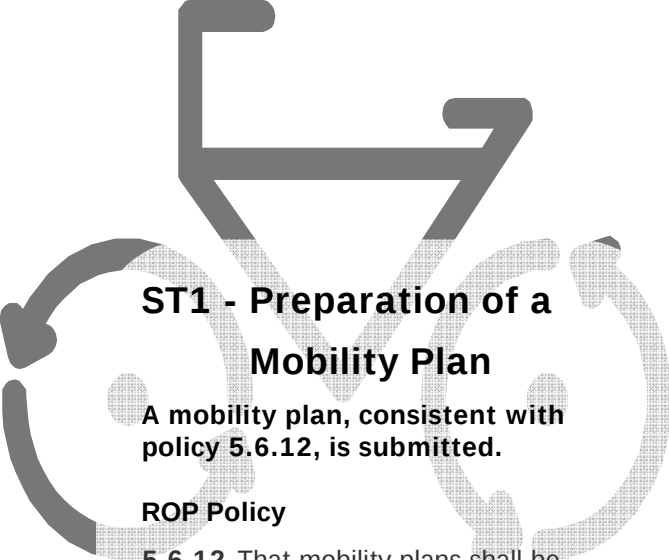




ST1 - Preparation of a Mobility Plan

A mobility plan, consistent with policy 5.6.12, is submitted.

ROP Policy

5.6.12 That mobility plans shall be completed to ensure that ... [a – j]

Related ROP Policies

5.2.4 That development requiring Regional approval shall be supported by a transportation study that assesses impacts on the Region's transportation system and surrounding land uses. Significant development shall prioritize walking, cycling and transit.

OBJECTIVE: To ensure that a mobility plan is prepared for each new community area

What is a mobility plan?

A key element of the approved Regional Official Plan is an enhanced mobility system using a “people and transit first approach” to connect land use and transportation planning. York Region has found that the traditional transportation impact study needs to be more comprehensive and emphasize transit, active transportation (pedestrian and cycling), and Transportation Demand Management (TDM) programs. At the community level, a mobility plan provides the framework necessary to ensure that design supports the successful implementation of a multi-modal transportation system.

What are the key elements of a mobility plan?

Mobility plans in new community areas must address the following key elements:

- Active transportation - pedestrian and cycling movements with access and connections to the transit system, between neighbourhoods and other community destinations
- Transit - route planning to provide reasonable walking distances for residents to transit stops to serve existing and future land use patterns
- Integration and connectivity - locating schools, community centres, and other key land uses to be well integrated and connected to transit and active transportation corridors
- Transportation Demand Management programs - community and neighbourhood level strategies and initiatives to reduce trip making and provide opportunities for walking, cycling, transit, and carpooling, including costs and responsibilities, implementation and monitoring
- Development phasing plans and implementation triggers

When are mobility plans required?

A mobility plan is required for all secondary plans, as well as, all major development applications within new community areas. This will result in a hierarchy of mobility plans prepared at various stages in the planning process. The scope and scale of the required mobility plan will vary based on the scope and scale of the development area. All mobility plans prepared within new community areas, must support the overall objectives of the community scale mobility plan prepared at the secondary plan stage.

Regional staff are undertaking the development of *Transportation Study Guidelines for Development Applications* which will provide further guidance on the technical requirements of developing mobility plans in support of new community areas. The individual components required in mobility plans are described in the proceeding sections of this chapter.



Components of a Mobility Plan

Synergies



Supporting Themes



Additional Resources:

York Region [Transportation Master Plan](#) Update, 2009
 York Region [Pedestrian and Cycling Master Plan](#), 2008
 York Region [Transportation Impact Study Guidelines](#), 2007

York Region [10-Year Road Construction](#) Program
 York Region Transit (YRT) - [5 Year Service Plan](#) (2006 – 2011)
 Metrolinx Regional Transportation Plan, [The Big Move](#), 2008
 York Region [Transit-Oriented Development Guidelines](#), 2006

ST2 – Interconnected Mobility System

Design communities with an interconnected transportation system that emphasizes pedestrian, cycling and transit movement.

ROP Policies:

5.6.12 That mobility plans shall be completed to ensure that:

- communities are designed to have interconnected and accessible mobility systems, with a priority on pedestrian movement, and on transit use and access;
- communities are designed to include a system of pedestrian and bicycle paths linking the community internally and externally to other areas, and providing access to the transit system;
- all schools and community centres shall be integrated into the community mobility system and provide the ability to walk, cycle, transit and carpool to these locations;
- the street network includes continuous collector streets that run both north-south and east-west and/or a grid system of streets linked to the Regional Street network;

Related ROP policies:

5.2.3 That communities be designed to ensure walkability through interconnected and accessible mobility systems. These systems will give priority to pedestrian movement and transit use, provide pedestrian and cycling facilities, and implement the York Region Pedestrian and Cycling Master Plan.

7.2.16 To partner with the York Region District and Catholic School Boards to implement the Active and Safe Routes to School program, and to design and locate school campuses to promote walking, cycling and transit as a primary means of transportation.

Synergies



Supporting Themes



OBJECTIVE: To create an interconnected mobility system in new community areas that emphasizes pedestrian, cycling and transit as preferred modes of transportation

What is an interconnected mobility system

New community areas will be supported by an interconnected mobility system that emphasizes sustainable travel modes including walking, cycling and transit. The *York Region Pedestrian and Cycling Master Plan* provides a framework for both improving conditions and creating comprehensive and interconnected networks for walking and cycling.

Street Network

Transportation and land use patterns are inextricably linked. Street layout and design can affect how convenient and appealing public transportation, cycling, and walking are for residents.

In new community areas, the emphasis is upon connectivity, integration and providing amenities to achieve safe, efficient and attractive street networks, by:

- establishing a fine-grained grid pattern of streets with predominantly short block lengths
- including continuous north-south and east-west collector streets in communities
- ensuring connections between local street networks and the Regional street network
- designing street environments that aim to integrate the activities of pedestrians, cyclists and motorists

Regional Pedestrian and Cycling Networks

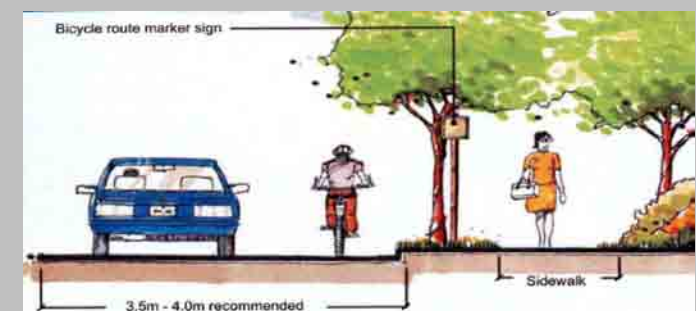
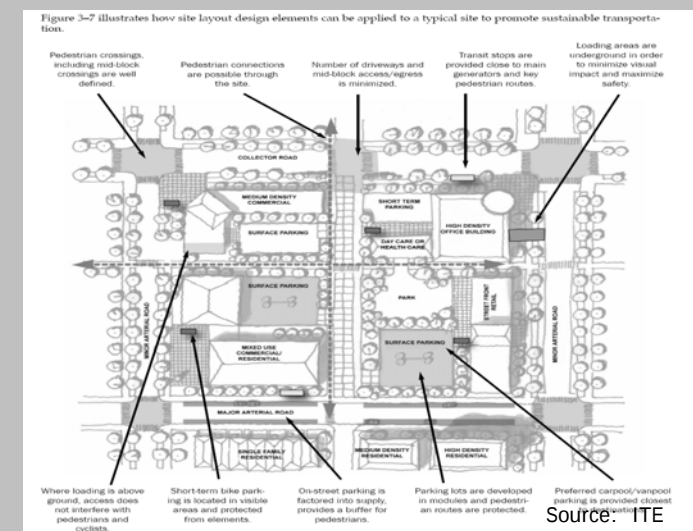
In designing new community areas, it is essential to create a network that engages pedestrians and cyclists by:

- providing walking/cycling facilities that make pedestrian/cyclists feel comfortable and safe (through design, road safety improvements, benches, footbridges, lighting, etc.)
- connecting the pedestrian and cycling networks to other modes of transportation including transit, and key destinations such as: employment centres, schools, recreational/leisure and commercial destinations within the community
- facilitating year round operation of pedestrian and cycling routes through appropriate design, signage and maintenance
- encouraging and supporting pedestrian-friendly urban design
- encouraging mixed-use to foster pedestrian activity at all times of the day
- improving, expanding or linking to existing pedestrian/cycling networks

Transit

There are also a number of community design issues that should be considered in the creation of mobility systems that support transit, including:

- providing clearly signed cycle routes/walkways to and from transit stations
- providing reliable bus services to facilitate access to local employment
- ensuring connections to leisure facilities, nearby town centres and key inter-urban transit routes
- providing street furniture (stands, shelters etc) that is safe, secure and well lit
- providing high quality information, including real-time information that can be accessed from transit stops, homes, shops and schools



Additional Resources:

[Taming the Flow—Better Traffic and Safer Neighbourhoods](#), Research Highlight, Canadian Mortgage and Housing Corporation, July 2008

[Giving Pedestrians an Edge – Using Street Layout to Influence Transportation Choice](#), Research Highlight, Canadian Mortgage and Housing Corporation, July 2008

York Region [Pedestrian and Cycling Master Plan](#), 2008



ST3 – Walkable Community Design

Design communities to ensure walkability

ROP Policy:

- 5.2.3** That communities be designed to ensure walkability through interconnected and accessible mobility systems. These systems will give priority to pedestrian movement and transit use, provide pedestrian and cycling facilities, and implement the York Region Pedestrian and Cycling Master Plan.

Related ROP Policies:

- 5.2.8** To employ the highest standard of urban design, which:
- f. emphasizes walkability and accessibility through strategic building placement and orientation
- 3.3.5** To ensure that public buildings and facilities are designed to be accessible and are located in proximity to pedestrian, cycling and transit systems.

OBJECTIVE: To ensure new community areas are walkable

What are the elements essential to creating a walkable community?

In the secondary plan process, areas of high pedestrian use should be identified as pedestrian priority areas. Typically these areas will include parks and open spaces networks, educational institutions, civic destinations, community core areas and transit facilities. [Canada Walks](#) has identified 6 key elements that are essential to ensuring a walkable community that should be considered during the secondary plan process, and more specifically, the preparation of a mobility plan.

1. Accessibility
 - human scale design
 - universal design
 - safely accommodate people of all ages and abilities
2. Safety
 - provide pedestrian scale lighting at regular interval in areas of high activity
 - provide street crossings that are easy and safe for people of all ages and ability
 - provide an unobstructed, continuous and safe circulation system that serves the same destinations as served by the local road system
 - incorporate Crime Prevention Through Environmental Design (CPTED) techniques in the design of public spaces and mobility networks
3. Connectivity
 - provide a pedestrian network that is continuous and connected with key destinations
 - provide a pedestrian network that connects to other mobility networks including cycling and pedestrian trails
 - implement a fine-grain street pattern
 - create short walkable blocks or provide mid-block pedestrian crossings on longer blocks
 - support environmental goals through the integration of green infrastructure
4. Density/Land Use
 - locate mixed-use developments near services and transit
 - create distinct community core area
 - provide convenient access to local land uses and transit
5. Access to amenities
 - locate pedestrian furniture along sidewalks and trails
 - ensure location of community facilities such as schools are along pedestrian network
6. Aesthetics
 - create unique and identifiable public spaces
 - provide visual interest and support community interaction through open space and other public activity space
 - provide good lighting
 - maintain sidewalks in good repair and in all seasons
 - provide signage, crosswalks and improved aesthetics (such as trees and landscaping)



Synergies



Supporting Themes



Additional Resources:

York Region [Pedestrian and Cycling Master Plan](#), 2008

[What is Walkability? How Do You Measure It?](#) Take-a-ways from This Year's TRB Meeting, Placemaking Blog Project for Public Spaces, February 16th, 2011

[Mobility Hub Guidelines for the Greater Toronto and Hamilton Area](#), Metrolinx, 2010

[Canada Walks](#)

[Creating Safer Communities. An Introduction to Crime Prevention Through Environmental Design for Architects, Planners, and Builders](#), Royal Canadian Mounted Police and Canadian Mortgage and Housing Corporation, 1998

ST4 – Implementation of the York Region Pedestrian and Cycling Master Plan

Design communities to implement the York Region Pedestrian and Cycling Master Plan.

ROP Policy:

- 5.6.13** That *new community areas* shall be designed to implement the York Region Pedestrian and Cycling Master Plan
- 7.2.3** To apply the York Region Pedestrian and Cycling Master Plan's Planning and Design Guidelines in the implementation of the Regional pedestrian and cycling network.

Related ROP Policies:

- 5.6.12** That mobility plans shall be completed to ensure that:
- communities are designed to include a system of pedestrian and bicycle paths linking the community internally and externally to other areas, and providing access to the transit system.
- 5.2.3** That communities be designed to ensure walkability through interconnected and accessible mobility systems. These systems will give priority to pedestrian movement and transit use, provide pedestrian and cycling facilities, and implement the York Region Pedestrian and Cycling Master Plan.

Synergies



Supporting Themes



OBJECTIVE: To implementation of the Pedestrian and Cycling Master Plan

What is the Pedestrian and Cycling Master Plan?

The *Pedestrian and Cycling Master Plan* was endorsed by York Region Council in April 2008 and provides guidance on how to work in partnership with local municipalities to create a comprehensive and interconnected pedestrian and cycling network over a 25 year time frame. Over its first 10 years of the plan, the *Pedestrian and Cycling Master Plan* will, in coordination with the Region's 10-year Roads Capital Plan and in cooperation with the local municipalities, propose to implement:

- 450 km of bike lanes/paved shoulders
- 61 km of multi-use trails
- 124 km of signed routes
- 62 km of sidewalk

Implementation of the Pedestrian and Cycling Master Plan

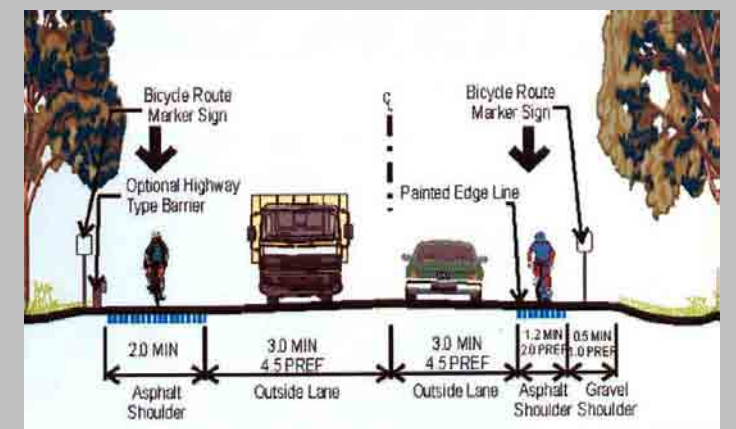
Since its launch in 2007, York Region has partnered with the local municipalities to construct new cycling facilities worth more than \$2.3 million through the Pedestrian and Cycling Municipal Partnership Program. Other Regional initiatives include:

- created and distributed a Regional cycling map for residents
- offered a CAN-BIKE training program in partnership with local municipalities and school boards
- continued advocacy and awareness of pedestrian and cycling in conjunction with other agencies and stakeholders
- planners and transportation engineers are working together to incorporate cycling facilities on Regional streets
- installed bike racks on buses to provide greater options for active transportation
- initiated Lake-to-Lake route design study in consultation with stakeholders including local municipalities and City of Toronto staff

How does Implementation of the Pedestrian and Cycling Master Plan impact new community areas?

