

City of Orillia
Official Plan

August 2026



Contents

1	Introducing the Our Orillia Official Plan	1
1.1	Orillia's Past & Present.....	1
1.2	Purpose of this Plan.....	7
1.3	How to Read this Plan	8
2	Vision and Guiding Principles.....	10
2.1	Looking Towards Orillia's Future	10
2.2	Guiding Principles	11
3	Growth and Development.....	14
3.1	Introduction.....	14
3.2	Growth Forecasts and Planning Objectives	15
3.3	City Structure.....	17
3.4	Land Use Designations.....	28
3.5	Urban Design and Built Environment.....	54
3.6	Housing Supply and Affordability	67
3.7	Public Service Facilities.....	69
4	Transportation and Mobility	70
4.1	Introduction.....	70
4.2	Transportation and Mobility Policies	70
4.3	Trails	80
4.4	Public Transit.....	83
4.5	Parking, Loading, and Access	85
4.6	Goods Movement	89
4.7	Transportation Demand Management and Smart Mobility	90

5	Parks and Open Space	92
5.1	Introduction.....	92
5.2	Open Space Network Policies.....	93
6	Cultural Heritage	99
6.1	Introduction.....	99
6.2	General Policies	99
7	Economy.....	104
7.1	Introduction.....	104
7.2	Economic Drivers	105
8	Environment and Climate Change	110
8.1	Introduction.....	110
8.2	Natural Heritage System.....	111
8.3	Water Resources	120
8.4	Energy Conservation and Climate Change.....	131
8.5	Natural Hazards	134
8.6	Human-Made Hazards.....	138
8.7	Aggregate Resources.....	140
9	Infrastructure	143
9.1	Introduction.....	143
9.2	Water and Wastewater	143
9.3	Stormwater.....	144
9.4	Utilities and Pipelines.....	147
10	Implementation	149
10.1	Introduction.....	149
10.2	Monitoring.....	149
10.3	Implementation Tools	150

10.4 Planning and Development Controls..... 158

10.5 Planning and Development Applications..... 162

10.6 Consultation and Engagement 167

10.7 Glossary 168

Appendices.....189

1 Introducing the Our Orillia Official Plan

1.1 Orillia's Past & Present

The City of Orillia is situated on the traditional territory of the Anishinaabeg, specifically the Chippewas of Rama First Nation, a member of the Chippewa Tri-Council and Three Fires Confederacy, and it continues to be home to many diverse First Nations, Metis and Inuit Peoples. The City acknowledges that this land is covered by the Williams Treaties and Upper Canada Treaties signed by governments on behalf of the Anishinaabe and Canadian Peoples and was once part of the Coldwater-Narrows Reserve.

Recognizing the lives, cultures, and Peoples of this land, the Our Orillia Official Plan builds on the City's commitment to reconciliation.

Indigenous Settlement

The area in which the City of Orillia is located is some of the oldest known human settlement in present day Canada. The Mnjikaning Fish Weirs were built on the narrows between Lake Simcoe and Lake Couchiching several thousand years ago, before recorded history, and have been stewarded by Indigenous peoples in the centuries since.

Text Below Adapted from Chippewas of Rama First Nation

The Chippewas of Rama First Nation are an Anishinaabe (Ojibway) community located at Rama First Nation, Ontario. As Anishinaabeg, their history begins with a beautiful creation story. Lowered to Shkakmii-Kwe (Mother Earth), their ancestors became a part of creation and lived in harmony with all of their relations. For a long time, this is how it was.

Going back tens of thousands of years, their ancestors and the ancestors of many other Nations were the only people on Turtle Island (North America). Their ancestors co-existed with other

Nations. There were times of peace and there were times of war. Alliances were formed, trade networks established, social norms, ceremonies, customs, and tools were adapted and evolved. Much of their history before the arrival of Europeans remains only in ancestral memory and aadzookaanag (sacred stories) – stories which we are still learning.

As First Nations people and as Anishinaabeg, they have always relied on Shkakkii-Kwe. Their ancestors followed seasonal cycles of food and resource harvesting, which were all a part of the natural laws their ancestors understood.

In Niibin (summer) their ancestors travelled to fisheries and Mnjikaning (the place of the fish fence), harvesting large amounts of tikmeg (whitefish), kewis (herring), gnoozhe (pike), ogaa (walleye), and nmebin (suckers). These giigoonyag (fish) were smoked and added to food stock for surviving winter. Mshkikiwan (medicines) and berries such as odeminan (strawberries), datgaagminag (blackberries), miinan (blueberries) and mskominag (raspberries) were picked throughout the summer.

Beginning late Niibin into Dgwaagi (fall), their ancestors harvested from their small and large gtigaanan (gardens). While their ancestors did not farm on the same scale as other Nations, they did grow important root vegetables. Late Niibin also saw the harvest of mnoominan (wild rice). Their ancestors harvested mnoominan from the many lakes it grew upon, and mnoominan was arguably our most important food, sustaining their people through the barren winter months.

Dgwaagi started the migration into Misko Aki (Muskoka) and other ndawenjge ki (hunting lands). Kwewag (women) and binoojiinyag (children) typically stayed behind as the niniwag (men) and shkinweg (young men) travelled to ndawenjgewag. The waawaashkeshi (deer), mooz (moose), amik (beaver), wabooz (rabbit), gaag (porcupine), zhaashk (muskrat), and zhiishiib (duck) were and still today are hunted throughout our ndawenjge kiing. All parts of the animal are used, and for most of their history, have provided clothing, bags, ceremonial items, and mshkikiwan.

In Bboon (winter), families overwintered together, and we sometimes even stayed with allied Nations. Bboon was a time for rest, storytelling, teachings, and family. There was dawenjgewag and ancestors also fished through the ice at times too. Their ancestors largely relied on their preparations from summer and fall to survive the winter. Their kinship, trading, ndawenjgewag, and harvesting determined whether they could survive Bboon or not.

The welcome melt of snow meant zisbaakwad (maple sugar). Entire communities mobilized to harvest sap from the sacred ninaatig (maple tree), which they spent weeks boiling down into zisbaakwad. Zisbaakwad was added to their miijim (food); a welcome treat after a long Bboon. gtigaanan andg) started the visiting of fisheries during the early giigoonh (fish) runs, planting our

gtigaanan, and harvesting first mshkikiwan. It was a time to repair tools, weapons, and resources, to visit with other families and trade with other Nations, and to visit.

These seasonal patterns reflected the natural laws to which their ancestors were bound and to which they live their lives today. Their ancestors knew that in not following these laws, they and their relations would struggle. They relied on their adherence to these laws and vast traditional ecological knowledge to survive. Today they see these laws reflected in medicine wheel teachings and through their worldview as Anishinaabeg.

Their history in Ontario begins with a great migration from the East Coast of Canada into the Great Lakes region. With no Western concepts of property ownership nor borders, Nations self-governed by wampum agreements, doodemnaan (clans) and political alliances. Throughout a period of several hundred years, their direct ancestors again migrated to the north and eastern shores of Lake Huron and Georgian Bay.

Elders say that they made room in their territory for allies, the Wendat Nation, during their times of war with the Haudenosaunee. Following the dispersal of the Wendat Nation from the region in the mid-1600s, their stories say that we reclaimed our territories in what today is known as Muskoka and Simcoe County. Several major battles with the Haudenosaunee culminated in peace being agreed between the Anishinaabe and the Haudenosaunee, after which the Haudenosaunee agreed to leave the region and remain in southern Ontario. Since the early 18th century, much of central Ontario into the lower parts of northern Ontario has been Anishinaabeg territory.

The more recent history of Rama First Nation begins with the creation of the “Coldwater Narrows” reserve, one of the first reserves in Canada. The Crown intended to relocate their ancestors to the Coldwater reserve and ultimately assimilate their ancestors into Euro-Canadian culture.

Underlying the attempts to assimilate their ancestors were the plans to take possession of their vast hunting and harvesting territories. Feeling the impacts of increasingly widespread settlement, many of their ancestors moved to the Coldwater reserve in the early 1830s. Their ancestors built homes, mills, and farmsteads along the old portage route which ran through the reserve, connecting Lake Simcoe to Georgian Bay (this route is now called “Highway 12”). After a short period of approximately six years, the Crown had a change of plans. Frustrated at their ancestors continued exploiting of hunting territories (spanning roughly from Newmarket to the south, Kawartha Lakes to the east, Meaford to the west, and Lake Nipissing to the north), as well as unsuccessful assimilation attempts, the Crown reneged on the promise of reserve land. Three of their Chiefs, including Chief Yellowhead, went to York (Toronto) under the impression they were signing documents affirming their ownership of land and buildings. The Chiefs were misled, and allegedly surrendered the Coldwater reserve back to the Crown.

Their ancestors, then known as the Chippewas of Lakes Simcoe and Huron, were left landless. Earlier treaties, such as Treaty 16 (1815) and Treaty 18 (1818), had already resulted in nearly 2,000,000 acres being allegedly surrendered to the Crown. The Chippewas made the decision to split into three groups. The first followed Chief Snake to Snake Island and Georgina Island (today known as the Chippewas of Georgina Island). The second group followed Chief Aissance to Beausoleil Island, and later to Christian Island (Beausoleil First Nation). The third group, led by Chief Yellowhead, moved to the Narrows between Lakes Simcoe and Couchiching and eventually, Rama (Chippewas of Rama First Nation).

A series of purchases using Rama's own funds, resulted in Chief Yellowhead purchasing approximately 1,600 acres of abandoned farmland in Rama Township. This land makes up the core of the Rama Reserve today, and they have called it home since the early 1840's. Their ancestors began developing the community, clearing fields for farming and building homes. They continued to hunt and harvest in their ndawenjge ki (hunting grounds) up until the early 1920's. In 1923, the Williams Treaties were signed, surrendering 12,000,000 acres of previously unceded land to the Crown. Once again, their ancestors were misled, and they were informed that in surrendering the land, they gave up their right to access their seasonal traditional hunting and harvesting territories.

With accessing territories difficult, their ancestors turned to other ways to survive. Niniwag (men) guided tourists around their former family ndawenjge ki in Misko Aki (Muskoka), showing them places to fish and hunt. Others worked in lumber camps and mills. Kwewag (women) made crafts such as porcupine quill baskets and black ash baskets, and sold them to tourists visiting Simcoe and Muskoka. The children were forced into Indian Day School, and some were taken away to Residential Schools. Church on the reserve began to indoctrinate our ancestors. Their community, along with every other First Nation in Canada, entered a dark period of attempted genocide at the hands of Canada and the Crown.

With incredible strength, their ancestors persevered, and they kept our culture, language, and community alive. Today, their community has grown to approximately 2,200 members, and is a bustling place, home to approximately 1,100 people living on reserve. They have passed through the darkest part of their history and are now reclaiming their history, ceremonies, language, harvesting, and all of the beautiful things that make them Anishinaabeg. They are a proud and progressive First Nation community.

Establishment of Orillia

The Orillia of today took shape through important transportation connections to Toronto and Georgian Bay and over more than a century of commercial and tourism growth. Today, Orillia remains an important stop on the Trent-Severn Waterway and is a growing community, known for its scenic and natural setting and vibrant core area. Orillia's Downtown and its main street – Mississauga Street, were established parallel to Coldwater Road, the original settlement road giving access to the area.

At around the same time, the land around the Narrows, south of the present-day Downtown core, was where the early European settlers established themselves, alongside the primary water route north. Most of this development was located immediately inland from the lake, between what are now West and Neywash Streets; in other words, north of the current main street and alongside the original settlement road. The population continued to grow, thanks to settlement traffic north to Muskoka which was based on access provided by lake steamers. The economy was not based on farming, however, but rather on the burgeoning logging industry in the area and, to some extent, on tourism. The village already had a resort hotel by the 1850s and, though short lived, this lakeside complex heralded the development of an important tourism industry.

The decade of the 1870s was a turning point in the history of the Downtown and Mississauga Street. In 1870, the village had a population of around 1000; three years later, this number had almost tripled. Lumber was being milled and shipped, and new industries to serve a developing region were being formed. This maturity in community and construction was evident in other ways as well. The local economic base was shifting from logging and railroad construction to commerce, industry and tourism. Local businesspeople were prospering and able to begin investing in local improvements. Some of the early business owners who established themselves in the mid-19th century were now becoming very wealthy and positioned to use their wealth to foster community-building projects.

A Growing City

Orillia was incorporated as a city in 1969. The evolution of the city's Downtown during the 20th century is indicative of the shifts in the local, regional and national culture and economy. Much of the century saw the steady decline of locally owned businesses and the rise of national chains. The growth of suburban residential and commercial enterprises, accelerated by construction of the highway bypass, drew customers away from Downtown stores. As automobile use became ubiquitous, parking became an issue. Especially in the decades immediately following World War II, the emphasis was on new things, and older Downtowns were either neglected or "modernized", while new residential subdivisions came online.

Recognizing the potential for Downtown to attract more people and more development while protecting its small-town feel, City Council adopted the Downtown Tomorrow Plan: Linking Orillia's Core to the Water in 2012. The plan set out a comprehensive, long-term vision for Downtown and identified 33 strategic initiatives intended to help achieve seven goals. Many of the initiatives were pursued and have resulted in significant improvements, including the Orillia Recreation Centre, reinvestments in historic buildings and new residential developments along the waterfront. At the same time, new developments were taking shape in West Orillia which brought new housing, recreation, education, and job opportunities to Orillia. Alongside this growth, Orillia has taken significant steps to protect and enhance its natural environment through the implementation of the Lake Simcoe Protection Plan to provide greater protection along and connections to the city's shorelines.

1.2 Purpose of this Plan

- a) Looking ahead to 2051, Orillia will shift to achieving more growth through infill and intensification within existing built-up areas of the city where adequate infrastructure exists, alongside strategic and well-planned community and employment growth in Designated Growth Areas. This growth will bring many opportunities and challenges, including vibrant urban and suburban places with a strong connection to surrounding rural areas.
- b) Orillia's Official Plan is a visionary, long-range land use plan established in accordance with the *Planning Act* to guide growth and change to 2051. The Official Plan recognizes the challenges of today, while envisioning a future where Orillia is more livable, affordable, and sustainable – a city that works for everyone and where people and nature thrive.
- c) This Official Plan directs growth to areas that can best support new residents and jobs to make efficient use of adequate infrastructure, while also pursuing a more diverse range and mix of housing types and tenures. Leveraging Orillia's existing compact size, a forward-looking City Structure will support long-term financial sustainability for the city, help reduce energy consumption, decrease emissions, provide connections to Downtown and the waterfront, and offer greater choice.
- d) Orillia, as a single-tier municipality, also has many other guiding city-wide plans and strategies that work alongside the Official Plan, like those for parks, economic development, infrastructure, housing, mobility, and the local food system. These plans and strategies should be consulted alongside the Official Plan.
- e) None of the policies of this Plan are intended to commit City Council to provide funding for their implementation. Funding decisions will be made through appropriate city-wide plans, strategies, and budget processes.

