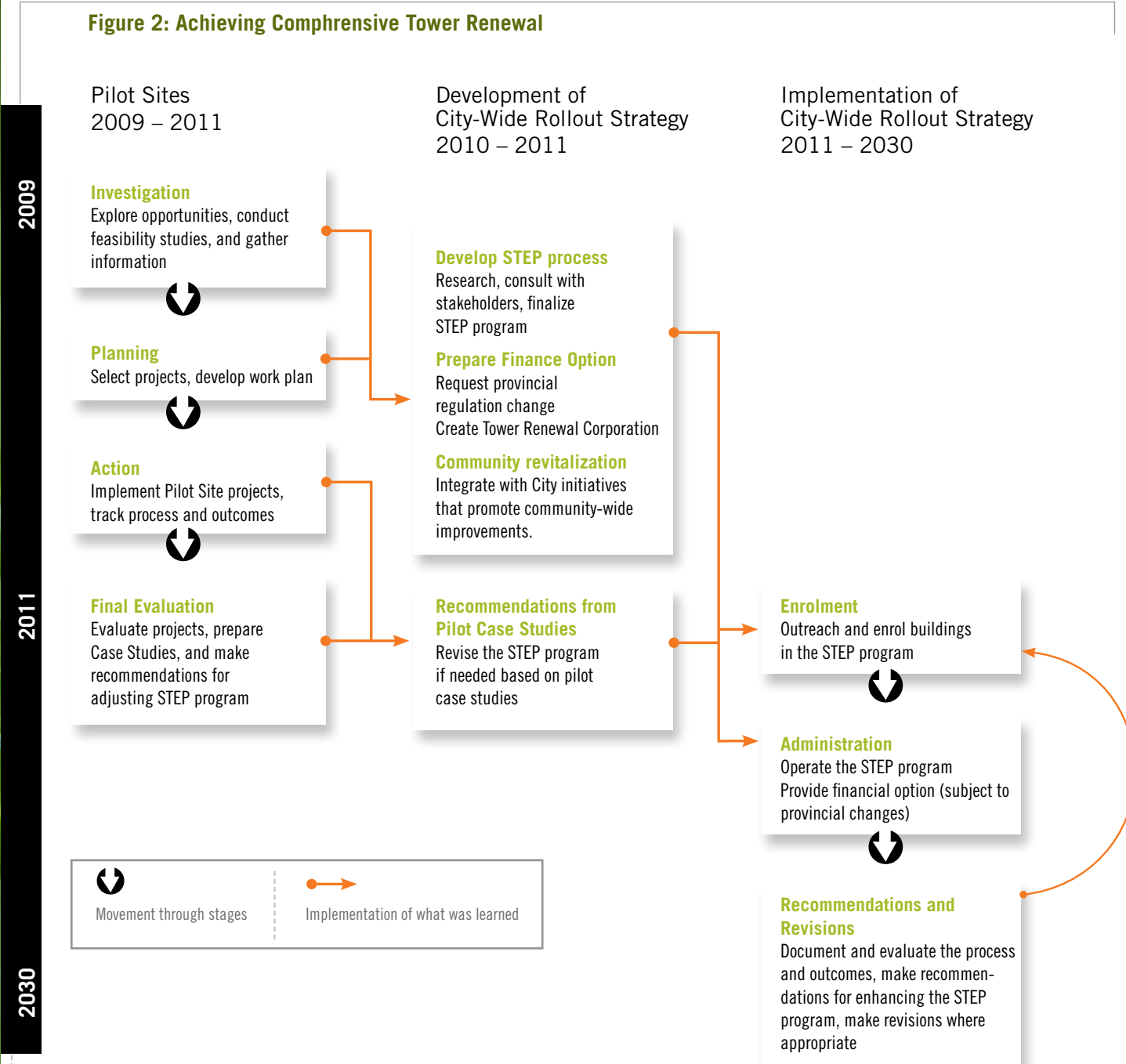
The feasibility studies undertaken, partnerships developed with the property owners, building management staff and residents, and an examination of the physical, social and financial situation at apartment towers have provided the findings and information needed to confidently develop a responsive city-wide rollout strategy. Tower Renewal activities have shown the following:

- A number of challenges currently exist in Toronto apartment towers:
  - > investments in the towers are mostly made on an as needed basis
  - > residents have a very low level of opportunity for involvement in their building
  - > knowledge of the potential benefits of renewal projects is very low
  - > improvements are needed in the owners' capacity to design, offer and undertake comprehensive renewal projects.
- There is tremendous opportunity to achieve a wide range of benefits by integrating the delivery of Tower Renewal projects to involve achievements in all three objectives.
- The success in any one Tower Renewal objective requires that the other objectives are addressed simultaneously. Thus, the three objectives are inter-dependent and need to build upon each other.
- An alternative to current financing methods is needed to support Tower Renewal projects.

Tower Renewal staff are recommending a plan that will move the Tower Renewal project towards a city-wide rollout, and active and accessible participation of all stakeholders, including property owners, residents, City staff, and community organizations across Toronto. This plan contains three components:

- **The Sustainable Towers Engaged People (STEP) program:** designed to incrementally build the capacity of property owners to undertake increasingly substantial Tower Renewal projects, and to outline the various types of support available to owners by the City and by other Tower Renewal partners.
- **A financing option:** a strategy that will make some of the more expensive retrofits, such as over-cladding, a more attractive and affordable option for property owners.
- **A community revitalization process:** a process intended to promote community-wide improvements by ensuring that Tower Renewal activities are integrated with other City, Provincial, and community-based programs and strategies.

**Figure 2: Achieving Comprehensive Tower Renewal**



## Sustainable Towers, Engaged People (STEP)

The Tower Renewal office is proposing a program called Sustainable Towers, Engaged People (STEP) to support widespread participation by building owners in Tower Renewal.

### What is STEP?

The STEP program is designed to incrementally build the capacity of property owners to undertake increasingly substantial Tower Renewal projects, and to outline the various types of support available to owners by the City and by other Tower Renewal partners. By following the STEP program, it is expected that all owners of apartment buildings in Toronto will be able to undertake Tower Renewal projects in their buildings and will therefore, achieve energy savings and improved living conditions for tenants.

Similar to the LEED® program, the STEP program will act as a performance rating system and will allow City staff, property owners and other stakeholders to understand how the performance and amenities of a particular apartment building compares with other apartment buildings in Toronto.

This program is grounded in findings from the pilot sites and from similar tower renewal activities in other places of the world. The details of the components of the program are preliminary and will undergo a series of consultation activities before being finalized.

Recognizing that buildings will engage in the Tower Renewal program at varying levels of capacity and participation, the STEP program is intended:

- to identify a step-by-step process for incrementally building the capacity of building owners and other stakeholders to undertake increasingly substantial Tower Renewal projects
- to outline the tasks required and the related considerations for specific Tower Renewal projects
- to identify opportunities for supportive roles by City of Toronto Divisions and other partners for each potential Tower Renewal project.

The STEP program will expand Tower Renewal's transformative impacts to an expected 1000 Toronto apartment buildings, including private for-profit and non-profit buildings. The proposed STEP program will be guided by five key principles:

- **Inclusive** – STEP will be created in a way that allows it to be applied to any Toronto apartment building.
- **Incremental Growth** – Each stage of STEP builds upon the actions/measures of the previous stage.
- **Consistent and Complementary** – The City of Toronto is involved in a wide range of activities that relate to Tower Renewal. STEP is intended to work in consistent and complementary ways with existing programs and strategies.
- **Meaningful** – STEP will provide a clear path to achieving the goals and objectives of Tower Renewal.
- **Flexible** – STEP will be designed so that it can be adjusted as time passes to reflect updated standards and emerging concerns.

The STEP program is a staged process that includes a foundation stage followed by four steps. The following chart describes all five STEPs and examples of possible activities for each step:

Level	Actions	Activity
<b>Foundation Stage</b>	<p><b>Preparation</b></p> <p>In the foundation stage, the property owner is enrolled into the program. Materials will be collected and data tracked to determine a baseline. This baseline will be used to measure the building's progress through the STEP program.</p>	<p>The primary activities involved in this preparatory stage include collecting existing data (i.e. tracking costs involved with utility consumption), creating an inventory of existing resources and building assets.</p>
<b>STEP 1</b>	<p><b>Learning and Planning</b></p> <p>STEP 1 involves building the knowledge and skills necessary to develop and implement future plans. This stage will build upon the findings from the studies conducted at the Tower Renewal sites and customize recommendations for each building.</p>	<p>Examples of activities include conducting audits and technical studies, collecting data, determining the need for education and training sessions for building staff, and undertaking tenant surveys.</p>
<b>STEP 2</b>	<p><b>Implementation</b></p> <p>STEP 2 involves investments in short-term improvements. The focus is on implementing projects that result in significant yet easily attainable benefits. Generally these projects are retrofits with less than a five-year simple payback on investment.</p>	<p>In this stage, developing and implementing a strategy to engage tenants is one component. Examples of other possible activities include changing to energy efficient lighting, replacing showerheads, installing aerators on faucets, improving recycling efforts and engaging tenants in participatory studies like the walkability studies conducted by the University of Toronto and Jane's Walk.</p>
<b>STEP 3</b>	<p><b>High Performance</b></p> <p>STEP 3 requires investment in comprehensive improvements. Building on the momentum and skill capacity established in the previous levels, building owners will understand how to realize even greater benefits. This stage would include comprehensive building retrofits and the provision of additional space for on-site community use.</p>	<p>Examples of possible activities include installing an energy efficient heating/cooling system, over-cladding, developing a community garden, and revitalizing tenant recreation space through renovations and/or programmed activities.</p>
<b>STEP 4</b>	<p><b>Leadership</b></p> <p>In STEP 4, the building owner is in a position to be a leader in promoting new technology, new solutions and best strategies. Through example, the building owner demonstrates how using innovative energy conservation measures and resident engagement methods together create a stronger, more liveable community.</p>	<p>Examples of possible projects at this step might include on-site energy generation and off-site tenant-led community projects.</p>

### Step toolkits

Each STEP will have a tool kit made up of various components and a corresponding checklist of tasks for each component. The components are categorized into two groups: Efficiency and Conservation, and Quality of Life. To successfully achieve the full benefits of Tower Renewal, the range of components for each stage must be addressed.

For each component, the checklist will describe how building owners can receive support from City staff, pre-existing City programs and initiatives, and benefit from other partners. Applied comprehensively, the tool kit will address all three Tower Renewal objectives (environmental, social/cultural, and economic) and will assist in achieving the greatest benefits possible. **Figure 3** shows each of the components and depicts what a tool kit may look like.

**Figure 3: Tool Kit**



## Implementation of STEP

Tower Renewal staff will conduct outreach activities to raise awareness and engage building owners in the STEP program. Once enrolled in the STEP program, Tower Renewal buildings will be supported by the City and other stakeholders to move through the subsequent levels. Because many buildings have already begun to implement some aspects of the STEP program (e.g. data tracking, community revitalization, retrofits, etc.), it is expected that buildings will enter the program at different STEPs, depending on the kind of preparation and/or improvements they may have already undertaken. Additionally, participants will vary in their capacity for planning and implementing projects so the speed of movement through the STEPs is also expected to vary.

The Foundation stage and STEP 1 (Planning) are projected to obtain significant enrolment based on Tower Renewal providing project planning tools, facilitating peer-to-peer support and enabling easy access to incentive programs.

STEPS 2 (Implementation), 3 (High Performance) and 4 (Leadership) are incrementally more complex and require greater capacity on the part of building management, buy-in from the tenants and substantive financing. If an effective financing option is available, it is expected that within a 20 year timeframe, almost all of the buildings will have reached STEP 3, with 400 of those buildings moving onto STEP 4.

## Projected STEP Participation in each STEP, 2011 – 2030 (no. of buildings)\*

	2011	2015	2020	2030
STEP 4 Leadership	3	50	200	400
STEP 3 High Performance	5	200	500	900
STEP 2 Implementation	20	500	800	1000
STEP 1 Planning	100	700	1000	1000
Foundation Preparation	300	1000	1000	1000

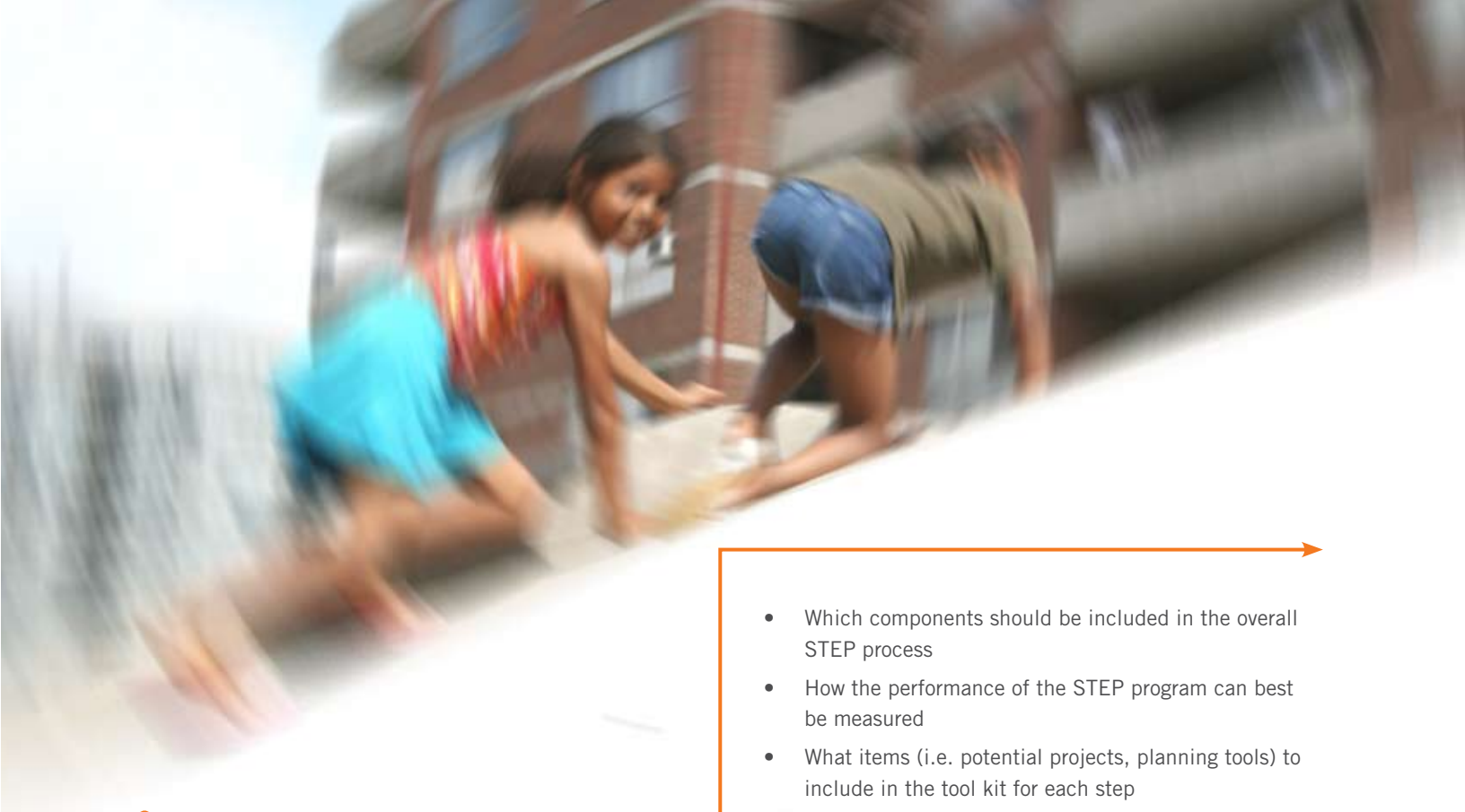
\* Projections are based on reviews of the participation rate of buildings in Toronto in six related programs and on input from stakeholder consultations.

## STEP as a leadership tool in Tower Renewal

Documenting the process and outcomes for each building enrolled is pivotal to the STEP program. By documenting and applying findings to subsequent participants, the STEP program will remain current and innovative, will succeed in creating a cumulative library of best practices, and will position Toronto among world leaders in creating living environments that are ecologically and socio-economically sustainable.

**Image >** *Opposite page: Children playing at the Kipling pilot site. Courtesy of Dennis Swartz.*





## Consultations will inform the current STEP proposal

The current STEP proposal is based on the findings from reviewing practices and programs in other parts of the world and in investigating the concepts at the pilot sites. However, to ensure that the STEP program is successful in achieving the goals and vision of Tower Renewal across the city, it is imperative that the program be grounded in the needs and opportunities of all Tower Renewal stakeholders. As such, the Tower Renewal office is currently planning for an extensive consultation process. Tower Renewal staff will engage Toronto apartment owners, residents, City staff, industry representatives, and other stakeholders to provide input into the proposed STEP program. Consultation topics will include:

- Which components should be included in the overall STEP process
- How the performance of the STEP program can best be measured
- What items (i.e. potential projects, planning tools) to include in the tool kit for each step
- Opportunities for supportive roles by City staff, City programs and initiatives, and other partners.