Implementation of the Pedestrian and Cycling Master Plan will require partnerships between the Region, the local municipalities and the development community, in a variety of areas, including:

- coordination with the Regional Transportation Master Plan, Rapid Transit Environmental Assessments and implementation of the Regional Transportation Priority Network, and reconfiguration of existing lanes and lane widths through annual maintenance programs.
- expansion, implementation and maintenance of the Regional and local pedestrian and cycling networks
- adopting and implementing pedestrian friendly urban design and streetscaping practices
- facilitating built form and subdivision design that supports walking and cycling for utilitarian and recreational purposes
- providing education and outreach about pedestrian and cycling safety



Additional Resources:

York Region Pedestrian and Cycling Master Plan Implementation - [2011 Progress Report](#)
 York Region Pedestrian and Cycling Master Plan Implementation -
 York Region [Pedestrian and Cycling Master Plan](#), 2008
 Canadian Institute of Transportation Engineers – [Sustainable Transportation through Site Design](#)

ST5– Transit Services

Design communities so transit can easily service the majority of residents, and connect them to rapid transit.

ROP Policies:

- 5.6.12 That mobility plans shall be completed to ensure that:
- c. a transit plan is completed in consultation with York Region Transit, which identifies transit routes and corridors, co-ordinates transit with land use patterns and ensures the early integration of transit into the community;
 - d. the distance to a transit stop in the Urban Area is within 500 metres of 90% of residents, and within 200 metres of 50% of residents;
 - h. rapid transit corridor and/or transit terminal that connects to a rapid transit corridor is included in the community;

Related ROP Policy

- 7.2.25 To achieve higher transit usage by supporting improvements in service, convenient access and good urban design, including the following:
- e. creating a system of parking and drop off facilities for commuters.

Synergies



Supporting Themes



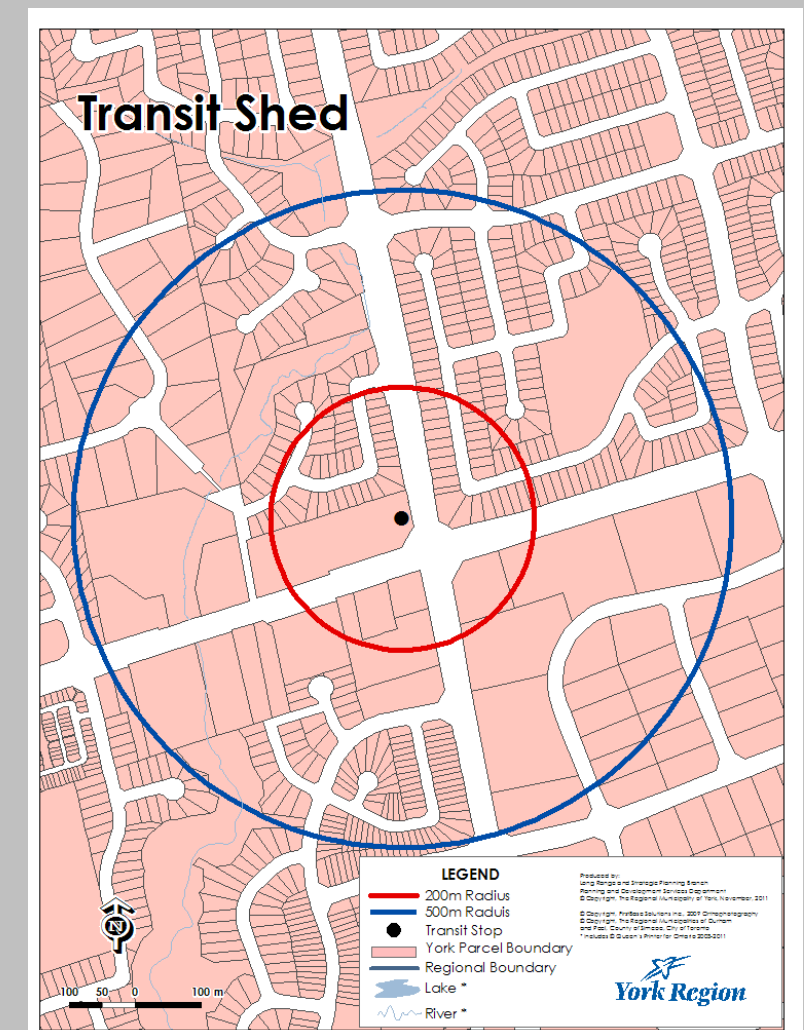
OBJECTIVE: Ensure the majority of residents can easily access transit

People are willing to use transit on a regular basis, if access to transit is within a reasonable walking distance from where they live and work. A reasonable walking distance is defined as 400 to 800 metres or a 5 to 10 minute walk, depending on the level of transit service and the pedestrian environment. Through the Regional Official Plan, York Region Transit has committed to ensuring that transit stops are provided within 500 metres of 90% of residents and within 200 metres within 50% of residents. In new community areas, community design will be critical to ensuring this service target is met. It will require the implementation of the following strategies:

- communities are designed to have an interconnected street pattern
- the street network should include short, walkable blocks to allow for more frequent and convenient transit stops
- careful planning and design of the pedestrian network to ensure integration with transit
- provide off-street paths to improve connectivity and permeability of neighbourhoods
- provide pedestrian paths to transit that are safe and comfortable
- the community transit route should provide connections to the larger Regional transit system including rapid transit
- York Region Transit should be involved in the secondary plan process to coordinate existing and future planned routes
- early introduction of transit into the community; transit route information displayed in sales offices
- parking and drop-off areas in support of transit are safe, sufficient in number and conveniently located

How do I demonstrate that proposed secondary plan design provides easy access to transit for the majority of the community?

Measuring walkability can be estimated based on a variety of methods. The method demonstrated in this guideline is the mapping of transit sheds (walk catchments). This method involves preparing a map that identifies the area within 200 and 500 metres distance from a transit stop or node. The resulting maps provide a visual estimate of the areas walkability. There are also methods that employ the mapping of actual pedestrian travel routes. It is recommended that the appropriate measure to support your development be discussed Regional Staff.



Transit Shed: shows the areas that lie within a 200m and 500 m radius of a transit node.

Additional Resources:

[Walking and Cycling – PedShed Analysis](#), Active Healthy Communities, Heart and Stroke Foundation
[Transit Supportive Guidelines](#), 2011 Draft, Ontario Ministry of Transportation



ST6 – Transit-Oriented Design Guidelines

Meet or exceed the York Region Transit-Oriented Development Guidelines.