1.3 How to Read this Plan

- a) The Official Plan is to be read in its entirety, including Schedules. Policies will generally not be repeated or paraphrased between sections.
- b) The Official Plan contains non-operative components that are intended to tell the story of Orillia, make the Plan more accessible for readers, and clarify the intent of policies and concepts. Non-operative components of this Plan include commentary in shaded sidebars, photographs, and graphics.
- c) The specific language used throughout the policies of this Plan is intentional and indicates a specific course of action:
 - i. “Will” expresses a mandatory course of action, and has the same meaning as “shall”;
 - ii. “Should” or “encourage” expresses that the policy applies to all situations, unless that policy is not reasonable, practical, or feasible for the given situation; and
 - iii. “May” expresses guidance, but with inherent flexibility in the interpretation of the policy to ensure that it responds to individual contexts and that alternative approaches to meet the intent of the policy can be considered.
- d) Words that are underlined in this Plan are to be interpreted as defined terms listed in the glossary. Words that are italicized refer to Provincial legislation.
- e) Throughout the Plan, the Corporation of the City of Orillia will be referred to as the “City”, while the geographic land area and/or residents of Orillia will be referred to as the “city”.
- f) The boundaries identified on the Schedules to this Plan are approximate except where they meet with streets and highways, pipeline routes, transmission lines, the shoreline or other clearly defined physical features, and in these cases, are not open to flexible interpretation.
- g) Where a street or highway separates land use designations, this Plan will be interpreted such that the centre line of the right-of-way represents the boundary between designations.
- h) Where the general intent of the document is maintained, minor adjustments to boundaries will not require amendment to this Plan.

- i) It is recognized that the boundaries of the Natural Heritage System as shown on **Schedules A and C** may be imprecise and subject to change. The City will determine the extent of the Natural Heritage System on a site-by-site basis when considering development proposals, upon receipt of an Environmental Impact Study, in consultation with the appropriate agencies. Minor refinements to the boundaries of the Natural Heritage System and areas, as confirmed through detailed Environmental Impact Studies may occur without an amendment to this Plan.
- j) Minor refinements to the boundaries of natural hazard lands on **Schedule D** may not require an amendment to the Official Plan if a study is undertaken by the City or other agency to refine the extent of the regulatory floodplain. **Schedule D** will be updated through housekeeping amendments from time to time.
- k) Changes to the boundaries of wellhead protection areas and intake protection zones on **Schedule E** will not require an amendment to the Official Plan if a study is undertaken by the Source Protection Authority.
- l) **Schedule F** will be updated through housekeeping amendments from time to time to reflect refinements to former waste disposal sites and associated waste disposal assessment areas as a result of the completion of acceptable studies and receipt of applicable approvals. Minor refinements to the boundaries of the waste disposal assessment areas shown on **Schedule F** resulting from the completion of a D-4 Study to the satisfaction of the City will not require an amendment to the Official Plan.
- m) **Schedule G** will be updated through housekeeping amendments from time to time to reflect minor refinements to the location of roads, including those which do not change the intended use of adjacent land uses as a result of the refinement. Minor refinements to the alignment of trails on **Schedule G** will be updated through regular updates to this Plan and may not require an amendment to this Plan.
- n) **Schedule H** is not intended to identify the precise locations of parks. Changes to **Schedule H** will not require an amendment to this Plan provided the objectives of this Plan with respect the parks system, as set out in the Parks, Recreation, Culture, and Trails Master Plans, is maintained.

2 Vision and Guiding Principles

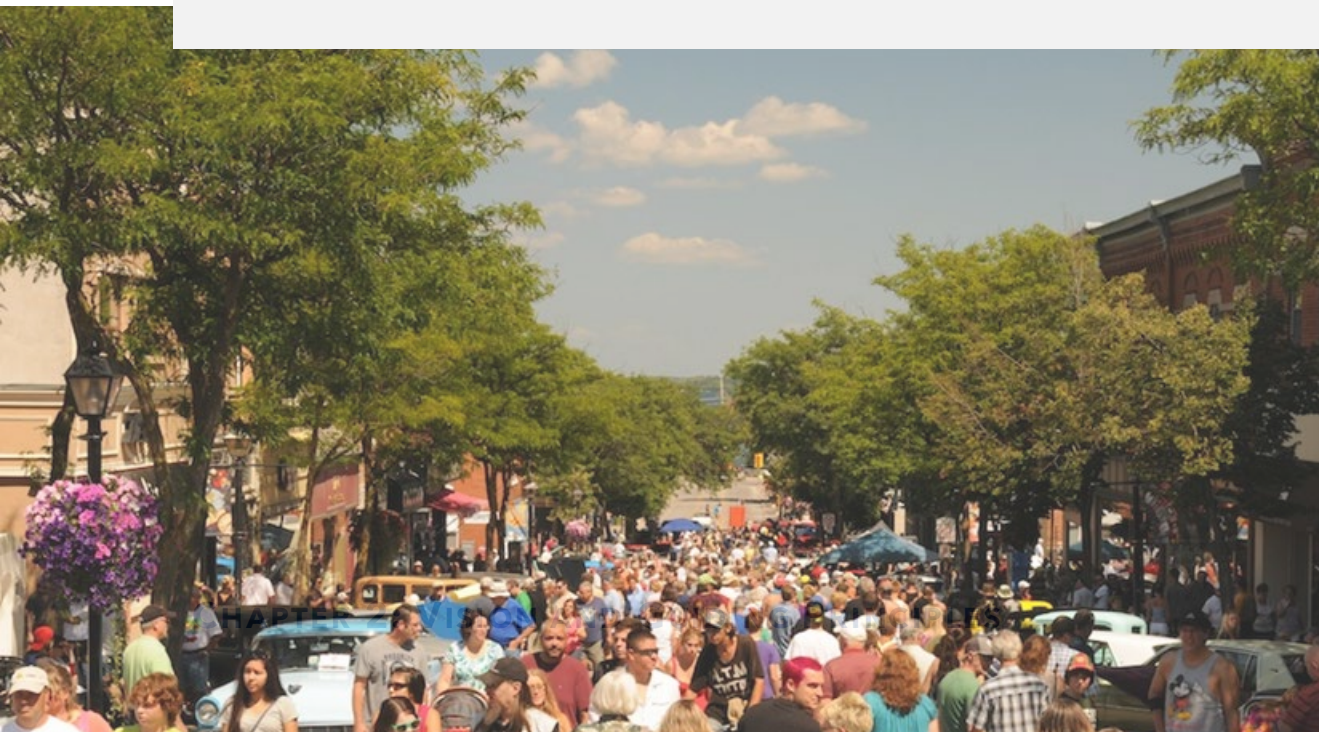
2.1 Looking Towards Orillia's Future

The process of writing Orillia's Official Plan took place between 2023 and 2026. A city-wide plan starts with a shared vision for the future that resonates with all residents. The Our Orillia Official Plan Review process actively sought out new ideas from residents to hear their desires for the future of Orillia. Through the planning process, the City engaged with Chippewas of Rama First Nation, residents, agencies, community groups, businesses, and civic organizations. The process involved City Council and all departments of the City.

Together, a vision and guiding principles represent a desired future state and provides a basis for policy development in the chapters that follow – providing that all elements of the Official Plan work together with intention and consistency.

Vision for 2051

Orillia thrives as a complete community with unique hometown character, linked by commitments to civic and environmental stewardship and providing opportunities for all. With a vibrant Downtown, situated along the Trent-Severn Waterway, we celebrate our culture and heritage in every season.



Four overarching themes are crosscutting throughout the Official Plan. Embedding these themes across the guiding principles reflects the interconnected nature of city-building.

Resilience proactively plans for an uncertain future so that Orillia can withstand, adapt, recover, and thrive in the face of climate change impacts and reduce stresses like affordability.

Inclusion works to equitably distribute the benefits of growth and change across Orillia's neighbourhoods and expand choice, with a focus on equity-denied groups, providing all with a chance to thrive.

Reconciliation seeks to continue to strengthen relationships of mutual respect and understanding with First Nations and urban Indigenous residents, integrating Indigenous perspectives in planning, design, and decision-making processes.

Collaboration recognizes the interdisciplinary nature of city-building and involves all City departments, other orders of government, community members, and agencies in meaningful ways.

2.2 Guiding Principles

To help realize the vision and inform policy contained in this Official Plan, six guiding principles for Orillia's future have been established.

By 2051, Orillia will:

Be a Complete Community

- Support a vibrant Downtown which builds on the city's rich natural and cultural heritage along the waterfront and imagines new legacies.
- Direct more intense growth and development to Strategic Growth Areas that provide a range of services in convenient locations and support more compact new neighbourhood development.
- Promote small-scale retail, service, and community uses that support daily life and food access in neighbourhoods.
- Direct intensification to areas of the City where the infrastructure is available and can support the safety and wellbeing of residents.

Be Leaders in Sustainability & Stewardship

- Collaborate with First Nations and urban Indigenous residents on the shared responsibility to sustain the lands, waters, and resources for the benefit of generations to come.
- Use data about climate and flooding risks to inform decisions and investments.
- Protect and enhance Orillia's Natural Heritage System and tree canopy, connected by a network of parks and trails linked to the waterfront.

Leverage Integrated Mobility & Infrastructure

- Invest in strategic mobility and infrastructure projects and transit service which unlock the City Structure and integrate these investments with housing and jobs.
- Create people-first streets that are safe and attractive for people walking, rolling, biking, taking transit, and driving.
- Future-proof infrastructure with climate resilience in mind.
- Invest in strategic infrastructure improvements to support housing and intensification, in accordance with the City Structure.

Protect and Expand Safe & Affordable Housing

- Allow housing choices for renters and owners to meet the needs of residents throughout all life stages and shifting household structures.
- Use all the tools that Orillia has and collaborate with other orders of government and private builders to support the preservation and creation of affordable homes.

Cultivate a Strong & Diverse Economy

- Plan for and protect Employment Areas for industries that need lots of land or create noise, dust, and vibrations and ensuring that necessary infrastructure and services are available to meet growing demand for current and future jobs.
- Offer opportunities for more businesses to start and grow in Orillia, particularly in the advanced manufacturing, health and wellness, and green industries.
- Grow opportunities for year-round tourism.

Foster Wellness & Creativity

- Offer social supports and connections which support mental and public health, alongside modern health care services.
- Protect and build upon existing cultural heritage resources, and grow Orillia's recreational, cultural industries, and arts opportunities.
- Be leaders in public and private building design excellence.

3 Growth and Development

3.1 Introduction

- a) Growth and development in Orillia over the next 25 years will be guided through this Plan in an iterative manner that starts with overall population and employment growth and filters down to individual buildings on individual sites.
- b) This section mirrors this approach, with the following subsections:
 - i. Growth Forecasts and Planning Objectives establishes the overall expected population and growth for the city to 2051, and sets basic principles for how the city will grow;
 - ii. The City Structure, shown on **Schedule A**, outlines how the growth forecasted for 2051 will be distributed across the city, and what areas will see higher or lower levels of residential, mixed-use, or employment development;
 - iii. The Land Use Designations, shown on **Schedule B**, break the City Structure down and establish permitted uses, building types, and development policies (including heights) on a lot-by-lot basis across the city;
 - iv. The Urban Design and Built Environment policies provide additional direction on how development on individual sites should implement the City's planning objectives, starting with the edges (of the public realm), then the design of the site, then the design of the building(s) on the site; and
 - v. Additional policies are included to direct how housing and public service facilities should integrate with the land use context described in previous subsections.

3.2 Growth Forecasts and Planning Objectives

- a) This Official Plan is intended to guide and enable private and public growth and development in the city which achieves the following planning objectives to:
- i. Accommodate the forecasted population (people) and employment (jobs) growth to 2051 shown in Table 3.1;

Table 3.1: 2051 Growth Forecasts for the City of Orillia

	2021 Census	2051 Forecast
Population	33,411	49,000
Employment	18,500	26,000

- ii. Plan for growth and development in a sustainable way that makes efficient and safe use of existing infrastructure, vacant or underutilized lands and buildings, and existing or planned municipal services;
- iii. Ensure that all new development in the city is supported by municipal water and wastewater services;
- iv. Focus future investments which improve public infrastructure to promote a safe, prosperous, and sustainable urban environment;
- v. Maintain at all times:
 1. The ability to accommodate residential growth for a minimum of fifteen years through lands which are designated and available for residential development; and
 2. Where new development is to occur, land with servicing capacity sufficient to provide at least a three-year supply of dwelling units available through lands suitably zoned for residential uses, including units in draft approved or registered plans;
- vi. Pursue a minimum residential density target of 47 units per hectare for all new residential development in Strategic Growth Areas as shown on **Schedule A**;

- vii. Enable the provision of an adequate supply and appropriate range of housing types and tenures for the current and future residents of Orillia, at all stages of life;
- viii. Enable a pedestrian-oriented, transit-supportive and cyclist-oriented development pattern throughout the city where priority is given, first, to the pedestrian, then to the cyclist and motorist;
- ix. Achieve high quality urban design for new buildings and development, and foster a vibrant public realm and pedestrian environment through private and public development;
- x. Ensure that a full range of shops and public service facilities are in proximity to housing to promote walking and to help reduce automobile trips for existing and future Orillia residents;
- xi. Support healthy lifestyles for Orillia residents through the provision of safe and convenient parks and recreation and active transportation opportunities, clean air and water, and nature;
- xii. Prioritize protection and enhancement of the Natural Heritage System and water resources; and
- xiii. Promote and support the development and utilization of alternative energy systems, including wind, solar and other renewable energy.

3.3 City Structure

3.3.1 Introduction

- a) The City Structure shown on **Schedule A** establishes where and how much residential and employment growth should occur across the city.
- b) The City Structure is further broken into the land use designations found in section 3.4, which will include more detailed policies on permitted uses, development standards, design, and transition.
- c) The City Structure comprises the following unique elements:
 - i. Strategic Growth Areas, inclusive of Downtown, Nodes, and Corridors, where most residential, commercial, and mixed-use development is intended;
 - ii. Employment Areas, which are lands protected for non-residential development to support industry and job growth;
 - iii. Community Areas, which are primarily intended for residential uses and some growth through gentle intensification, as well as parks and open space; and
 - iv. Natural Heritage System, comprising known and/or designated natural heritage features and areas and water resources as well as future restoration and linkage opportunities.
- d) The City Structure also includes the Designated Growth Area overlay, comprising lands within the city's Settlement Area which are identified as Community Areas or Employment Areas, but are not yet developed.

3.3.2 Strategic Growth Areas

3.3.2.1 Intent

- a) Strategic Growth Areas shown on **Schedule A** are the focus of intensification in the city, supporting a higher density and mix of uses, and a compact built form.
- b) Strategic Growth Areas are intended to accommodate the majority of future growth and intensification in the city, whereas Neighbourhoods will accommodate a smaller proportion of the city's future growth and at a modest scale.
- c) Growth and development in Strategic Growth Areas will be guided by the following hierarchy:
 - i. **Downtown** – supports a range of building heights, highest densities, and broadest mix of uses in the city;
 - ii. **Nodes** – concentrated areas of intensification and mixed-use development outside Downtown; and
 - iii. **Corridors** – transit-supportive intensification and mixed-use development along certain portions of Arterial and Collector streets, at lower heights and densities than in Downtown or the Nodes.
- d) Future Strategic Growth Areas may be identified on **Schedule A** through future amendment to this Plan, including in Designated Growth Areas. In these circumstances, development proponents will identify the proposed locations and land use designations for those new Strategic Growth Area through a Neighbourhood Plan, pursuant to section 3.3.6.4 of this Plan.