Following a first round of consultations, the STEP program will be revised as necessary and follow-up consultations will be conducted to ensure that the revisions remain appropriate and feasible.

The strong focus on documenting the process and impacts (as described above) and the cyclical design of the city-wide rollout strategy [see **Figure 2**, page 18], will allow the STEP program to remain flexible and to offer continuous improvements that reflect changing technologies, opportunities, and challenges. In this way, the STEP program is intended to remain a timeless approach that moves the greatest possible number of apartment buildings towards achieving comprehensive Tower Renewal.

## Capital considerations and financing options

The impressive findings from the technical studies are clear—comprehensive Tower Renewal projects are a good investment. They will pay for themselves over time through positive returns from reduced utility costs, lower maintenance costs and improved property values.

However, the investment payback for comprehensive Tower Renewal is often not as favourable as the paybacks offered by other types of investments. Based on information received from property owners of privately owned rental buildings, it is unlikely that the large amounts of money needed for major retrofit projects will be invested in the towers without an attractive financing strategy. Non-profit housing has funding opportunities that are not available to privately owned buildings. Private building owners are in need of financing strategy that will create a positive return on their investments in Tower Renewal projects. Tower Renewal projects do offer a positive return on investment, but they cannot compete with other investments which have higher rates of return. As a result, the money needed for Tower Renewal projects is often invested elsewhere. Without a financing strategy, comprehensive Tower Renewal projects will likely not take place in the 800 privately owned buildings.

Tower Renewal staff worked with Morrison Park Advisors and others to determine the best approach to ensuring that Tower Renewal projects are a practical choice for property owners. This partnership has led to the development of a mechanism for establishing a separate source of funding available only for Tower Renewal projects to provide the funds needed to improve Toronto's high-rise apartment buildings.

This strategy would make financing the more comprehensive Tower Renewal projects a more attractive option to building owners, and all the costs to the City for the Tower Renewal projects would be recovered.

To support this alternative financing strategy, a new Tower Renewal Corporation could undertake the funding arrangements. The building owners and the Tower Renewal Corporation would enter into a long-term contract that would see the Corporation provide the services to implement and maintain the Tower Renewal retrofits for the duration of the contract. The services provided would be of high quality and offered at a competitive price.

Morrison Park Advisors recommend that the City seek to include a contract clause that gives the fees priority lien status, and would therefore ensure that the municipal Tower Renewal Corporation's investment in the buildings remains secure. This arrangement would be similar to what occurs today if a property owner does not pay his water bill. The unpaid amount is added to the property tax bill. If a property owner did not pay the fee for implementing the Tower Renewal projects, the fees owing would be added to the property tax bill. If the owner goes bankrupt or sells the property, or the fees owed to the corporation are not paid on time, the City would receive the money owed.

Tower Renewal's success depends on retrofit loans not being secured against buildings using a traditional mortgage. If mortgage security were required, Toronto's Tower Renewal program would be no different from other unsuccessful retrofit programs across North America.

The Tower Renewal Corporation will offer building owners many benefits that may not otherwise be possible:

- Building owners will be able to substantially invest in their buildings without borrowing against their mortgage and without reducing their equity or the value of their net operating costs.
- The Corporation will ensure that the building owners receive high quality and reliable services.
- Building owners will now have realistic opportunities to reduce utility costs and make their buildings more attractive and comfortable for residents.

To create this Corporation, two things will need to occur:

- a] The City will have to form a corporation that will arrange for the contracting of services and obtain the money needed for the initial investment (“the capital”).
- b] The Province will have to make a change to Ontario Regulation 504/6 so that the City can use priority lien status to safeguard its investment in apartment tower buildings. This regulation permits the City to add the amount of certain unpaid fees, such as water, sewage and waste collection, to the property tax bill. The change required would be to add the Tower Renewal Corporation fees to the list of services permitted to use priority lien status.

## Grants and subsidies

Grants and subsidies are useful and should be maximized. City staff will be working with Toronto Hydro and Enbridge Gas to make sure that all current incentive programs are maximized and that any future incentive programs are tailored to meet the needs of Tower Renewal participants.

However, the City and the utility companies cannot afford to provide the amount of grants and subsidies necessary to encourage property owners to invest in the more substantial Tower Renewal projects. Therefore, an alternative financing option is needed to support these projects.

### In summary

To make it attractive—and even realistic—for property owners to invest in comprehensive Tower Renewal projects, the City would create a Tower Renewal Corporation. This Corporation would then have the ability to raise funds to invest in apartment building retrofits, manage the program commercially and ensure that the program remains financially self-sustaining. The process required to establish the Tower Renewal Corporation is included in the Financing Option Feasibility Study undertaken by Morrison Park Advisors (Morrison Park FO), and is available on the Tower Renewal website ([towerrenewal.ca](http://towerrenewal.ca))

## Credit-enhanced Capital Pool

To successfully establish the Tower Renewal Corporation, financing from a source that does not compete with typical investment opportunities is needed. To address this, a credit-enhanced capital pool is being developed.

The bulk of this capital would be raised through bond issue(s) to the private sector. The City of Toronto would contribute equity or subordinated debt to a pool of funds. The credit rating of the pooled funds would be based on several factors:

- Number of different assets
- Credit quality of assets
- Degree of over-collateralization of fund, i.e. proportion of equity/subordinated debt in total fund

The cost of the funds to the program borrowers would be equal to the price of the bond issue, plus the cost of return to equity/subordinated debt and administration costs. The interest rate would be superior to any other option in the marketplace for Tower Renewal types of projects.

Instead of securing the loan against a mortgage, the Capital Pool would attach any default of a fee payment to the property. If the repayment agreement was breached, the City would have the ability to enforce a priority lien on the property tax bill. This also protects the City in the event of a sale or bankruptcy. This mechanism will require Provincial approval to amend a regulation.

### Timelines

Present Executive Committee with recommended approach for approval, including STEP and Credit-enhanced Capital Pool Finance Option (Tower Renewal Corporation)	June 2010
<b>Pending City Council Approval:</b>	
Request Province to include Tower Renewal Corporation in Ontario Regulation 504/506	July 2010
<b>Pending an Amendment to Ontario Regulation 504/06 being made:</b>	
Development of Tower Renewal Corporation design for approval by City Council	July 2010 – July 2011
Changes to Provincial Regulation to take effect	TBD
Implement Credit-enhanced Capital Pool Option	After provincial regulation changes are made

## Community Revitalization: Integrating Tower Renewal with other City, Provincial and community-based programs and strategies

To maximize the benefits and opportunities in the City-wide rollout strategy and to help create a seamless process for building owners and residents, Tower Renewal will integrate its work with other City, provincial and community programs and strategies. Several activities are planned to determine how this integration will occur.

Tower Renewal will participate in the City's Committee on Integrated Place-Based Initiatives. This committee is an inter-divisional planning table that brings together senior City staff representing divisions throughout the Corporation to problem-solve collectively and ensure that City-wide projects and programs have an integrated approach. Tower Renewal staff will participate in this committee by highlighting related Tower Renewal opportunities and challenges and seeking input and feedback from the other participants. In this way, Tower Renewal activities will remain in line with practices of other City divisions.

In addition, Tower Renewal staff will engage in consultation activities with other City staff to identify ways in which City divisions can directly support building owners and other stakeholders in Tower Renewal opportunities.

Tower Renewal staff are also discussing with stakeholders how they can integrate opportunities with the practices of other governments, community organizations, neighbourhood associations, and the City's Neighbourhood

Action Partnerships (forums that bring together City staff and community stakeholders, such as community organizations and residents, to discuss community revitalization initiatives).

Through these forums and activities, Tower Renewal staff will develop a comprehensive plan that will ensure that Tower Renewal both builds upon and compliments existing programs and strategies. In this way, Tower Renewal will remain embedded in the broader plan towards fostering a greater vibrancy and increased life opportunities in the communities that surround the apartment towers.

## Pilot Sites

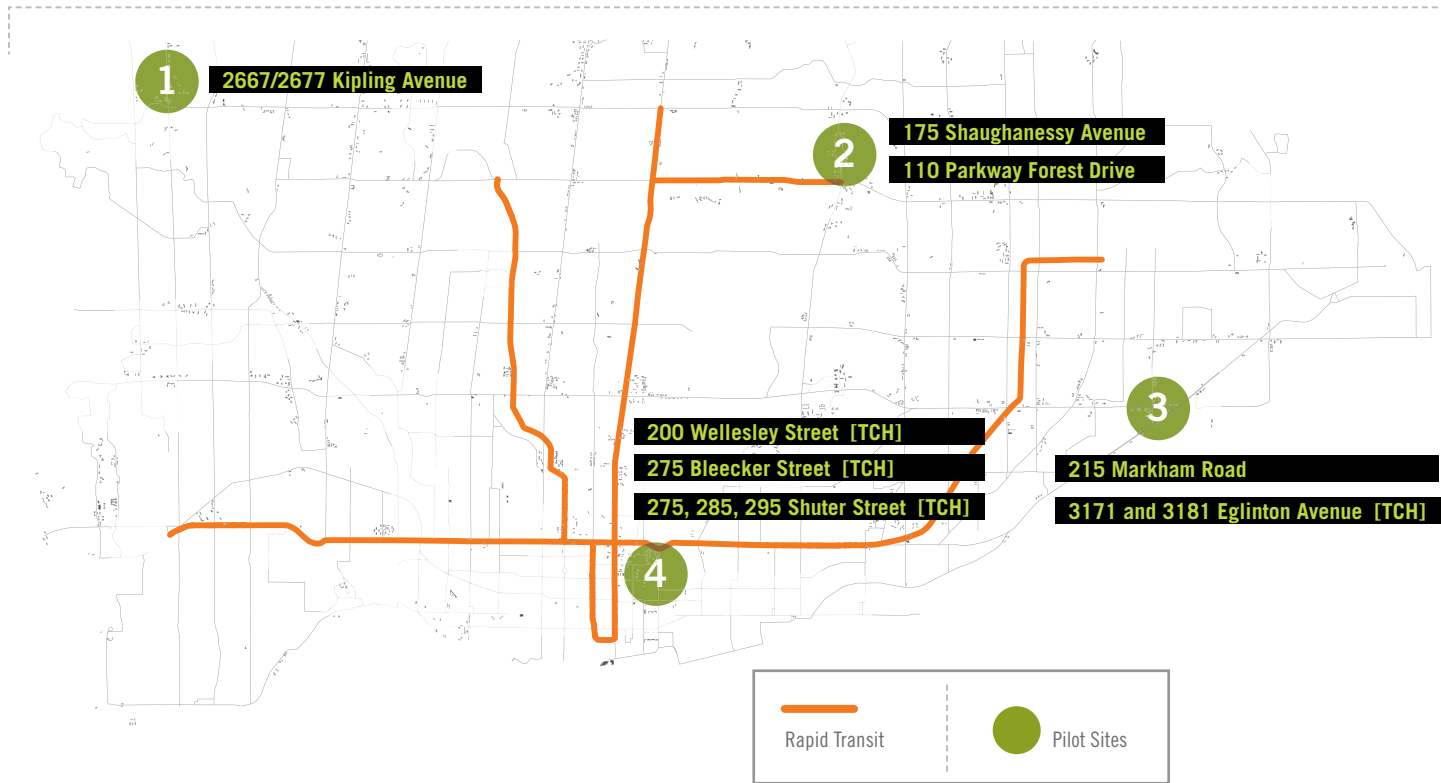
The Tower Renewal process first began at four pilot sites. At these sites, investigations took place to identify opportunities that would:

- achieve the most benefits
- provide the information needed to allow us to learn from challenges associated with these opportunities
- identify best practices for implementing Tower Renewal across the city.

The pilot sites were selected because they are able to demonstrate a wide range of Tower Renewal opportunities in different environments and contexts. Pilot sites are located in each of the City's Community Council areas including Etobicoke/York, North York, Scarborough, and Toronto/East York. Initially, there were four pilot sites but this list expanded to seven sites as new opportunities presented themselves. The sites allow for projects of varying sizes, site conditions and neighbourhoods. The property owners and managers also vary, ranging from large publicly traded corporations to family-owned businesses to publicly owned housing. Taken together, the mixture of pilot projects are intended to show and test a full range of tower renewal ideas and actions.

### The selected pilot sites are:

Region	Address
<b>Etobicoke/York</b>	2667 Kipling Avenue 2677 Kipling Avenue
<b>Scarborough</b>	215 Markham Road 3171 Eglinton Avenue East • 3181 Eglinton Avenue East •
<b>Toronto/East York</b>	200 Wellesley Street East • 275 Bleecker Street • Moss Park: 275 Shuter Street • 285 Shuter Street • 295 Shuter Street •
<b>North York</b>	175 Shaughnessy Blvd. 110 Parkway Forest Drive
• Toronto Community Housing	



At the pilot sites, the opportunities for Tower Renewal include:

- Increased energy efficiency
- Increased water conservation
- Increased waste diversion (for example, on-site recycling strategies)
- Increased demand for green and clean technology
- Opportunities for resident involvement
- Upgrades to outdoor space around the pilot site buildings
- Potential indoor amenity space for tenant use
- Space for meetings and gatherings
- Opportunities for community gardens at site buildings
- The potential for on-site, small-scale retail and markets
- Enhanced pedestrian connections



## Approach to Tower Renewal at the Pilot Sites

### Pilot Site Progress Chart

#### Investigation

Explore opportunities, conduct feasibility studies, and gather information



#### Planning

Select projects, develop work plan



#### Action

Implement pilot site projects, track progress and outcomes



#### Final Evaluation

Evaluate projects, prepare case studies, and make recommendations for adjusting STEP program

Tower Renewal development at the pilot sites follows a progression of stages. The pilot site progress chart describes the four stages and the activities that will be undertaken in each stage.

The investigation and planning stages will provide the information necessary to build a strategy for city-wide rollout that will be responsive to the opportunities and challenges associated with Tower Renewal projects. The Action and Final Evaluation stages will provide continuous insights to improve the implementation of the city-wide rollout strategy.

The last stage 'final evaluation' refers to a formal evaluation of all outcomes and impacts; however, it is important to note that Tower Renewal staff conduct on-going reviews of the progress made and of the impacts to date and then adjust the approaches used when necessary.

## Community engagement activities are an important part of Tower Renewal

Tenant engagement strategies range from consultation activities to full participation in decision-making. Through the engagement process, Tower Renewal can develop and foster positive relationships and partnerships with stakeholders, focusing on residents from the apartment buildings as well as property owners, community organizations and City Divisions.

At the pilot site buildings, residents have been involved in the sharing of information and ideas and in identifying the assets and needs that are relevant to Tower Renewal. These ideas have been captured as potential projects (see Pilot Site Status Updates, page 49). Currently, Tower Renewal staff are exploring opportunities for resident involvement in the planning and implementation of on-site projects such as recycling and safety-related approaches. In the surrounding community, Tower Renewal has worked with partners to facilitate increased access for residents to community resources, to strengthen existing partnerships and to reduce barriers to communication.



## Progress at the Pilot Sites

Tower Renewal has completed the investigation stage and is currently in the planning stage. To date, a number of studies have been completed at each of the pilot sites. Examples of some of the studies completed include:

- analyses of potential energy saving measures
- assessments of waste diversion (e.g. recycling) approaches
- audits of water consumption
- assessments of job-creation opportunities and the related economic impacts
- explorations of how walkable the neighbourhood is for residents
- safety audits
- inventories and assessments of potential community use space
- inventories of the number and condition of local trees
- description of the local transit service

Collectively, these studies have verified the dramatic potential impacts of Tower Renewal and have identified a series of project opportunities that will lead to concrete changes in each of the three objectives: environmental, social/cultural, and economic.

### **Planning for Tower Renewal projects at the privately owned sites:**

At the privately owned sites, Tower Renewal staff are working with building owners, residents, City staff and other stakeholders to select the projects that will be undertaken and to determine how they will be implemented. Buildings owners have been given a list of possible site improvements. The suggested building improvements range in scope and challenges presented.

See pages 49 – 73 for a detailed description of identified projects for each privately owned pilot site.

### **Planning for Tower Renewal projects at Toronto Community Housing Sites:**

Toronto Community Housing (TCH) pilot sites took a different approach to planning for tower renewal projects, utilizing a Request for Proposal process and partnering with a program called Recipe for Community. TCH issued a Request for Proposal that invited consultants to conduct a comprehensive audit report and proposal. The request listed the areas of work that TCH would like to consider for implementation at each of its buildings. The proposals have now been received by TCH. The Board of Directors will soon be making their decision for moving forward.

Recipe for Community is a program facilitated by the Toronto Community Foundation and the City of Toronto that will work in partnership with residents and other stakeholders to build upon opportunities for strengthening a sense of community and enhancing the vibrancy of the neighbourhood.

