

Vaughan's Urban Structure

Vaughan Tomorrow
Background Paper
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DRAFT

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Introduction

This paper is one of a series of background papers prepared in the spring of 2008 to inform the development of a new Official Plan for the city of Vaughan. Like the other papers, it focuses on existing conditions and broadly identifies issues and opportunities to be addressed by the Official Plan. It is largely based on a study of Vaughan's historical development and observations of its current physical environment. Maps, diagrams and photographs are used extensively to show existing conditions and illustrate main points. In considering the city's urban structure, it raises key questions about how the continuing growth and evolution of Vaughan as a whole might be directed.

What do we mean by 'urban structure' and why is it important?

In broad terms, urban structure refers to the way land uses, infrastructure, open spaces and natural features are arranged to create a city. Since city building is a collective undertaking that results in constant change, the sense of an overall urban structure is not always apparent. Nevertheless, how a city is physically organized is fundamental to the quality of life it offers its citizens, the functioning of its economy, the fostering of social cohesion, and the health of the natural environment.

The development of a new Official Plan provides an opportunity for Vaughan to reflect on its urban structure, identifying its strengths and weaknesses. With the city expected to accommodate significant population and job growth in the coming decades, its urban structure will change. Understanding the structure today is a critical first step to defining an appropriate structure for the future and creating a larger vision to guide the new Official Plan.

Understanding Vaughan's urban pattern and exploring opportunities to enhance it are the first steps toward defining choices about where and how the city should grow.





An overview of Vaughan's physical evolution

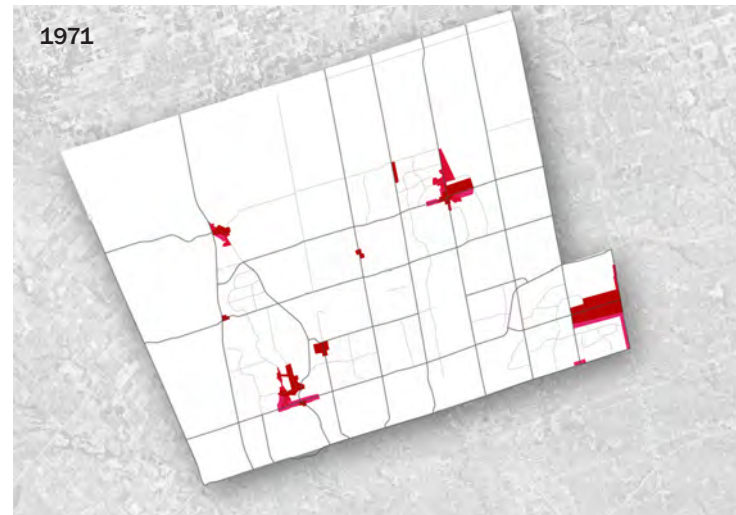
Long before Vaughan was constituted as a township and then a city, it was home to First Nations peoples who camped, fished, hunted and farmed along the Humber and Don rivers and tributaries. In the 19th century, European settlers established a number of villages within the city's current boundaries. Of these villages, four still exist today- Thornhill, Maple, Woodbridge and Kleinburg. These villages were clearly defined communities that supported and serviced vast agricultural areas. These village exemplified compact urban living, containing homes, businesses, churches and other places for congregating, in close proximity to one another. They each had, and partially retain, distinctive urban characteristics that are still highly valued—attractive and flexible buildings oriented to streets, a mix of uses, and streets that comfortably accommodated pedestrians, private vehicles and, in the case of Yonge Street, public transit [see streetcar tracks on facing page].

The photograph on the facing page of Yonge Street in Thornhill was taken in 1902. Though times have changed, the urban characteristics of Vaughan's historic villages provide clues about how to create contemporary mixed-use centres.

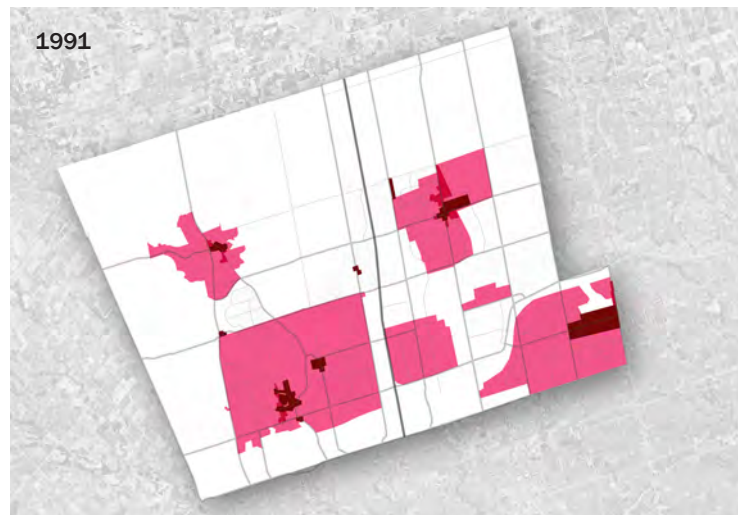
These maps illustrate Vaughan's slow and then rapid growth from four distinct villages within the countryside to a contiguous city adjacent to the countryside.



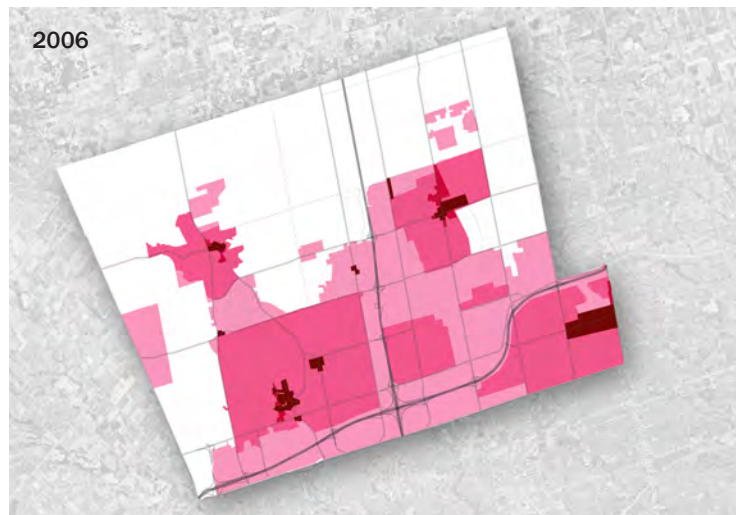
By 1880, the four villages had been established, Thornhill, which straddled Yonge Street, being the largest. More than 95% of Vaughan's land remained rural.