ROP Policies:

- 5.2.8 To employ the highest standard of urban design, which:
- g. follows the York Region Transit-Oriented Development Guidelines; and,
- 5.6.12 That mobility plans shall be completed to ensure that:
- g. *new community areas* are designed to meet the York Region Transit-Oriented Development Guidelines;

Related ROP Policies:

- 7.1.7 To require new *development* applications to demonstrate that the *development* meets or exceeds the York Region Transit-Oriented Development Guidelines.

Synergies



Supporting Themes



OBJECTIVE: To meet or exceed the *York Region Transit-Oriented Development Guidelines*

York Region's *Transit-Oriented Development Guidelines* were adopted by Regional Council in 2006. The Region will be reviewing and updating these guidelines, as per Regional Official Plan policy 7.1.6, so they can remain current and responsive. The following a summary of the TOD approaches that can be applied at various stages in the planning, design and development process to advance transit-supportive, pedestrian-friendly communities.

Pedestrians

- accommodate people with disabilities
- promote safety and comfort through building and site design
- locate activity-generating land uses at street level

Parking

- design surface and structure parking to include safe, accessible and convenient connections between parking and building entrances
- view existing surface parking lots as placeholders for future development
- reduce the prominence of surface parking
- include less parking for sites in areas of high transit services
- link parking supply to transportation demand management programs
- include on-street parking where possible

Land Use

- provide mixed-use development to generate activity and convenience
- concentrate people-servicing uses along transit corridors
- locate employment-generating uses along transit-routes, or clustered around stations
- support the introduction of transit at early stages of development
- do not locate low density, auto-oriented land uses along transit corridors and stations
- redevelop existing surface parking, vacant lots and underdeveloped sites

Built Form

- design compact buildings that maximize the site
- use appropriate scale and design to integrate buildings into the surrounding areas
- enhance the pedestrian-scaled environment at street-level
- orient buildings and entrances to the street

Connections

- connect transit stops directly to sidewalks and buildings
- explore opportunities to harmonize lighting, sidewalk and street improvements within Regional rights-of-way
- minimize walking distances between sites and transit stops

Implementation

- use the TOD Implementation checklist to evaluate development proposals
- integrate Transportation Demand Management initiatives into development



TOD IMPLEMENTATION CHECKLIST

Using the TOD approaches outlined in this document at various stages in the planning, design and development process will help to advance transit-supportive, pedestrian-friendly communities. This "checklist" can help assess how well a policy or project incorporates some of the essential TOD elements.

PEDESTRIANS

- ☐ easy, safe access for people in wheelchairs, etc.
- ☐ shelter from wind, rain, etc. (ie. covered walkways, etc.)
- ☐ essential, service-related uses are located at street-level

BUILT-FORM

- ☐ building is compact, and makes effective use of site
- ☐ building is oriented to the street
- ☐ building fits will into surrounding area—scale, design and height are appropriate

PARKING

- ☐ pedestrian walkway provided to/from building
- ☐ parking structure above and/or below grade
- ☐ surface parking provided in side or rear of building
- ☐ existing parking design accommodates future phases of development
- ☐ site-specific/reduced parking standards
- ☐ priority parking for carpooling
- ☐ parking facilities shared with adjoining properties

CONNECTIONS

- ☐ sidewalks and buildings are linked to transit stops
- ☐ lighting, sidewalks, street furniture etc. are provided for all planned walkways and along roads
- ☐ minimize walking distances

Additional Resources:

[Transit-Oriented Development Guidelines](#), 2006, York Region

ST7 – Implementation of Trip Reduction Strategies

Development implements trip-reduction strategies consistent with the policies of Section 7.1.

ROP Policy:

5.6.12 That mobility plans shall be completed to ensure that:

- j. trip reduction strategies consistent with policies of Section 7.1 are promoted.

Related ROP Policies:

3.2.8 To work with local municipalities, agencies and stakeholders on the development and implementation of clean air initiatives

5.2.40 To work with local municipalities and the building and land development industry to provide each resident, worker, and employer with information on the sustainability features of their communities including water and energy conservation, transit information, ride share, car share, and carpooling options.

5.2.10 That secondary plans and zoning by-laws shall, in consultation with the Region and related agencies, incorporate parking management policies and standards that include:

- f. preferential locations for carpooling and car-sharing spaces and bicycle storage requirements.

Synergies



Supporting Themes



OBJECTIVE: To implement trip reduction strategies

The Region's *Transportation Master Plan* (2009) recommends four approaches in meeting the Region's modal split targets by 2031 to achieve efficient use of our transportation system through: reducing the need to travel, providing alternative modes of travel, increased public transit and optimize our existing road network. A first step to achieving this efficiency is through trip reduction strategies. In new community areas, trip reduction strategies must be incorporated as a component of any mobility plan.

What are trip reduction strategies?

The objective of these strategies is to change commuter behavior by reducing single-occupant vehicle trips by promoting a variety of transportation options that encourage more efficient use of existing transportation infrastructure and services.

Trip Reduction Strategies provide travel choice and incentives for commuters while:

- reducing single occupant vehicle trips
- reducing greenhouse gas emissions and improving local air quality
- reducing congestion and delay for people and goods
- improving public safety
- enhancing accessibility and mobility options
- supporting efficient land use through reduced infrastructure costs and space requirements
- reducing parking facility costs for participating business, and improving employee recruitment, retention and productivity

Trip Reduction programs generally include the following:

- transit service improvements and discount transit pass programs
- rideshare matching (carpool) and vanpool programs
- providing support and information for alternative modes and services including social media
- encouraging emergency-ride-home programs
- pedestrian and cycling network and facility planning
- shuttle services
- shared parking arrangements
- work from home/telework

At the development stage, transportation demand strategies can be focused on either the workplace or homes. Workplace programs are typically delivered by a transportation management association. The programs provided by each transportation management associations are unique to its service area but involve some combination of the full range of travel demand management measures identified above. A transportation management association will identify which services are best suited to an employer, given their location and the commuting patterns of their staff. There are several transportation management associations located in York Region: Smart Commute Markham-Richmond Hill, Smart Commute Central York, and Smart Commute North Toronto-Vaughan.

Home-based travel demand management programs provide resources and incentives for residents to use sustainable modes of travel for a variety of trips. In a new residential community, it is expected that developers will work with the Region and local municipalities to provide an appropriate range of travel demand management measures to achieve agreed upon mobility goals. Sufficient resources should be available to properly implement and monitor the agreed-upon travel demand management measures.



Additional Resources:

[Mobility Hub Guidelines for the Greater Toronto and Hamilton Area](#), Metrolinx, 2010
Sudbury Trip Reduction Manual

ST8 – Parking Standards

Development is consistent with all parking standards contained in policy 5.2.10.

ROP Policies:

- 5.6.12** That mobility plans shall be completed to ensure that:
- parking standards, consistent with policy 5.2.10, encourage and support transit use and include reduced minimum and maximum parking standards; and,
- 5.2.10** That secondary plans and zoning by-laws shall, in consultation with the Region and related agencies, incorporate parking management policies and standards that include:
- reduced minimum and maximum parking requirements that reflect the walking distance to transit and complementary uses;
 - shared parking requirements, where possible, reflecting variances in parking demand between complementary uses on a time-of-day, weekday/weekend, and monthly basis;
 - on-street parking;
 - site design that orients the main building entrance(s) towards the street(s), that does not permit the placement of surface parking spaces between the main building entrance and the major street;
 - the design of surface parking to support redevelopment and retrofitting; and,
 - preferential locations for carpooling and car-sharing spaces and bicycle storage requirements.