Please see pages 75 – 80 for more information about the TCH tower renewal process and the specific opportunities that have been identified.

## Tower Renewal builds upon existing community development programs

Prior to the buildings being selected as Tower Renewal pilot sites, City staff, community organizations, and/or resident associations had already been working to engage residents and strengthen the surrounding communities. Tower Renewal staff are now working collaboratively with these organizations and associations.

Two of the pilot sites are located in the City's Priority Neighbourhoods: Rexdale – Jamestown and Scarborough Village. As part of the City's Priority Neighbourhood strategy, these communities each have Neighbourhood Action Partnerships, which are collaborative tables of City Divisions, community organizations and residents that together coordinate services, problem-solve, identify local priorities and opportunities, and build the community's capacity for change.

Also in the Priority Neighbourhoods, the Action for Neighbourhood Change (ANC) offices and resident-led associations are established in community development roles and have been important in supporting the resident engagement activities of Tower Renewal. For example, ANC staff have helped to organize community social and information-sharing events in Scarborough Village and Rexdale – Jamestown, and were instrumental in bridging partnerships with the National Film Board for a community photography program at the Kipling Pilot Site.

In the St. James Town pilot site area, Tower Renewal staff worked with Toronto Community Housing, their existing tenant association structure and their resident engagement resources to ensure that residents in these buildings and in the wider communities have opportunities to participate.

In the North York pilot site area of Don Mills and Sheppard, a local service provider network, called the Fairview Interagency Network (FIN), adopted the Tower Renewal project as part of its working group. FIN has supported Tower Renewal in a wide range of projects (e.g. helping to connect residents to participatory activities, such as the walkability studies conducted by University of Toronto Professor Paul Hess and Jane's Walk, and the safety audits led by METRAC and the City of Toronto) and, in turn, Tower Renewal staff have supported the participation and greater representation of City Divisions in FIN activities.

In each of these pilot sites, the Tower Renewal project has been able to build partnerships with City programs, community organizations and resident associations that have benefitted tenants and resident associations.



**Images >** Above: Community event at Scarborough Village pilot site. Opposite page: Kipling pilot site community event. Courtesy of Dennis Swartz.

## Pilot site study findings



## Environmental objective

**A series of focused studies** examined the feasibility of a number of conservation measures that would significantly reduce the environmental footprint of the Tower Renewal pilot site buildings and their surrounding communities. Two key studies, provided by ARUP Engineering and Genivar WD, looked at energy use, water use and recycling rates in apartment tower communities.\*

### Reducing energy and water use in the buildings

A detailed technical study (Community Energy Plan by ARUP Engineering) identified 30 ways to reduce the amount of electricity, water and gas used in apartment buildings and reduce greenhouse gases. Implementing these 30 conservation methods will reduce energy costs, improve comfort, and provide other benefits—including a significant contribution toward achieving Toronto's goal of reducing greenhouse gas emissions while creating local “green” jobs.

In 2009, Drs. Ted Kesik and Ivan Saleff of the Daniels Faculty of Architecture, Landscape and Design at the University of Toronto published a book examining the technical feasibility of Tower Renewal building retrofits. That book, *Tower Renewal Guidelines for the Comprehensive Retrofit of Multi-Unit Residential Buildings in Cold Climates* lays the foundation for much of the discussion and analysis underlying the study (Community Energy Plan) by ARUP Engineering.

Pilot sites in North York, Etobicoke and Scarborough were studied to determine which energy and water efficiency improvements were appropriate for each building. These findings were then examined to determine if they could be successfully applied to similar apartment buildings city-wide. This information allows us to determine the overall impact of Tower Renewal projects if implemented in older apartment towers across the city.

The 30 energy and water conservation methods were first evaluated individually. The study also considered which projects should be implemented together to achieve the greatest benefits.

\*Summarized findings from several technical reports relating to Tower Renewal pilot sites are included in the following pages. The full text of these reports can be found at [towerrenewal.ca](http://towerrenewal.ca)

Energy and water conservation methods were grouped into the following retrofit packages:

**Short Paybacks:** a group of retrofit projects that together will provide enough savings to pay for themselves in five years, based on lower water, gas and electricity bills.

**Short Paybacks + Longer Paybacks:** the same group of short payback projects, plus over-cladding (insulating and sealing the walls) and replacing the windows. (These are projects that will pay for themselves over a longer period of time.)

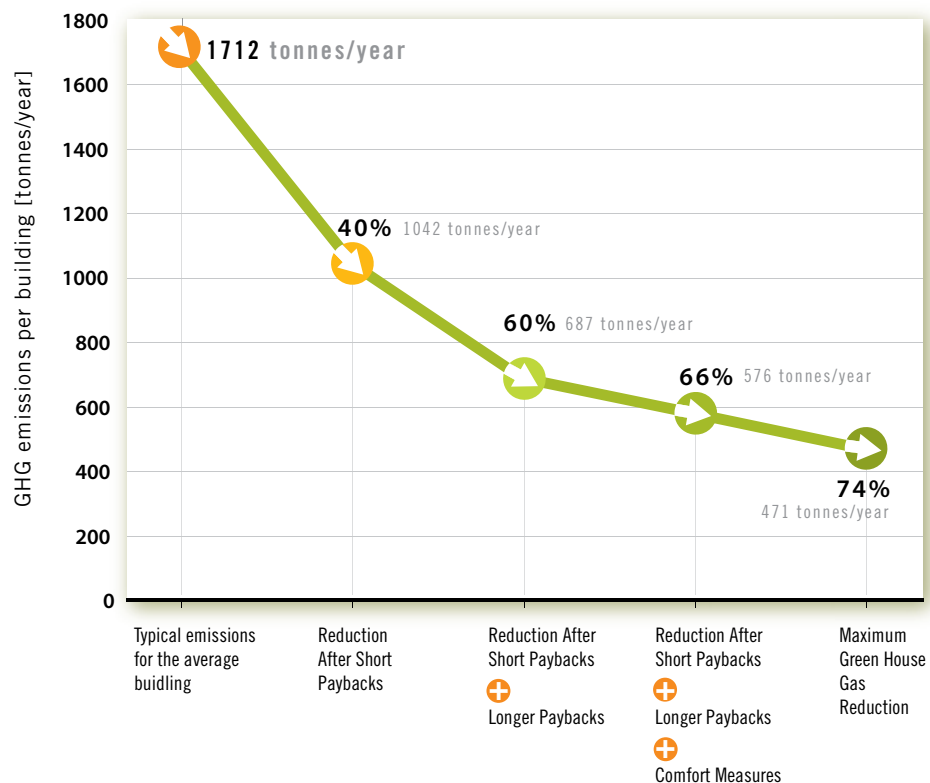
**Short Paybacks + Longer Paybacks + Comfort Measures:** the same group of projects as listed in the previous two groups, plus controls, like thermostats, so tenants can individually modify the heat levels in their apartments.

**Maximum Greenhouse Gas Reduction:** this group of projects has the biggest environmental impact through the reduction of greenhouse gas emissions.

The average building in the study emits 1,712 tonnes per year of greenhouse gas emissions (CO<sub>2</sub>e).

Depending on the types of retrofits made, **greenhouse gas emissions can be reduced by up to 74%.**

**Green House Gas Reductions through Tower Renewal projects**





The City's carbon reduction targets are to reach an **80 per cent reduction** in greenhouse gas emissions **from 1990 levels by 2050**.



The size and shape of the buildings and which direction the majority of the windows on the building face in relation to the sun affects the actual energy savings at each site. The three study sites vary in terms of size, shape and window direction, but also in terms of the existing equipment (furnaces, appliances, etc.), the amount of deferred maintenance and the numbers of tenants living there. In order to estimate the city-wide impact that Tower Renewal retrofits will have on electricity, gas and water use, the average savings from the three sites were applied to all 1150 existing, older concrete high-rise apartment buildings across Toronto.

If Tower Renewal is implemented across the city's aging Apartment Neighbourhoods, the Short Payback conservation projects could reduce greenhouse gas emissions by 770,500 tonnes/year. Implementing the conservation measures from the fourth group (Maximum Greenhouse Gas Reduction) could almost double greenhouse gas reductions. (1,427,150 tonnes/year).

### Reducing water use in the buildings

Replacing toilets, installing low-flow showerheads and installing tap aerators are usually the first retrofits to be undertaken by property owners because the water savings are high and the retrofits are easy to do. Two of the Tower Renewal pilot site buildings have already replaced their original 12 litre or 15 litre toilets with six litre toilets with the assistance of Toronto Water incentives. If these buildings were to replace their toilets again with three litre toilets, they could save an extra 20% on water use. Other Tower Renewal pilot buildings still have the original 12 litre toilets, but will be replacing them with three and four litre toilets. These sites will be able to reduce their water use by as much as 30%.

Some other water conservation measures, such as grey water reuse, are uncommon today. Research by the University of Toronto shows that we can save a substantive amount of treated tap water by further developing methods of re-using grey water.

### **Producing renewable energy in the community— for buildings in the community**

Energy conservation is key to Tower Renewal building retrofits, but renewable energy production also has a role to play. The report by ARUP Engineering outlines the potential for clusters of apartment towers to partner and form district energy systems to save energy and money. Most apartment buildings are heated by sending hot water throughout the building. A central heating plant could be installed that would use a series of large boilers to pipe hot water to a number of buildings. Similarly, the flat roof on a nearby school could hold solar energy equipment, creating electricity and hot water to be shared by the towers in the neighbourhood. Producing renewable energy in apartment tower neighbourhoods would reduce greenhouse gas emissions and reduce the load on Toronto's electricity distribution grid. The project would also pay for itself in reduced utility bills over time.

### **Reducing transport-based carbon emissions by creating better spaces for walking, biking and taking transit**

ARUP Engineering's technical report also studied how much energy is used and how much greenhouse gas is created by residents in the Tower Renewal pilot sites for trips to work, school, shops and more. The report outlines and prioritizes a variety of ways to reduce the number of trips that people take by private automobiles. By developing transportation demand management measures, such as encouraging residents to organize car-pools or buying TTC Metropasses at group rates, greenhouse gas emissions from transportation could be reduced by 12% – 22%.

Achieving additional carbon reductions will require more than transportation demand management alone. Apartment Neighbourhoods require more shops, services, workplaces and other destinations, so that residents do not have to travel to reach their destination. Land use permissions, as specified in local zoning bylaws, need to change to make it easier for commercial users, like small stores, cafés and other small businesses, to set up closer to where people live. Increasing the number and diversity of destinations within the neighbourhood will be critical to further reducing transport-based carbon emissions in the long term. The goal is to create opportunities so that residents prefer to make local trips on foot, by bike or by transit, in a convenient and enjoyable way. Revitalization of Tower Renewal neighbourhoods is a prime opportunity for achieving this.

## Increasing recycling in apartment buildings

A study by Genivar WD assessed the current level of waste diversion in 11 buildings, including some of the Tower Renewal pilot buildings.

Their analysis found that most apartments are recycling at a rate of about 10 per cent—that is, for every 10 bins of waste coming out of the building, nine bins contain garbage that goes straight to the landfill, and only one bin contains materials that will be recycled. This low recycling rate causes higher operating costs for property managers because it is more expensive to dispose of garbage than it is to dispose of recyclable materials.

Genivar WD's study shows that two of the Tower Renewal pilot buildings are already very successful recyclers—diverting as much as 30 per cent of waste from going to landfill. The consultants and property managers also identified a number of means that would allow older apartment buildings, including those with successful recycling programs in place, to further improve their waste diversion to at least 40 per cent. Building owners are encouraged to use a variety of approaches to engage both building staff and residents, including providing incentives and quicker feedback on how well the residents are recycling, and ensuring that the solid waste storage and pick-up area is well-designed.

## Moving forward

The pilot studies have shown that the energy retrofits, water retrofits and changes to solid waste management at apartment buildings can achieve significant benefits in terms of energy performance, and savings. Additional benefits can be realized by broadening land use permissions (i.e. changing the zoning) so that more local amenities can be created, such as small-scale retail and services, thus removing the need for automobile travel. What is important about the technical studies is that they provide significant detail about potential benefits, including the potential anticipated performance, and savings, as well as the costs associated with the retrofits. The technical studies also describe the challenges in terms of property owner priorities, physical and regulatory obstacles and financing challenges that implementing the Tower Renewal retrofit projects will likely encounter.

Overall, the findings are clear. The potential savings and other benefits—to the property owner, the residents and the broader community—are huge. There are currently significant barriers—financial and otherwise—that are keeping Tower Renewal from moving forward. However, the studies also indicate that pursuing a framework that makes it easier to achieve Tower Renewal's savings and benefits is worthwhile.



## Economic objective

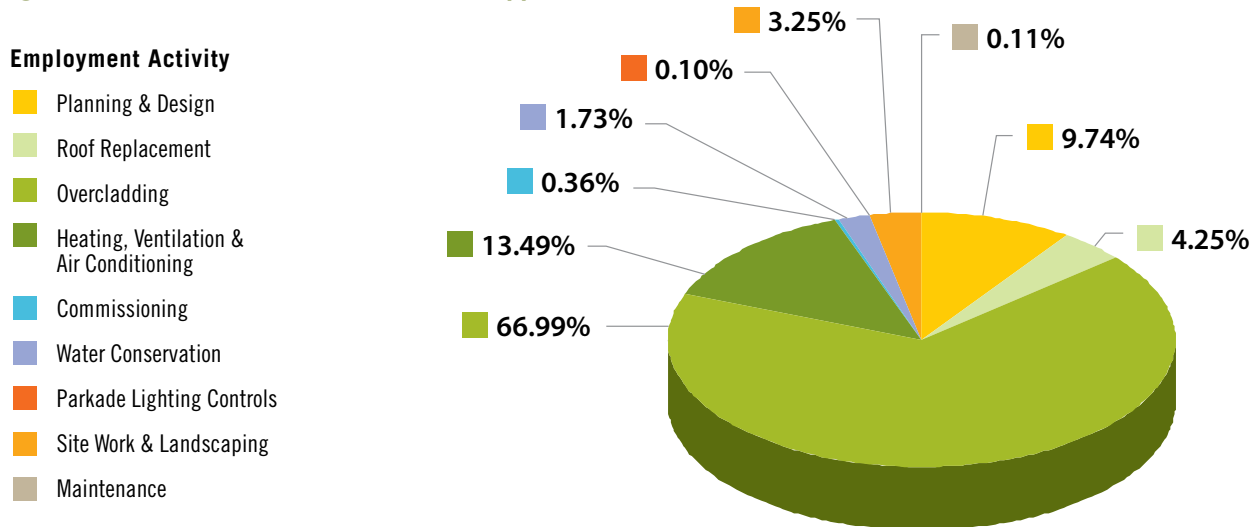
Realizing that Tower Renewal projects will require substantial renovations to existing structures, the economic objective seeks to support these renovations by maximizing the economic benefits both to the local communities in which the buildings exist and to Toronto as a whole.

The Tower Renewal project undertook a study to identify and plan for Tower Renewal employment opportunities and to understand how these opportunities could strengthen Toronto's local economy. The following research activities were undertaken:

- A literature review of information on construction workforce statistics and trends
- A survey of selected industry stakeholders related to Tower Renewal retrofit work
- Interviews with key industry stakeholders to develop the job descriptions and estimate the number of person hours, and net wages corresponding to the Tower Renewal retrofit work
- A projection of findings to estimate the workforce requirements and economic impacts (net wages) associated with the retrofit of the GTA's current stock of tower apartment buildings.

Industry stakeholders then came together for a Tower Renewal Industry Roundtable to discuss and verify the issues that were identified in the studies and to identify any additional issues that the findings did not capture.



**Figure 4: Breakdown of Tower Retrofit Job Opportunities**

### Job opportunities created by Tower Renewal

Industry experts estimate that the time needed to perform the retrofit work for all Toronto concrete frame apartment buildings is at least 20 years. Therefore, it is fair to say that at least one generation could be engaged for their entire careers in Tower Renewal activities. The net wages for these workers would amount to approximately \$2.12-billion and generate an estimated total of 30,000 person years of employment. (Kesik: Workforce Challenges and Opportunities Report, 2010)

**Figure 4** shows the breakdown of the types of job opportunities that Tower Renewal retrofit projects would create. The vast majority of tower renewal job opportunities fall into three categories: i) over-cladding; ii) heating, ventilation, and air conditioning (HVAC); and iii) planning and design (primarily architects and engineers).

Appendix C shows a complete breakdown of the Tower Renewal Economic and Workforce projections.

Opportunities for enhancing industry capacity to integrate new technologies were also identified. While many workers already have the skills and knowledge needed to fulfill many of the retrofit requirements, some industries will first need to create training opportunities to prepare their labour force for the higher technical demands of the Tower Renewal retrofit projects. Specifically, comprehensive building retrofits have not yet found their way into the training and education programs for HVAC trades and for architectural and engineering professions. Thus, strategies for increasing the capacity of these sectors to integrate new technology into Tower Renewal opportunities are critical.