By 1971, the villages had grown, but more than 90% of the Township of Vaughan was still rural.



With Toronto largely built out and sewers extended into York Region, growth in Vaughan had taken off by 1991. The four villages evolved into suburban communities, together consuming about one third of the city's land.



Rapid growth through the 1990s and into the 21st century linked the four village-centred communities with development including the creation of two new communities—Vellore and Carrville.



This photograph of north Woodbridge, looking southwest over Islington Road toward the intersection of Highway 27 and Rutherford Road, was taken in 1992.



The same view in 2008. Low-density housing now dominates much of the Vaughan landscape...

If future development in Vaughan were to follow the pattern of growth over the past 15 years, the city would quickly be built out and not come close to reaching its population target of 418,000 residents and 276,000 jobs by 2031. The new Official Plan will need to identify a new urban structure to guide growth within and beyond the current urban boundary.



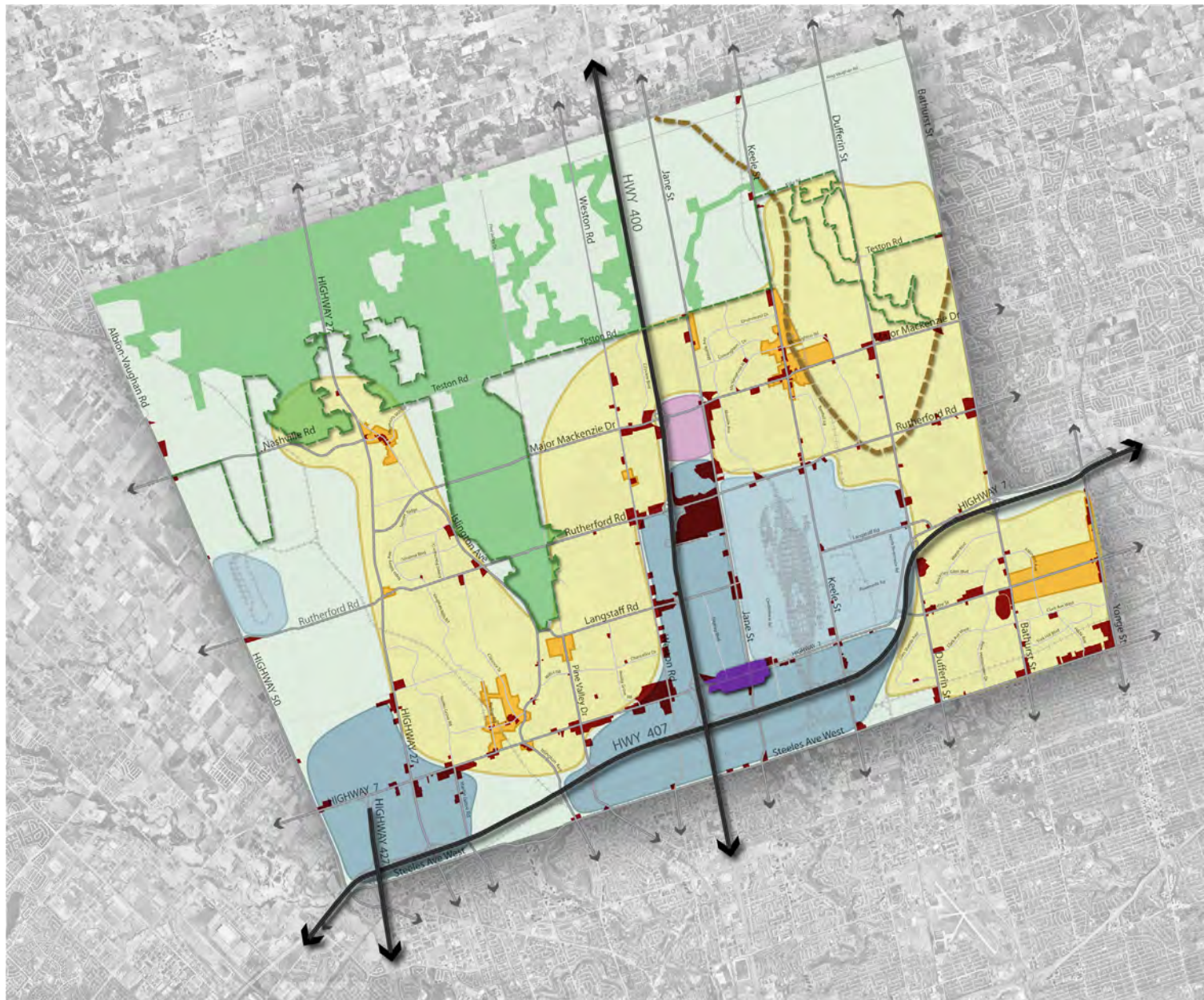
...along with low-density employment uses and low-density commercial development. It is widely recognized that this overall pattern of development is not sustainable.

A simple urban structure

As Vaughan has grown, a distinct pattern of general land uses has been established, as illustrated in this diagram. A meandering band of residential communities from Kleinburg to Thornhill is sandwiched between employment lands adjacent to major highway and rail infrastructure to the south, and countryside and the natural features within the Humber and Don river systems to the north. Commercial uses are strung along key east-west and north-south arterial roads running through and at the edges of communities, with Canada's Wonderland and the Vaughan Mills complex marking the geographic centre of the city.

The subsequent sections of this paper look more closely at the employment, residential, commercial and countryside land use zones that structure the city. Although not urbanized, Vaughan's countryside, much of which is in the Provincial Greenbelt or Oak Ridges Moraine and therefore cannot be urbanized, is fundamental to the city's structure.