Synergies



Supporting Themes



OBJECTIVE: To implement parking standards that encourage and support transit use

In new community areas, parking standards and parking management strategies will need to be developed to support transit-use. In York Region, parking standards are addressed through local municipal by-laws. There are a variety of parking standards and management strategies that can be considered through the secondary plan process for new community areas, including:

Flexible Parking Standards allow for adjustments in parking supply requirements for developments by considering:

- proximity to transit routes – allow a reduction in parking supply for developments on transit routes or within a short walking distance of nearest transit stop;
- availability of on-street parking – allow reduction in off-street parking requirements if on-street parking is available in proximity to development or in return for the provision of on-street parking;
- provision of carpool/vanpool programs – allow a reduction when a carpool program is provided in a development and dedicated spaces for multiple-occupant vehicles are provided;
- provision of car share spaces – allow a reduction when dedicated space is provided for a car share program, particularly in residential developments; and,
- provision of transit pass program – allows for providing transit passes to development users in return for reduced parking requirements.

Reduced Parking Minimums - Reduction in the required amount of parking specified in land use bylaws. Remove minimum parking standards in areas with high accessibility to local transit service or rapid transit stations except the minimums related to accessible parking.

Parking Maximums - Parking maximums are upper limits placed on parking supply, either at individual sites or in an area.

Shared Parking - Parking spaces serve multiple users or destinations, including sharing rather than assigning reserved spaces to users, and sharing facilities among multiple destinations.

On-street Parking - Space for parking cars within the street right-of-way; on-street parking can improve access to nearby land uses, create a buffer between pedestrians and vehicles, and help reduce traffic speeds by narrowing the perceived right-of-way.

Surface Parking (Transitional) - while communities are building out and maturing, portions of a vacant/underutilized site can be used for surface parking until those lands are required to complete development. Employing a parcel approach is an effective method to manage transitional surface parking.

Preferential Locations for carpooling and car sharing can act as an incentive to promote behaviours that reduce parking demand.

Bicycle storage requirements - need to supply safe and weather protected storage for commuting cycling including change rooms and showers.



Additional Resources:

[Parking Management Strategies](#), Evaluation and Planning 18 February 2011 by Todd Litman Victoria Transport Policy Institute
[Mobility Hub Guidelines for the Greater Toronto and Hamilton Area](#), Metrolinx, 2010

NH1 - Regional Greenlands System

That a Regional Greenlands System plan is prepared and implemented consistent with policy 5.6.14.

ROP Policies

- 5.6.14 That a Greenlands System Plan shall be prepared that:
- a. evaluates the potential impact of *development* and ensures the protection, enhancement, and securement of *key natural heritage features* and *key hydrologic features* of the System;
 - b. identifies strategic areas for enhancement and restoration to maximize the quality of the entire System;
 - c. identifies how infrastructure projects within the System, including permitted stream crossings for streets, water and wastewater systems, contribute to an overall ecological gain by increasing natural cover, enhancing ecological function, providing recreational access or contributing to off-site enhancements;
 - d. identifies securement opportunities and management requirements;
 - e. includes a trail system, which is integrated into the mobility system of the community;
 - f. examines the feasibility of providing local community gardening plots where appropriate, outside of the lands dedicated for parkland; and;
 - g. identifies hazard lands and hazardous sites, incorporates them into the Greenlands System, directs *development* away from these areas and includes an appropriate buffer or access allowance.

Related ROP Policy

- 2.1.13 To require a Greenlands System Plan as a component of secondary plans that is consistent with policy 5.6.14 of this Plan.

Synergies



Supporting Themes



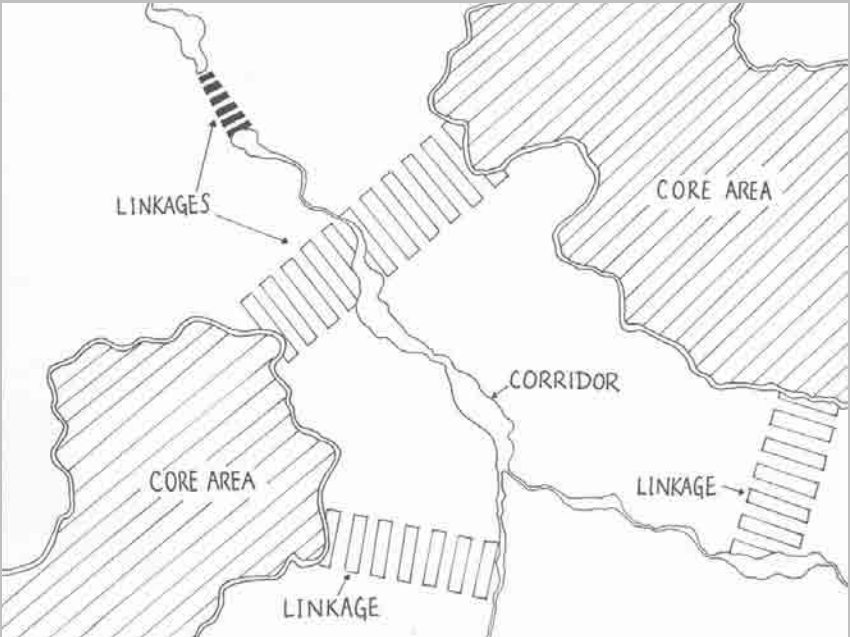
Objective: To ensure that Regional Greenlands System plans are prepared in support of secondary Plans for new community areas

York Region has placed significant emphasis on the identification, protection, restoration and enhancement of the Region’s Natural Heritage System through Vision 2026 which encourages the integration of natural heritage values into development and recognizes natural heritage as an important ingredient to quality of life and economic prosperity in York Region.

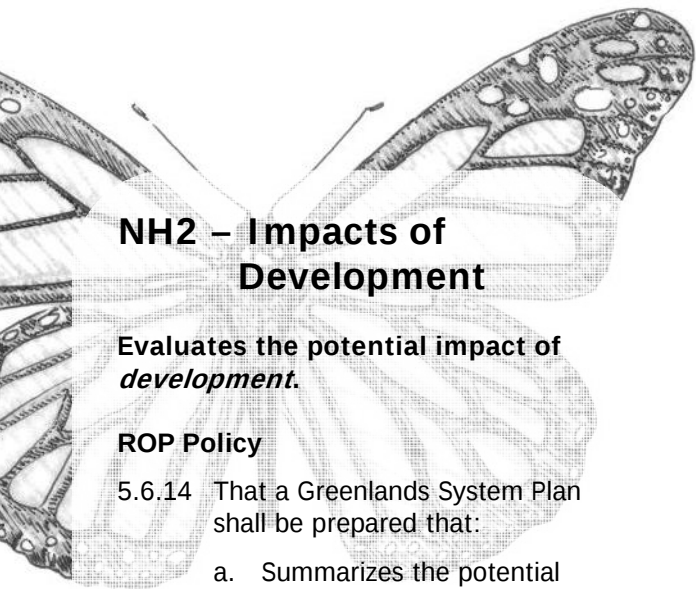
The forecasted growth for York Region has the potential to place considerable pressure on the Region’s natural systems. The policies and mapping of the York Region Official Plan have been updated to reflect an updated approach to Greenlands System planning with a focus on connecting and strengthening the System.

What is the Regional Greenlands System?

The Regional Greenlands System is comprised of cores, corridors and linkages. Core areas contain the most significant natural features on the landscape and include significant woodlands and wetlands, Areas of Natural and Scientific Interest (ANSIs) and Environmentally Sensitive Areas. Corridors include existing significant valleylands and watercourses. Linkages are smaller features that connect core areas and are either existing or need to be established through restoration which will ensure that the system is linked north to south and east to the west.