## **Impact on the City's economy**

The Canadian economy is changing: construction activity is becoming an increasingly significant indication of fiscal health. If undertaken, Tower Renewal retrofit projects will create a significant number of jobs and will require construction and building industries to be trained in the latest technologies and retrofit methods. In this way, Tower Renewal will contribute to a strengthening of the local construction and building industries and will assist Toronto in preparing itself to respond to the changing economy.

Tower Renewal recognizes that as the cost of living rises in Toronto, a promising means to sustaining a vibrant construction industry is through stable, well paying jobs.

## **Tower Renewal industries and services**

There are a wide array of industries and services that are needed to undertake Tower Renewal projects. Hundreds of these businesses are in operation in Toronto and nearby regions. An inventory of these businesses is available for reference on the Tower Renewal website ([towerrenewal.ca](http://towerrenewal.ca)). These are the businesses that will drive demand for more staff that will bring economic opportunity to residents.

## **Moving forward**

This study has confirmed that the Tower Renewal retrofit projects will create an impressive number of jobs, will promote training and education programs that teach the most innovative retrofit methods, and will have positive impacts on the local economy. Using the outcomes of the employment study together with the employment opportunities created by energy retrofits at the pilot sites, Toronto Employment and Social Services will build an employment plan for Tower Renewal supported by the local service delivery infrastructure.

## Social/cultural objective

Three studies have been completed that support the goals of the social/cultural objective. These studies looked at the walkability of the area, spaces intended for community-use and the safety of the area. Each study has identified possible projects that could greatly enhance the social and cultural quality of life for residents living in and around the towers.

### **Walkability Studies by the University of Toronto and Jane's Walk**

A series of walkability studies explored how residents of Toronto's high-rise areas travel throughout their neighbourhoods, with a focus on walking. The studies were collaboratively developed and led by Professor Paul Hess of the University of Toronto's Department of Geography and Jane Farrow, Director of Jane's Walk. Their work began in 2005, with funding from the Social Sciences and Humanities Research Council of Canada and was expanded to include Tower Renewal pilot sites in 2008 with funding from the Toronto Community Foundation.

When Toronto's inner suburbs were developed in the 1960s through 1980s, the neighbourhoods of single detached houses were often designed around a primary school and park, so that children could easily walk to school without crossing a major road. Shopping and other services were usually located at major intersections and were intended to be reached by people in cars. The high-rise apartment buildings were typically built along the edges of the neighbourhoods, further away from amenities like retail stores and schools. At the time, there was an expectation that families with children would live in the low-rise neighbourhoods and singles and couples (with

cars) would live in the apartment towers. Today, as shown by the work done by Professor Hess and Jane's Walk, it is clear that residents of the high-rise apartment buildings now often include families with children, and that many of the people living in the high-rises do not have cars and rely on walking or transit to get to work and school and to run errands.

Walking is an important part of living in a city, as Jane Jacobs so often pointed out. People see each other on the street and become familiar with one another. People who already know each other stop to chat, sharing information and reducing social isolation. Walking helps people to keep fit, through physical activity. Walking is also a primary means of transportation for many people; it may be how a person gets to work, to grocery stores, and to social activities. The walking environment can make a big difference in a resident's day-to-day life.

To learn about walking experiences in the neighbourhoods, the walkability studies engaged residents living in and around the pilot sites to complete a survey, create maps that showed how and where they travel, and discuss in small groups their neighbourhood, its walking environment and its public spaces.

The studies confirmed that most residents are without regular access to car transportation and heavily rely on transit and walking to complete their day-to-day activities.

At each site, there were aspects of the physical neighbourhood that participants felt proud of. For example, Scarborough Village participants enjoy spending time at the nearby parks and gardens. Kipling Avenue participants appreciated the presence of the bike path and ravine trails. St James Town participants enjoyed the vibrancy of the area, being close to shops, and sitting along paths where they can connect with neighbours.

**Image >** *Opposite page: St. James Town residents enjoying the park. Courtesy of Dennis Swartz.*





Participants at each of the pilot sites also identified significant barriers that limited or restricted where and when they can walk. The following barriers were each identified in at least two of the locations as significant impediments to how residents get around<sup>2</sup>. Some of these conditions are found on privately owned land and others on publicly owned land.

- Poor lighting or no lighting
- Pathways and sidewalks in poor physical condition
- Littered or unkempt pathways/sidewalks
- Strong odours from exposed garbage bins
- Missing connections or pathways requiring residents to create their own
- Concerns about encountering 'scary people'
- Isolated pathways with too few people
- Narrow spaces with fencing on all sides
- Obstructed sightlines and blind corners (i.e.: not being able to see what/who is around the corner)
- Lack of snow and ice clearing in winter months
- Excessive mud and large pools of water over pathways in warmer months
- Lack of places on pathways to sit, rest, and socialize with neighbours
- Too much and/or too fast traffic

Additionally, the studies revealed that most residents do not feel safe from automobile traffic in walking areas and believed there were not enough safe places to cross the street.

The above barriers have critical consequences on the sense of safety and community, and the degree of pride that is felt by residents. These barriers also affect the level of accessibility of the pathways for residents in wheelchairs, with strollers, or with buggies, or for residents who generally have difficulty walking. Approximately half of the participants reported that they restrict where or when they walk because of safety concerns or accessibility issues.

Through working with area residents, University of Toronto Professor Paul Hess and Jane's Walk identified key areas in each neighbourhood where improvements would greatly enhance accessibility and safety for pedestrians. For the researchers, the next step for the walkability studies is a detailed analysis of the data collected and general conclusions across all of the individual studies.

The City is moving ahead based on the preliminary reports that the researchers provided, sharing this information with the appropriate City staff, facilitating discussions about the findings and seeking ways to improve the local walking environment at the Tower Renewal pilot sites. Please see the pilot site reports (pgs 49 – 80) for more specific information.

<sup>2</sup> based on the lists of barriers identified in the Walkability Studies for North Kipling, Scarborough Village and St James Town

## Community-use space

Making space available where residents can meet with their neighbours, take part in recreation activities and access social programs is an important part of building a sense of community. Tower Renewal staff have worked with building owners and residents to:

- a] develop approaches /opportunities for providing new amenity space in buildings where a lack of potential space exists
- b] suggest physical changes that could improve the use and safety of existing amenity spaces.
- c] identify spaces that are currently available or that could be made available for community-use activities

Several principles for promoting a safe, cohesive and vibrant community were considered in this study:

- Common spaces that benefit residents foster a sense of community within buildings.
- Residents should be engaged in decisions that determine how the space is used.
- Location should be carefully considered when designing both indoor and outdoor common spaces (i.e. distance to entrances, well used hallways, and laundry rooms, exposure to sunlight, etc.)
- It is often beneficial to have indoor and outdoor common space close together.
- Clear rules for use of common space (both by residents and by external groups) can be helpful in maintaining a space that is appropriate for diverse residents and owners alike.

Guided by these principles, an inventory of the physical space was created for each pilot site. The findings from the inventories were used to create summaries that highlighted recommended improvements that would make the space more appropriate for use by residents.

The following summarizes what was learned:

- The sites offer varying indoor and outdoor amenities for residents.
- All of the sites were originally built with indoor amenity spaces (e.g. party rooms, saunas).
- One of the sites was built with extensive amenities (swimming pools, tennis courts, meeting rooms), but currently has very few amenities in good repair.
- None of the sites currently offer indoor common areas for casual, unstructured use by residents (e.g. a drop-in lounge). Two of the sites permit external community organizations to run programs or activities for residents in the indoor common rooms.
- Some of the indoor amenity spaces (meeting rooms, lounges) at several sites have been converted to other uses over the years, including administrative offices and storage.
- Maintenance of and access to common spaces over the long-term needs to be addressed.

The study also indicated that establishing protocols would support the ability of residents to access the space.

The inventories and recommendations have been shared with the property owners. Tower Renewal staff are currently working with the owners, other City staff, community organizations, and residents to select feasible community-use space projects and plan for how they can be implemented.

## Safety audits

Each of the pilot sites and the surrounding area has been reviewed in detail by both residents and local police officers to identify safety concerns and improvements that would address these concerns. Residents identified issues that affected their safety and made suggestions for improvements. METRAC, a community-based organization that aims to prevent and end violence, facilitated the process in partnership with Tower Renewal staff, resident leaders and other community-based organizations. Police officers used a technique called Crime Prevention through Environmental Design (CPTED), which is based on the belief that proper design and appropriate use of the man-made environment can reduce crime and improve the quality of life for residents in the community.

## Moving forward

Tower Renewal staff are now working to bring together the issues and recommendations submitted by both the police and residents and communicate them to building owners and to City staff who could best address them. The next stage will be to develop a plan for acting upon these recommendations.

**Images >** *Opposite page: Shaughnessy (top) and Kipling (bottom) pilot site residents. Courtesy of Dennis Swartz.*



## Youth/adult residents gave voice to safety issues and stepped into community leadership roles

The safety element of Tower Renewal has shown that magic can happen when motivated residents—both youth and adult—are brought together to discuss and problem-solve a common concern. With funding from the Ministry of Community Safety and Correctional Services, an opportunity presented itself to expand the safety audits to include a capacity-building program. Youth and adults who were already established as leaders in the community, worked with METRAC, other community-based organizations and City staff to link the necessary safety audit activities with sessions that would help residents become leaders in safety promotion and in community-building.

In total, approximately 125 residents, including over 90 youth, participated in training sessions and safety audit walkabouts. The training sessions taught the participants to understand different ways of looking at safety, from one's physical safety to one's social and emotional safety. They also looked what might affect how safe someone feels, from the building design and amount of lighting, to experiencing types of oppression such as acts of discrimination or racism. At the North York site, the residents chose to expand the training sessions to also include workshops on building self-awareness and conflict mediation. Following the training sessions, the

participants used their knowledge to take part in a safety audit walkabout where they traveled through their community and identified areas that might affect one's level of safety. In a follow up discussion, possible solutions were developed that could address these issues.

The resident safety audit process succeeded in identifying the areas in the community that residents considered to be problematic. But this process also achieved much more. By coming together and sharing the tools and knowledge necessary to actively engage in issues that affect the quality of their lives, the more than 120 youth and adults who participated are now positioned to continue their involvement through resident leadership roles in many of the community programs, such as the City's Community Crisis Response Program, or through the development of new resident-led initiatives. By continuing to include capacity-building components in Tower Renewal projects, residents who live in the towers and in the surrounding areas can continue to help shape the ways in which Tower Renewal, and other community-based initiatives, enhances their lives and their communities.



## Conclusion

We have now examined a group of apartment buildings and their surrounding communities in great detail. Based on our research, we can now confidently assert that these are valuable assets of the City of Toronto and have much potential.

The broad range of benefits associated with Tower Renewal has been established. Through the implementation of Tower Renewal projects, we can achieve:

- A cleaner and healthier environment
- Increased social and cultural benefits, and stronger communities
- Enhanced local economic activity

The extensive studies conducted at the pilot sites have identified an impressive list of potential benefits and provided significant detail about the anticipated performance, costs and savings, physical and infrastructure challenges, property owner priorities, and financing and regulatory challenges that the Tower Renewal implementation can expect to encounter.

Overall, the findings are clear: the potential savings and other benefits of Tower Renewal projects are dramatic. Tower Renewal will have a remarkable impact on the future shape of the city by significantly improving the quality of the built and natural environment, as well as quality of life for all Torontonians.

The initiative is consistent with major City of Toronto objectives as outlined in the Agenda for Prosperity – including supporting a proactive, global, creative and inclusive Toronto, the City's Climate Change, Clean Air and Sustainable Energy Action Plan and with the work of the Neighbourhood Action teams in the city's 13 priority neighbourhoods. Tower Renewal is an ambitious plan. It requires the cooperation of all City Divisions and Agencies, combined with a wide array of external partners.

The pilot sites and the reports from similar tower renewal activities around the world have reinforced the substantial value of Tower Renewal projects and have already provided the necessary information to create a city-wide rollout strategy. Tower Renewal is at an exciting point in its development; projects at the pilot sites have been selected and will soon begin implementation.

The STEP program will guide and support projects that will achieve comprehensive benefits. Supported by an appropriate financing option, these benefits will be tremendous. Further work including the study of appropriate zoning conditions will continue. Other regulatory issues will also continue to be investigated. Tower Renewal will continue to work toward improving quality of life while minimizing negative impacts on residents through engagement programs and financing options that minimize cost pressures on building owners.

Apartment Neighbourhoods are important to the city. Investing now will ensure the buildings provide sound, housing for decades to come. Tower Renewal provides a path to a future that includes comfortable and affordable housing, inviting communities and healthy industry and businesses.

# **Tower Renewal Pilot Sites: status report**





## 2667 and 2677 Kipling Avenue

Two 23-floor buildings totalling 458 units.

### Area profile

The residential towers at 2667 and 2677 Kipling Avenue are located in the Rexdale – Jamestown area of Etobicoke, between Finch Avenue and Steeles Avenue. The neighbourhood is a high growth area in the city, seeing nearly 10 per cent growth in population between 2001 and 2006 compared with a 1 per cent increase for the City of Toronto. The population density is more than double the Toronto average (10,000 residents per square kilometre compared with an average of 4,000 residents per square kilometre for Toronto).

Compared to the rest of Toronto, residents are typically younger, with a median age of 30.5 years, compared with the Toronto average of 38.4 years. Approximately one quarter of the residents are under 15 years of age (17 per cent of the population of Toronto is under 15 years of age).

The average number of rooms per dwelling is lower with an average of 4.4 compared with an average of 5.5 for the City of Toronto. There is a higher number of persons per household (3.3 people) compared with the Toronto average of 2.5 people per household.

The proportion of residents who are immigrants in the Etobicoke pilot site is nearly 70 per cent compared with the Toronto average of 50 per cent. The proportion of residents who speak neither English nor French is also higher than average.

The median household income in the census tract is \$48,000 per household (2006), compared with the Toronto average of \$53,000 per household. The unemployment rate is higher than average at 10.7 per cent (2006) compared with the Toronto average of 7.6 per cent.

### Examples of neighbourhood assets:

North Kipling Community Centre and School (and associated parkland)  
Albion Public Library  
St. Andrew's Elementary School  
Highfield School  
North Albion Collegiate Institute and sports fields  
Religious institutions  
Humberview Park  
Panorama Park  
Humber Valley parks and trails  
Albion Arena  
Community Garden (new in 2010)  
Community Hub (planned for 2012)

Images > *Opposite page: Kipling pilot site. Courtesy of Dennis Swartz*

## Achievements

### Studies completed:

- ✓ Analysis of Potential Resource Conservation Measures
- ✓ Recommendations for Transport Demand Management Measures
- ✓ Walkability Study by University of Toronto Department of Geography Professor Paul Hess and Jane's Walk Director Jane Farrow, with the assistance of area residents
- ✓ Recommendations for Waste Diversion Solutions and Strategies
- ✓ In-home Day Care Feasibility Analysis
- ✓ Study of Community Use Space on site
- ✓ Safety Audit (METRAC – resident led)
- ✓ Safety Audit (CPTED – Toronto Police)
- ✓ Water Efficiency Audit and Report
- ✓ Tree Canopy Study
- ✓ Inventory of City-owned Parks and Recreation Facilities in the area

### Additional:

- ✓ Partnered with Action for Neighbourhood Change (ANC) Rexdale, a community development organization located in one of the buildings, to support resident engagement work
- ✓ Connected ANC Rexdale with an agency which provided parenting workshops
- ✓ Provided safety audit training to residents
- ✓ Supported an outdoor community gathering and held a general information session for tenants
- ✓ Assisted property owner with concept development for a re-zoning application to permit the construction of a medical lab and office

- ✓ Met with Toronto Region Conservation Area to identify areas which may have potential for new construction
- ✓ Supported digital photography workshops and an ensuing exhibit by residents and the National Film Board
- ✓ Explored regulatory framework relating to on-site, off-the-truck fruit and vegetable vending

### The property owner has begun retrofit work by:

- ✓ Replacing washing machines with front-loaders
- ✓ Replacing all showerheads and faucet aerators with fixtures provided by Enbridge (50 per cent complete)



## Proposed Kipling Pilot Site Projects

Based on the results of the studies, several projects are proposed as feasible for the pilot project site. Some of the project opportunities are for the 2667 and 2677 Kipling Avenue sites and others are within the Rexdale – Jamestown neighbourhood. Each project will be led and/or supported by either the City of Toronto, Humber Properties (the property owner), or through a collaborative effort. Work plans will be created in various ways, depending on the specific project.

The following projects are proposed:

- Energy and Water Retrofits
- Waste Diversion through increased recycling
- On-site Community Use Space (e.g. indoor multi-purpose room improvements)
- Outdoor Site Improvements (e.g. play area, gathering spaces, re-use of the tennis courts)
- Improvements to the public boulevard along the Kipling pedestrian corridor
- Rezoning application to permit the construction of a medical centre
- Connect residents with the new community food garden in Humberview Park, including approaching neighbouring land owners regarding re-opening the shortcut to Humberview Park
- A multi-lingual Welcome Package to connect new tenants with local services and facilities.
- Further consideration of the potential to re-purpose existing local park and recreation space.