Legend

- Vaughan Corporate Centre Node
- Historic Village
- Residential Area
- Highway Employer
- General Employers
- Commercial Area
- Rural / Open Space
- Greenbelt
- Oak Ridges Moraine
- Highway
- Arterial Road
- Local Road
- Rail

Existing Urban Structure

A car-oriented structure

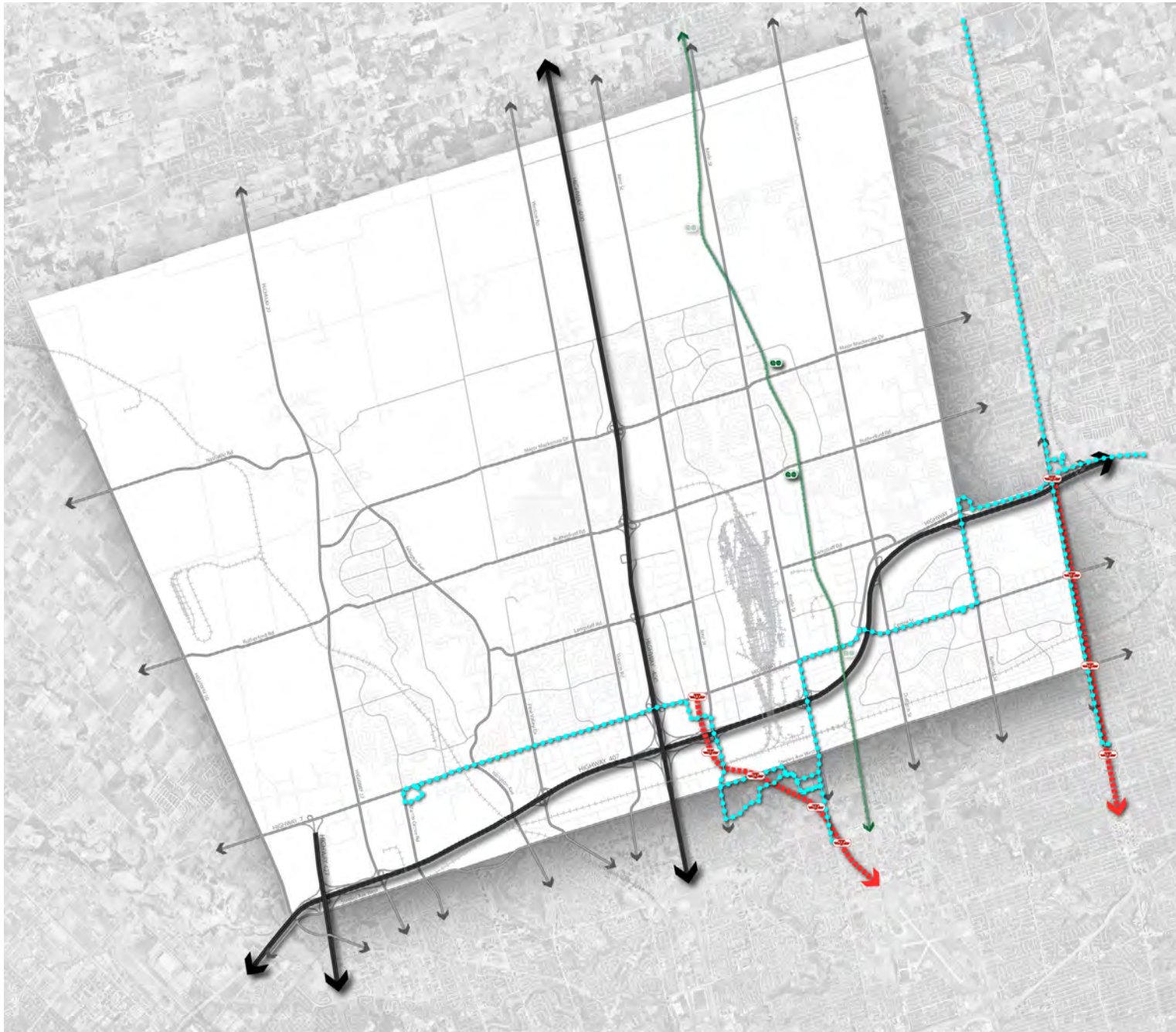
Within Vaughan's pattern of low-density development and segregated land uses, highways and major arterial roads play a principal role as the connecting elements. There are a number of consequences to this structure:

- Cars and trucks and parking lots tend to dominate the public realm and the image of the city.
- Most residential neighbourhoods tend to be removed from busy roads and industrial uses.
- Walking and cycling are discouraged.
- Providing most residents and workers with a high level of public transit service is difficult.
- People with disabilities or no access to a car may have trouble gaining access to jobs, services and amenities.
- The built environment lacks diversity and larger areas are devoted to single uses.
- It is challenging to maintain and create distinct communities and places.

The introduction of the VIVA rapid transit system has begun to attract more transit-oriented patterns of development along the Highway 7 corridor. The extension of Toronto's subway network into Vaughan will have a significant impact on its urban structure.

In addressing land use, density, built form and transportation, the new Official Plan must capitalize on existing and planned public transit investments. It should also consider new transit opportunities.





- Legend
- - - - TTC
 - - - - Go Line
 - - - - Viva
 - Highway
 - Arterial Road
 - Collector Road
 - Local Road
 - ||||| Rail