3.3.2.2 General Policies for Strategic Growth Areas

- a) Growth and development in Strategic Growth Areas will enable increased use of public transit and active transportation and will support walkable communities.
- b) As places of gathering and higher concentrations of people and jobs, Strategic Growth Areas are the focal points of commercial and community amenities in the city such as grocery stores, food banks, farmers markets, community food centres, and other Food Assets that support access to nutritious, affordable, and culturally appropriate food.

- c) Non-residential uses that generate a high number of jobs, such as office uses and institutional uses, are encouraged in Strategic Growth Areas.
- d) Along with Employment Areas, Strategic Growth Areas support the city's long-term economic needs and job growth through the provision of employment opportunities in a mixed-use context.
- e) Light industrial, manufacturing, and warehousing uses that do not create adverse impacts and may be located adjacent to or in close proximity to sensitive land uses are encouraged to be located in all Strategic Growth Areas as part of a complete community.

3.3.2.3 Downtown

- a) Downtown is the historical centre of the city and includes several smaller pockets with their own character. Downtown at present includes heritage main street buildings with a mix of uses, low-rise residential buildings, and low-rise non-residential buildings with surface parking.
- b) Downtown will grow at varying heights and densities, primarily through infill of vacant sites, or through redevelopment of underutilized sites.
- c) Downtown will continue to be the cultural and civic centre of the city with a range of private and public institutional, entertainment, recreational, and cultural uses such as music venues, museums and art galleries that harness the variety of buildings and history of the Downtown.
- d) Direct connections will be encouraged between the Downtown and Lake Couchiching. This will be achieved through a combination of public and private initiatives including, but not limited to:
 - i. The extension of public and private streets, pathways, and other connections to Lake Couchiching;
 - ii. The maintenance and improvement of view corridors to the lake and waterfront parks; and
 - iii. Prioritizing entrances and exits to buildings that provide convenient access to Lake Couchiching.

- e) Downtown has several districts:
- i. The Historic Main Street district is the heart of the Downtown and focused around Mississauga Street. This district will accommodate low-rise mixed-use infill development which conserves existing cultural heritage resources and uses and encourages high-quality architecture that enhances the existing form and function of the district. Along with the Central Core, the Historic Main Street district is to be the cultural core of the city;
 - ii. The Central Core district supports and respects the existing scale of Mississauga Street and the surrounding area, and conserves existing Cultural Heritage Resources. The north and south areas of the district will accommodate mid-rise mixed-use development. The greatest range of uses are encouraged within the Central Core including cultural, institutional, retail, and entertainment uses that activate the street;
 - iii. The West Downtown district will support a range of uses, including residential uses, around the soon-to-be-relocated Orillia Soldiers' Memorial Hospital. When relocated, the site of the hospital represents an intensification opportunity that can accommodate tall buildings while the remaining outer areas of the district will provide mid-rise and low-rise buildings transitioning to areas outside the Downtown;
 - iv. The South Downtown district features a range of former industrial and employment lands and low rise residential neighbourhoods. A mix of uses will be supported with an emphasis on office, commercial and institutional uses. Tall buildings can be accommodated in certain areas of the district with appropriate transitions to outside the Downtown and to the Central Core district; and
 - v. The Downtown Waterfront district is one of Orillia's greatest assets and is what sets Downtown apart from other Downtowns. Public access to the waterfront and convenient connections to the waterfront will be a priority for development in the Downtown Waterfront district. Development will generally be mid-rise in the district with limited opportunities for tall buildings. A mix of uses will be permitted with a balance between residential uses and non-residential uses. Non-residential uses and events throughout the year will cater to residents and visitors to the city.
- f) Downtown will be subject to height and other built form requirements that vary by district, which can be found in section 3.5.4 and on **Schedule B-1**.

3.3.2.4 Nodes

- a) Nodes are Strategic Growth Areas outside Downtown that represent opportunities for mixed-use redevelopment and intensification of large vacant or underutilized sites.
- b) Nodes are typically the site of existing low-rise non-residential buildings and surface parking on larger parcels and may require planning of new internal street networks and infrastructure.
- c) The majority of lands in Nodes will be designated Mixed-Use – Growth. A mix of uses and range of building types, including tall buildings, will be permitted.
- d) Significant and/ or complex development proposals, with the exception of standalone commercial uses, will be supported by a Comprehensive Development Plan pursuant to the policies of section 10.3.3 of this Plan.

3.3.2.5 Corridors

- a) Corridors are Strategic Growth Areas along certain Arterial and Collector streets that will provide growth and development opportunities that are lesser in scale and intensity than the Downtown and Community Nodes.
- b) Corridors are typically the sites of existing low-rise commercial and residential uses on smaller parcels which directly front the street. Development in Corridors will activate and animate this frontage to encourage pedestrian use.
- c) Most lands in Corridors will be designated Mixed-Use – Evolving. A mix of uses is permitted, and a range of building types will be permitted, excluding tall buildings.

3.3.3 Community Areas

3.3.3.1 Intent

- a) Community Areas shown on **Schedule A** comprise the majority of residential lands within the city, as well as parks and open space. Community Areas currently support a limited range of low-rise residential building types and primarily detached dwellings.
- b) Community Areas located in established areas of the city and within Designated Growth Areas present opportunities for both modest intensification, including modest non-residential amenities and job opportunities, in a small-scale and walkable form.
- c) Community Areas will grow and change in a harmonious manner that is compatible with their existing context.
- d) Lowered parking rates may be considered in parts of Community Areas that are walkable to amenities and services to encourage alternative modes of transportation
- e) Lands in Community Areas are designated Neighbourhoods, Neighbourhoods – Evolving, Parks and Open Space, Flex Business, Major Institutional.

3.3.4 Employment Areas

3.3.4.1 Intent

- a) Employment Areas shown on **Schedule A** will support a range of development and uses to support the city's long-term needs for economic development and job growth.
- b) Employment Areas will be municipally serviced, contiguous, and contain a variety of lot sizes to support a broad range of employment uses, including manufacturing, warehousing, and associated uses.
- c) Employment Areas will require separation from sensitive land uses, large lots and access to transportation corridors that can facilitate the movement of goods. This Plan seeks to protect the identified Employment Areas in proximity to Provincial Highways 11 and 12, for uses that are not appropriate in Strategic Growth Areas or Community Areas.
- d) The Employment Areas are further designated as Core Employment on **Schedule B**.

3.3.4.2 Site Plan Control in Employment Areas

- a) The following development in Employment Areas will be subject to Site Plan Control:
 - i. All new development;
 - ii. Redevelopment of a site, including enlargements or replacements of existing facilities, with an existing executed Site Plan Agreement;
 - iii. Redevelopment of a site, including enlargements or replacements of existing facilities, where it has been determined that the use requires an Environmental Compliance Approval or successor from the Province; and
 - iv. Enlargements of existing facilities on a site without an existing executed Site Plan Agreement (and not required an Environmental Compliance Approval or successor from the Province) that would involve an expansion of the floor area by more than 15% of the existing Gross Floor Area.

3.3.4.3 Employment Area Removals

- a) The redesignation of lands in an Employment Area to permit a use not permitted in the Core Employment designation will require the submission of an amendment to this Plan,

which must be supported by a Planning Justification Report, among other reports as required by the discretion of the City, which addresses the criteria provided in this section.

- b) Lands may be redesignated from Core Employment and removed from Employment Areas only where it has been demonstrated that:
 - i. There is an identified need for the removal and the lands in questions are not required for employment uses over the long term;
 - ii. The city has sufficient lands to accommodate projected employment growth to the horizon of this Plan;
 - iii. The proposed uses would not negatively impact the overall viability of the remaining Employment Area by:
 - 1. Avoiding, or where avoidance is not possible, minimizing and mitigating potential impacts to existing or planned Employment Area uses in accordance with Land Use Compatibility Guidelines established by the Province; and
 - 2. Maintaining access to major goods movement facilities and corridors.
 - iv. Existing or planned infrastructure and public service facilities are available to accommodate the proposed uses.
- c) In addition to the criteria in policy 3.3.4.3b), lands may be redesignated from Core Employment and removed from Employment Areas only where it has been demonstrated that the lands:
 - i. Are located at the edge of an existing or planned Employment Area so as not to prevent or disturb the clustering of existing and proposed employment uses;
 - ii. Do not have an existing job density that exceeds 20 jobs per hectare;
 - iii. Do not feature a land use that limits or prevents adequate transportation and civil servicing to the remaining parcels within the Employment Area; and
 - iv. Do not feature a land use that adversely impacts the transportation network and movement of goods in the remaining Employment Area.

3.3.5 Natural Heritage System

3.3.5.1 Intent

- a) The Natural Heritage System is shown on **Schedule A** and further delineated on **Schedule C** and is made up of natural features and areas and water resources prescribed in Provincial policies and legislation.
- b) The Natural Heritage System will contribute to flood mitigation, erosion control, air quality improvements, pollination services, plant and animal life, recreation opportunities and human health.
- c) Development in the Natural Heritage System will be prohibited or minimized, in accordance with the policies of Chapter 8 of this Plan.

3.3.6 Designated Growth Areas

3.3.6.1 Intent

- a) Designated Growth Areas are shown as an overlay on **Schedule A** and comprise those lands which are identified as Community Areas or Employment Areas, but which are not yet developed.
- b) Policies for Designated Growth Areas are intended to ensure that growth is orderly and makes efficient use of existing and planned public service facilities, including schools, and infrastructure.
- c) Realization of Designated Growth Areas will include the integration of active transportation and transit infrastructure that reflects current best practices and helps to extend and/or connect the mobility network and reduce reliance on private vehicles.

3.3.6.2 Land Uses

- a) Development of Community Areas in Designated Growth Areas will incorporate a mix of residential, commercial, institutional (including school sites), recreation, parks and open space uses to support the achievement of complete and walkable neighbourhoods.
- b) Land uses within Designated Growth Areas will promote compact forms and a mix of uses and densities.

3.3.6.3 Phasing

- a) Growth in Designated Growth Areas will proceed in a phased manner outwardly from existing built-up areas in the city, phases will be supported by the availability of municipal water, wastewater, and stormwater management services and their associated capacity.

3.3.6.4 Neighbourhood Plans

- a) New development in Neighbourhoods in Designated Growth Areas which are greater than 20 hectares will require completion of a Neighbourhood Plan, with the cost and associated work borne by the development's proponent(s).
- b) A Neighbourhood Plan will form the basis for all subsequent planning approvals for the lands in question, as well as the basis for any cost sharing or other agreements among the proponents of the development and the City.
- c) A Neighbourhood Plan will include the following components:
 - i. A detailed block and land use plan which:
 - 1. Shows the conceptual layout of the neighbourhood;
 - 2. Identifies Strategic Growth Areas and demonstrates that the minimum overall minimum density target of 47 units per hectare has been achieved in the Strategic Growth Areas;
 - 3. Identifies the proposed mix and location of land uses and densities, including the proposed land use designations; and
 - 4. Demonstrates multi-modal access to local commercial, institutional, recreation, parks and open space uses from all residential uses.
 - ii. Comprehensive streetscape, parks, open space, and trails plans which:
 - 1. Identify the function, design and treatment of all the street types and future transit routes;
 - 2. Identify the trails network and the location of all public sidewalks, including mid-block connections; and

3. Include a detailed layout that identifies the locations and linkages between proposed parks and storm water management facilities.
 - iii. Servicing plan, including, but not limited to the provision of water, wastewater and/or utilities; and
 - iv. An assessment of how pupil accommodation from each publicly funded school board will be addressed in the Neighbourhood Plan.
- d) Apartment buildings should be located at highly accessible locations within 400 metres of planned public transit stops, parks, community facilities and local commercial uses.
- e) All the available lands within the Neighbourhood Plan area are to be subdivided into a series of development blocks. The size and configuration of each development block will:
- i. Be appropriate for its intended use;
 - ii. Facilitate and promote active transportation, particularly for pedestrian movement across blocks; and
 - iii. Provide a sufficient number and, where appropriate, a range of building lots to achieve cost effective and efficient development.
- f) Each lot in a block will:
- i. Have frontage on a public street, or private street if the development is part of a plan of condominium; and
 - ii. Be of sufficient size and appropriate configuration to accommodate development that conforms with the policies of section 3.5 and any other applicable policies in this Plan.

3.4 Land Use Designations

3.4.1 Introduction

- a) Land use designations shown on **Schedule B** apply direction related to permitted uses and specific development criteria (e.g., building heights) to areas across the City Structure.
- b) Land use designations are organized as follows:
 - i. Strategic Growth Areas:
 - 1. Mixed-Use – Growth;
 - 2. Mixed-Use – Evolving;
 - ii. Community Areas:
 - 1. Neighbourhoods;
 - 2. Neighbourhoods – Evolving;
 - 3. Parks and Major Open Space;
 - 4. Major Institutional;
 - 5. Flex Business;
 - iii. Employment Areas:
 - 1. Core Employment;
 - iv. Natural Heritage System:
 - 1. Natural Heritage.

3.4.2 General Policies for All Designations

- a) The following uses will be permitted in all land use designations, except the Natural Heritage designation:
 - i. Public service facilities, including libraries, schools, child care centres, community centres, and hospitals, except in the Core Employment or Flex Business designation;
 - ii. Transit facilities;
 - iii. Parks and open space, including both passive and active recreational uses associated with the park or open space;
 - iv. Community gardens and orchards;
 - v. Places of worship, except in the Core Employment designation;
 - vi. Stormwater management facilities;
 - vii. Public and private utilities, including electricity generation facilities and transmission and distribution systems, subject to any regulatory requirements for the utility involved;
 - viii. Public safety facilities, on Arterial or Collector streets; and
 - ix. Legally existing uses.
- b) Any uses that are not expressly permitted through policy 3.4.2a) or the permitted uses of each land use designation will be considered prohibited and will not be permitted except through an amendment to this Plan.
- c) Any proposed development that includes a non-residential use or more than 10 dwelling units may be subject to Site Plan Control.
- d) Development will be directed away from areas of the City where, in the sole discretion of the City, the existing infrastructure is deficient and poses a threat to public health and safety. For the purposes of this Policy, deficient infrastructure includes, but is not limited to, insufficient road allowance width, insufficient road base stability, insufficient pavement width, absence of underground storm sewers and/or absence of sidewalks.

- e) Development in all designations will be subject to additional urban design policies related to public realm, site design, and building design in section 3.5 of this Plan.
- f) Development in all designations will ensure compatibility between uses, including through the following:
 - i. Major facilities and sensitive land uses will be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with Provincial guidelines, standards and procedures; and
 - ii. Within 300 metres of Employment Areas, development will avoid, or where avoidance is not possible, minimize and mitigate potential impacts on the long-term economic viability of employment uses within existing or planned Employment Areas, in accordance with Provincial guidelines.