The province has established polices for the protection of key natural heritage features and key hydrologic features in the Oak Ridges Moraine Conservation Plan, the Greenbelt Plan and the Lake Simcoe Protection Plan. Development within new community areas will have to comply with the policies of the Regional Greenland System, the Oak Ridges Moraine Conservation Plan, the Greenbelt Plan and the Lake Simcoe Protection Plan if applicable.



NH2 – Impacts of Development

Evaluates the potential impact of development.

ROP Policy

5.6.14 That a Greenlands System Plan shall be prepared that:

- a. Summarizes the potential impact of *development* and ensures the protection, enhancement, and securement of all *key natural heritage features* and *key hydrologic features* of the System;

Objective: To understand the potential impacts of development on key natural heritage and hydrologic features

How do you evaluate the potential impact of development?

- Determine the presence of key natural heritage and key hydrologic features
- Understand the current and future ecological functions of the natural feature or area as they relate to the Greenlands System, including identification of:
 - features that contribute to genetic, species and ecosystem diversity in York Region
 - areas likely to function as pathways or support a functional relationship between features and areas, and
 - physical, chemical or biological processes.
- Evaluate the anticipated impacts as a result of changes in land use and the interaction of these changes with the features and functions of the area and to the larger Greenlands system including the impact to the Regional target of 25% woodland cover
- An evaluation of mitigation approaches that protect against potential impacts to the natural heritage system including the identification of buffers, restoration and enhancement areas

How does this differ from an Environmental Impact Statement?

An Environmental Impact Statement will be a significant component of the Greenlands System Plan. However, the Greenlands System Plan will move beyond this traditional study to address the areas of concern that have been identified above. It is recommended that pre-consultation with the Region and the relevant conservation authority occurs prior to the creation of the Greenlands System Plan to ensure an appropriate scope.

Sustainability Benefits of the Regional Greenlands System		
Sustainable Natural Environment	Healthy Communities	Economic Vitality
Habitat for plant and animal species Maintains biodiversity species richness & ecosystem complexity Improves air quality Contributes to water management Mitigating the impacts of climate change	Contributes to liveable neighbourhoods, our feeling of well-being, our health, and quality of life, community identity and sense of place. Provides educational and research opportunities Provides active and passive recreation for healthier lifestyles	Eco- and agri-tourism Enhanced property values; creating desirable communities for investment. Renewable energy opportunities Disease prevention & treatment resulting in reduced health care costs Reduced infrastructure costs; reducing peak flows and flooding, natural alternatives to infrastructure. Helps make York Region an attractive place for businesses



Synergies



Supporting Themes



Additional Resources:

[Terrestrial Natural Heritage System Strategy](#) (2007), Toronto and Region Conservation Authority (TRCA)
[Natural Heritage Reference Manual \(2010\)](#), Ontario Ministry of Natural Resources
[York Region's Greening Strategy \(2001\)](#), Regional Municipality of York
York Region Natural Heritage Trails Study,

NH3 – Identification of Strategic Enhancement and Restoration Areas

Identification of strategic enhancement and restoration areas.

ROP Policy

- 5.6.14 That a Greenlands System Plan shall be prepared that:
- b. identifies strategic areas for enhancement and restoration to maximize the quality of the entire System;

Objective: To facilitate the protection, enhancement and restoration of the Greenlands System.

What is ecological restoration?

Ecological restoration is an activity that initiates or accelerates recovery of an ecosystem with respect to its function (processes), integrity (species composition and community structure), and sustainability (resistance to disturbance and resilience). Ecological restoration activities range from active restoration projects that attempt to rebuild lost complex ecological processes or functions to passive enhancement projects that prevent an ecological disturbance or effect thereby allowing natural processes to become re-established.

How does York Region define restoration?

Ecological restoration refers to activities that re-establish ecological function to the landscape that have been lost and/or destroyed or removed. An example of a restoration activity would be to replant a forest in area that had been previously deforested.

How does York Region define enhancement?

Ecological enhancement refers to those activities that increase the ecological function of an existing habitat. An example of an enhancement activity would be to improve the ecological function and biodiversity of a stormwater management pond through the addition of aquatic plants, edge shrubs and trees.

How to identify strategic areas for enhancement and restoration?

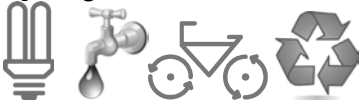
The Greenlands System Plan will have to examine the following sources of information to determine strategic areas for enhancement, including:

- existing and proposed regional and local greenlands systems
- Conservation Authority natural heritage and subwatershed evaluations to determine target ecological features and functions for restoration
- eco-region and eco-district information to determine representative and rare vegetation communities as well as rare species of flora and fauna that should be targeted for restoration and enhancement
- an ecological science based approach to identify strategic areas for restoration and enhancement that contribute to improved ecological function, connectivity, and diversity



East Beaver Creek Planting and Morning side tributary restoration – from Friends of the Rouge Watershed Picture Gallery

Synergies



Supporting Themes



Additional Resources:

[Natural Heritage Restoration Plan Guidelines](#), Toronto and Region Conservation Authority (TRCA)

[Natural Heritage Reference Manual \(2010\)](#), Ontario Ministry of Natural Resources

[York Region's Greening Strategy \(2001\)](#), Regional Municipality of York

[Principles and Guidelines for Ecological Restoration in Canada's Protected Natural Areas](#), Parks Canada

Daigle, Jean-Marc and Donna Havinga. 1996. Restoring Nature's Place: A Guide to Naturalizing Ontario Parks and Greenspace. Ecological Outlook and Ontario Parks Association: Schomberg

NH4 – Infrastructure within Greenlands System

Identifies how infrastructure projects will contribute to overall ecological gain with the Greenlands System.

ROP Policy

- 5.6.14 That a Greenlands System Plan shall be prepared that:
- c. Identifies how infrastructure projects within the System, including permitted stream crossings for streets, water and wastewater systems, contribute to an overall ecological gain by increasing natural cover, enhancing ecological function, providing recreational access or contributing to off-site enhancements.

Related ROP Policies

- 2.1.14 That infrastructure design and construction be sensitive to the features and functions of the System, and include context sensitive design and innovative technologies to minimize impacts and enhance the Regional Greenlands System. Infrastructure within the Regional Greenlands System should *avoid key natural heritage features and key hydrologic features* and shall be subject to the policies of the Oak Ridges Moraine Conservation Plan and the Greenbelt Plan, where appropriate.
- 2.1.15 That the planning, design and construction of infrastructure projects shall enhance and invest in the Regional Greenlands System, including providing passive recreational amenities and environmental restoration where appropriate.

Synergies



Supporting Themes



Objective: To ensure infrastructure projects within the Greenlands System will result in an overall ecological gain.

What is context sensitive solutions and design?

Context sensitive solutions is a collaborative, interdisciplinary approach that involve all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions.

What are they key principles of context sensitive solutions?

- Strive towards a shared stakeholder vision to provide a basis for decisions
- Demonstrate a comprehensive understanding of contexts
- Foster continuing communication and collaboration to achieve consensus
- Exercise flexibility and creativity to shape effective transportation solutions, while preserving and enhancing community and natural environments

What are the outcomes of implementing context sensitive solutions and design?