## Energy and water retrofits

Energy and water efficiency retrofits currently being considered for implementation in 2010 and 2011 are:

- Replacing all toilets
- Replacing all showerheads
- Installing aerators on all faucets
- Replacing the boilers, including upgrading associated systems (necessary piping changes, digital controls on boiler systems, etc.)
- Replacing the balcony doors
- Upgrading the make-up air unit and installing exhaust heat recovery units
- Installing a variable speed water pump
- Improving lighting systems in some common areas: change to energy-efficient lighting, install motion sensors and bi-level lighting where allowed to do so.
- Undertaking outreach and education to both building staff and residents to support these energy and water conservation efforts.

With the availability of a City loan under the Sustainable Energy Fund for private owners, Humber Properties is applying for up to \$1,000,000 in low-interest loans for energy retrofits at the Kipling pilot site.

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## Waste diversion

Humber Properties plans to improve current waste storage practices as well as increase the level of recycling in the buildings.

The property manager will endeavour to improve the visual and other impacts of current waste storage practices, including providing new waste and recycling bins, reconsidering the current bin locations and working with an architect to explore opportunities to construct a fully-enclosed waste storage building on the property.

The property manager will also endeavour to further enhance recycling at the buildings by:

- Exploring options to make recycling as convenient as waste disposal, such as floor-to-floor recycling
- Providing larger, well-signed recycling bins
- Providing significant outreach and education to residents about solid waste management, with particular emphasis on recycling and pest management
- Consulting with tenants about appropriate approaches (incentive programs, etc.)

### On-site community use space (indoor)

Humber Properties plans to open a large multi-purpose room in 2677 Kipling in 2010, including:

- Renovating a space to permit group activities, including repairs to the ceiling and walls, a lockable storage area and furniture
- Installing a door to the outside potential play area and enlarging the existing windows
- Refurbishing the outdoor area immediately outside the space to create a children's play area with natural surveillance from the activity room
- Consulting with residents about the types of equipment (furniture, play equipment, etc.) to be provided

- Connecting with external programs to activate the space, with a focus on programs of interest to residents
- Exploring the use of the multi-purpose room as an air conditioned cooling room for resident relief during heat waves.

### Outdoor site improvements

Humber Properties is currently working with an architect to develop concept plans for outdoor site improvements at the Kipling pilot site, including outdoor gathering areas and refurbishing some of the original recreation facilities.

During 2010, the owner wants to present these ideas to residents for discussion in order to better understand tenant priorities and how residents and property management can work together to keep on-site play areas safe for children.

Improvements being considered include but are not limited to:

- Refurbishing one of the tennis courts at the site to create a basketball court, either in front of 2677 Kipling or at the rear of 2667 Kipling.
- Creating a children's play area with good natural surveillance and separation from traffic.
- Creating a gathering area in front of 2677 Kipling Avenue that could accommodate off-the-truck fruit and vegetable sales as part of a pilot project.
- General landscaping improvements, including removing and replacing dead trees, adding benches, shrubs and new trees and additional exterior lighting.



## **Kipling pedestrian corridor improvements**

To enhance the public realm along a stretch of Kipling for pedestrians and cyclists, the following is recommended:

- Consulting with the local community in 2010 to identify possible short-term improvements to the Kipling corridor, including but not limited to additional benches, garbage and recycling cans, bus shelters, trees and repairs to sidewalks.
- Exploring funding options and potential timelines for long-term improvements to the boulevards on Kipling Avenue.

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## **Rezoning to permit the construction of a medical centre**

The need for additional medical services in the local area was identified by Jamestown – Rexdale residents. The property owner is interested in constructing a new medical centre in front of one of the buildings. Medical offices are not currently permitted by the zoning for this property so the proposal will go through a rezoning process. Step one will be to prepare an application for rezoning to permit the construction of the medical centre at 2667 Kipling Avenue, including all required drawings and studies, and including all associated site improvements.

## **Community food garden**

The City is establishing a community garden in Humberview Park, south of the site, to increase use of the park, resident interaction and access to healthy, affordable food. Residents could be connected with the new community garden through local community organizations such as gardening groups or Action for Neighbourhood Change (Rexdale) working with City staff.

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## **Multi-lingual Welcome Package for new tenants**

Local community organizations and the Neighbourhood Action Partnership have collected information about services and facilities in the local area, especially those which support newcomers. This information is being published in a reference document for local community agencies, to help staff to refer residents to the appropriate local services.

This valuable tool could also serve as the foundation of a Tower Renewal Welcome Package, to be distributed to residents when they move into buildings in the Jamestown-Rexdale area. The material in the reference document about locally available services (health services, language classes, etc.) could be translated to the appropriate languages. Property managers could distribute this information when tenants move in, along with other important information (i.e. City recycling pamphlets), easing the transition to the new neighbourhood and notifying new residents about how to access available services.



## 110 Parkway Forest Drive (Fairview Pilot Site)

17 floors, 216 units

### Area profile

110 Parkway Forest Drive is located in the Don Valley East neighbourhood of Toronto, near Fairview Mall, and between Highway 404 and Don Mills Road to the east and west, and Sheppard Avenue and Highway 401 to the north and south. The community's population remained stable between 2001 and 2006, with only a 1.2 per cent increase in residents.

The population density in the pilot area is more than four times the Toronto average (18,000 residents per square kilometre compared with an average of 4,000 residents per square kilometre for Toronto). This density is also considerably higher than the other Tower Renewal pilot neighbourhoods of approximately 10,000 residents per square kilometre.

Residents in the area have a median age of 33.3 years compared with the Toronto average of 38.4 years. Nearly 21 per cent of residents are under the age of 15, whereas in Toronto approximately 17 per cent of residents are under 15 years of age.

The average number of rooms per dwelling is 4.2 compared with an average of 5.5 rooms per dwelling for the City of Toronto. There is a higher number of persons per household (2.9 people per household) compared with the Toronto average of 2.5 people per household.

Residents in the neighbourhood are more mobile relative to the rest of Toronto with only 71 per cent of residents having lived at the same address in the past year. This is compared with 84 per cent of Torontonians. This also represents greater mobility than the other pilot project neighbourhoods (79%).

The proportion of residents who are immigrants in the pilot site is 79 per cent compared with the Toronto average of 50 per cent. The proportion of residents who speak neither English nor French (7.1 per cent) is higher than the City average (5.1 per cent).

The median household income is \$45,000 per household compared with the Toronto average of \$53,000. The unemployment rate is higher than average at 11.4 per cent (2006) compared with the Toronto average of 7.6 per cent.

### Examples of Neighbourhood assets:

Parkway Forest Park  
Fire station  
Recreation centre  
Parkway Forest Plaza  
Forest Manor Public School  
Fairview Mall  
Don Mills subway station (Sheppard subway line)  
Woodbine Junior School  
Shaughnessy Public School  
George S. Henry Academy  
St. Timothy's Catholic School

Images > *Opposite page: Fairview pilot site. Courtesy of Dennis Swartz.*

## Analysis of Tower Renewal opportunities

The City of Toronto Tower Renewal Office, in partnership with City Divisions, non-governmental organizations and El-Ad Group (Canada) Inc. (the property owner), have identified a number of potential initiatives at the site and within the apartment neighbourhood, with a focus on energy conservation.

### Achievements

#### Studies completed:

- ✓ Analysis of Potential Resource Conservation Measures
- ✓ Analysis of Potential District Energy Concept for Don Mills Neighbourhood
- ✓ Recommendations for Transport Demand Measures
- ✓ Inventory of On-site Community Use Space
- ✓ Safety Audit (METRAC – resident led)
- ✓ Safety Audit (CPTED – Toronto Police)

#### Additional:

- ✓ Provided safety audit training to area residents
- ✓ Parkway Forest Redevelopment Master Plan by City Planning, with site plan approvals underway
- ✓ Supported participation of City Divisions with Fairview Interagency Network (FIN) on community development work

## Parkway Forest Masterplan

Prior to the Tower Renewal initiative, high-level neighbourhood-wide plans were established for the Parkway Forest area through a lengthy rezoning application process. The approved Master Plan includes the improvements to existing roads and a new road including a signalized intersection with Don Mills Road, expansions to the existing park and addition of recreational areas, a 45,000 square foot Community Centre including a child care facility, and an aquatic centre.

New rental housing will replace aging townhouses and older mid-rise buildings which will be demolished to make way for new condominium towers. Construction of Phase 1 includes two new rental housing buildings and 4300 square feet of space for community agencies, in each of the two buildings. A broad range of additional neighbourhood improvements will be implemented during this phased redevelopment. Some, such as the construction of party rooms and improvements to the lobbies in the existing buildings, are already complete.

### Proposed Parkway Forest projects

For Tower Renewal, the focus is on ensuring that the remaining high-rise apartment buildings are also improved. Based on the results of the studies, several projects are proposed or underway for the pilot project site. Some of the project opportunities are for the building site of 110 Parkway Forest Drive and other proposed projects are within the Fairview neighbourhood. Each project will be led and/or supported by either the City of Toronto, El-Ad Group (Canada) Inc. (the property owner), or through a collaborative effort.



## Energy initiatives

The first priority for El-Ad Group (Canada) Inc. is upgrading the heating system with high efficiency boilers at 110 Parkway Forest. The tender for this work has been issued.

The owner will also issue a Request for Proposals (RFP) for new energy efficient and water efficient systems and, based on the proposals submitted, will be issuing a tender for the work to be completed. The proposals will include recommendations on energy and water retrofits and are expected to include:

- A re-commission of the building
  - Ventilation control upgrade: Upgrading the make-up air unit and installing exhaust heat recovery units
  - Sealing and caulking around existing windows and doors, possibly upgrading building walls which face onto balconies
  - Interior and exterior light bulb and fixture replacements, and installation of motion sensors and bi-level lighting where possible
  - Refrigerator replacements
  - Toilet upgrades to six litre toilets (may go as low as four litres)
  - Aerator and showerhead upgrades (already completed)
  - Tenant engagement/ education
  - Property management training / benchmarking preparation and analysis: measurement and reporting of energy and water consumption
- Solar domestic hot water on the roof
  - Solar Wall system to pre-heat the ventilation intake air
  - Solar photovoltaic panels on the roof

The following energy retrofits are also being considered:

- Creating a Central Heating Plant for multiple buildings
- Eliminating garage heating and installing CO-monitoring based on garage exhaust system

El-Ad Group (Canada) Inc. is applying for low-interest loans through the City of Toronto's Sustainable Energy Funds for energy initiatives at the Parkway Forest pilot site.

## Parkway Forest Park improvements

The Parkway Forest Park is located on the west side of Parkway Forest Drive, south of Sheppard Avenue East. The park borders Forest Manor Public School.

As part of the Parkway Forest Master Plan (rezoning application), El-Ad Group (Canada) Inc. is providing a number of community benefits related to the park, including additional land for and funds for improvements to the Parkway Forest Park, a new community centre, outdoor pool and landscape improvements. The overall neighbourhood, including the future condominium buildings and the existing rental buildings, will be a pedestrian friendly environment, where the pathways and the landscaped areas have a continuity of movement. A substantial public art program has been prepared and will emphasize the access to the area as well as the pedestrian circulation.

The City will be preparing a reference document to guide the design of the park improvements. One way of incorporating local input would be for youth who participated in the safety audit to present their recommendations to Parks staff as part of the development of the terms of reference.

## Strengthen local community network

The Fairview Interagency Network is a local network of community organizations and City Divisions serving residents in the Fairview area. The group initially formed to increase interagency coordination and support for grassroots agencies. As this neighbourhood has not been named one of the City's Priority Neighbourhoods, the Tower Renewal Project aims to support the participation in the network of City staff working in the neighbourhood. At present, the following City Divisions and City agencies, boards, and commissions (ABC's) are official members of the network: Toronto Employment and Social Services, Tower Renewal Project, Toronto Public Health, Toronto Public Library, Toronto Community Housing.







## 175 Shaughnessy Boulevard

(Peanut and Fairview Site)

18 floors, 139 units

### Area profile

175 Shaughnessy Boulevard is located in the Don Valley Village (Ward 33 – Don Valley East) neighbourhood of Toronto, near Fairview Mall, north of Sheppard Avenue and next to a section of Don Mills Road that is commonly known as the “Peanut”. The community’s population remained stable between 2001 and 2006, with only a 1.2 per cent increase in residents. Don Valley Village contains low- to middle-income housing and is home to many new immigrants, including those of Armenian, Chinese, West Indian, East Indian and Middle Eastern descent.

The population density in the area is more than four times the Toronto average (18,000 residents per square kilometre compared with an average of 4,000 residents per square kilometre for Toronto). This density is also considerably higher than the other Tower Renewal pilot neighbourhoods of approximately 10,000 residents per square kilometre.

Residents in the area have a median age of 33.3 years compared with the Toronto average of 38.4 years. Nearly 21 per cent of residents are under the age of 15, whereas in Toronto approximately 17 per cent of residents are under 15 years of age.

The average number of rooms per dwelling is 4.2 compared with an average of 5.5 rooms per dwelling for the City of Toronto. There is a higher number of persons per household (2.9 people per household) compared with the Toronto average of 2.5 people per household.

Residents in the area are more mobile relative to the rest of Toronto with only 71 per cent of residents having lived at the same address in the past year. This is compared with 84 per cent of Torontonians. This also represents greater mobility than the other pilot project neighbourhoods (79%).

**Images >** *Opposite page: Peanut and Fairview pilot site. Courtesy of Dennis Swartz.*

The proportion of residents who are immigrants in the pilot area is 79 per cent compared with the Toronto average of 50 per cent. The proportion of residents who speak neither English nor French (7.1 per cent) is higher than the City average (5.1 per cent).

The median household income is \$45,000 per household compared with the Toronto average of \$53,000. The unemployment rate is higher than average at 11.4 per cent (2006) compared with the Toronto average of 7.6 per cent.

### Examples of neighbourhood assets:

Fairview Mall  
Don Mills subway station  
(Sheppard subway line)  
North York General Hospital  
Seneca College’s Newnham Campus  
Cummer Park Fitness Centre  
Woodbine Junior School  
Shaughnessy Public School  
Dallington Park  
George S. Henry Academy  
St. Timothy’s Catholic School

## Analysis of Tower Renewal opportunities

The property owner (Homestead Land Holdings Ltd.) has been working with City staff to provide access to the building, its residents and its property managers to undertake a variety of studies. Major opportunities at the Shaughnessy Tower Renewal Pilot Site relate to outdoor gathering areas, gardens, walking paths and recycling.

## Achievements

### Studies completed:

- ✓ Analysis of Potential District Energy Concept for Don Mills Neighbourhood
- ✓ Walkability Study by University of Toronto Department of Geography Professor Paul Hess and Jane's Walk Director Jane Farrow, with the assistance of area residents
- ✓ Recommendations for Waste Diversion Solutions and Strategies
- ✓ Inventory of On-site Community Use Space
- ✓ Safety Audit (METRAC – resident led)
- ✓ Safety Audit (CPTED – Toronto Police)
- ✓ Tree Canopy Study

### Additional:

- ✓ Supported participation of City Divisions with Fairview Interagency Network (FIN) on community development work
- ✓ Provided safety audit training to residents
- ✓ Conducted week-long safety training for youth in the Peanut/Fairview area

- ✓ Conducted a charrette to explore the potential for district energy systems
- ✓ Identified Dallington Park as a potential site for beautification, trees and community gardening.

The property owner completed work on the underground parking garages to address maintenance needs.

## Proposed Shaughnessy Boulevard projects

Based on the results of the studies, including assessments, and consultation with the property owner and residents, several projects are feasible for the pilot project site. Some of the project opportunities are for the building site of 175 Shaughnessy Boulevard and other proposed projects are within the Peanut and Fairview neighbourhood. Each project will be led and/or supported by either the City of Toronto, Homestead Land Holdings Ltd. (the property owner), or through a collaborative effort.

The following projects are proposed:

- Waste Diversion
- On-site garden
- Dallington Park Improvements
- Strengthen Community Networks
- Walkability discussion among apartment building owners between Shaughnessy Boulevard and Don Mills Road.

## Waste diversion

The waste diversion study identified 175 Shaughnessy as a high-performance building when it comes to recycling. Based on the study recommendations, the owner has already made positive changes, such as re-locating waste storage bins to more appropriate locations.

Homestead wants to further improve its recycling program at the building by:

- Implementing further education and outreach activities about solid waste management
- Developing a system whereby the City can provide continuous feedback to property managers/superintendents about their recycling performance

## On-site garden

Homestead plans to design and construct landscaping improvements, including gardening and gathering areas.

## Dallington Park improvements

Located on the west side of Shaughnessy Boulevard, Dallington Park is the nearest park to the pilot site.