Roads and Transit



11 URBAN STRUCTURE

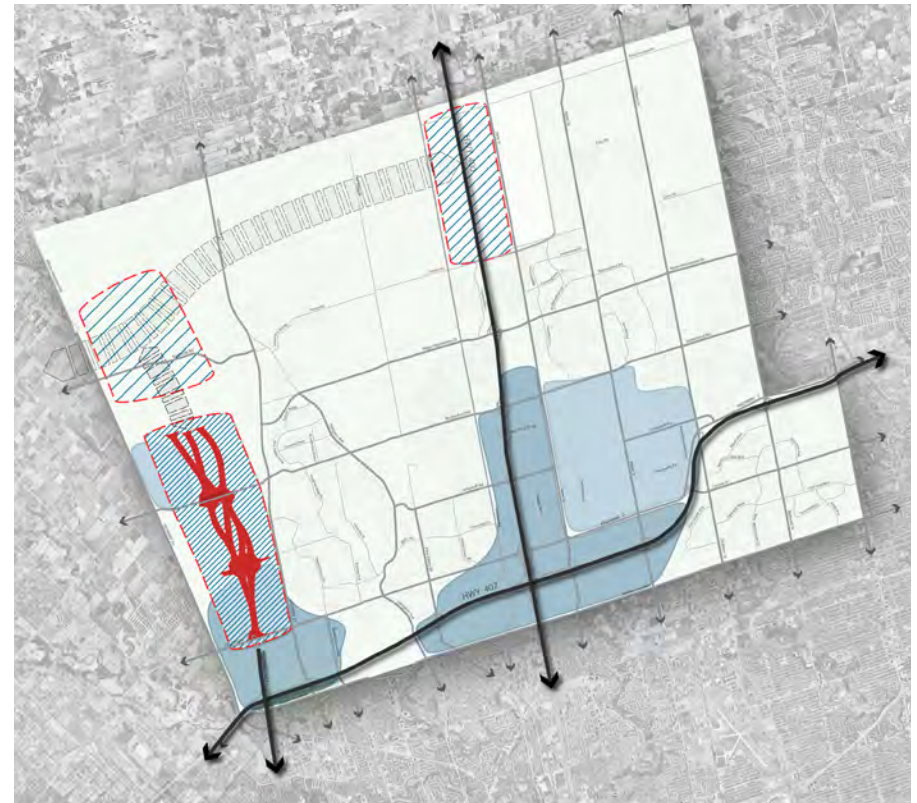
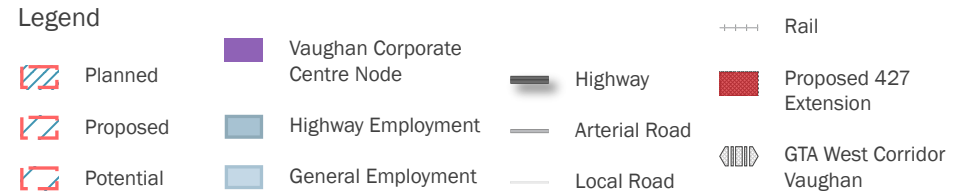
Places to Work: **the structure of Vaughan's employment lands**

Vaughan has experienced tremendous job growth over the past 20 years and has the highest ratio of jobs to residents of all cities in the Greater Toronto Area. Because of its location within a multi-modal transportation network that includes 400-series highways, the CNR Concord and CPR Kleinburg rail yards, and Pearson Airport, Vaughan has developed into an “industrial powerhouse”. Low-density manufacturing and other industrial-type activities account for about 45% of the city’s employment base.

As a result of its success in attracting industrial employment, Vaughan's employment lands occupy a large portion of the city's total land base, approximately 15%. Located in highly visible locations along the 407, 427, 400 and major arterials, they figure prominently in the city's urban structure.

The proposed employment lands straddling the 400 north of Teston Road would effectively extend Vaughan's spine of highway-related employment northward. An Official Plan Amendment designating these lands for employment has been adopted by the City and is currently being reviewed by York Region since the lands are currently outside of the urban boundary, and therefore are required by Provincial legislation to be addressed as part of a comprehensive municipal review. This requirement will be addressed as part of the City's growth management initiative leading to the new Official Plan.

On the west edge of the city, the planned extension of the 427 to Major Mackenzie Road will extend the existing employment corridor in the southwest corner of the city northward. These lands lie within the designated urban boundary. The conceptual GTA West Highway Corridor being contemplated by the Province (which would likely link to the 427 and could extend west to Highway 400), may create an opportunity to consider the appropriateness of reserving land in the northwest corner of the city (outside of the Greenbelt) for employment in the long-term.



Employment Lands



As future employment areas are identified, there are several key issues and opportunities to consider, including the following:

- Vaughan's current Official Plan has essentially two employment area designations, prestige and general. Should a broader hierarchy of employment areas be considered as a way to distinguish different types and encourage a greater variety of employment uses across the city?
- Vaughan currently has about 50 office buildings scattered within its highway-related employment lands. Should future office buildings be strategically located in nodes and corridors, where the higher density of workers might support and benefit from transit infrastructure and contribute to the vitality of public spaces?
- The Vaughan Corporate Centre has not attracted significant office development and does not figure prominently as an employment area. How might it evolve while remaining a focus for new employment? What types of employment are most appropriate there?
- Would a higher quality public realm within employment areas attract more prestigious uses? How should employment uses relate to major public streets to contribute to an attractive streetscape?
- Planned and potential employment areas abut and/or contain significant natural areas. How can natural landscapes be integrated with development to protect natural features, enhance the setting and provide amenities for workers?
- Automobile-oriented, warehouse-type retail employment uses typically are not appropriate in areas intended for a mix of pedestrian- and transit-oriented uses. Should employment lands be planned to accommodate these "big boxes" in strategic locations?



Would concentrations of office employment in strategic locations benefit workers and the city?



Places to Live: the structure of Vaughan's communities

Vaughan's early residential communities were distinguished by Victorian-era houses with lush gardens. Early post-war housing reflected the suburban dream—large homes on large lots. With the development boom that began in the 1980s, subdivisions, made up mostly of detached homes on smaller lots, sprang up.

Today, Vaughan's communities are primarily a blend of old and new, with the original farming-based, individual traditional villages expanded by the addition of vast tracts of suburban subdivision development.

How should the centres of new communities be defined?