3.4.3 Mixed-Use - Growth

3.4.3.1 Intent

- a) The Mixed-Use – Growth designation applies to land in Downtown and Nodes, intended to allow for a mix of uses and increased residential densities to support integrated, walkable, transit-oriented communities.

3.4.3.2 Permitted Uses and Buildings

- a) The following uses are permitted in the Mixed-Use – Growth designation in addition to those uses listed in Policy 3.4.2:
 - i. Retail and service commercial uses;
 - ii. Hotels;
 - iii. Office uses;
 - iv. Dwelling units;
 - v. Live-work units;
 - vi. Communal housing;

- vii. Community uses, including food banks and food co-ops;
 - viii. Public service facilities, including civic, cultural and arts uses;
 - ix. Temporary uses, including farmers' markets, food stalls, and stages;
 - x. Parks and open space, including passive and recreational uses;
 - xi. Industrial, manufacturing and warehousing uses that could be located adjacent to sensitive land uses without adverse effects; and
 - xii. Accessory uses.
- b) The following building types as described in policy 3.5.4.2 of this Plan are permitted in the Mixed-Use – Growth designation:
- i. Tall and mid-rise buildings, including:
 - 1. Mixed-use buildings;
 - 2. Apartment buildings;
 - 3. Non-residential buildings; and
 - ii. Low-rise buildings, including:
 - 1. All types of townhouse dwellings;
 - 2. Multiple-unit dwellings;
 - 3. Low-rise apartment-buildings;
 - 4. Mixed-use buildings; and
 - 5. Non-residential buildings.

3.4.3.3 Development Policies

- a) New buildings will be a minimum height of three storeys and a maximum height of twelve storeys.

- b) Notwithstanding policy 3.4.3.3a), the following uses will be exempt from the minimum height requirement:
 - i. Standalone commercial uses; and
 - ii. Institutional uses, including schools and places of worship.
- c) All development will be subject to Site Plan Control, except residential developments of 10 or fewer dwelling units.
- d) Buildings should include a mix of at least two of the principal uses listed in policy 3.4.3.2a), wherever feasible.
- e) Ground floors of buildings in the Mixed-Use – Growth designation should incorporate uses that activate the sidewalk and public realm.
- f) Development on larger sites will create a block pattern through the conveyance of public streets and/or addition of mid-block connections.
- g) Infill development and new development will be compatible and appropriately transition to Neighbourhood lands adjacent to lands designated Mixed-Use – Growth in accordance with the urban design policies of this Plan.
- h) Infill development and new development in Downtown as shown on **Schedule B-1** will respect and reinforce the Historic Main Street character of Mississauga Street and the greater Central Core area in accordance with the urban design policies and the cultural heritage policies of this Plan.
- i) Townhouses, stacked townhouses, and/or back-to-back townhouses:
 - i. May be incorporated into the podium of tall or mid-rise buildings, except on Flex streets; and
 - ii. May be developed as standalone blocks to transition to adjacent low-rise areas on larger development sites.

3.4.4 Mixed-Use - Evolving

3.4.4.1 Intent

- a) The Mixed-Use – Evolving designation applies to lands in Corridors and is intended to allow for a mix of uses and increased residential densities on underutilized lands along key Arterial streets in the city.

3.4.4.2 Permitted Uses and Buildings

- a) The following uses are permitted in the Mixed-Use – Evolving designation in addition to those uses listed in policy 3.4.2.a:
 - i. Retail and service commercial uses;
 - ii. Office uses;
 - iii. Hotels;
 - iv. Dwelling units;
 - v. Live-work units;
 - vi. Communal housing;
 - vii. Community uses, including food banks and food co-ops;
 - viii. Public service facilities;
 - ix. Civic, cultural and arts uses;
 - x. Parks and open space, including passive and recreational uses;
 - xi. Industrial, manufacturing and warehousing uses that could be located adjacent to sensitive land uses without adverse effects; and
 - xii. Accessory uses.

- b) The following building types as described in policy 3.5.4.2 of this Plan are permitted in the Mixed-Use – Evolving designation:
 - i. Mid-rise buildings, including:
 - 1. Mixed-use buildings;
 - 2. Apartment buildings; and
 - 3. Non-residential buildings.
 - ii. Low-rise buildings, including:
 - 1. All types of townhouse dwellings;
 - 2. Multiple-unit dwellings;
 - 3. Low-rise apartment-buildings;
 - 4. Mixed-use buildings; and
 - 5. Non-residential buildings.

3.4.4.3 Development Policies

- a) New buildings will be a minimum height of three storeys and a maximum height of eight storeys.
- b) Notwithstanding policy 3.4.4.3a), the following uses will be exempt from the minimum height requirement:
 - i. Standalone commercial uses; and
 - ii. Institutional uses, including schools and places of worship.
- c) All development will be subject to Site Plan Control, except residential developments of 10 or fewer dwelling units.
- d) Ground floors of buildings in the Mixed-Use – Evolving designation should incorporate uses that activate the sidewalk and public realm.

- e) Infill development and new development will be compatible and appropriately transition to low-rise residential areas located on lands adjacent and in proximity to lands designated Mixed-Use – Evolving, in accordance with the urban design policies of this Plan.
- f) Deeper development sites are encouraged to be redeveloped with internal development blocks that align with neighbouring sites to allow for pedestrian connections.

3.4.5 Neighbourhoods

3.4.5.1 Intent

- a) The Neighbourhoods designation applies to lands in Community Areas which are intended to support housing, including modest growth and infill development.

3.4.5.2 Permitted Uses and Buildings

- a) The following uses are permitted in the Neighbourhoods designation in addition to those uses listed in policy 3.4.2.a:
 - i. Dwelling units, including additional dwelling units;
 - ii. Communal housing;
 - iii. Public service facilities;
 - iv. Home occupations;
 - v. Bed and breakfasts; and
 - vi. Accessory uses.
- b) The following building types as described in policy 3.5.4.2 of this Plan are permitted in the Neighbourhoods designation:
 - i. Low-rise buildings, including single detached dwellings and multiple-unit dwellings; and
 - ii. Semi-detached dwellings and all types of townhouse dwellings, subject to an amendment to the implementing Zoning By-law.

3.4.5.3 Development Policies

- a) Buildings will have a maximum height of three storeys.

- b) Infill development and new development will be compatible, will not result in undue adverse impacts on surrounding properties, and appropriately transition to low-rise residential areas located on lands adjacent and in proximity to lands designated Neighbourhoods, in accordance with the urban design policies of this Plan.

3.4.6 Neighbourhoods - Evolving

- a) The Neighbourhoods - Evolving overlay applies to parcels designated Neighbourhood which front on Arterial or Collector streets and is intended to support a modest increase in residential density and flexibility for land uses.

3.4.6.2 Permitted Uses and Buildings

- a) The following uses are permitted on lands subject to Neighbourhoods - Evolving policies in addition to those uses listed in policies 3.4.2a) and 3.4.5.2:
 - i. Small-scale retail or service commercial uses, including live-work units;
 - ii. Public service facilities; and
 - iii. Accessory uses.
- b) The following building types as described in policy 3.5.4.2 of this Plan are permitted on lands subject to Neighbourhoods - Evolving policies in addition to those buildings listed in policy 3.4.5.2b):
 - i. Apartment buildings; and
 - ii. Mixed-use buildings.

3.4.6.3 Development Policies

- a) Buildings will be a maximum height of four storeys.
- b) Infill development and new development will be compatible, will not result in undue adverse impacts on surrounding properties, and appropriately transition to low-rise residential areas located on lands adjacent and in proximity to lands designated Neighbourhoods, in accordance with the urban design policies of this Plan.

3.4.7 Parks and Major Open Space

3.4.7.1 Intent

- a) The Parks and Major Open Space designation applies to those lands contributing to the city's open space network, providing recreational opportunities including City-owned parks, private cemeteries or golf courses, and other privately or publicly owned open spaces (including the city's Waste Diversion Site).
- b) The open space network will be maintained with facilities that meet the recreation needs of residents, tourists, and visitors in accordance with the Parks, Recreation, Trails, and Culture Master Plan.
- c) Any changes to the Parks and Major Open Space designation on **Schedule B** will require an amendment to this Plan. Changes to **Schedule H** will not require an amendment to this Plan provided the objectives of this Plan with respect the open space network is maintained.

3.4.7.2 Permitted Uses and Buildings

- a) The following uses are permitted in the Parks and Major Open Space designation:
 - i. Passive and active recreation uses, including golf courses;
 - ii. Conservation uses;
 - iii. Cemeteries;
 - iv. Public service facilities;
 - v. Commercial and/or office uses accessory and subordinate to uses in i. to iii. above;
 - vi. Urban agriculture; and
 - vii. Public uses and public and private infrastructure.
- b) The following building types as described in policy 3.5.4.2 of this Plan are permitted in the Parks and Major Open Space designation:
 - i. Non-residential buildings.

3.4.7.3 Development Policies

- a) The City will retain, where appropriate, City-owned lands in this designation in public ownership and use these lands for public purposes. It is expected that privately owned lands in this designation will also continue to contribute to the overall open space network of the city.
- b) Lands designated Parks and Open Space will be developed in accordance with the policies of Chapter 5.

3.4.8 Major Institutional

3.4.8.1 Intent

- a) The Major Institutional designation applies to those lands that facilitate the development of major institutional uses to support the local community and offer regional services including, but not limited to, post-secondary education and government offices.
- b) Major Institutional lands will be discouraged from conversion to other land use designations as they are among the largest employers in the city and support a resilient economy.

3.4.8.2 Permitted Uses and Buildings

- a) The following uses are permitted in the Major Institutional designation in addition to those uses listed in policy 3.4.2a):
 - i. Facilities related to Federal, Provincial, or City service delivery and administration;
 - ii. Post-secondary education, including associated recreation;
 - iii. Housing for students and/or staff of any institutional use;
 - iv. Public service facilities;
 - v. Communal housing;
 - vi. Existing cemeteries; and
 - vii. Accessory or ancillary retail and service commercial uses.

- b) The following building types as described in policy 3.5.4.2 of this Plan are permitted in the Major Institutional designation:
 - i. Mid-rise and low-rise buildings, including:
 - 1. Mixed-use buildings;
 - 2. Apartment buildings; and
 - 3. Non-residential buildings.

3.4.8.3 Development Policies

- a) Buildings will be a maximum height of eight storeys.
- b) All new development will be subject to Site Plan Control.
- c) New development may require the preparation of a Comprehensive Development Plan.

3.4.9 Flex Business

3.4.9.1 Intent

- a) The Flex Business designation is intended to provide for a broad range of industrial, commercial, and office uses which benefit from separation from sensitive uses and close proximity to Employment Areas, and proximity to Provincial Highways 11 and 12 for goods movement.

3.4.9.2 Permitted Uses and Buildings

- a) The following uses are permitted in the Flex Business designation in addition to those uses listed in policy 3.4.2a):
 - i. Manufacturing uses, including construction and research and development;
 - ii. Warehousing, logistics, and transportation terminals;
 - iii. Retail and service commercial uses;
 - iv. Offices and medical care clinics; and
 - v. Accessory uses.
- b) The following building types as described in policy 3.5.4.2 of this Plan are permitted in the Flex Business designation:
 - i. Non-residential building.

3.4.9.3 Development Policies

- a) Lands may be redesignated from Flex Business only through an amendment to this Plan, where it has been demonstrated that:
 - i. The lands do not have an existing job density that exceeds 20 jobs per hectare;
 - ii. There is a need for the proposed use, and that the function and total job yield of the lands can be maintained or improved through the redevelopment of the lands;
 - iii. The proposed uses on the lands will not create issues of access to major goods movement facilities and corridors, especially in adjacent Core Employment lands;

- iv. The proposed uses will not adversely affect the overall economic viability of the city's Employment Areas by limiting the future development of any Core Employment or Flex Business lands for uses permitted in those designations;
- v. The proposed redesignation will not introduce new sensitive land uses within 300 metres of lands designated Core Employment; and
- vi. The lands offer limited market supply potential for a permitted use in the Flex Business designation.

3.4.10 Core Employment

3.4.10.1 Intent

- a) The Core Employment designation is intended to provide for industrial uses which require large lots, separation from sensitive uses, and proximity to Provincial Highways 11 and 12 for goods movement.

3.4.10.2 Permitted Uses and Buildings

- a) The following uses are permitted in the Core Employment designation in addition to those uses listed in Policy 3.4.2a):
 - i. Manufacturing uses, including construction and research and development;
 - ii. Warehousing, logistics, and transportation uses;
 - iii. Retail uses and office uses that are associated with uses mentioned in subparagraphs i. and ii.;
 - iv. Existing uses that were lawfully established as of October 20, 2024; and
 - v. Accessory uses.
- b) The following uses are prohibited in the Core Employment designation:
 - i. Residential uses;
 - ii. Commercial uses, including retail and office uses, that are not associated with a permitted use;
 - iii. Public service facilities and other institutional uses; and
 - iv. Other sensitive land uses that are not ancillary to a permitted use.
- c) The following building types as described in policy 3.5.4.2 of this Plan are permitted in the Core Employment designation:
 - i. Non-residential building.

3.4.10.3 Development Policies

- a) Redesignation of Core Employment lands are subject to the criteria in section 3.3.4.3 of this Plan.
- b) Uses in the Core Employment designation will:
 - i. Meet or exceed Provincial guidelines for noise, odour, and contaminants emissions to protect sensitive land uses and adjacent uses; and
 - ii. Be entirely contained within a building, except for accessory vehicle parking and limited accessory outdoor storage.
- c) Outdoor storage areas will be limited in size and will be screened from public streets and highways through siting and setbacks as well as placement of soft and hard landscaping.
- d) Notwithstanding any other policy in this Plan, a limited amount of visitor parking may, subject to approval by the City, be permitted between a building and its front lot line in the Core Employment designation.

3.4.11 Natural Heritage

3.4.11.1 Intent

- a) The Natural Heritage designation applies to those lands on which known natural heritage features and areas are located, and is intended to protect, maintain, and if possible, enhance those features and associated functions.

3.4.11.2 Permitted Uses

- a) The following uses are permitted in the Natural Heritage designation:
 - i. Conservation uses;
 - ii. Public and private infrastructure; and
 - iii. Passive recreation opportunities which do not require site alteration.
- b) The following building types are permitted in the Natural Heritage designation:
 - i. Buildings or structures necessary for flood or erosion control.

3.4.11.3 Development Policies

- a) No development or site alteration will be permitted in the Natural Heritage designation or on adjacent lands unless it has been demonstrated, through an Environmental Impact Study, that there will be no negative impacts on the natural heritage features and areas or their ecological functions.
- b) Notwithstanding policy 3.4.11.3a), an Environmental Impact Study will not be required for natural heritage features and areas located with a City-owned park as shown on **Schedule H**.
- c) Notwithstanding policy 3.4.11.3a) and 3.4.11.3b), no development or site alteration will be permitted within significant wetlands.
- d) Additional guidance related to lands designated Natural Heritage can be found in section 8.2 of this Plan.