Context sensitive solutions leads to outcomes that:

- Are in harmony with the community and preserve the environmental, scenic, aesthetic, historic, and natural resource values of the area
- Are safe for all users
- Solve problems that are agreed upon by a full range of stakeholders
- Meet or exceed the expectations of both designers and stakeholders, thereby adding lasting value to the community, the environment, and the transportation system
- Demonstrate effective and efficient use of resources (people, time, budget,) among all parties

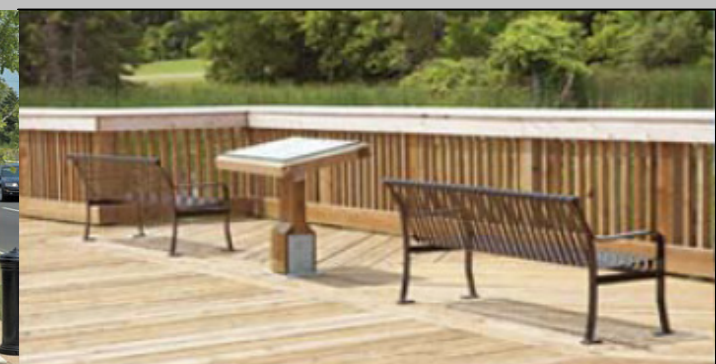
York Region has demonstrated leadership in implementing context sensitive solutions and design in infrastructure

St. John's Sideroad and the South East Collector are just two projects where the Region has demonstrated a commitment to context-sensitive design.

The South East Collector wastewater project will leave the areas affected by construction in a similar – if not better – condition than before the work took place. This includes environmental enhancements to the Rouge Park and Bob Hunter Memorial Park and Trail.



Toronto Zoo



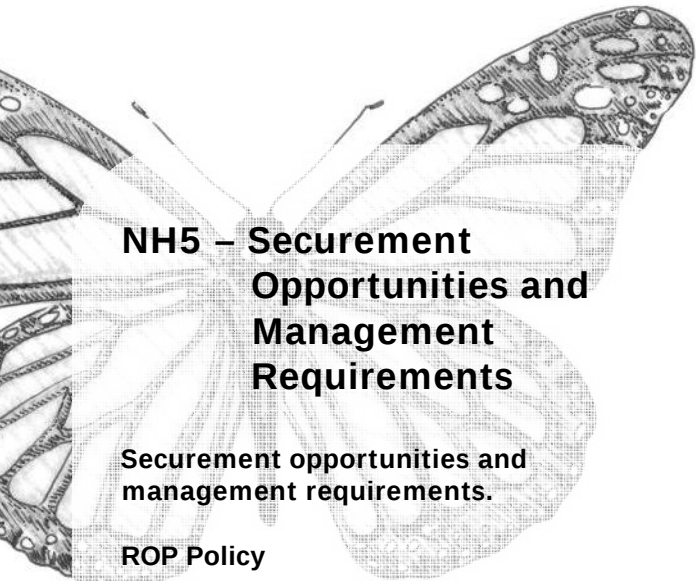
Pictures of St. John's Sideroad, Town of Aurora

Additional Resources:

[A Guide to Road Ecology in Ontario](#), Ontario Road Ecology Group

NCHRP Report 480: [A Guide to Best Practices for Achieving Context Sensitive Solutions](#), US Department of Transportation, Federal Highway Administration

[On-line TDM Institute](#), Victoria Transport Policy Institute



NH5 – Securement Opportunities and Management Requirements

Securement opportunities and management requirements.

ROP Policy

- 5.6.14 That a Greenlands System Plan shall be prepared that:
- d. identifies securement opportunities and management requirements;

Related ROP Policy

- 2.1.19 That land securement initiatives assist in implementing the Regional Greenlands System trails network.
- 2.1.19 That land securement initiatives assist in implementing the Regional Greenlands System trails network.

Objective: To identify strategic securement opportunities and management requirements for the Greenlands System

What is a securement strategy and what should be included?

York Region has a land securement strategy in place. In that strategy, the term "securement" refers to the protection of key natural heritage and Greenlands properties throughout the Region by a range or suite of tools. The key natural heritage and Greenlands properties referred to in York Region's securement strategy include:

- the broadest definition of forest cover including complex ecosystems of different tree species, vegetation and other wildlife together with other non-living components, such as air, soil and water and related ecological processes
- environmentally significant areas, areas of natural and scientific importance, wetlands, valley and stream corridors, significant wildlife habitats and woodlands throughout the Region's rural and urban areas
- greenlands and natural heritage properties such as, but not limited to, wetlands, old fields, marginal farmlands, linkages and buffers

What methods are used to achieve protection of the natural environment?

There are many methods available to achieve the protection of our natural environment. Techniques include a continuum of tools from stewardship to policy planning to monitoring to purchasing of land. While outright land purchase is one method, in view of the relatively high costs involved, this method would only be recommended in specific cases where all other means have been exhausted. The full continuum of tools includes:

- Stewardship Tools
- Policy Planning Tools
- Monitoring
- Acquisition Tools

Management Requirements

The Regional Greenlands System Plan will also prescribe management actions for the natural heritage system within the secondary plan area. The intent is to provide overall direction and guidance for managing the natural heritage system to ensure that natural heritage values are protected in the long term and that areas reflecting past human disturbance are restored to natural habitats. In addition, the management requirements should provide guidance on the areas of interactions between the natural heritage system, infrastructure crossings and neighbourhoods.



Synergies



Supporting Themes



Additional Resources:

[Terrestrial Natural Heritage System Strategy](#) (2007), Toronto and Region Conservation Authority (TRCA)
[Natural Heritage Reference Manual \(2010\)](#), Ontario Ministry of Natural Resources
[York Region's Greening Strategy \(2001\)](#), Regional Municipality of York

NH6 - Identification of a Trail system

Identifies a trail system.

ROP Policy

- 5.6.14 That a Greenlands System Plan shall be prepared that:
- e. includes a trail system, which is integrated into the mobility systems of the community.

Related ROP policy

- 2.1.20 To work with local municipalities, conservation authorities and trail organizations on initiatives that contribute to, or complement, the creation of a trails network.

Objective: To ensure identification of a trail system within the Greenlands System Plan

The Greenlands System Plan will identify a trail system that links neighbourhoods to each other as well as to the larger regional trail and open space networks.

What are the Greenlands System plan trail objectives?

The trail objectives are:

- to promote accessible linkages between the natural heritage system and urban and agricultural uses
- to promote low impact uses and activities compatible with its protection
- to locate facilities in an environmentally responsible manner
- to create a safe trail system by encouraging public use

What are the Greenlands System plan trail design principles?

The trail design principles are:

- protect important natural heritage features
- avoid significant archaeological resources
- integrate cultural and built heritage resources
- make connections between neighbourhoods and destinations within new community areas as well as linkages to the regional trail, open space and natural heritage systems

What trail information should be included in the Greenlands System plan?

Trail System should indicate:

- a conceptual trail system and hierarchy
- the delineation of potential trailhead locations
- the identification of potential locations for crossings of built or natural barriers
- how the proposed trail system supports implementation of the *Pedestrian and Cycling Master Plan*
- how the proposed trail system supports implementation of other natural heritage trails plans



Synergies



Supporting Themes



Additional Resources:

Pedestrian and Cycling Master Plan
Natural Heritage Trail Strategy
Town of Aurora, [Trail Master Plan](#)
Town of Richmond Hill, [Trails Master Plan](#)

NH7 – Feasibility of Providing Community Gardens

Examines feasibility of providing community gardens.