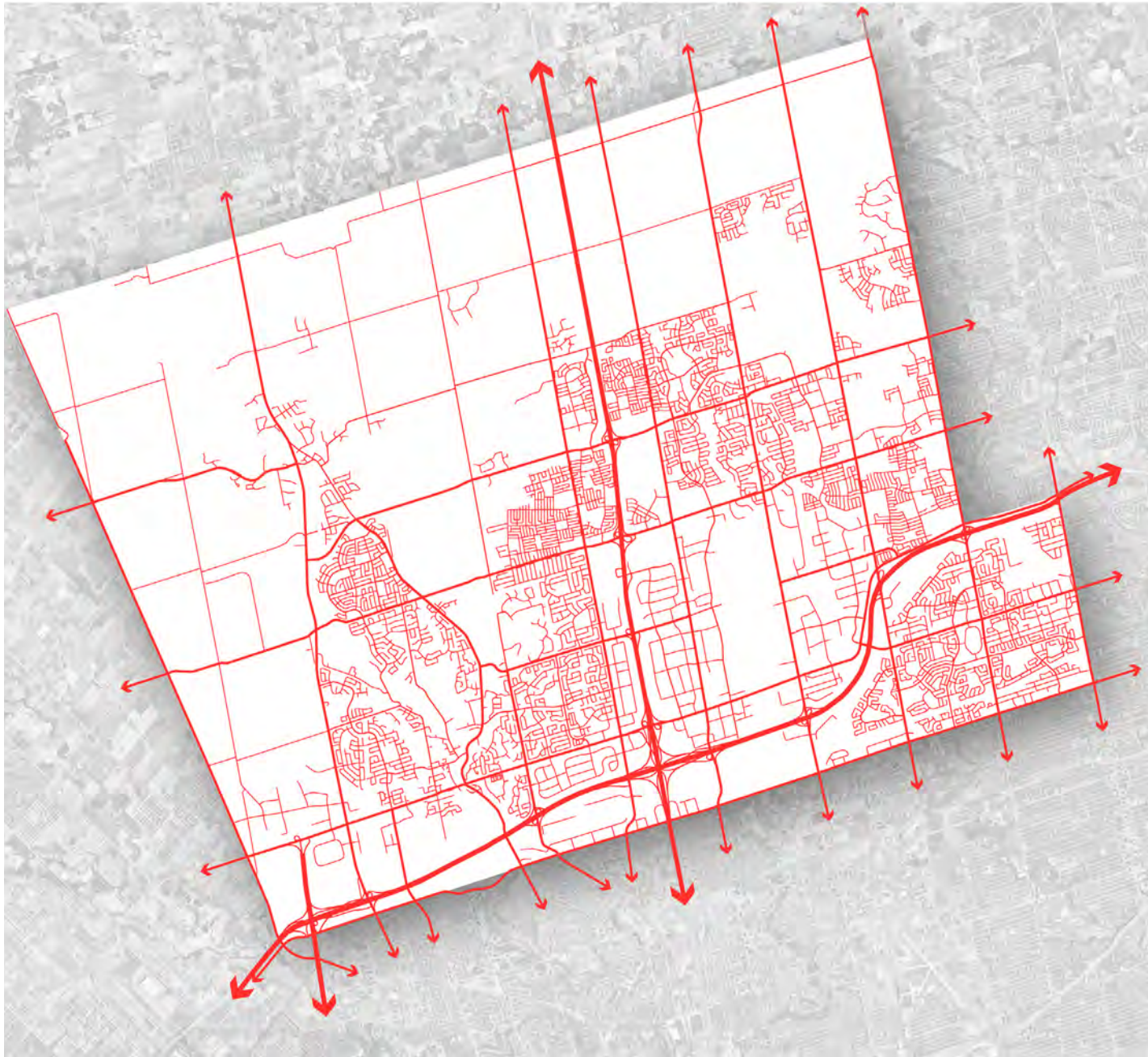


Legend

- Historic Village
- Residential Area
- Highway
- Arterial Road
- Local Road
- Rail

The rapid growth of Vaughan, the consistent pattern of housing and the undistinguished streetscapes of the arterial roads have resulted in communities blending into one another. The historic villages continue to give Kleinburg, Woodbridge, Maple and Thornhill their own identities, but away from these centres it is easy to get disoriented. As Vellore and Carrville mature, there will be opportunities to enhance their identities with distinctive places and buildings.

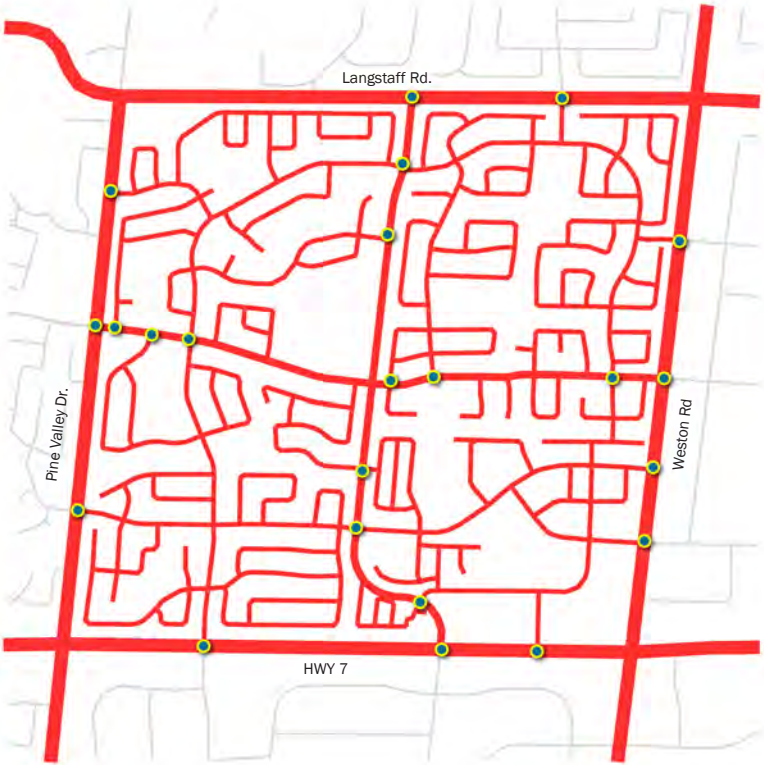
Communities



Street Pattern

The pattern of residential development that predominates in Vaughan is a familiar one, found in suburban municipalities throughout the Greater Toronto Area. Within the grid of two-kilometre by two-kilometre concession blocks, networks of circuitous local streets have been laid out, with collector roads and occasionally a local street providing access to and from the surrounding arterial roads. This car-oriented pattern discourages non-local traffic from infiltrating neighbourhoods but also discourages walking and cycling to parks, schools, shops and transit stops, since routes are indirect and lengthy. Reliant on automobile traffic, neighbourhood stores are pushed to the busy arterial roads.

The figures below compare the street pattern of a concession block in Vaughan to the grid pattern of streets found in a pre-war area of the same size in Toronto.



Circuitous streets and few access points to/from each arterial road limit connectivity and necessitate wide arterials with high traffic volumes.



Direct, interconnected streets and multiple access points to surrounding arterials disperse traffic and facilitate walking and cycling.