3.4.12 Municipal Services Overlay

- a) Notwithstanding the policies of this Plan, where full municipal water and sewer services are not yet available, development should not occur until services are available. However, development of existing lots of record or infilling on lands identified by the Municipal Services Overlay on **Schedule B** may be permitted, where the extension of the service is not feasible, practical or likely to be available in the foreseeable future, and where no present or immediately foreseeable water or sanitary problem would be further compounded, subject to the following:
- i. The uses are restricted to low effluent producing uses which do not generate large quantities of liquid effluent or create discharge which would be an environmental hazard or present a threat to ground or surface water;
 - ii. The use does not preclude the eventual connection to full services when they become available and does not preclude future intensification;
 - iii. As a condition of development approval, an agreement is entered into with the City to require connection to full municipal services when they become available;
 - iv. A private waste disposal system (if required) can be accommodated on the lot to the satisfaction of the authority having jurisdiction and the proposed private waste disposal system will not be located within any wellhead protection area and/or intake protection zone as identified on **Schedule E** that has a Vulnerability Score of 10;
 - v. New private individual sewage systems located within any wellhead protection area, intake protection zone, and/or significant groundwater recharge area delineated on **Schedule E** and identified as a Significant Drinking Water Threat by the City's Risk Management Official may be permitted only where the lot size for the proposed development is based on the most current version of Provincial guidelines for individual on-site servicing. Lots of record that existed on the effective date of the South Georgian Bay Lake Simcoe Source Protection Plan are exempted;
 - vi. Private individual sewage systems should be located within the yard adjacent to the street or in the side yard, where possible, to facilitate future connection to municipal sewers; and
 - vii. Subject to such conditions as the City deems necessary respecting servicing.

- b) The following lands may be permitted to be developed on private services:
- i. 520, 530, 540 & 546 Harvie Settlement Road;
 - ii. All residentially zoned properties on Grape Island;
 - iii. 65, 71, 77, 85, 95, 107 & 111 Commerce Road;
 - iv. 1382 Wilson Point Road, 4375 & 4381 Huronia Road;
 - v. 829, 831, 833, 835, 837, 841 & 843 Memorial Avenue;
 - vi. 2850, 2875, 2900 & 2925 Old Barrie Road East;
 - vii. 165, 185, 215, 255 & 725 Line 15 North;
 - viii. 2875 Bass Lake Sideroad East; and
 - ix. All residentially zoned properties on Heyden Avenue and the unserviced portion of Victoria Crescent.

3.4.13 Site and Area Specific Policies

3.4.13.1 West Ridge Trailside Neighbourhood Plan

- a) The West Ridge Trailside Neighbourhood Plan (the “Trailside Neighbourhood Plan” or the “TNP”) comprises of approximately 105 ha of land located in West Orillia. The subject lands are situated north of the Lakehead University campus, south of Bass Lake Side Road East, west of the existing Stone Ridge Subdivision and east of Line 15 North. Within the Trailside Neighbourhood Plan is the Trailside Draft Approved Plan of Subdivision (43T-21001).



Residential land uses proposed in the Trailside Neighbourhood Plan may need to consider alternative forms of development to comply with future Municipal or Provincial density requirements. Those alternative forms may be considered in accordance with permitted land uses under the Neighbourhoods designation and will be permitted without further Amendments to the Official Plan. Compliance with the City's Zoning By-law will be required.

All applicable policies of this Plan apply to the Trailside Neighbourhood Plan and to the Trailside Draft Approved Plan of Subdivision "DPS" (43T-21001) save and except for the following policies which are specific to the TNP and to the DPS:

- i. Notwithstanding the Neighbourhoods designation on Intensification_Block 485:

1. An Apartment Building use located on Block 485 of the Trailside DPS (43T-21001), and designated Neighbourhoods will not exceed a height of Sixteen (16) storeys;
 2. Where such an Apartment Building use on Block 485 is abutting an adjacent property line within the Neighborhoods designation, setbacks and step backs for the building podium will be implemented, per policy 3.5.4.3c) of this Plan, to establish an appropriate interface with abutting lower built forms, which would result in the stepping back of the upper floors of the building in accordance with detailed provisions of the Zoning By-law. Property lines abutting a public road allowance are not subject to the setback and stepback provisions; and
 3. The development of an Apartment Building uses must be in conformity with all other policies of this Plan.
- ii. Notwithstanding the Neighbourhoods designation, buildings and lots abutting Stoneridge Boulevard (Arterial street) will present a façade with architectural detailing and landscape features that address the street frontage. Reverse frontage developments will be permitted adjacent to all Arterial streets;
 - iii. Notwithstanding the Neighbourhoods designation, on the property described as Block 488 of the Trailside Draft Plan of Subdivision (43T-21001) a “Local Convenience/Service Retail” use may develop with multiple commercial units, provided the combined maximum gross floor area of the structure will be generally limited to 750 m² for a consolidated local commercial use. The maximum gross floor area per individual commercial use (unit) will generally be limited to 500 m²; and
 - iv. Additional permitted uses for this Block include a variety of local service commercial uses, including but not limited to: Retail, Restaurants /Restaurant drive-thru, Business, Professional or Administrative Offices, Medical Clinics, and Day Care Facilities.
 - v. Elementary and Secondary Schools
 1. If the School Board(s) deem the school site(s) to be surplus and the school block(s) are no longer required, the site(s) will be permitted to develop in accordance with permitted land uses under the Neighbourhoods designation without further Amendments to the Official Plan; and

vi. Parkland Dedication.

1. The Trailside Neighborhood Plan (representing 105 hectares of land) will recognize the existing over-dedication of parkland contribution in the amount of 2.45 hectares from the adjacent Stoneridge Subdivision together with the parkland contributions from the Trailside Draft Plan of Subdivision (43T-21001) of 3.79 hectares. These dedications result in a total parkland contribution of 6.24ha for the entirety of the Trailside Neighborhood Plan as per the requirements of the *Planning Act*;
2. All components of the parks system will be accepted by the City including lands encumbered by the TransCanada PipeLine Limited (TCPL) pipeline right-of-way and be considered as contributions to the parkland dedication requirements of the *Planning Act*. No component of the parks system will be accepted as parkland dedication if it incorporates components of the Natural Heritage System; and
3. That all Medium and High-Density blocks will be required to re-evaluate park land contributions especially if they propose a greater number of units. School blocks and Commercial blocks will also provide separate contributions to parkland as set out by the City's most up to date Parkland Dedication By-law.

vii. Natural Heritage System

1. Development and site alteration, including the location of existing and future stormwater management facilities, may be permitted in the "Natural Heritage" designation; and
 2. Newly proposed infrastructure must comply with the policies of the Natural Heritage System, in conjunction with the findings and recommendations provided in the Environmental Impact Study ("EIS") approved for the TNP (43T-21001).
- b) Site-specific development approvals and land use permissions in West Ridge Trailside granted prior to the approval of this Plan by the Ministry of Municipal Affairs and Housing are deemed to conform with this Plan. Subsequent implementing development applications in West Ridge Trailside will be subject to the land use policy framework in place through the Neighbourhood Plan prior to the approval of this Plan by the Ministry of Municipal Affairs and Housing and will not require an amendment to this Plan.

3.4.13.2 Inch Farm Lands

- a) The Inch Farm Subdivision (43T-90023) is a Draft Approved Plan of Subdivision. Continued development and site alteration, consistent with the existing Draft Approved Plan, associated with the registration and construction of the Draft Approved Plan may proceed, notwithstanding any other policies of this Plan. The Environmental Impact Study requirements associated with potential redline revisions to the zoned Draft Approved Plan will be evaluated in accordance with the Scoped Environmental Impact Study policies of this Plan.
- b) Notwithstanding the Core Employment designation, the following development criteria will apply:
 - i. Parking areas may:
 - 1. Be located between the buildings and adjacent streets;
 - 2. Be located in a front or exterior side yard; and
 - 3. Be located adjacent to roads subject to screening or a landscaped buffer in accordance with the provisions of the implementing Zoning By-law, as amended.
 - ii. Loading/service areas may:
 - 1. Be located at the front or exterior side of the building(s); and
 - 2. Be located adjacent to roads without the requirement for screening or a landscaped buffer.
 - iii. Automotive parts shop will be permitted, and all other automotive related uses will be a permitted use, ancillary to a permitted use as listed in the Core Employment designation; and
 - iv. Outdoor storage areas will be permitted in accordance with the provisions of the implementing Zoning By-law, as amended.

3.4.13.3 Horne Business Park

- a) Notwithstanding the policies of this Plan, parking areas may:
 - i. Be located between the building(s) and adjacent streets;
 - ii. Be located in a front yard or exterior side yard; and

- iii. Be located adjacent to roads subject to screening or a landscaped buffer in accordance with the provisions of the implementing Zoning By-law.
- b) Notwithstanding the policies of this Plan, loading and service areas may:
 - i. Be located at the front or exterior side of the building(s); and
 - ii. Be located adjacent to roads without the requirement for screening or a landscaped buffer.
- c) Notwithstanding the policies of the Core Employment designation:
 - i. Automotive service will be a permitted ancillary use; and
 - ii. Outdoor storage areas will be permitted.

3.4.13.4 Former Huronia Regional Centre Lands

- a) The following policies apply to any proposed development of the former Huronia Regional Centre lands:
 - i. Public parkland dedication will be provided in accordance with the policies of this Plan. The City may accept cash-in-lieu of parkland;
 - ii. Public access to the Lake Simcoe shoreline will be ensured and appropriately secured; and
 - iii. A Shoreline Protection Plan will be prepared and implemented in conformity with the Lake Simcoe Protection Plan. At a minimum, the first 30 metres from the shoreline will be protected as public open space and/or Natural Heritage System.

3.4.13.5 Former Georgian College Lands

- a) Prior to the development of any new building or major expansion of any existing building, the City may require an Environmental Impact Study which will consider development alternatives that minimize the impacts on the existing woodlot on the property.

3.4.13.6 395 Barrie Road

- a) Notwithstanding policy 4.5.1a)ii, on the property known municipally as 395 Barrie Road, parking is permitted to be located between the building and the adjacent road.

3.4.13.7 340 Mississauga Street West

- a) Notwithstanding policy 4.5.1a)ii, on the property known municipally as 340 Mississauga Street West, parking is permitted to be located between the building and the adjacent road.

3.4.13.8 460 West Street South

- a) Notwithstanding the permitted uses in policy 3.4.4.2a), on the property known municipally as 460 West Street South, automotive related uses including vehicular sales and service are permitted uses.

3.4.13.9 600 Sundial Drive

- a) Notwithstanding policy 3.4.4.2b), tall buildings shall be permitted on the property known municipally as 600 Sundial Drive.
- b) Notwithstanding policy 4.5.1a)ii, on the property known municipally as 600 Sundial Drive, parking is permitted to be located between the building and the adjacent road.

3.4.13.10 665 Lacie Street

- a) Notwithstanding policy 3.4.4.2b), tall buildings shall be permitted on the property known municipally as 665 Lacie Street.
- b) Notwithstanding any other policy of this Plan, the property known municipally as 665 Lacie Street may be accessed over a private right-of-way.

3.4.13.11 95 – 175 Murphy Road (SmartCentres)

- a) Notwithstanding the policies of this Plan, parking areas may:
 - i. Be located between the buildings and adjacent streets;
 - ii. Be located in a front yard or exterior side yard; and
 - iii. Be located adjacent to roads subject to screening or a landscape buffer in accordance with the provisions of the implementing Zoning By-law.

3.4.13.12 West Ridge Xchange Lands

- a) Notwithstanding 3.4.3.2 d), the following special policies apply to land legally described as: Part of the East Half of Lots 8 and 9, Concession 2, formerly Township of South Orillia; Part

of the West Half of Lot 7 and Part of Lot 8, Concession 3, formerly Township of South Orillia; and Part of Lot 5, Concession 3, Geographic Township of Orillia, South Division, all now City of Orillia; and, all of which are designated Flex Business on **Schedule B**:

- i. In addition to the permitted uses in policy 3.4.9.2a), the following uses are also permitted on the subject lands:
 1. Offices and research uses of all types including, but not limited to, research and development facilities, information and data processing centres, customer service centres, call centres, and computer programming facilities, telecommunication centres, and office and business service establishments such as printing and equipment rental and repair;
 2. Prestige industrial and manufacturing uses including, but not limited to, machine shops, tool and die establishments, and custom workshops;
 3. Industrial service and supply facilities;
 4. Warehouses;
 5. Child care facilities (existing only);
 6. Retail functions, fitness centres and child care facilities located on the same lot as the industrial, manufacturing and/or office uses provided they are ancillary to the primary use in function and floor space;
 7. Wholesale facilities associated with those uses permitted in sub policies 2. and 3.;
 8. Tourist accommodations/conference uses;
 9. Training centres and trade schools, but shall not include elementary or secondary schools;
 10. Enclosed self-storage facilities within existing industrial buildings only;
 11. Contractor sales;
 12. Micro-industries that support non-noxious uses such as beverage brewing and wine-making;

13. Automotive and recreational vehicle service and rental, parts sales, gas bars, car washes, service stations, auto body repair, and ancillary vehicle sales;
14. Commercial recreational facilities; and
15. Ancillary public uses and public and private utilities.

3.5 Urban Design and Built Environment

3.5.1 Introduction

- a) The vision of this Plan is based in the belief that the livability and physical appeal of a community can be enhanced by the quality, layout, and attractiveness of its built environment, which includes the public realm, design of development sites, as well as new and existing buildings in the city.
- b) The policies in this section are intended to provide the City and development proponents with a consistent roadmap for achieving a built environment which provides:
 - i. An attractive and distinctive city, with connections to the waterfront;
 - ii. A well-defined and accessible public realm, including an interconnected open space network that encourages walking, rolling, and cycling;
 - iii. A transit-supportive and multi-modal development pattern;
 - iv. Integration of new development with existing development through the promotion of compatible development; and
 - v. Building designs which serve a variety of uses, support a range of housing types and tenures.
- c) The City is committed to a high caliber of urban design. The urban design policies of this Plan are intended to ensure a high standard of design and environmental sustainability, to provide guidance to proponents and decision-makers, and provide a framework for public expectations.
- d) Site specific conditions and design considerations should be reflected in the urban landscape. With respect to all urban design policies contained in this Plan, the City will allow appropriate justified variances from these standards without the requirement for an

amendment to this Plan provided that the spirit and intent of the policies are respected, and a high quality of design is maintained.

- e) Orillia's Multi-Year Accessibility Plan will support the design of a community and access to services that foster physical and mental health, facilitates inclusivity and accessibility for people of all ages and abilities.

3.5.2 Public Realm

3.5.2.1 Blocks and Connections

- a) In all areas of the city, development should result in block lengths and layouts which are conducive to multi-modal transportation by not creating unnecessarily long routes to amenities.
- b) Generally, the maximum block length (i.e., distance between public roads) should be:
 - i. 100 metres in Strategic Growth Areas; and
 - ii. 200 metres in Community Areas and Employment Areas.
- c) Where achieving the maximum block lengths above are not feasible via public roads, mid-block pedestrian connections, including paths, trails, and alleys, should be used to break up blocks greater than the maximum.
- d) For development in Designated Growth Areas, the City will require proponents to demonstrate that the maximum block lengths above have been achieved through the draft plan of subdivision.
- e) For development through intensification, the City may request that mid-block connections be provided through the development, either as privately-owned public spaces, easements, or conveyance to the City.