Through discussions, residents, community organizations and City Divisions have identified the potential for Dallington Park to become a focal point for the community. Providing beautification and community gathering activities in part of the park would improve the capacity for community gathering. This park is ideally situated to provide opportunities for residents from low-rise residential homes and residents living in the apartment neighbourhood to connect.

The following improvements to the park could encourage residents to use the park more often:

- Seating areas, e.g. benches
- Trees, bushes, shrubs and flowers
- Plant containers
- Playground
- Mural project

## Strengthen community networks

The Fairview Interagency Network is a local network of community organizations and City Divisions serving residents in the Fairview area. The group initially formed to increase interagency coordination and support for grassroots agencies. The Tower Renewal Project aims to support the participation in the network of City staff working in the neighbourhood, mirroring the structures in the City's Priority Neighbourhoods. At present, the following City Divisions and agencies, boards and commissions are official members of the network: Toronto Employment and Social Services, Tower Renewal Project, Toronto Public Health, Toronto Public Library, Toronto Community Housing.



## Understanding obstacles to better east-west walking routes

The walkability study conducted by University of Toronto Professor Paul Hess and Jane's Walk with local residents identified a major need for safe and direct east-west routes across private property. There are no direct routes for residents to walk from the site to the "Peanut", where schools, community centres, shopping and bus stops are concentrated.

The City will invite a group of local property owners, including Homestead, to explore the obstacles and challenges related to providing safe, direct walking routes across private property. The purpose of this activity is to better understand the motivations and concerns of property owners in relation to walkways across their properties. The goal is to better understand the problem in order to come up with appropriate solutions.

**Images >** *Opposite page: Hole in fence provides access to transit, school and shopping. Courtesy of Dennis Swartz.*











## 215 Markham Road

18 floors, 192 units

### Area profile

215 Markham Road is located in the Scarborough Village neighbourhood, near the intersection of Eglinton Avenue East and Markham Road. It is one of four high-rises that are located close together along Cougar Court. Based on the 2006 census, the Scarborough Village pilot site is in an area of rapidly declining population. Between 2001 and 2006, there was a nearly 19 per cent decrease in the recorded number of residents. It is unclear whether this represents an actual decrease in the number of residents or a decrease in the proportion of residents who were counted in the census.

Even with the decrease in population, the population density for the area is more than double the Toronto average (10,000 residents per square kilometre versus 4,000 residents per square kilometre for Toronto).

Compared with the rest of Toronto, residents at the Scarborough site are younger, with a median age of 29.2 years compared with the Toronto average of 38.4 years. Approximately 28 per cent of residents are under 15 years of age whereas 17 per cent of the Toronto population is under 15 years old.

The average number of rooms per dwelling is 4.5 rooms per dwelling compared to the Toronto average of 5.5 rooms per dwelling. There is a higher number of persons per household (3.4 people per household) compared with the Toronto average of 2.5.

Residents of the Scarborough pilot neighbourhood are more mobile relative to the rest of Toronto with only 79 per cent of residents having lived at the same address in the past year (compared with 84 per cent of Torontonians).

The proportion of residents who are immigrants is higher than average with nearly 65 per cent of residents compared with the Toronto average of 50 per cent. The proportion of residents who speak neither English nor French is 9.4 per cent compared with the Toronto average of 5.3 per cent.

The median household income is \$37,000 compared with the Toronto average of \$53,000. The unemployment rate of 12.9 per cent is also higher than the Toronto average of 7.6 per cent (2006).

### Examples of neighbourhood assets:

- Campbell House (heritage farm)
- Mosque and several churches
- Community garden
- Scarborough Village Recreation Centre
- Scarborough Village Park with sports fields
- Cedar Drive Public School

**Images >** *Opposite page: Hole in fence provides access to transit, school and shopping. Courtesy of Dennis Swartz.*

## Achievements

### Studies completed:

- ✓ Analysis of Potential Resource Conservation Measures
- ✓ Recommendations for Transport Demand Measures
- ✓ Walkability Study by University of Toronto Department of Geography Professor Paul Hess and Jane's Walk Director Jane Farrow, with the assistance of area residents
- ✓ Recommendations for Waste Diversion Solutions and Strategies
- ✓ Inventory of On-site Community Use Space
- ✓ Safety Audit (METRAC – resident led)
- ✓ Safety Audit (CPTED – Toronto Police)
- ✓ Tree Canopy Study

### Additional:

- ✓ Supported outdoor community gathering
- ✓ Held a general information session for residents
- ✓ Facilitated tenant engagement as part of the Waste Diversion Audit, Walkability Study, Community Use Space and Safety Audits
- ✓ Working with City Planning to outline potential driveway improvements.

## Proposed Markham Road projects

Based on the results of the above noted studies, including assessments and consultation with property owners and residents, several projects are proposed as feasible for the pilot project site. Some of the project opportunities are for the building site of 215 Markham Road and other proposed projects are within the Scarborough Village neighbourhood. Each project will be led and/or supported by either the City of Toronto, CAPREIT Properties (the property owners), or through a collaborative effort. Work plans will be created in various ways, depending on the specific project.

The following projects are proposed:

- Energy Retrofits, in particular the use of motion sensors for common area lighting
- Waste Diversion Strategies
- On-site Community Use Space
- Improvements to Shared Driveway
- Improvements to Main Pathway
- Community Garden and Beautification
- Shared Outdoor Recreation Space (Cougar Court)

## Energy retrofits

CAPREIT has previously invested in energy and water retrofits at 215 Markham Road through a range of initiatives including the installation of low-flush toilets and the replacement of the boiler system.

CAPREIT is applying for \$1,000,000 in low-interest loans through the City's Sustainable Energy Funds program to assist in financing these retrofits. Investments currently being considered include:

- Installing solar photovoltaic panels, subject to City approval
- Replacing six-litre toilets with flapperless three-litre per flush toilets
- Lighting including motion sensors in hallways, stairwells and the parking garage, subject to City approval.

## Waste diversion program

CAPREIT has already achieved a high level of recycling at 215 Markham. This was achieved through door-to-door outreach activities and training for on-site property management and staff. The recommended approach to achieve even higher recycling rates and associated cost savings is the development of a rapid feedback mechanism from the City's Solid Waste Management Division.

The proposed feedback mechanism is a kind of continuous feedback loop. Each time waste bins are picked up at the site by City trucks, an electronic transponder will send a signal to the Solid Waste Division's billing staff. The billing staff could keep property managers informed about their day-to-day recycling performance via email or internet. This is proposed as a pilot project.

## On-site community space

Through discussions with residents, increasing access to indoor common amenity space for tenant use was identified as an important opportunity. Specifically, potential for improved access to the rooms alongside the lobby (which currently host programming from local organizations) was identified.

Further potential improvements include:

- Creating independent access from the outdoors making it possible to have activities in the room without compromising building security
- Creating an attractive entrance to the building by landscaping the exterior space associated with the indoor space, including seating, lighting and barbecues
- Renovating the interior space, e.g. kitchen, bathroom and storage spaces
- Making the common amenity space wheelchair accessible.

## Safety

Safety audits at 215 Markham resulted in several recommendations. Since then, CAPREIT has repaired the locking mechanism on the main entrance interior foyer door. The following are further suggestions for indoor and outdoor improvements that could increase safety and security on the property:

- Increasing exterior lighting in key locations
- Improving sight lines on east side of property
- Increasing opportunities for residents to get to know each other (e.g. basketball court, indoor multi-purpose rooms, etc.)
- Upgrading surveillance system from analog to digital
- Adding more security cameras at building exits
- Hiring an on-site, on-duty security guard
- Erecting signage listing prohibitions (“no trespassing”, etc.) and ensuring signage is in languages appropriate for resident population
- Increasing common area cleaning schedule
- Repairing elevators to reduce incidents of residents getting stuck in elevators
- Conducting regular inspections of dwelling units for pest management and hiring exterminators.

## Improvements to shared driveway (between 215 Markham Road & 15 Cougar Court)

The shared driveway operates as a private roadway giving cars and pedestrians access from Cougar Court to Cedar Drive. The following improvements are recommended to increase the safety and accessibility of the driveway:

- Increased lighting
- Enhanced snow removal
- Lowering curb heights and installing curb cuts for people with strollers, buggies and wheelchairs
- Improving pedestrian pathways
- Improving drainage of storm water on the pathways and driveway

## Improvements to main pathway

The ‘main pathway’ is an informal pathway from Cougar Court through a shopping plaza to Eglinton Avenue East. The need for improvements was identified through discussions with local residents, community organizations and City staff, and further detailed by the walkability study conducted by University of Toronto Professor Paul Hess and Jane’s Walk. Improvements suggested that would increase the safety and accessibility of the pathway include:

- Resurfacing the pavement to make it easier for people with strollers, buggies, wheelchairs and limited mobility to use the pathway
- Improving the lighting
- Creating seating areas, e.g. benches
- Adding trees, bushes, shrubs and flowers
- Landscaping, maintenance of existing trees and introducing landscaping materials

## **Community garden and beautification**

The residents of the Cougar Court area and the Scarborough Village Advisory Council have identified vacant City-owned land north of Dunelm Road as a potential location for a community garden.

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## **Shared outdoor recreation space (between 15 Cougar Court and 25 Cougar Court)**

The open space between 15 Cougar Court and 25 Cougar Court has been identified as a good location for a shared outdoor recreation area for all four apartment buildings. This space could accommodate both active recreation (e.g. ball games, playground equipment) and passive recreation (e.g. seating, tables) for Cougar Court residents to meet and socialize with each other. This project would require the cooperation of multiple building owners.



## Toronto Community Housing

Wellesley Street East and 275 Bleecker Street  
275, 285, 295 Shuter Street, 3171 and 3181 Eglinton Avenue East

### Toronto Community Housing Profile

Toronto Community Housing (TCH) is the largest social housing provider in Canada and, after New York City, the second largest in North America. TCH has more than 360 high-rise and low-rise apartment buildings throughout the city and, in total, is home to about 164,000 low and moderate-income tenants in 58,500 households.

TCH tenants reflect the city's diversity, including age, education, language, sexual orientation, mental and physical abilities, religion, ethnicity and race, as well as an increasing diversity in lifestyles and values.

TCH is run by a 13-member Board of Directors appointed by the City of Toronto. The Board is made up of three City Councillors, the Mayor or the Mayor's designate, and nine citizens, including two Toronto Community Housing tenants. The Board is responsible for managing the housing portfolio, employing a staff, making policy and operational decisions, leading shareholder direction, following related legislation and regulations.



## 200 Wellesley Street East and 275 Bleecker Street

### St. James Town

#### Area Profile

200 Wellesley Street East and 275 Bleecker Street are two of four buildings owned by Toronto Community Housing in the St. James Town neighbourhood. The management of the property is contracted out to Greenwin Property Management Company.

The St. James Town neighbourhood covers the area bounded by Sherbourne Street to the west, Bloor Street to the north, Parliament Street to the east, and Wellesley Street East to the south. St. James Town is the largest high-rise community in Canada. It consists of 19 high-rise buildings (14 to 32 stories). These massive residential towers were built in the 1960s. Approximately 17,000 people live in the neighbourhood's apartment towers making it Canada's most densely populated community ( $\pm$  65,000 people per square km) and one of the most densely populated neighbourhoods anywhere in North America.

At 65% of the population for the area, the community has a high number of recent immigrants—especially those who arrived in the 1990s. The largest cultural groups in this community are Filipino (making up 21.9% of the population), African-Canadian (11.2%), Chinese (8%), and Sri Lankan (7.8%). Other cultural groups include East African and members of Aboriginal communities.

#### Examples of neighbourhood assets:

Because St. James Town is in a downtown location, there are numerous businesses and retail options within walking distance, including:

Rose Avenue Public School:  
Kindergarten through 6th grade

A community centre and branch of the  
Toronto Public Library

A food bank at grade facing the rear of  
the building on 275 Bleecker Street

Images > *Opposite page: 200 Wellesley. Courtesy of Dennis Swartz.*

## Achievements

- ✓ Significant energy and water efficiency retrofits completed in 2009 at St James Town Tower Renewal pilot buildings
- ✓ Developed partnership with Toronto Community Foundation, City Divisions and other agencies for Recipe for Community
- ✓ Issued a Request for Proposals (RFP) for comprehensive Tower Renewal at TCH sites
- ✓ Supported outdoor community gathering (corn roast in Fall 2009)
- ✓ Held general information sessions for residents
- ✓ Facilitated tenant engagement as part of the Walkability Study (conducted by University of Toronto Professor Paul Hess and Jane's Walk), Waste Diversion Audit and Community Use Space and Safety Audits
- ✓ Coordinated 'Recipe for Community' activities for Spring and Summer 2010 (see below)

### Studies completed

- ✓ Walkability Study by University of Toronto Department of Geography Professor Paul Hess and Jane's Walk Director Jane Farrow, with the assistance of area residents
- ✓ Mini-audit of St James Town pedestrian infrastructure conditions
- ✓ Waste Diversion Solutions and Strategies
- ✓ Inventory of On-site Community Use Space
- ✓ Safety Audit (METRAC – resident led)
- ✓ Safety Audit (CPTED – Toronto Police)
- ✓ Tree Canopy Study

## Energy and Water Efficiency Retrofits

In 2009, Toronto Community Housing completed a series of retrofits on 200 Wellesley Street East and 275 Bleecker Street. At a cost of \$5 million, this included:

- In-suite and common area lighting retrofits
- Heating and hot water boiler replacement
- Window retrofits
- Door replacement
- Balcony repair/replacement
- Security system improvements
- Toilet and appliance replacement
- Kitchen and bathroom improvements
- Lobby and corridor refurbishment

### **Potential 200 Wellesley and 275 Bleecker projects:**

Based on the results of the studies completed, including assessments and consultation with TCH and residents, several projects are proposed for the pilot project site. Each project will be considered by TCH and discussed with Tower Renewal before developing work plans.

## Waste diversion program

With the outdoor location of containment areas for waste bins, residents have commented about the problem of odour, pests, the location, size and unsightly nature of the enclosures which also present a safety problem. The enclosures obscure sightlines near entrances and walkways. Waste diversion options have been presented to TCH.

Potential improvements include:

- addressing resident concerns through outreach and staff training
- reviewing improvements to equipment and storage arrangements for waste and operations procedures
- looking at approaches to encourage recycling among residents

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## On-site community use space

Through discussions with residents, increasing access to indoor common amenity space for resident use was identified as extremely important. Specifically, an opportunity for improved access to a resident space at ground level with natural light was identified. While such a space is available at 275 Bleecker, this is not the case at 200 Wellesley. Concerns were also raised about unsupervised entry to the buildings and concerns for security.

Potential indoor improvements include:

### 200 Wellesley:

- Enhancing security by creating an attractive entrance to the building alongside an indoor naturally lit resident space that overlooks the street
- Creating a new ground level resident space with independent access from outdoors so as not to compromise building security
- Making the common amenity space wheelchair accessible
- Renovating the interior gymnasium space in the basement for various resident uses
- Revisiting the 'use of space' policy to make common amenity spaces available to residents
- Pursuing opportunities with Parks Forestry and Recreation to support on site programs in a resident space
- Supporting residents who wish to garden on balconies

### 275 Bleecker:

- Creating a new indoor common resident amenity space on the ground floor currently used as storage
- Providing an accessible washroom on the ground floor

### Potential outdoor improvements at 200 Wellesley and 275 Bleecker include:

- Providing benches and picnic tables for residents to gather with shade cover
- Improving outdoor lighting and maintaining pathways
- Improving outdoor enjoyment by finding solutions to the location, size, unhealthy and unsightly nature of waste enclosures
- Enclosing the children's play area to secure children at play and keep pets out
- Re-instating a resident lead community garden that was previously located at the north east corner of the property
- Making the pool deck visible to parents who cannot monitor their children because of a quota limitation within the pool area
- Beautifying the property by removing the old rusted bikes from the fence alongside the pedestrian concourse

### Safety

Based on the safety audits at the 200 Wellesley and 275 Bleecker site, the following are examples of identified suggestions for indoor and outdoor improvements that could increase safety and security on the property:

- Increasing lighting along several pathways
- Maintaining around the buildings and in the space between buildings
- Increasing the sightlines along pathways to address potential hiding spots
- Updating/installing signs and maps to promote safe practices and assist in an emergency
- Increasing the accessibility of the buildings
- Updating/installing security measures, such as cameras, mirrors on corners and security guards
- Strengthening networks and familiarity between residents

### Moving Forward

Toronto Community Housing (TCH) Tower Renewal pilot projects have been handled differently than the private building pilot sites. TCH is moving ahead on planning for tower renewal projects using two processes: a 'recipe for community' project and a Request for Proposals (RFP).

## Recipe for Community:

Recipe for Community – St. James Town is an investment/partnership between Toronto Community Foundation and the City of Toronto. The goal of the project is to facilitate resident-inspired projects that strengthen community belonging and pride, and build community skills and capacity.