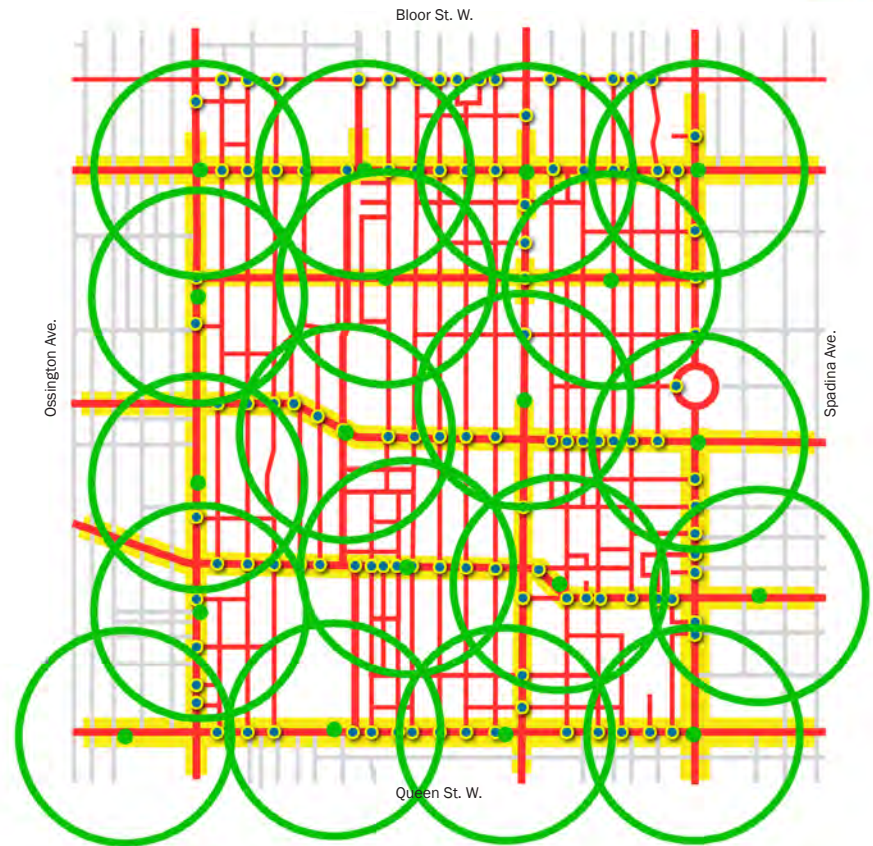


Note: Circles define 400 m distance from centre, approximately a 5 minute walk.

■ = Access Point



Neighbourhood shops and services are focused in plazas too distant from most residents to be conveniently accessible by foot.



Retail activity is dispersed along main pedestrian/transit routes, less than a 5-minute walk away from all residents.



If the City's goal is to encourage more walking, cycling and transit use, should communities be structured by more grid-like street patterns?

The aging population, smaller households and the desire for more affordable, sustainable transportation options are just a few of the factors that will shape and reshape Vaughan's communities.

Also notable about most of Vaughan's communities are their uniformly low densities and lack of housing diversity. Detached and semi-detached homes are the dominant type of housing, although newer subdivisions are including some townhouses. Recently, higher density apartment housing has been occurring in the core of Woodbridge, the Jane and Rutherford area, the Centre Street and Bathurst area, and the Steeles and Dufferin area. Highway 7 is also attracting apartment buildings. Where are the best locations for other higher density housing, and how can it be sensitively integrated into existing and new communities?

Vaughan's communities are blessed with significant natural features, such as woodlots, ravines and water courses. However, many of these features are not highly accessible or visible to most residents because they have been heavily lined with residential properties and effectively joined to private backyards. As a highly valued public resource, should conservation lands and other natural heritage be made more accessible and visible to enhance the identity of communities and benefit all residents?

Parks and schools, too, are frequently lined with housing. Should they have more exposure to streets and other public spaces to maximize accessibility and encourage social and recreational activity?





Places to Shop: the structure of Vaughan's commercial areas

Vaughan is well served by a variety of retail destinations, from the “super-regional” Vaughan Mills complex and the Promenade Mall to all manner of large-format retail development to neighbourhood strip plazas to the main street shops in the old villages of Kleinburg, Maple, Woodbridge and Thornhill.

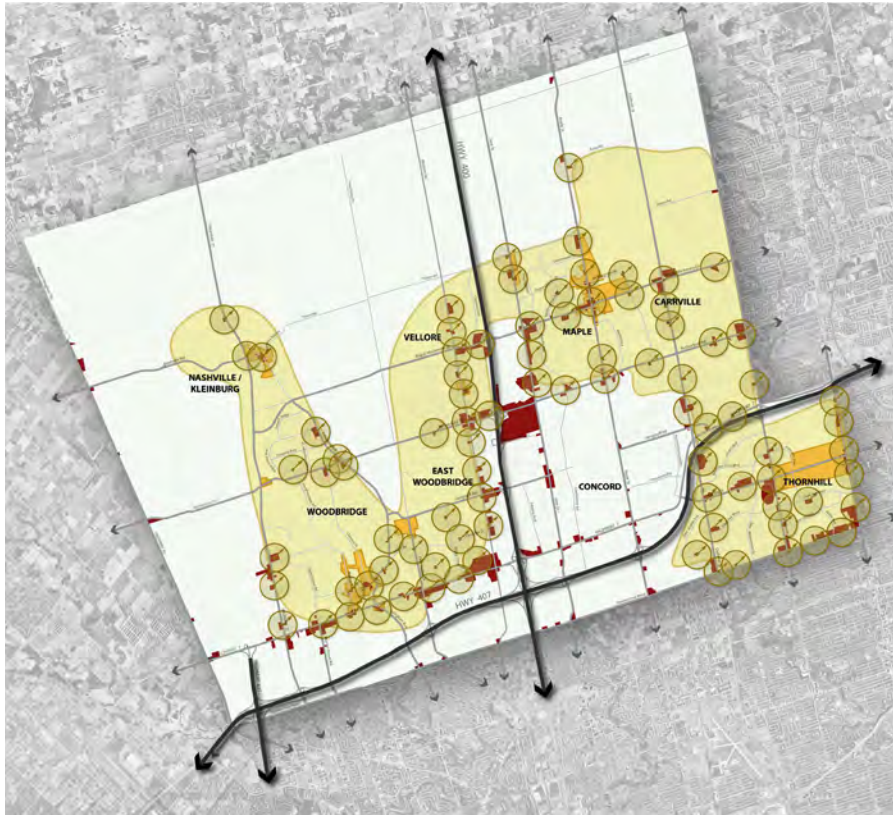


Legend

- Vaughan Corporate Centre
- Historic Village
- Residential Area
- Highway Employment
- General Employment
- Canada's Wonderland
- Commercial Area
- Rural Area
- Greenbelt
- Oak Ridges Moraine
- Highway
- Arterial Road
- Local Road
- Rail
- GO Line
- Mixed-use Village Centre
- Regional Commercial Centre
- Community Commercial Centre

Commercial Centres

400m radius
(5 min walk)



How can retail nodes be more integrated with the neighbourhoods they serve and more pedestrian-friendly?