3.5.2.2 Views

- a) **Schedule B-1** shows conceptual views corridors from Downtown to Lake Couchiching. The City will ensure that these views of the waterfront are protected, achieved and enhanced over time.
- b) Where views of Lake Couchiching along public roads have been blocked by development, the City aims to re-establish these open views through the development process.

- c) Any development and/or public works that could negatively impact these views will be required to demonstrate that the views will be preserved and/or enhanced.
- d) Beyond the views shown on **Schedule B-1** all development in the city should seek opportunities to open views to key landmarks, including but not limited to Lake Simcoe and Lake Couchiching, parks and open space, civic buildings, and built heritage resources.

3.5.2.3 Waterfront Design

- a) Development in the Downtown Waterfront district as shown on **Schedule B-1** should focus on connectivity between roads, trails, and parks to encourage safe inviting and interactive spaces. A high standard of hard and soft landscaping will be required and will be maintained in a healthy condition.
- b) With the exception of new single detached or semi-detached dwellings, including additional dwelling units, any new development within Community Areas adjacent to Lake Couchiching or Lake Simcoe will incorporate a water's edge open space and/or trail connection that includes all lands abutting the water's edge, and, at the City's discretion, may be required to dedicate the land to the City.
- c) Enhanced building elevations with special architectural massing or detail on special priority lots which are located in prominent public view will be provided. Priority lots in the Downtown Waterfront district include corner lots, terminating vista lots, lots adjacent to the civic square at the northwest corner of the intersection of Mississauga Street East and Lightfoot Drive, and lots that have views of the Lake Couchiching shoreline.
- d) In addition to street design policies of this Plan and the designation on **Schedule G** of Lightfoot Drive as a Collector street, Lightfoot Drive will be designed as a Collector street, but it is intended to function as a Local street, in effect serving as a Minor Collector street. The planned objective of Lightfoot Drive is not to rapidly move large volumes of traffic from one area of the city to another. Instead, Lightfoot Drive will be designed to accommodate multi-modal transportation with a specific focus on pedestrian and active transportation movement with a sidewalk on one side of the street and a multi-use trail on the other side.
- e) The existing parks adjacent to Lake Couchiching are the primary green open space feature that sets the stage for the level of quality to be emulated throughout the Downtown Waterfront district. Wherever possible, through the development process, the

waterfront parks and trails systems are to be enhanced through additional parkland dedication, high quality landscape design, and where buildings are adjacent, high quality urban architecture.

- f) The development of the Downtown Waterfront district will incorporate a civic square at the northwest corner of the intersection of Mississauga Street East and Lightfoot Drive.
- g) A relatively consistent building edge is important to provide spatial definition and containment to the street for buildings within the Downtown Waterfront district. The front and exterior side walls of buildings should be located within a defined zone on the lot, referred to as “Build-Within Zones”. The implementing Zoning By-law may set both a minimum and maximum setback. It is understood that in some circumstances these “Build-Within Zones” may not be achievable on all sides. The City will use its discretion in the application on the street wall concept on development blocks that have street frontage on more than two sides. The priority focus of the “Build-Within Zones” will be the streetscape along Mississauga Street East, Coldwater Street, Front Street North, and Lightfoot Drive.

3.5.2.4 Streetscape

- a) Pedestrian-friendly roads will be created in Strategic Growth Areas through the provision of sidewalks, appropriately scaled decorative lighting, tree planting, architectural variety and with building wall faces that are designed with consistent setbacks and are aligned with street right-of ways to provide a continuous street edge.
- b) Where space permits, hardscaped boulevards will line the roads, separating pedestrians from vehicles to facilitate safe pedestrian movement.
- c) In retail areas, sidewalks should provide space for outdoor cafes and retail uses. Visual and textural materials should be considered for pedestrian paving to clearly delineate the pedestrian thoroughfare for persons with disabilities and to help limit encroachments.
- d) Street furniture will be coordinated to ensure a consistent and unified streetscape. Furniture will be strategically placed to provide resting places and shade spots for pedestrians.
- e) Benches, waste and recycling receptacles, bicycle racks and tree guards, will be placed with regard for pedestrian comfort and vehicular traffic in and around buildings and parking and loading areas.

3.5.2.5 Tree Canopy

- a) In Strategic Growth Areas, boulevard trees will be provided as part of any development and will be located between the curb and the sidewalk, where viable.
- b) In Community Areas and Employment Areas, trees will be provided as part of any development along the front yard and/or exterior side yards, where viable. Larger street trees will be encouraged along Arterial and Collector streets.
- c) All proposed street trees should be planted in continuous tree trenches to ensure access to adequate soil volumes. Tree trenches should be irrigated and drained, where possible.
- d) A variety of tree species tolerant to the Orillia current and future climate should be used to avoid the creation of a monoculture. Preference will be given to the use of native tree species (see **Appendix 2**) that are suitable to the planting environment.
- e) Proposed tree plantings will align with the City's Tree Canopy and Native Vegetation policy or their successors.

3.5.2.6 Wayfinding and Lighting

- a) Clear signage, wayfinding, and community features should be included in all parts of the public realm, including in new development. These elements support pedestrian comfort, cultural expression, and safety, and help create a more navigable and inclusive public realm.
- b) Pedestrian-scale lighting will be provided to illuminate sidewalks, trails, walkways, pedestrian routes and within parks, courtyards, and urban and civic squares.
- c) Exterior lighting on buildings will be designed to promote pedestrian comfort, safety and provide high quality ambiance. In addition, accent lighting is encouraged where it can emphasize built form and landscape elements.
- d) Only Dark Skies-friendly lighting and LED lighting or equivalent energy efficient technology will be permitted.

3.5.3 Site Design

3.5.3.1 Site Orientation

- a) All development sites will be designed to place buildings toward the street, at a reasonable setback to be determined through the City's Zoning By-law.
- b) Primary access to buildings will, where feasible, be oriented to the street and provide direct access for pedestrians from the sidewalk.
- c) Development will create a street space that is scaled to the pedestrian and is organized to present an appropriate façade to all adjacent public roads to provide interest and comfort at ground level for pedestrians.
- d) Development in Strategic Growth Areas will frame the adjacent street by creating a consistent street wall.
- e) On-site design considerations to support access by active transportation and public transit include the provision of safety features such as appropriate lighting, walkways, traffic calming measures, benches and shade.

3.5.3.2 Corner Lots

- a) Corner lots are good locations for landmark buildings as they have better visibility, light and view opportunities than standard lots. As such, corner sites will define the intersection at which the building is located by architecturally articulating its presence at each corner.
- b) Buildings on corner lots should have the highest level of architectural detail and are encouraged to include prominent visual and vertical architectural features such as a wrap-around porch, bay window, turret feature or a clock tower.

3.5.3.3 Site Landscaping

- a) A high standard of landscaping will be required for all development, in particular on lands adjacent to Provincial Highways 11 and 12, as well as Arterial, Collector, and Flex streets.
- b) Plantings will visually enhance individual sites, screen parking and loading areas and create a consistent landscape treatment along roads with emphasis on providing trees along the roads.

- c) Landscape design will relate to the architecture of the building with particular attention to entrances and windows, architectural massing, rhythm, detailing and sightlines.
- d) Buffer planting will consist of a mix of coniferous and deciduous plant species of a suitable height and configuration to provide a visual screen between adjacent properties during all seasons and, where appropriate, preference will be given to native species.
- e) In parking areas, trees, shrubs and groundcovers should be planted at-grade in wide, continuous planting beds that serve to define pods of parking and provide for pedestrian circulation.

3.5.3.4 Amenity Areas

- a) Where a development includes more than ten dwelling units that are not proposed to be divided into individual lots on municipal roads, outdoor amenity areas will be required.
- b) An outdoor amenity area should be centrally located and of sufficient size to support the creation of a gathering place for the residents of the development and for the installation of shared facilities such as community mailboxes.
- c) The outdoor amenity area will be designed either as a passive sitting area incorporating such amenities as benches, planting beds, trees, shade structures or as an active play area with such amenities as benches, landscaping, curbed play space with safety surfacing and play equipment in compliance with CAN/CSA-Z614-07 or successor.
- d) Outdoor amenity areas will incorporate principles of universal design.

3.5.3.5 On-site Parking, Loading, and Access

- a) To reinforce roads as primary public spaces, the locations of parking, driveways and service entrances and loading areas need to be carefully considered and coordinated with the locations for pedestrian entrances. Access points will be reduced and consolidated to optimize the use of driveways and minimize potential conflicts with pedestrians and the public realm.
- b) Parking and loading facilities will be provided on site as directed through the City's Zoning By-law. Additional policies related to parking can be found in section 4.5 of this Plan.
- c) Parking, loading and service areas, where site conditions can accommodate, will not be located in the front yard of the buildings.

3.5.4 Buildings

3.5.4.1 General Policies for All Buildings

- a) Buildings are encouraged to be pedestrian oriented.
- b) The siting, massing, and façade design of buildings will be coordinated on a block-by-block basis, where feasible. Building exteriors will be articulated in a manner that provides variation between existing and new buildings but reinforces common characteristics such as the horizontal alignments of neighbouring buildings.
- c) Buildings will have varied, dynamic façades articulated with three-dimensional elements, such as balconies, bay windows and porches, cornices, window trim, entrances, canopies and the articulation of the building mass. Large, blank and/or repetitive façades along the face of a street and/or facing Lake Couchiching will be avoided.
- d) Buildings which result in extensive loss of sunlight to adjacent land uses will be discouraged.
- e) All new development and redevelopment will incorporate principles of universal design.
- f) Buildings in Strategic Growth Areas should include pedestrian weather and sun protection systems including awnings, canopies, colonnades, or front porches along the sidewalk edge of important pedestrian roads and adjacent to the urban squares and at entrances to buildings. These elements, along with other elements of the building frontage like signage and storefront windows, should respect and complement the style and scale of the existing similar elements on neighbouring buildings.
- g) Energy efficient building design including passive solar energy gain, increased insulation, Energy Star appliances, alternative energy systems, electric vehicle charging stations, and conformity with LEED certification will be encouraged in all new buildings.
- h) New commercial, institutional, industrial and apartment buildings will be encouraged to incorporate a green roof into the design of the building.
- i) All utility equipment, rooftop mechanical equipment, hydro transformers and waste/recycling storage facilities should be incorporated into the design of a building, where feasible. If this is not feasible, equipment will be positioned so as not to be visible from the public right-of-way, including through:
 - i. Using recessed walls;

- ii. Insetting within walls; and/or
- iii. Screening with materials that are complementary to the building design.
- j) The screening of utilities, including electricity generation facilities and transmission and distribution systems, will be at the expense of the developer or proponent.
- k) Buildings sited at the end of a view corridor, such as at a “T” intersection, elbow roads, traffic circles and on prime corner lots should be designed with significant architectural elements.

3.5.4.2 Building Types

- a) Building heights shown in Table 3.2 represent a range, and minimum and maximum heights will be dictated through the land use designations in section 3.4 of this Plan.

Table 3.2: Building types and height ranges

Building Type	Height	Sub-types (if applicable)
Tall Building	9 to 12 storeys	
Mid-Rise Building	5 to 8 storeys	
Low-Rise Building	Up to 4 storeys	Single detached dwelling Semi-detached dwelling All types of townhouse dwellings Multiple-unit dwellings Low-Rise apartment building Low-Rise mixed-use building Low-Rise non-residential building <u>Communal housing</u>

3.5.4.3 Mid-Rise and Tall Buildings

- a) Mid-rise buildings will support increased densities and mix of uses while allowing for easier transition to adjacent low-rise areas.
- b) Tall buildings will allow for the most efficient use of a given lot to maximize residential densities while providing for non-residential uses at ground floor level.
- c) Mid-rise and tall buildings will be pedestrian scaled and blend harmoniously within their existing setting, including through the following measures:
 - i. The building form should be compact. On larger development sites, multiple compact buildings are preferred to single large buildings;
 - ii. A podium will be established that, in order to maintain a consistent street wall and human-scaled public realm, has:
 - 1. A maximum height of four storeys on lands in the Central Core, West Downtown, districts as shown on **Schedule B-1**, and on lands in Corridors as shown on **Schedule A**;
 - 2. A maximum height of six storeys on lands in the South Downtown district, as shown on **Schedule B-1**, or on lands in Nodes as shown on **Schedule A**;
 - 3. A maximum height of three storeys on lands in the Downtown Waterfront district as shown on **Schedule B-1**; and
 - 4. A front façade that aligns with adjacent buildings, in the case of infill development, or otherwise that respects the setback requirements of the City's Zoning By-law.
 - iii. The impact of building massing on the public realm will be minimized by stepping back the façade of the building above the maximums listed in policy 3.5.4.3c)ii by a minimum of three metres;
 - iv. Podiums on development sites wider than 15 metres should be treated architecturally to visually appear as multiple separate buildings from grade; and
 - v. Building facades above eight storeys will be separated from other tall building facades on the same lot or an abutting lot by a minimum of 20 metres to mitigate issues of light and privacy.

- d) Where development sites abut lands designated Neighbourhoods, transition measures will be implemented to reasonably mitigate shadow and privacy impacts, through reduced building height or other design measures.
- e) Permanent parking, loading and service areas will be located in side or rear yards and not permitted between the front facade of the building and the street line.
- f) Ground floors of all mid-rise and tall buildings will be designed with windows and door opening onto roads or public open spaces to support natural surveillance, which is the ability to see into and out of an area.

3.5.4.4 Low-Rise Apartment Buildings

- a) Low-Rise apartment buildings should be oriented to front on to the street, with a minimum setback, or build-within zone.
- b) Permanent parking, loading and service areas will be located in side or rear yards and not permitted between the front facade of the building and the street line.
- c) Side and rear elevations visible from public areas will have upgraded facade treatments, and a variety in the design of roofs, required to break up the massing of the building.

3.5.4.5 Live-Work Units

- a) Live-work units may be located within in low-rise, mid-rise and tall buildings that incorporate small-scale commercial, office or retail uses at-grade, in combination with dwelling units.
- b) Building containing live-work units should fit the scale of their surrounding area and facilitate small-scale businesses and occupations, particularly for those living in the dwelling units associated with the business. Live-work units are not intended to support businesses with large workforces or traffic-generating services.
- c) Buildings containing live-work units will have adequate parking and drop-off/pick-up facilities, as directed through the City's Zoning By-law.

3.5.4.6 Townhouses

- a) All forms of townhouses provide the opportunity for increased residential densities while maintaining the scale and massing of adjacent development.