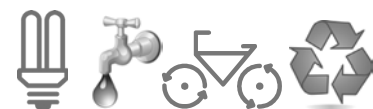
ROP Policy

- 5.6.14 That a Greenlands System Plan shall be prepared that:
- f. examines the feasibility of providing local community gardening plots where appropriate, outside of the lands dedicated for parkland;

Related ROP Policies

- 3.1.8 To support locally grown and produced agricultural products.
- 6.3.16 To support local food production and procurement through means such as a Local Food Charter, buying and production co-operatives, farm-to-table programs and farmers' markets at key locations in York Region communities.
- 7.3.17d Encouraging the provision of community gardens and other urban agriculture practices, but not including animal agriculture in new and existing communities.

Synergies



Supporting Themes



Objective: To identify appropriate and feasible sites for community gardens within the Greenlands System.

What is local food?

Local Food is a movement that promotes a closer relationship between where food is produced and consumed. A strong local food system supports the local agricultural economy as well as initiatives to increase residents' access to safe, healthy and affordable food. There are a variety of strategies that can be used to facilitate access to local foods including growing your own.

What are community gardens?

They are individual plots of land that are publically available for use by community members to grow food.

What are the benefits of community gardens?

Community Gardens provide a wide range of community benefits including:

- promoting sustainability and education
- improving food security and neighbourhood liveability
- increasing access to fresh locally produced food
- improved social cohesion by providing a gathering place, promoting social interaction and intergenerational activity
- providing opportunities for exercise, recreation and leisure.

What are the criteria for determining an appropriate community garden site?

- it receives at least six hours of sun per day
- it is close to watering facilities, but does not interfere with any underground pipes or lines
- it is located centrally and is convenient for community members to get to
- the terrain of the site should be relatively flat

What are some potential locations?

- under-utilized parks and open space
- publically managed lands including storm water management facilities, fire stations, libraries, community centers, parking facilities, and wastewater facilities.
- public school properties, publicly-owned rights-of-way along established multi-use paths, along pipelines, and under power lines
- privately held lands including nursing homes and daycares



Additional Resources:

[Community Gardens Program Toolkit](#), Parks and Recreation Division, City of Toronto
[Community Garden Resources](#), Community Planning, Social Planning, City of Vancouver,
[GTA Agricultural Action Plan](#), 2005

NH8 – Integrated Open Space Network

Development is designed to include an integrated open space network, or connect to an existing open space network.

ROP Policy

5.6.15 That *new community areas* be designed to include an integrated open space network that includes both active recreational facilities and meeting places, urban squares, parks outdoor seating and informal gathering places generally within 500 metres of all residents.

Picture came from :

<http://urbanitydesign.wordpress.com/2009/05/14/waterloos-new-urban-square/>

Objective: To create an integrated open space network

The Greenlands System Plan prepared in support of a new community area secondary plan will identify an integrated open space network. An open space network is a system of parks and public spaces that provide a range of services from access to natural areas, opportunities for active and passive recreation, and meeting and informal gathering places. The creation of an open space network benefits communities by providing structure and amenity to the urban area; strengthening distinct communities; incorporating natural features; providing opportunities to improve environmental quality; and increasing accessibility to open air recreation. In new community areas, the open space networks will be integrated with:

- the structure of the urban area
- natural heritage system and trails
- community infrastructure
- mobility systems

The open space network should include the following components:

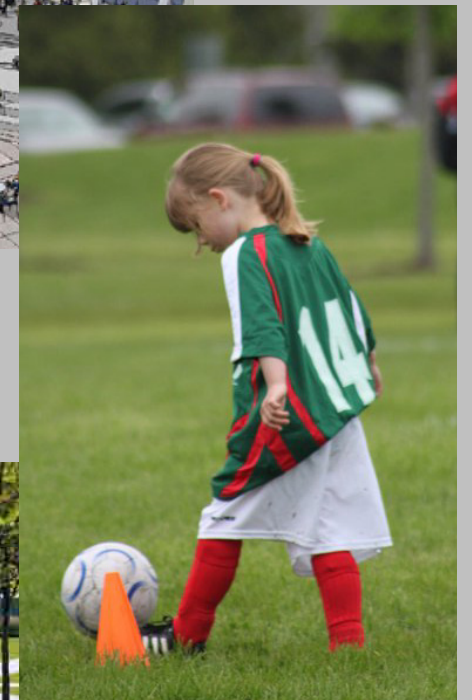
- **Active recreational spaces**
Active are designed to serve the municipality's needs for organized sports, picnic areas, and playgrounds. Active recreational spaces can also include public facilities such as a community centre, arena or swimming pool. Recreational open spaces are typically larger and serve the larger community.
- **Passive recreational spaces**
Passive recreational spaces include creatively landscaped areas designed for aesthetic appeal or natural areas sensitive to more active uses. They are primarily used for walking, viewing, sitting, bird watching, hiking, wildlife habitat or any combination of the above. These open spaces are typically smaller and provide open space amenity at the neighbourhood scale.
- **Urban squares, meeting places/informal gathering spaces**
These are typically established at key focal points or intersections within communities and/or neighbourhoods. They usually abut commercial, mixed-use or institutional land uses. Urban Squares are spaces designed to accommodate passive recreational and social activities. Low walls, steps and benches can provide a variety of formal or informal seating arrangements.

Role of Infrastructure in creating an Open Space Network?

Stormwater Management (SWM) facilities should have public access and be integrated as open spaces through out new community areas. SWM facilities can be designed to combine their function with amenities for residents and the local community. Opportunities for integration of utility and infrastructure corridors into the open space network should be considered. These corridors are typically linear in nature and can serve as important linkages in the network of open spaces.

Public Art

Incorporation of public art should be considered within the open space network especially within those areas designed for passive recreation opportunities such as smaller parks, urban squares, and outside of major institutional buildings.



Synergies



Supporting Themes



Additional Resources:

Referenced from the Role of Recreation, Parks and Open Space in Regional Planning - Alberta
Town of Oakville - North Oakville Urban Design and Open Space Guidelines, November 2009:

NH9 – Public Art

Incorporation of public art into the urban public realm.

ROP Policy

5.6.8 That *new community areas* shall be planned to consider human services needs, including educational, social, health, arts, culture and recreational facilities.

Objective: To incorporate public art into new community areas

What is public art?

- created by artists or in collaboration with artists through a public process
- located on publically owned lands in publicly accessible locations
- located on privately owned common spaces
- formal selection method involving community members, artists and regional/local government

What are the benefits of public art?

- creates a clear sense of community pride and identity
- reflects cultural heritage, fosters an understanding of history and presents the cultural identity of a community
- improves and enhances the built environment
- contributes to the development of a more pleasant, safe and vibrant public realm
- enhances tourism and economic development; creating an overall sense of place
- creates cultural links through the promotion of opportunities for community development, community engagement and community partnerships

Where can public art be located?

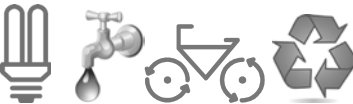
- highly visible intersections and community gateways
- areas of high pedestrian traffic,
- outdoor public spaces
- underutilized sites with potential for growth
- municipally owned land and buildings

How will public art be implemented in new community areas?

Local municipalities are encouraged to undertake Cultural Master Plans/Public Art Master Plans during secondary planning process for new communities.



Synergies



Supporting Themes



Additional Resources:

Town of Markham, Public Art Policy and Public Art Committee
Town of Newmarket, Cultural Master Plan
Public Art Toolkit, Creative City Network of Canada
City of Toronto, Public Art Planning
City of Hamilton Public Art Master Plan