Beyond the enclosed malls and their immediate surroundings, large retail plazas serving Woodbridge, Vellore and Carrville can be found all along Highway 7, Weston Road, Major Mackenzie Drive and to a lesser extent Dufferin Street. Small neighbourhood plazas are scattered throughout the city, mostly along arterial roads. This pattern of distribution is highly automobile-oriented, the result being that less than half of Vaughan neighbourhoods, as defined by circles with radii of 400 metres, are within a 5-minute walk of a store.

For those residents who do live close to shops and services, the typical design of neighbourhoods and retail plazas does not encourage walking or cycling to purchase basic necessities. Commercial areas are highly segregated from residential areas and dominated by parking lots. And the arterial roads from which plazas are accessed generally are not inviting pedestrian environments.

Of all of Vaughan's distinct land use layers, the commercial malls and plazas have the simplest internal structure. With rare exception, they are occupied by single-use, single-storey buildings facing parking lots. In the larger plazas and malls, the network of driveways designed to get cars in and out efficiently and safely may be the most complex element.

It is Vaughan's commercial areas that highlight how highly segregated land uses are in the city. One expects neighbourhoods to contain mostly housing and employment areas to contain mostly industry. Historically, commercial areas have contained not just stores and services but also offices of all types, public and cultural institutions, housing and open spaces. This mix of uses, with parking playing an important but secondary role, gives these areas a vitality that continually attracts businesses and residents. One need look no further than the original village areas of Thornhill, Maple, Woodbridge and Kleinburg to see how a mix of uses contributes to creating a distinct place with a strong local economy and high quality of life.



Woodbridge

Given the nature of Vaughan's existing shopping plazas and malls, and more importantly the need to accommodate a significant amount of the city's future population growth within its developed lands, the Official Plan process will need to focus on the considerable opportunities and challenges presented by existing commercial areas. What is the potential of each commercial node and corridor to attract and accommodate new housing and employment uses? How should they be structured and designed to facilitate incremental growth? How can they be made more attractive focal points of community social activity? What is the appropriate built form for new uses? Which public uses are appropriate in these areas? How can public transit support the evolution of commercial nodes and corridors?

How can Vaughan's places to shop become places to live, work, play and shop?



Thornhill

Where is Vaughan's 'city centre'?

The Vaughan Corporate Centre (VCC) has long been planned to become a major mixed-used center with a concentration of high-density housing, shopping and employment. The development that has occurred there to date has consisted of mostly low-density retail, entertainment, hotel and industrial uses. Recognizing its location along the Highway 7 rapid transit corridor and at the terminus of the planned Spadina Subway Line extension, the Province has identified the VCC Node as an Urban Growth Centre and assigned it a density target of 200 people and jobs per hectare. The VCC is poised to become the highest density node within the city, but can it become the city's downtown? a thriving mixed-use community, a focus for social and cultural activities, and a place that gives the city a recognizable identity? Below are some of the more specific questions to be addressed by the Official Plan process as it develops a vision, policies and strategies for the VCC.

- What is the capacity of the VCC to accommodate population and job growth? What are the appropriate densities in the Node and elsewhere in the VCC?
- What is the capacity of the VCC to accommodate population and job growth? What are the appropriate densities in the Node and elsewhere in the VCC?
- Cultural, educational and civic uses are an important component of vibrant downtowns. In addition to transit, a significant public investment in the VCC such as—a university or college campus, hospital or major park, for example, might provide a catalyst for other development. Which institutional uses should the City seek to locate in the VCC?
- Successful downtowns typically are surrounded by healthy neighbourhoods full of residents who will regularly rely on the downtown for shopping, services, entertainment and jobs. The VCC is surrounded by industrial uses. How can it be

better connected to established communities? Should it have a high proportion of housing to compensate for the non-residential context?

- Apartment and office buildings are clearly appropriate in the VCC. What other forms could new housing and employment take?
- Which urban design policies are needed to ensure the City's objectives for built form, parking and the public realm are achieved?
- Landowners in the VCC may not respond to new land use policies and public transit investments in a timely way. Will incentives and other innovative implementation tools be necessary to stimulate appropriate development and achieve the urban design vision for the centre?