- b) The siting, massing, and façade design of townhouse units will be coordinated on a block-by-block basis.
- c) The following additional design policies apply to all forms of townhouses:
 - i. Where development sites are designed so that a townhouse block faces inward onto a Private street or common element, buildings along the public roadway should be articulated with entrances or otherwise to maintain the street wall along that roadway;
 - ii. The elevation and roofs of a townhouse block will be articulated in a manner that provides variation between units and breaks up the massing of the block;
 - iii. Garages will be encouraged to be accessed from a rear lane. Where they are not, garages are expected to be paired to allow for more substantial front yard green space. Garages will not protrude beyond the main front wall or porch of the townhouse;
 - iv. Each dwelling unit in a stacked and/or back-to-back townhouse will have a dedicated entrance which is accessed through an adequate, safe, and well-lit walkway that links to the sidewalk; and
 - v. For standard townhouses with rear yards, each dwelling will have access to its rear yard via the garage and/or a rear lane and/or a communal walkway/easement.

3.5.4.7 Single Detached, Semi-Detached and Multiple-unit Dwellings

- a) Single detached, semi-detached, and multiple-unit dwellings may contain additional dwelling units in accordance with section 3.5.4.8 while respecting the scale and massing of adjacent development.
- b) To create a consistent street wall, these buildings will have doors, windows and/or entry features adjacent to the public street.
- c) Garages should be set behind or flush with the main building face or accessed from a rear lane and should not dominate the frontage of the building.
- d) The design of buildings on corner lots will include the following considerations:
 - i. Where sides of buildings are visible, they should have windows, materials, and other architectural treatments equal to the front elevation of the building;

- ii. The main front entrance may be located on the exterior side elevation, corner windows and wrap-around porches should be included to emphasize a corner location; and
 - iii. Fencing around front and/or exterior side yards should not block the view of the sidewalk from the building; their height will be consistent with the provisions of the implementing Zoning By-law.
- e) Porches, stairs, canopies and other entrance features may encroach into the required setbacks, subject to the requirements of the City's Zoning By-law.
 - f) Entry features and other architectural elements will be incorporated into the front elevation of the building to reduce the visual impact of the garage and the driveway.
 - g) Shared or grouped driveways will be expected to reduce the amount of asphalt on front yards and to facilitate winter maintenance operations.

3.5.4.8 Additional Dwelling Units

- a) A lot containing a single detached dwelling may have up to three additional dwelling units, including up to two additional dwelling units in a detached accessory structure.
- b) A lot containing a semi-detached dwelling or a townhouse dwelling may have up to:
 - i. Two additional dwelling units, contained within the main building; or
 - ii. One additional dwelling unit within the main building and one additional dwelling unit in a detached accessory structure.

3.5.4.9 Low-Rise Mixed-use and Non-Residential Buildings

- a) For low-rise mixed-use and non-residential buildings on corner lots, the design treatment of façades facing the flanking street will be equal to that of the front façade. Windows will be encouraged on all facades that overlook roads and open spaces; the use of reflective glass should be minimized where possible.
- b) Entrances to low-rise mixed-use or non-residential buildings will be prominent and visible with the use of such features as entrance canopies, awnings or other architectural elements.

- c) Low-rise mixed-use or non-residential buildings will be designed to blend in with their surroundings and with other buildings in the area.
- d) Where a proposed low-rise mixed-use or non-residential buildings abuts or is in proximity to an existing residential or open space use, fencing, landscaping, berming, distance and grade separation or a combination of these features will be utilized to ensure that there is adequate screening between the uses.
- e) Permanent parking, loading and service areas will be located in side or rear yards and set back from the front facade of a low-rise mixed-use or non-residential buildings. Large surface parking areas will be broken up with landscaping.

3.6 Housing Supply and Affordability

3.6.1 Housing Demand

- a) The City recognizes that within Strategic Growth Areas and Community Areas, the number of dwelling units required to meet the long-term needs of the city's population could vary over time. Accordingly, this Plan encourages and support a full range of housing options within these areas.
- b) The City and County of Simcoe will continue to implement the recommendations of the Orillia Affordable Housing Action Plan and Housing Attainable Supply Action Plan.
- c) Innovative and non-traditional housing types and arrangements will be encouraged where residential land uses are permitted to facilitate intensification and the creation of affordable housing units, subject to the Zoning By-law, including but not limited to life lease housing, shared accommodations, co-ownership housing, co-operative housing, community land trusts, land lease community homes, supportive housing, and additional needs housing.

3.6.2 Rental Housing

- a) The City recognizes the importance of a supply of rental housing in contributing to housing attainability and affordability and will seek to maintain or increase the current rental housing stock in Orillia.

3.6.3 Unit Sizes

- a) All buildings with over 10 proposed dwelling units should include an approximate balance between:
 - i. Studio and one-bedroom units; and
 - ii. Two-or-more bedroom units, which are appropriate for housing greater numbers of persons.

3.6.4 Communal Housing

- a) Communal housing will be permitted in all land use designations which permit residential land uses, subject to additional requirements to be implemented through the Zoning By-law.
- b) Communal housing should be developed in proximity to transit service, public service facilities, and commercial amenities.

3.6.5 Affordable Housing

- a) Affordable housing for low- and moderate-income households is encouraged across all Neighbourhoods and Strategic Growth Area.
- b) To protect and expand the number affordable housing units, the City may consider relief from municipal permit fees, taxes and/or development fees, or other incentives.
- c) It is a target that 25 percent of all new dwelling units in Strategic Growth Areas meet the definition of affordable housing.
- d) The City will prioritize the disposition, either through sale, lease or development partnership of surplus City-owned land for the development of affordable housing.
- e) Surplus publicly owned lands, which are not City-owned, are also encouraged to be prioritized for development of affordable housing.
- f) Affordable housing may also be supported by:
 - i. Promoting higher density housing forms, where per unit land costs are reduced;
 - ii. Applying government grants and/or subsidies, including land dedication, that will reduce overall development costs;
 - iii. Encouraging the development of additional dwelling units and multiple-unit dwellings; and

- iv. Consider an inclusionary zoning framework if permitted by future amendments to the *Planning Act*.
- g) The City will work with other government agencies and the private sector, to promote innovative housing forms and development techniques and incentives that will facilitate the provision of affordable housing.
- h) Affordable housing will be encouraged to locate in proximity to public service facilities, transit routes, and the active transportation network.

3.7 Public Service Facilities

- a) Public service facilities will be planned in accordance with approved Master Plans and in coordination with growth planning, in consideration of the following:
 - i. Public service facilities should be integrated with other public service facilities and other uses, including affordable housing and community food centres, to promote cost-effectiveness, convenient access, and efficient use of land;
 - ii. The City will collaborate and consult with service planning, funding, and delivery partners to facilitate the development of community hubs;
 - iii. New public service facilities, including schools, hospitals, and recreation centres, will be encouraged on sites that are connected to the active transportation and transit networks;
 - iv. Over time, new public service facilities will be encouraged in or near Strategic Growth Areas; and
 - v. Existing public service facilities will be recognized as essential anchors for Neighbourhoods which incentivize active transportation, especially schools in Community Areas.

4 Transportation and Mobility

4.1 Introduction

- a) Orillia's mobility network, shown on **Schedule G**, moves people and goods via roads, public transit, trails, pedestrian linkages and cycling routes. It is the goal of this Plan to facilitate an active and integrated multi-modal mobility network that is safe, efficient, economical, convenient and comfortable while respecting the heritage features and character of the city.

4.2 Transportation and Mobility Policies

4.2.1 General Policies

- a) The City's Multi-Modal Transportation Master Plan is the primary tool for defining Orillia's future transportation investments. The Master Plan and this Official Plan will be used together to inform investments in transportation infrastructure in the city.
- b) The City's Parks, Recreation, Culture, and Trails Master Plan will also support investment and planning for trails infrastructure in the City.
- c) The City will plan for and protect corridors and rights-of way for transportation, transit and infrastructure facilities to meet current and projected needs.
- d) As shown on **Schedule G**, the mobility network is comprised of City-owned streets, Provincial Highways 11 and 12, private streets, and the off-road trails network.
- e) The purpose of the mobility network is to move people and goods, support all modes of transport and treat all users equitably in the design of infrastructure or the provision of services.
- f) The mobility network will also support active, healthy lifestyles for Orillia residents, improve access to transit and transportation facilities for special user groups, and contribute to climate change initiatives and improved air quality.
- g) Through the implementation of this Plan and the Multi-Modal Transportation Master Plan, active transportation and transit will become viable options for transportation modes.

- h) The City will support increased active transportation use through:
 - i. Dedicated cycling/pedestrian infrastructure provided in new developments to create linkages to centres of activity and the sidewalk/trail system;
 - ii. Wider rights-of-way for cycling/pedestrian facilities conveyed to the City through new development;
 - iii. Separation of new cycling facilities, sidewalks, and multi-use trails from vehicular lanes, including landscaped boulevards; and
 - iv. Adequate consideration in the planning of all development of a safe, efficient, and interconnected active transportation network, which includes routes to schools.
- i) Major capacity improvements to the existing street system will only occur when the need exists and all reasonable control options have been previously implemented.
- j) Development within Ministry of Transportation Permit Control Areas of Provincial Highways 11 and 12 are subject to the safety requirements of the Province.
- k) The City encourages infrastructure that supports the use of alternative fueled vehicles, including charging stations for electric vehicles, wherever feasible.
- l) Large scale transportation facilities will be planned, designed and constructed to minimize the effects of noise, fumes and vibration on existing and future residential development.
- m) The City will endeavor to work with the County of Simcoe, neighbouring municipalities, and the Province, where appropriate, towards the overall coordination of the transportation system, including any active transportation and public transit initiatives.

4.2.2 Complete Streets

- a) With the exception of Provincial Highways, every street in Orillia's mobility network is intended to function as a complete street that serves all users. These streets will provide two primary functions:
 - i. Movement: the ability to travel between places; and
 - ii. Place: the ability to access origins and destinations of travel.

- b) The city's street network provides the organizing framework for development and placemaking by establishing the size and edges of development blocks. The existing street and block pattern will be maintained and, where appropriate, expanded.

4.2.3 Street Grids

- a) As noted in section 3.5.2.1 of this Plan, in general, development blocks should be a maximum of 100 metres by 200 metres in size. Where larger development blocks exist, the City will consider the introduction of new internal street networks.
- b) The construction of new streets and the reconstruction of existing streets (including through planned capital investments identified in the Multi-Modal Transportation Master Plan) will be encouraged to result in complete streets.
- c) New street grids created through development or redevelopment should be rectilinear, connect with and enhance the function of the existing street network, and avoid the use of cul-de-sacs or other designs that discourage pedestrian connectivity and walkability.
- d) Local streets will be built with a sidewalk on at least one side of the street's right-of-way.
- e) Arterial and Collector streets will be built with sidewalks on both sides of the street's right-of-way.
- f) Sections of Provincial Highway 12 which are in a Strategic Growth Area as shown on **Schedule A** may eventually include sidewalks on one or both sides of the right-of-way, subject to consultation with the Province.
- g) In the design of all streets except Provincial Highways, particular regard will be given to adequate space and safety provisions for the movement of pedestrians and cyclists, with a clear system of through routes and for safe transfers on and off transit vehicles.
- h) The coordinated installation of utilities, sidewalks, trails, transit, cycling facilities, and streetscaping, including lighting and tree planting, will be part of the planning, design, and construction of all roads.
- i) Where feasible, new and reconstructed streets in the city should connect public spaces and parks and provide opportunities for vistas and view corridors.

4.2.4 Street Classification

- a) The street classes in Orillia are shown in Table 4.1 below. Additional policies related to each street class may be found later in section 4.2.

Table 4.1: Orillia Street Classifications

Street Class	Function	General Right-of-Way Width	Access to Adjacent Properties	Encouraged Cycling Facility Type
Provincial Highway	Carry high volumes of interurban traffic at highway speeds	N/A	No direct access except where existing or with permission from the Province	N/A
Arterial	Connect to the Provincial and County road network as well as service major commercial or Employment Areas in Orillia.	30 metres	No direct access for individual dwelling units	Protected bike lanes Painted bike lanes (only where vehicular volumes permit safely)
Collector	Connect Arterial and Local streets.	26 metres	Limited	Protected bike lanes Painted bike lanes Signed routes (only where vehicular volumes permit safely)
Local	Accommodate low volumes of traffic at low speeds and generally only serve local area trips.	20 metres	Direct access to lots.	Painted bike lanes Signed routes
Flex	Curbless street with low speed traffic, supporting a mix of uses including cycling, sidewalk play, tree canopies, laneway greening, water play, performance areas, murals and art platforms.	Various	Direct access to lots.	Shared space with low-speed traffic

Street Class	Function	General Right-of-Way Width	Access to Adjacent Properties	Encouraged Cycling Facility Type
Lane/Private	Provide access to private garages and/or condominium developments which connect to municipal streets.	Minimum 9 metres	Direct access to lots.	Shared space with low-speed traffic.

- b) Where the class and function of an existing street is to be changed to a higher class and function, such change will require a Functional Servicing Plan or a Service Infrastructure Master Plan and an Amendment to this Plan.
- c) In the case of the construction or reconstruction of Arterial and Collector streets and Flex streets located within Downtown as shown on **Schedules A and B**, regard will be had to the preservation or enhancement of scenic vistas and the character of the neighbourhood. For these streets, the preparation of a detailed Streetscape Plan by a qualified landscape architect is required. Such plan will require Council approval prior to proceeding with or tendering of the project.
- d) Specific lane requirements will be determined at the detailed design stage and will, in addition to traffic demand, be based upon planning considerations such as preservation of mature trees and the overall effect upon the streetscape.

4.2.5 Widenings, Intersection Improvements and Alignments

- a) The right-of-way widths listed in Table 4.1 are the ultimate widths required to provide for traffic surfaces, boulevards, sidewalks, multi-use trails, utility locations and ditches. The identified road allowance widths are based on the existing situation, expected future development and the intended street function.
- b) For the purposes of the *Planning Act*, Arterial and Collector streets shown on **Schedule G** to this Plan will be considered a “highway to be widened” and the identified right-of-way width in Table 4.1 will form the basis for any conveyances of land for the purposes of street widening required through approval of site plan, plan of subdivision, or consent applications.
- c) In addition to right-of-way widenings, the City may also require conveyances for:

- i. Street widenings for daylighting triangles at intersections to provide sufficient sight distances, turning lanes and locations for traffic control measures; and
 - ii. Turning lanes at any other locations along roads to provide safe and appropriate access to major generators or attractors of traffic. Dimensions of such widenings will be in accordance with the standards of the City.
- d) Where a road allowance is identified as including or comprising part of a cycling route or trail system as shown on **Schedule G**, the City may require additional street widenings for a cycling lane or trail. The maximum width for such a dedicated widening will be 1.5 metres per side.
- e) The City may, under certain topographic conditions, require a greater street width to address appropriate design or traffic safety measures. Where such circumstances are encountered, a further 10 metres may be added to the right-of-way that would be established through the policies of this Plan.
- f) Where a dedication of land is being required as a condition of a development approval, the landowner will only be required to dedicate a widening equivalent to 50 percent of the total required width to bring the right-of-way width up to the width specified for the applicable street classification. Where topographic constraints, existing buildings, or infrastructure make it impractical to obtain an equal widening from both sides of the street, the City may secure a dedication from one side to the maximum extent possible provided it does not unduly impact existing features and does not exceed 50 percent of the total street widening requirement.