The Recipe for Community Model was developed from the successes of community building activities in the Alexandra Park Community in 2009.

The project will include community and youth engagement activities including those that centre on food, artistic creations, community gathering and convening, and neighbourhood beautification. With the support of City Divisions and community organizations, residents will develop a range of activities and programs. Initiatives under consideration include:

- Neighbourhood beautification
- The creation of spaces to support informal opportunities for community gathering
- Carpentry program
- Bike repair and maintenance program
- A program that teaches how to create vertical (balcony) gardens
- A cooking/nutrition program
- A recipe book reflecting the diversity of the community
- Arts and culture programming
- A tenant engagement strategy involving community organizations.
- Basketball courts
- Safety audit project

## Request for Proposals for Comprehensive Tower Renewal:

TCH used a Request for Proposal that required applicants to submit possible plans for undertaking the following:

- External overcladding to improve energy efficiency and to improve indoor spaces for tenants through better air quality and thermal comfort
- Site development/upgrades, housing mix and new retail and amenities for residents (income revenue generation)
- Energy retrofit measures such as heating, hot water and ventilation upgrades, controls, etc., which will reduce ongoing operating costs and greenhouse gas emissions
- Renewable energy production (solar photovoltaic, geo-thermal, solar hot water) to reduce greenhouse gas emissions and generate revenue under the Ontario Power Authority FIT program and recently announced Renewable Energy Initiatives conservation measures aimed at staff and residents through increased resident engagement, education, training and collaboration
- Community economic development including green jobs creation and local procurement opportunities.

Based on the results of the RFP process, Toronto Community Housing will further explore comprehensive building renewal options with a long-term view for implementation that will extend beyond 2012.

## Expanding Tower Renewal to additional TCHC sites:

275, 285, 295  
Shuter Street (Moss Park)

3171 and 3181  
Eglinton Avenue East

Based on the upcoming results of the RFP process (described above), Toronto Community Housing is considering comprehensive Tower Renewal at additional buildings, including 275, 285 and 295 Shuter Street (Moss Park) and 3171 and 3181 Eglinton Avenue East in Scarborough Village. The implementation of these comprehensive Tower Renewal projects will be completed long-term (beyond 2012).

The work being considered includes:

- Over-cladding at least one building in Moss Park, to begin in 2011.
- Connecting the buildings in Moss Park to the Regent Park Community Energy System (a request for energy distribution piping crossing approval has been submitted).
- Applying for renewable energy program funding for a geo-thermal energy system at 3171 and 3181 Eglinton Avenue East.



# Appendices

## Policies and Programs – City, Provincial

The following are some municipal and provincial legislation, policies and programs whose goals and objectives support Tower Renewal.

### Agenda for Prosperity [toronto.ca/prosperity](http://toronto.ca/prosperity)

In June 2006 the Mayor's Economic Competitiveness Advisory Committee came together in partnership to develop a plan of action for Toronto. The plan presents an achievable vision for growing the city's long-term prosperity and positioning Toronto as a leading global city of the 21st century.

### Better Buildings Partnership [bbptoronto.ca](http://bbptoronto.ca)

Better Buildings Partnership (BBP) is a City of Toronto program that works with building owners, managers and builders to ensure that buildings achieve high energy performance and low environmental impact. The program provides knowledge, resources and financial assistance to maximize the outcomes of a wide range of energy efficiency and renewable energy projects. A chart outlining the results of BBP is included in Appendix B.

### Climate Change, Clean Air and Sustainable Energy Action Plan [toronto.ca/changeisintheair](http://toronto.ca/changeisintheair)

Adopted in 2007, Toronto's bold Climate Change, Clean Air and Sustainable Energy Action Plan will see the City of Toronto and its residents, businesses and communities take action to cut greenhouse gas emissions, clean the air and create a sustainable energy future. The plan was crafted with substantial public and stakeholder input and is designed to achieve and exceed the Kyoto greenhouse gas reduction target. In addition to actions to green the City's internal operations, the plan outlines a number of actions that will benefit residents, businesses and community groups.

### City of Toronto Energy Efficiency Office [toronto.ca/energy](http://toronto.ca/energy)

The Energy Efficiency Office (EEO) is responsible for developing and coordinating the implementation of an energy efficiency and conservation strategy for Toronto. Some of the initiatives the EEO has undertaken are the Better Buildings Partnership, the Solar Neighbourhoods Project and creating the City's energy plan.

### City of Toronto Green Standard [toronto.ca/planning/environment/greendevlopment.htm](http://toronto.ca/planning/environment/greendevlopment.htm)

The Toronto Green Standard (City Planning Division) is about designing sites and buildings that are more environmentally friendly. Achieving the Toronto Green Standard will result in measurable improvements to air and water quality, increase energy and water efficiency, improve solid waste diversion rates, reduce greenhouse gas emissions and enhance ecology and the natural environment.

The Green Standard is a key strategy of the City's Climate Change Action Plan, an aggressive environmental framework aimed at reducing Toronto's greenhouse gas emissions by 80 per cent by 2050. Achieving the Toronto Green Standard performance measures will help meet this goal, while improving air and water quality, and enhancing the natural environment.

### **Housing Opportunities Toronto Action Plan, 2010 – 2020**

[toronto.ca/affordablehousing](http://toronto.ca/affordablehousing)  
[toronto.ca/affordablehousing/pdf/hot\\_actionplan.pdf](http://toronto.ca/affordablehousing/pdf/hot_actionplan.pdf)

Toronto's initiatives supporting affordable housing are focused through the Affordable Housing Office (AHO) and guided by Housing Opportunities Toronto—An Affordable Housing Action Plan 2010 – 2020, which sets targets that are responsive to the needs of Torontonians. The AHO administers the federally-funded Residential Rehabilitation Assistance Program (RRAP). RRAP is a Canada Mortgage and Housing Corporation initiative targeted to low-and-modest income households. It provides funding for housing repairs, housing modifications for disabled residents and the conversion of non-residential buildings into new rental housing. The City of Toronto delivers RRAP funding to eligible property owners.

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### **Live Green Toronto**

[toronto.ca/livegreen/index.html](http://toronto.ca/livegreen/index.html)

The Live Green Toronto program is designed to inspire and support every resident who wants to do something right now to make Toronto an even greener city. It is a one-stop resource for living green.

### **Official Plan**

[toronto.ca/planning/official\\_plan/introduction.htm](http://toronto.ca/planning/official_plan/introduction.htm)

The vision of Toronto's Official Plan (City Planning Division) is about creating an attractive and safe city that evokes pride, passion and a sense of belonging—a city where people of all ages and abilities can enjoy a good quality of life. The City's plan looks ahead 30 years through a sustainability lens and provides a framework for managing physical change that is needed for a successful city.

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### **Power to Live Green**

[toronto.ca/livegreen/downloads/2009-10\\_report.pdf](http://toronto.ca/livegreen/downloads/2009-10_report.pdf)

The goal of the Power to Live Green is to develop an energy strategy that builds on the City's sustainable energy foundation by significantly conserving, renewing, and smartly distributing electricity and natural gas to bring us closer to an 80 percent reduction in greenhouse gas emissions from 1990 levels by 2050, while maintaining energy reliability and affordability.

The recommendations and actions presented in this strategy aim to make it easier to retrofit homes and business, install small-scale renewable generation projects, support larger renewable generation projects, hook up to distributed energy, obtain green jobs, grow green industry, invest in the smart grid, secure sustainable transportation and use electric vehicles, and advocate for change in other orders of government.

### **Priority Neighbourhoods**

[toronto.ca/nan](http://toronto.ca/nan)

The strategy for strengthening neighbourhoods takes place within a context in which some areas of the city are at greater risk of negative outcomes. Persistently low incomes and a widening income gap between the rich and the poor in many communities threaten the social cohesiveness that has marked the success of the city. Some neighbourhoods have experienced increasing levels of gun violence and criminal gang involvement resulting in city-wide concerns about community safety. An unequal distribution of services and facilities has left some neighbourhoods less well-equipped to deal with the social challenges they face. Working with local residents to identify the neighbourhoods which most need assistance and ensuring they get the assistance they need has become a City priority.

## Tenant Supports

[toronto.ca/housing/about-tenant-landlord.htm](http://toronto.ca/housing/about-tenant-landlord.htm)

Toronto's Shelter, Support and Housing Administration Division supports a number of initiatives to assist low income tenants. Outreach and organizing help is available to tenants in private sector rental buildings to organize tenant associations; information is readily available in 150 languages about tenant rights and obligations; and the Tenant Defence Fund provides modest grants so tenant associations can get legal help where there is an application to increase rents above the guideline in the their building. Through Housing Help Centres, no-interest loans are available to low-income tenants needing help to pay rent arrears or first and last months' rent deposits. A guide has been developed that provides information about no and low-cost community services for tenants ([toronto.ca/housing/pdf/WelcomeGuide\\_09\\_WEB.pdf](http://toronto.ca/housing/pdf/WelcomeGuide_09_WEB.pdf)).

## Toronto Bike Plan

[toronto.ca/cycling/bikeplan/index.htm](http://toronto.ca/cycling/bikeplan/index.htm)

The Toronto Bike Plan (Transportation Services) establishes a vision for cycling in Toronto. To “shift gears” towards a more bicycle friendly city, the Plan sets out integrated principles, objectives and recommendations regarding safety, education and promotional programs as well as cycling-related infrastructure, including a comprehensive bikeway network.

## Toronto Food Strategy

[toronto.ca/foodconnections](http://toronto.ca/foodconnections)

Toronto Public Health is spearheading a Food Strategy to build a vision and inspire action toward a healthy and sustainable food system. The May 2010 report, “Cultivating Food Connections”, calls for the City to identify and implement opportunities to embed food system initiatives in policies and programs. There are six priority areas for action and collaboration:

- Support food friendly neighbourhoods
- Make food a centerpiece of Toronto's green economy
- Eliminate hunger in Toronto
- Connect city and countryside through food
- Empower residents with food skills and information
- Urge Federal and Provincial Governments to establish health-focused food policies

## Toronto Public Realm Initiatives

[toronto.ca/cleanandbeautiful](http://toronto.ca/cleanandbeautiful)

Public Realm programs (Transportation Services) successfully renew public spaces with the participation of everyone who lives and works here. By working together on community gardens, murals, community clean-ups and graffiti removal we encourage citizens, particularly young people, to develop practical skills, leadership and civic responsibility.

## Toronto Walking Strategy

[toronto.ca/transportation/walking/walking\\_strategy.htm](http://toronto.ca/transportation/walking/walking_strategy.htm)

The aim of the Walking Strategy is to build a physical and cultural environment that supports and encourages walking, including vibrant streets, parks, public squares and neighbourhoods where people will choose to walk more often. By envisioning a city where high-quality walking environments are seamlessly integrated with public transit, cycling and other sustainable modes of travel, the strategy sets out a plan that will produce tangible environmental, health and social benefits for residents and visitors to Toronto.

## Transit City

[toronto.ca/involved/projects/transit\\_city/index.htm](http://toronto.ca/involved/projects/transit_city/index.htm)

The Toronto Transit City Light Rail Plan is an exciting initiative that will help to revitalize neighbourhoods, spur economic growth, and improve air quality by enhancing transit across Toronto. Light Rail Transit (LRT) is an updated and improved version of the streetcars that have moved Torontonians for decades, and will bring a new concept of reliable and comfortable transit service to Toronto's busiest transit routes. Multiple new Light Rail Transit (LRT) lines will bring reliable, fast, quiet and comfortable transit service to many Toronto neighbourhoods.

## Provincial Acts and programs

### Places to Grow

[placestogrow.ca/index.php?lang=eng](http://placestogrow.ca/index.php?lang=eng)

Places to Grow is the Ontario government's program to manage growth and development in a way that supports economic prosperity, protects the environment and helps communities achieve a high quality of life across the province. Through Places to Grow, regional growth plans are developed that guide government investments and policies.

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### Ontario Building Code

[obc.mah.gov.on.ca/site4.aspx](http://obc.mah.gov.on.ca/site4.aspx)

Ontario's Building Code:

- Sets out new energy-efficiency requirements
- Establishes new construction standards that will make buildings more accessible to people with disabilities
- Facilitates the building of small care homes
- Makes constructing small residential buildings easier
- Contains a new format that allows more creativity in building design while maintaining public safety
- Boosts Ontario's building industry by encouraging innovation in building design and products.

### Ontario Green Energy Act

[mei.gov.on.ca/en/energy/gea](http://mei.gov.on.ca/en/energy/gea)

The Green Energy Act will boost investment in renewable energy projects and increase conservation, creating green jobs and economic growth to Ontario. This legislation is part of Ontario's plan to become a leading green economy in North America. The Green Energy Act will:

- Spark growth in clean and renewable sources of energy such as wind, solar, hydro, biomass and biogas in Ontario.
- Create the potential for savings and better managed household energy expenditures through a series of conservation measures.
- Create 50,000 jobs for Ontarians in its first three years.

### Ontario Places to Grow Act

[e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_05p13\\_e.htm](http://e-laws.gov.on.ca/html/statutes/english/elaws_statutes_05p13_e.htm)

The Places to Grow Act helps the Ontario government plan for growth in a coordinated and strategic way. It gives the Province the authority to:

- designate any geographic region of the province as a growth plan area
- develop a growth plan in consultation with local officials, stakeholders, public groups, and members of the public
- develop growth plans in any part of Ontario

The legislation makes sure that growth plans reflect the needs, strengths and opportunities of the communities involved, and promotes growth that balances the needs of the economy with the environment.

## City of Toronto's Better Buildings Partnership (BBP) Case Study

The Better Buildings Partnership (BBP) is an innovative program that promotes and implements holistic energy efficiency and building renewal retrofits in industrial, commercial, institutional and multi-family residential buildings. Building improvements usually consist of a mix of short and long-term payback measures, where significant energy and water technologies are combined with other building renewal measures to allow for project flexibility.

The BBP was created as a program to address multiple City of Toronto priorities including global climate change and its implications for society, economic development and job creation. The BBP is a practical initiative which advances the goals and objectives of 'The Power to Live Green: Toronto's Sustainable Energy Strategy'.

### The Better Buildings Partnership:

1. Develops marketing and communication program initiatives to engage tenants, property managers and owners/developers.
2. Provides technical assistance including energy audits, feasibility study reviews, pre-evaluation site assessments, post-evaluation site assessments, process evaluations and impact evaluations.
3. Administers the Better Buildings Partnership Loan Repayment Reserve Fund, the Sustainable Energy Funds comprised of the Toronto Energy Conservation Fund and the Toronto Green Energy Fund and partnership incentive programs to assist eligible building owners undertake conservation and renewable energy projects.
4. Reports technical and systems results on all projects.
5. Collaborates with energy sector stakeholders including utilities, financial institutions, government agencies and equipment suppliers.

### BBP Results between 1995 and March 2010

	TOTAL
Number of Completed Projects*	943
Retrofitted Floor Area (ft <sup>2</sup> )	95,000,000
Job Creation (person years)**	6,700
Economic Impact	\$232,000,000
Annual Energy Cost Reduction (\$/yr)	\$24,100,000
Simple Payback Years (averaged and aggregated)	9
Annual CO <sub>2</sub> Emissions Reduction (tonnes/year)	218,000
Cumulative CO <sub>2</sub> Emissions Reduction (tonnes)	1,474,000

#### Notes:

\*Some projects involve more than one building

\*\* Job creation values include direct and indirect jobs



## Related Technical Charts

### City-wide Energy and Greenhouse Gas Impacts

#### No. Scenario Description

- 1 Short Payback Projects** The combination of Resource Conservation Measures (RCM) with short term paybacks (within five years)
- 2 Short Payback + Longer Payback** Scenario #1 plus longer term paybacks, including exterior R-18 cladding (non-enclosed balconies) and double pane windows
- 3 Short Payback + Longer Payback + Comfort Measures** Scenario #3 plus addition of thermostats and control valves for baseboard radiators
- 4 GHG Reduction Projects** All RCMs with estimated GHG reduction of 30 tonnes/year or greater

The average figures from the results shown in the Summary of RCM Scenarios have been directly applied to the number of similar apartment buildings city-wide. The following is an estimation of the impacts across the entire residential tower building stock in the city of Toronto, currently estimated at 1,150 buildings.

### Extrapolation from Average of three Pilot Sites to City-wide Impact

Mode	Application	Electricity Savings (MWh/yr)	Annual Electricity Savings (%)	Gas Savings (m3/yr x 1,000)	Annual Gas Savings	GHG Reduction (tonnes/yr)
Scenario 1	3 Pilot Sites (Average)	864	45%	245	35%	670
	1150 Towers – City-wide	1,064,000		281,750		770,500
Scenario 2	3 Pilot Sites (Average)	920	48%	428	60%	1,025
	1150 Towers – City-wide	1,058,000		492,200		1,178,750
Scenario 3	3 Pilot Sites (Average)	920	48%	488	68%	1,136
	1150 Towers – City-wide	1,058,000		561,200		1,306,400
Scenario 4	3 Pilot Sites (Average)	926	49%	546	77%	1,241
	1150 Towers – City-wide	1,064,900		627,900		1,427,150

## Tower Renewal Economic and Workforce Projections

These job projections only capture the primary jobs and net wages associated with the scenario where all of the multi-unit residential tower buildings in the GTA receive comprehensive retrofits. The spin-off jobs related to each of the consulting and contracting organizations have not been assessed (e.g. clerical support, vehicles, equipment, etc.). The jobs and wages associated with the manufacture, distribution and delivery of the materials and equipment used in the tower retrofit projects have also not been assessed.