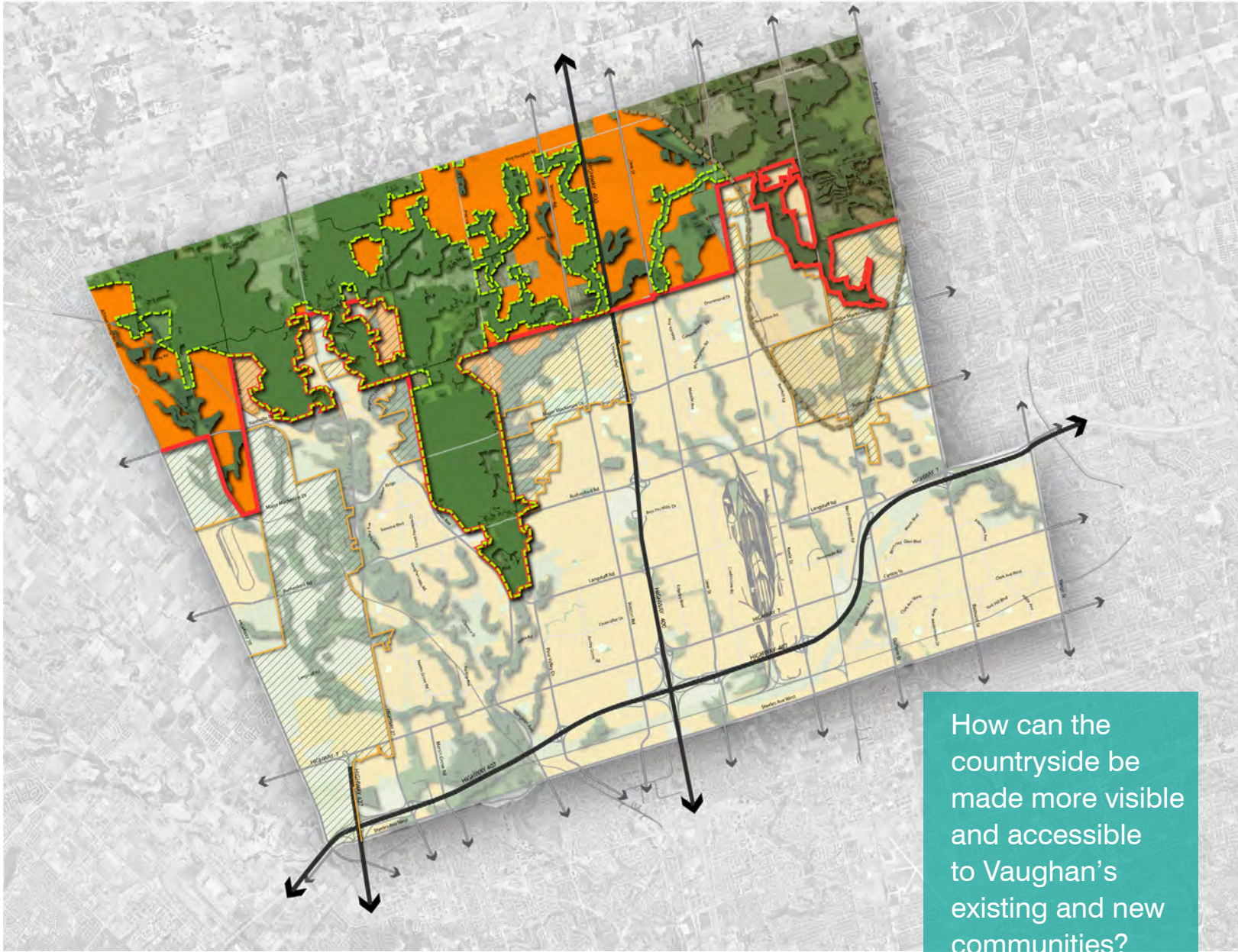


Vaughan Corporate Centre








Vaughan's countryside

There is increasing awareness about the value of the countryside to cities, for food production, for recreation, for tourism and above all to maintain the health of the environment. The establishment of the Greenbelt and the protective policies that apply to the Oak Ridges Moraine are responses to this awareness. But what is the future of the balance of Vaughan's rural/agricultural lands?



Legend

-  Designated Greenfield
-  Greenbelt
-  Oak Ridges Moraine
-  Whitebelt Area
-  Countryside Line

How can the countryside be made more visible and accessible to Vaughan's existing and new communities?

Countryside

Together, the Province's Growth Plan for the Greater Golden Horseshoe, the Greenbelt Plan and the Oak Ridges Moraine Plan, are intended to:

- protect prime agricultural lands and important natural features;
- lead to more efficient use of developed land and public infrastructure;
- promote compact new communities and the intensification of built-up areas.

Both the Greenbelt and the Oak Ridges Moraine will have a significant influence on the future urban structure of Vaughan, since the applicable legislation prohibits urban development in vast areas across the northern tier of the city.



Are there opportunities to build dense, compact and complete communities within Vaughan's "whitebelt" areas?

The strong presence of significant natural features and agrarian landscapes in Vaughan creates an opportunity for the city to evolve as a unique urban and rural place. As the Official Plan process addresses the structure of Vaughan's urbanized areas and how it can be enhanced, it will also need to consider how rural areas might evolve. These are some of the issues to be addressed:

- Development in Vaughan to date has largely eradicated the rural landscape, steadily pushing the line between city and countryside northward. As an alternative approach, should the City establish a permanent "countryside line" and develop one set of policies for community development in the "cityside" and another for development in the "countryside"?
- Within the Greenbelt and between it and the Moraine are significant pockets of rural land currently outside the city's urban boundary and not covered by the new land use regulations. These so-called "whitebelt" areas have the potential to accommodate future growth. What land uses and densities are appropriate in these areas, and what form should development take? Given the appropriate uses, densities and forms, what is the capacity of these areas to accommodate new residents and new jobs?
- Are there whitebelt areas within or adjacent to the Greenbelt that currently perform or could perform important agricultural or ecological functions within the city's urban structure, and therefore should be considered part of the Greenbelt?
- Are there opportunities to create environmental and recreational open space linkages in the countryside to reinforce its presence in the city and enhance natural features?



Summary of key questions

The pattern of infrastructure and land uses rapidly developed over the Vaughan landscape in the past four decades has played a significant role in defining the city's character and quality of life. To chart a course for managing future growth and change that enhances the city, the new Official Plan will need to be based on a comprehensive vision of how the city's urban structure should evolve.

This paper has posed many questions to be addressed as a new vision and structure are developed. Below is a summary of fundamental questions:

- How can Vaughan’s urban structure facilitate and promote walking, cycling and transit use while accommodating private vehicles?
- Does Vaughan need a broader hierarchy of employment areas to distinguish different types and encourage a greater variety of employment uses and opportunities across the city?
- Should future office buildings be strategically located in nodes and corridors?
- How can social and commercial hubs be reinforced and better connected to neighbourhoods?
- Where are the best locations for high density housing, and how can it be integrated into existing and new communities?
- Should conservation lands and other natural heritage be made more accessible and visible to enhance the identity of communities and benefit all residents?
- What is the potential of Vaughan’s commercial nodes and corridors to attract and accommodate new housing and employment uses?
- How should Vaughan’s commercial areas evolve to support growth, a mix of uses, community building and placemaking?

- Where should future public transit investments be focused to support growth and reurbanization?
- What is the capacity of the Vaughan Corporate Centre to accommodate population and job growth? Can it evolve to become a vibrant, healthy, mixed-use downtown?
- Should the City establish a permanent “countryside line” to guide growth and develop new models for community development on rural lands?
- What are the appropriate environmental and land use roles for Vaughan’s “whitebelt” areas?
- How can natural features be reinforced within existing and new communities?