The number of working days per person, per year is assumed to be:	240
The number of suites in the archetype tower building is:	240
Estimated number of apartment suites in GTA MURBs:	478,555

Phase	Description	Job Title	Based on Archetype Tower Building				Based on GTA Tower Buildings	
			Person Hours	Person Days	Person Years	Net Wages	Person Years	Net Wages
Planning and Design	Conditional Assessment + Pro Forma	Engineer / Architect	320	40	0.167	\$16,000	332.3	\$31,903,667
	Consulting Fees – Schematic Design	Engineer / Architect	480	60	0.250	\$19,200	498.5	\$38,284,400
	Consulting Fees – Design Development	Engineer / Architect	480	60	0.250	\$19,200	498.5	\$38,284,400
	Consulting Fees – Contract Documents	Engineer / Architect	2160	270	1.125	\$100,800	2,243.2	\$200,993,100
	Consulting Fees - Tender	Engineer / Architect	240	30	0.125	\$9,600	249.2	\$19,142,200
						<b>Sub-total</b>	<b>3,821.8</b>	<b>\$328,607,767</b>
Construction	Consulting Fee – Contract Administration	Engineer / Architect	1280	160	0.667	\$51,200	1,329.3	\$102,091,733
	Replace Roof	Roofer	1800	180	0.750	\$54,358	1,495.5	\$108,388,848
	Overcladding and Windows	EIFS / Sheet Metal	19300	1930	8.042	\$550,581	16,034.9	\$1,097,846,336
	Replace Boilers	HVAC Technician	950	95	0.396	\$24,839	789.3	\$49,527,870
	Heat Recovery Ventilation System	HVAC Technician	6250	625	2.604	\$151,958	5,192.7	\$303,001,215
	Commissioning	Elec/Mech Engineer	150	15	0.063	\$10,800	124.6	\$21,534,975
	Water Conservation	Plumber	300	30	0.125	\$6,323	249.0	\$12,534,975
	Parkade Lighting Controls	Electrician	50	5	0.021	\$3,631	41.5	\$7,240,138
	Site Work and Landscaping	Landscaper	1500	150	0.625	\$35,436	1,246.2	\$70,658,646
					<b>Sub-total</b>	<b>26,503</b>	<b>\$1,772,898,489</b>	
Maintenance		HVAC Technician	40	4	0.017	1,497	33.2	\$2,984,537
		Eldg. Env. Technician	100	10	0.042	5,935	83.1	\$11,835,231
						<b>Sub-total</b>	<b>116.3</b>	<b>\$14,819,768</b>
					<b>TOTAL</b>	<b>30,441.4</b>	<b>\$2,116,326,023.4</b>	

### Summary Table of Waste Diversion Impact Scenarios

Scenario	Waste stream	kg/unit/yr available	Waste stream capture rate (%)	Annual capture kg/unit	Total annual kg/unit	% Diversion	Application	Units	Annual diversion (tonnes)	Current Annual diversion @ 13%	Added annual diversion (tonnes)
1	Recyclables	299	60	179.4	201.6	29.65	Pilot sites	2974	599.56	262.90	336.66
	Organics	206	0	0			All 60's and 70's Towers	249,145	50227.63	22024.42	28203.21
	Other	37	60	22.2			Toronto-wide	510,000	102816.00	45084.00	57732.00
2	Recyclables	299	70	209.3	231.5	34.04	Pilot sites	2974	688.48	262.90	425.58
	Organics	206	0	0			All 60's and 70's Towers	249,145	57677.07	22024.42	35652.65
	Other	37	60	22.2			Toronto-wide	510,000	118065.00	45084.00	72981.00
3	Recyclables	299	70	209.3	283	41.62	Pilot sites	2974	841.64	262.90	578.74
	Organics	206	25	51.5			All 60's and 70's Towers	249,145	70508.04	22024.42	48483.62
	Other	37	60	22.2			Toronto-wide	510,000	144330.00	45084.00	99246.00
4	Recyclables	299	70	209.3	313.9	46.16	Pilot sites	2974	933.54	262.90	670.64
	Organics	206	40	82.4			All 60's and 70's Towers	249,145	78206.62	22024.42	56182.20
	Other	37	60	22.2			Toronto-wide	510,000	160089.00	45084.00	115005.00
5	Recyclables	299	70	209.3	317.6	46.71	Pilot sites	2974	944.54	262.90	681.64
	Organics	206	40	82.4			All 60's and 70's Towers	249,145	79128.45	22024.42	57104.03
	Other	37	70	25.9			Toronto-wide	510,000	161976.00	45084.00	116892.00

The five scenarios above use existing City of Toronto waste availability data to generate potential tonnages that might be diverted from the waste stream.

The scenarios move from lower recovery assumptions to higher recovery for three main waste streams: recyclables, organics and "other". The latter is comprised of textiles, waste electrical and electronic

equipment (WEEE) and municipal hazardous and special waste (MHSW), and recovery programs exist for all through either Ontario stewardship plans, local City of Toronto facilities and/or local organizations. Scenarios for recycling include 60% (generally achieved for single-family residences in Ontario) and 70% material capture rates.

Scenarios for Source Separated Organics include 0% (status quo—no organics program available), 25% and 40% material capture rates.

Scenarios for "Other" assume 60% and 70% material capture rates.

It should be noted that for recycling only, the ranges include recovery of 91,494 to 106,743 tonnes annually. Assuming an estimated current recovery rate of 13% from multi-family residences, this represents an additional 71,670 to 86,919 tonnes of recyclable material

for the city of Toronto, which currently markets 166,678 (2008 WDO marketed tonnes reported by the City) tonnes annually. This represents a potential 43 to 52% increase which will require accommodation within the City's recycling infrastructure.

\*Estimated. Sources refer to approximately 1000 of Toronto's 2047 multi-residential buildings as falling under the Tower Renewal profile. The estimated number of units is based on the percentage derived by dividing total buildings into Tower Renewal vintage buildings, and is provided as an estimate only.

### Water use Tower Renewal benefits

Case Study Building	Current Annual Water Consumption m3	Current Toilet Model	Toilet Replacement Model	Toilet Replace water savings m3	Toilet Replace water savings %	Water Savings – Replace faucets and showerheads m3	Shower head, aerator savings %	Total potential water savings m3	Total potential water savings %
A	45,371	6 litre	4.8 litre	7,345	16.2	6,843	15.1	14,188	31.3
B	77,235	16.8 litre	4.8 litre	22,443	29.1	14,944	19.3	37,387	48.4
C	110,336	15.4 litre	4.8 litre	33,832	30.7	19,199	17.4	53,031	48.1

### Projecting totals from Case Study Buildings to City-wide totals

Estimated that of a sample of 1,000 apartment towers:

**70% (700)** have 6 l Toilets and have already undertaken showerhead and aerator replacement

- Projected further savings for these are about 15% of annual water use

**10 % (100)** have 6 l Toilets but have not replaced aerators or showerheads

- Projected further Water Savings at these locations is about 30%

**20% (200)** have at least 15 l toilets and have not replaced aerators or shower heads

- Projected water savings at these sites is about 48%

Weighted average of projected savings:

- 23% water savings are available at Tower Renewal Sites



**Action for Neighbourhood Change** is a neighbourhood revitalization initiative funded by the United Way of Greater Toronto (UWGT). Its purpose is to work with residents, community-based organizations, governments, businesses and other stakeholders to build the capacity of community members to create positive change in their own neighbourhoods. UWGT plans to have an ANC office in each of the 13 priority neighbourhoods by the end of 2010.

**Aerator** is a device that creates the circulation of air.

**Caulking** is the process of applying a waterproof substance to a seam or crack to seal it and prevent water from seeping through. It is usually used around windows and bathtubs.

**Charrette** is the name for a session where designers meet with other stakeholders to create solutions to a design-related problem. An example of a charrette in Tower Renewal would be a workshop on community energy held to discover ways to improve energy efficiency and provide alternative energy sources in apartment neighbourhoods.

**Cladding / Over-cladding** is a construction covering that is applied to the exterior of a building to protect it. This can be used to help keep the energy from the building in (e.g. heat) and keep extreme temperatures out, reducing the amount of energy used.

**CO2 Emissions** are colorless, odourless gases that are released into the air, also known as greenhouse gases. CO2 emissions are commonly believed to be a cause of global warming. CO2 gases are created by many things including cars, refrigerators and the ways in which we commonly heat and cool buildings.

**Commissioning** is a quality assurance process that takes place during and following building construction.

**Community Engagement** is the process of involving members of a community (residents, community-based organizations, businesses, etc.) in an activity, initiative or development in a meaningful way. This could range from consultation activities, where participants offer their input and feedback, to full partnerships, where participants are equal decision-makers throughout the process, to full leadership, where participants are supported to lead the process.

**Community Garden** is a garden that is cared for and used by multiple members of a community. Some community gardens have individual garden plots with members each caring for their own section, while others are a single large garden with community members collectively maintaining it. Much research has shown that community gardens play an important role in communities in that they increase access to healthy foods, help residents feel connected to their environment, promote a sense of community and help build social networks.

**Community Hub:** a single place where a variety of services, programs, and/or amenities are available for a community. Community hubs are sometimes referred to 'one-stop-shops' and have recently been regarded as important to revitalizing a community.

**District Renewable Energy** is a source of renewable energy that is intended for use by multiple buildings. For example, four buildings may partner to receive electricity from a nearby wind turbine or from a solar panel on the roof of a nearby school.

**Ecological Footprint** is the amount of land and resources required to support a particular lifestyle.

**Geo-thermal Power** is power (e.g. electricity) that is generated from heat that is stored in the earth.

**Geothermal heat pump or ground source heat pump (GSHP)** is a way to heat or cool a building by pumping heat to or from the ground. It sends heat into the ground in the summer and then retracts it in the winter. GSHP is used to conserve energy and reduce the costs needed to heat and cool a building. It is sometimes combined with solar heating to increase the efficient creation and use of energy.

**Greenhouse Gas (GHG)** is gas in the air that both absorbs and releases energy. Most common GHGs are water vapour, carbon dioxide, methane, nitrous oxide, and ozone. The greenhouse effect occurs when these gases form a layer in the atmosphere. When heat that is released from the earth reaches this layer, it is reflected back to the earth causing the earth's temperature to become warmer.

**Green Jobs** are jobs that contribute to ecologically-friendly development.

**Greywater** is waste water generated from domestic activities such as laundry, dishwashing, and bathing which can be recycled on-site for uses such as landscape irrigation and constructed wetlands.

**Infill** is development or construction in a vacant land that is located near an already developed area.

**Leadership in Energy and Environmental Design (LEED®)** is a registered program that rates how ecological a building is and provides tools to owners and professionals to assist with the design, construction and operation of high performance green buildings.

**Make up Air Unit (MAU)** is a device used in large buildings to ensure there is a constant supply of fresh air.

**Neighbourhood Action Teams (NAT) and Neighbourhood Action Partnerships (NAP):**

NATs and NAPs exist for each of the 13 priority neighbourhoods. NATs bring together staff working locally from City of Toronto divisions and City boards to address local needs, coordinate services, and build community capacity.

NAPs are partnership tables that take place in the community with the intention of bringing together the three orders of government, local residents, and representatives from school boards, community agencies, community funders, and community-based groups.

Together, the NAP and the NAT coordinate and improve service delivery to achieve community outcomes in youth employment, education and skill development, youth engagement, community and family supports, youth justice, crisis response and infrastructure development.

**Ontario Power Authority FIT program** is a program that encourages the development of renewable energy in Ontario. The FIT program offers stable prices under long-term contracts for energy that is generated from renewable sources.

**Pedestrian Corridor** is a passageway that is intended at least in part for walking.

**Pilot Project/Sites** is a process of testing a program or idea, usually on a smaller scale and/or in a shorter period of time than would be intended for the full program. Pilot projects are often used to learn how a program will work and to inform the final plans for the full program.

**Photovoltaic** is the process of converting the rays from the sun into useable energy, usually through a device called a solar cell.

**Renewable Energy** is energy that is created by renewable sources, such as sunlight, wind, rain, tides, and heat stored in the earth.

**Resource Conservation Measures** are measures that, if implemented, would reduce how much of a particular resource a building uses (electricity, heat, water, etc.)

**Retrofits** are updates to a building that involves replacing old fixtures (e.g. toilets, windows) with newer versions or by adding new features to the fixture.

**Solar Power** is electricity that is generated from sunlight.

**Safety Audit** is a process used to understand and document aspects of an area that might impact the safety of the area, such as broken tiles on a staircase, poorly lit sidewalks, or graffiti with a prejudicial message.

**Sustainable** is the ability of something 'to remain' or 'to endure'. For example, a sustainable energy resource is expected to continue to provide energy despite any changes that might arise. A sustainable social program is a program with the ability to continue to provide services despite future challenges (for example, a decrease in program funding).

**Transport Demand Management Measures (TDMMs)** are actions that can be taken to reduce the number automobile trips taken. Examples of TDMMs are organizing car pools or buying TTC metropasses at group rates. TDMMs do not include major infrastructure measures such as developing new subway or streetcar routes.

**Tree Canopy** is the shade that is created by the branches and leaves of trees.

**Urban Sprawl** is the outward spreading of a city to its outskirts to low-density, auto-dependent development.

**Waste Diversion** is the process of preventing waste from going to landfill. Recycling and composting are common waste diversion strategies.

**Water Efficiency Measures** are measures that can be taken to minimize the amount of water used for a specific activity, such as flushing toilets, showering or doing laundry.

**Wind Power** is the process of changing wind into a usable form of energy (e.g. electricity).

**Zoning; Re-Zoning** is the process used by governments to determine the boundaries of a particular land, and/or the ways in which the land can be developed or built upon. Re-zoning is the process of changing the current zoning regulations.

# Acknowledgements

Achieving the magnitude of Tower Renewal can only be possible through a collaborative process with a multitude of valued partners and supporters. The City of Toronto is grateful for the involvement of everyone who has been involved so far and looks forward to future collaborations as we move towards successfully achieving the dramatic potential of Tower Renewal in apartment neighbourhoods across Toronto.

2667 and 2677 Kipling Avenue,  
Rexdale/Jamestown (R)

215 Markham Road,  
Scarborough Village (SV)

275, 285, 295 Shuter Street,  
Moss Park (MP)

110 Parkway Forest,  
Don Valley East (DVE)

175 Shaughnessy Boulevard,  
Don Valley Village (DVV)

200 Wellesley Street East; 275 Bleecker Street,  
St. Jamestown (SJT)

## Property Owners and Residents

CAPREIT; (SV)

Humber Properties; (K)

El-Ad Group (Canada) Inc.; (DVE)

Homestead Land Holdings Ltd.; (DVV)

Toronto Community Housing Corporation;  
(SJT, SV, MP)

The residents who call the pilot site buildings and the surrounding communities home.

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Action for Neighbourhood Change – Rexdale (R)

Action for Neighbourhood Change – Scarborough  
Village (SV)

Art City (SJT)

Canadian Training Institute

Community Matters (SJT)

E.R.A. Architects Inc.

Fairview Community Health Centre (DVE)

Fairview Interagency Network (DVE, DVV)

Federation of Canadian Municipalities

Food Share (R)

Green Thumbs, Growing Kids (SJT)

Growing Together (SJT)

GENIVAR

Government of Canada

Jane Farrow, Jane's Walk

Jane's Walk

Local Immigration Partnerships

Maureen McKenna, Consultant

Ministry of Community Safety and Correctional  
Services

METRAC

Mid Toronto (SJT)

National Film Board of Canada

Paul Hess; University of Toronto

Rexdale Adolescent Warriors (R)

Scarborough Village Advisory Committee (SV)

Scarborough Village Neighbourhood Association (SV)

Sherbourne Health Centre (SJT)

St. James Town Safety Committee (SJT)

St. James Town Community Corner (SJT)

St. James Town Youth Centre (SJT)

St. James Town Youth Council (SJT)

STOP (SJT)

Ted Kesik, University of Toronto

Toronto Atmospheric Fund

Toronto Community Housing

Toronto Community Housing Tenant Representatives  
(SJT)

Toronto District School Board

Toronto Police Services

Toronto Public Library

Toronto & Region Conservation Authority

Turning Point Youth Services (SJT)

Waste Diversion Ontario

Wellesley Institute Resident Action Group (SJT)

Working Women Community Centre (DVE)

Yonge Street Mission (SJT)