4.2.6 Provincial Highways

- a) Provincial Highways are subject to Provincial requirements and permits in addition to the other policies of this Plan.
- b) All proposed development located adjacent to and in the vicinity of a Provincial highway within the Ministry of Transportation's permit control area under the *Public Transportation and Highway Improvement Act* will also be subject to the approval of the Ministry of Transportation. Early consultation with the Ministry of Transportation is encouraged to ensure the integration of municipal planning initiatives with Provincial transportation planning.

4.2.7 Arterial and Collector Streets

- a) Arterial streets will generally limit private land access to existing lots, and commercial and industrial uses, with new residential access permitted only where traffic movement, volume, speed and safety are not compromised, no alternative Local or Collector street access is available, and the entrance criteria of the City are met.
- b) Arterial streets will generally have a minimum right-of-way width of 30.0 metres.
- c) Collector streets will generally have a minimum right-of-way width of 26.0 metres.
- d) Individual driveways for single detached, semi-detached, and townhouses dwellings and additional dwelling units will not be permitted on Arterial streets.
- e) Collector streets provide connections between Arterial streets and the Local streets.
- f) Shared access points are encouraged to limit individual accesses onto Collector streets.
- g) The following design standards apply to Arterial and Collector streets:
 - i. The roadway should be a minimum of 10.0 metres, with consideration of on-street parking or cycling lanes on both sides of the street;
 - ii. Outside of Strategic Growth Areas as shown on **Schedule A**, a minimum boulevard of 4.5 metres will be required on both sides of the roadway, which will accommodate a grass verge with street trees;
 - iii. Sidewalks will be continuous on both sides of the street, with a minimum width of 2.0 metres, where feasible. Where possible, greater sidewalk widths are encouraged;
 - iv. As an alternative to a sidewalk on one side, the City may give consideration to a multi-use trail, with a minimum width of 3.0 metres and hard surfaced, which will be separated from the roadway by a boulevard;
 - v. Where pedestrians and cyclists are meant to cross Arterial and Collector roads, the street environment should provide safety features, which may include pedestrian islands, lit crosswalks, clear signage and/or well-marked thoroughfares;
 - vi. Subject to additional City engineering criteria, design of the roadway will not inhibit the free and safe movement of transit vehicles, for example, through tight bends;

- vii. Transit facilities including, but not limited to, transit shelters, lay-bys and dedicated transit lanes may be located on any Arterial or Collector street;
 - viii. Individual direct access to any development site will be limited to minimize disruptions to traffic flow and to maximize safety and the attractiveness of the street;
 - ix. Street designs for Arterial/Collector streets are encouraged to include a planted centre median or other design features to signify their importance as a gateway or entrance feature; and
 - x. Within Strategic Growth Areas (including Downtown), where street construction or reconstruction projects are proposed, a detailed Streetscape Plan by a qualified Landscape Architect will be required prior to Council's approval to proceed with or tender the project.
- h) Buildings that abut Arterial or Collector streets should present a façade with enhanced architectural detailing and/or landscape features.
 - i) Intersections between high-use Arterial and Collector streets are high priorities for intersection improvements that increase the safety for pedestrians and cyclists.

4.2.8 Local Streets

- a) Local streets are designed to accommodate low volumes of traffic at low speeds generating traffic for locally served trips.
- b) Local streets will generally have a minimum right-of-way width of 20.0 metres.
- c) The following general design standards apply to Local streets:
 - i. The roadway, including a parking lane on one side of the street, which could alternate to both sides of the street, will be a maximum of 9 metres;
 - ii. Sidewalks will be continuous on one side of the street, with a minimum width of 1.5 metres;
 - iii. Boulevards on both sides of the roadway will be provided and will accommodate a grass verge with street trees;
 - iv. Street lighting should illuminate both the pedestrian and vehicular realm;

- v. Local streets that are single loaded may include a reduced boulevard abutting the publicly owned storm water management feature, open space, parkland or an environmental feature;
 - vi. Individual direct access onto Local streets is permitted; and
 - vii. Transit routes and facilities may be permitted on Local streets.
- d) Where possible, the City encourages enhanced design requirements for Local streets adjacent to public service facilities to facilitate safe pedestrian access and active transportation.
- e) Buildings that abut Local streets will present a façade with architectural detailing and landscape features that address the street frontage.

4.2.9 Flex Streets

- a) Flex streets are sections of streets which are intended to accommodate all modes of travel at slow speeds, and function as unique spaces where people can slow down and enjoy the public realm.
- b) The following general design standards apply to Flex streets:
- i. No curb will be provided, where applicable. In these circumstances, the sidewalk will grade will be blended with the roadway for a single surface, allowing for flexible use of the entire right-of-way at certain times;
 - ii. Roadways should be approximately 6.5 metres, with consideration of on-street parking, cycling lanes, and/or amenity spaces on both sides of the street; and
 - iii. Pedestrian zones should be a minimum width of 3.0 metres, where possible, on both sides of the street together with a minimum 3.0 metre amenity zone, where possible.
- c) Mississauga Street is a Collector street to be designed as a Flex street on **Schedule G**, but within Downtown it is unique as the ‘Main Street’ of Orillia. As such, it will be given special consideration in terms of the design and treatment of the public realm, including:
- i. The palette of materials and streetscape features includes decorative lighting, special furnishings including benches and waste and recycling receptacles, bicycle racks, enhanced paving, street trees, other plantings and public art.

- d) On-street parking will continue to be accommodated along Mississauga Street in Downtown, where appropriate.

4.2.10 Private Roads and Lanes

- a) Private roads and Lanes will not be owned by the City, Province, or other public authority, and may provide direct access to properties.
- b) Lanes and Private roads will have a minimum right-of-way of 9.0 metres.
- c) The following general design standards apply to Private roads and Lanes:
 - i. Lanes should be provided where garages and front driveways will detract from the character of a special location, such as along Arterial or Collector Roads;
 - ii. A minimum paved roadway of 6.0 metres will be provided. The remaining 3.0 metres of the minimum 9.0-metre right-of-way may accommodate elements such as parking, landscaped boulevards, street lighting, sidewalks, and snow storage. These elements may be distributed on either side of the roadway as required, however, the total right-of-way will not be reduced below 9.0 metres;
 - iii. Utility corridors and other infrastructure may be located within the right-of-way or in alternative locations, provided they are situated within the development's common elements;
 - iv. Sidewalks, with a minimum width of 1.5m, are required on at least one side of a Private road and may be located within the utility corridor;
 - v. Lanes and private roads should be designed, where feasible, to accommodate school buses and provide safe and direct access to public roads for student pick-up and drop-off; and
 - vi. Notwithstanding the aforementioned design policies for Private roads and Lanes, it is recognized that there are site specific conditions and design considerations which allow for justified variances from these standards without the requirement for an amendment to this Plan provided that the spirit and intent of the design policies are respected.

4.2.11 Traffic Circles and Roundabouts

- a) Traffic circles and roundabouts are intended to calm traffic and direct traffic flows without necessarily requiring stop controls at intersections.
- b) Whenever traffic circles and roundabouts are used, they should incorporate significant landscape features.
- c) The design of a traffic circle should ensure safe pedestrian and bicycle movement, as well as ease of snow removal and maintenance, and align with Provincial and Federal design guides, when possible.

4.2.12 Active Transportation Facilities

- a) As noted in policy 4.2.1h), the city's active transportation facilities are integral to the mobility network and are supported in both the complete streets network and off-street trails.
- b) Through the implementation of this Plan, the Multi-Modal Transportation Master Plan, and the Parks, Recreation, Culture, and Trails Master Plan, the active transportation infrastructure will continue to be expanded and improved to strengthen and connect pedestrian and cycling facilities into one cohesive network that is interlinked with the city's transit network.
- c) When new or improved cycling facilities are to be installed in a City-owned street's right-of-way, the full separation of cyclists and vehicular traffic will be prioritized and achieved where feasible, followed in priority by protected cycling facilities.
- d) All active transportation facilities will be designed to high standards and built with high-quality materials that meet the guidance of the Ontario Traffic Manual (Book 18).

4.3 Trails

4.3.1 General Policies

- a) Trails are a crucial component of the city's mobility network as well as the integrated parks and open space network.
- b) The City will establish, improve and maintain a well-connected trails system, which encourages active transportation as well as active recreation touring, particularly in the

form of walking, cycling, running, and rollerblading in a manner that is sensitive to the environment and private landholdings.

- c) Guided by the City's Multi-Modal Transportation Master Plan and Parks, Recreation, Culture, and Trails Master Plan, the trails network is intended to provide opportunities for recreation while also closing gaps in the city's active transportation network. This includes providing linkages between parks, open space areas, bicycle/pedestrian paths and recreation trail systems in adjacent municipalities, thereby fostering the development of Provincial and National trail networks.
- d) **Schedule G** identifies the general location of existing and future recreation and multi-use trails. Minor refinements to the alignment of trails on **Schedule G** will be updated through regular updates to this Plan and will not require an amendment to this Plan.
- e) All trails in Orillia will be designed, built, and maintained to City standards.
- f) Constructed trails will be provided in addition to the parkland dedication requirement as permitted under the *Planning Act* through the development approval process.
- g) Trails which facilitate linkages between parks, open spaces, the Natural Heritage System, and public service facilities will be encouraged.
- h) Trail connections across Provincial Highway 11 and to adjacent municipalities should be explored in collaboration with the Province.
- i) The City will utilize, where possible, abandoned rail corridors, unopened municipal road allowances, utility corridors, easements and other opportunities where available to provide for trails. Use of these rights-of-way for recreational purposes will not require an amendment to this Plan but should be based upon demonstrated need.
- j) Trails will be located outside the right of way of Provincial Highways, except as approved by the Provincial Ministry of Transportation. In these instances, the City will advocate for the incorporation of appropriate safety barriers, where trails interface with bridges or high-speed transportation corridors.
- k) Development proposals abutting trail corridors of any type will be designed and buffered to mitigate any potential impacts associated with the use of the trail corridors and to minimize vehicular crossings.

4.3.2 Design Policies for Trails

- a) The trails system includes trails within natural features, storm water management facilities, open spaces, woodlots, parks and the street system.
- b) Trail design and type will be based on each site's sensitivity in order to minimize environmental impacts.
- c) Trail widths will be at minimum:
 - i. 3.0 metres for multi-use trails; and
 - ii. 1.5 metres for pedestrian-only-trails.
- d) Multi-use trails identified on **Schedule G** will be hard surfaced, including but not limited to asphalt, to allow for a range of self-propelled recreational pursuits including roller blading.
- e) Trails will be designed to accommodate a range of users and abilities, through the following design considerations:
 - i. Slopes, where possible, should be under 5 percent; and
 - ii. Curb-cuts must be provided to improve access at street crossings.
- f) The use of permeable materials may be considered for trail construction in areas where sufficient drainage exists.
- g) Trails and cycling routes will be clearly signed regarding permitted use and speed. Wayfinding signage will also be provided throughout the trail network.
- h) Trail lighting should be prioritized in higher-use urban and commuter trail contexts, particularly at trailheads, key access points, high-use corridors, to support safety and year-round use while allowing discretion in more environmentally sensitive areas.
- i) Benches, waste and recycling receptacles, lighting, bicycle racks and natural or built shade structures should be provided at trail heads and at regular intervals along the route.
- j) Trails located in proximity to significant natural heritage features and areas, or adjacent to storm water management facilities should incorporate interpretive signage at various

locations to promote stewardship initiatives that will protect and enhance the features and functions of the natural environment.

- k) Trails and cycling facilities may be located within the right-of-way of the municipal street system, but where possible, will be separated from the asphalt by a landscaped buffer.
- l) Where trails intersect with motorized vehicle infrastructure or roads, clear signage and safety features will be provided for the safety of both the trail user and motorized vehicle user.
- m) Where a trail that contributes to a multi-use trail network within a woodlot, then the trail(s) within the woodlot will be hard-surfaced with a minimum width of 3m. Where a woodlot is not connected to the City's multi-use trail network, then any trails provided within the woodlot would not need to be hard-surfaced.

4.3.3 Snowmobile Trails

- a) Snowmobile trails will be a minimum of 4.0 metres wide and separate from pedestrian sidewalks and/or pathways. Snowmobile trails will be located outside the right of way of Provincial Highways, except as approved by the Ministry of Transportation.

4.4 Public Transit

- a) Along with vehicular and active transportation, public transit makes up a critical element of the city's multi-modal mobility network.
- b) Public transit is intended to be a viable alternative to the use of private motor vehicles in Orillia. As such, public transit is considered to be a priority in the interest of reducing traffic, promoting active transportation and the avoidance of street expansions through established Neighbourhoods.
- c) This Plan and its implementing tools are intended to result in development patterns in the city that support transit use.
- d) In the planning and design of public transit routes, stations, bus stops and transfer points, the following criteria will be applied:
 - i. Stations, stops and bus routes will be located to allow safe pedestrian access to as many residents, schools, cultural and recreational facilities, commercial amenities, and employment locations as possible;

- ii. Accessibility and age-friendly design will be key criteria in determining transit stop locations, particularly near major public service facilities;
 - iii. In areas to be developed or redeveloped, land use and street patterns will facilitate use of public transit and convenient access to major transit routes; and
 - iv. In the planning and operation of public transit services, facilities for comfortable and convenient pick-up will be provided, including off-line bus bays, where possible.
Transit stops will be located to minimize walking distances.
- e) The City will operate and improve Orillia Transit as a public network of bus services that provide an efficient and equitable transportation choice for all residents, supported by regional connections provided by the County of Simcoe's LINX transit system.
- f) Where new developments are located adjacent to existing or planned transit routes, they may be required to dedicate land for transit routes and transit stops and may be requested to provide bus shelters.
- g) Development proposals will support the use of public transit by:
- i. Siting higher density housing in proximity to an existing transit route;
 - ii. Fostering walkability by creating direct pedestrian routes to bus stops; and
 - iii. Providing transit stops where warranted.
- h) Development proposals within Designated Growth Areas will support the early introduction of transit services by:
- i. Locating transit-supportive uses, including higher density housing, commercial, or institutional uses on or within proximity to existing and planned transit stops and routes; and
 - ii. Establishing a street network that supports transit routes within Neighbourhoods.
- i) Transit stops should be incorporated into recreation facility site design, regardless of whether a transit route is currently planned to stop there, as transit planning typically evolves over time and these facilities will likely become desired stops in the future.
- j) Opportunities for transit priority measures such as transit priority signals and bus bays will be identified through street construction projects to improve schedule reliability and travel times.

- k) The City will advocate for the introduction of new and expanded regional and intercity transit services.
- l) Transit routes should be located primarily on Arterial and Collector streets.
- m) The following design standards apply to transit stops and shelters:
 - i. Transit stops should be located as close to intersections as possible with consideration given to vehicle and pedestrian safety, parking, intersection sightlines, and their location coordinated with pedestrian walkway connections and building entrances;
 - ii. Transit shelters should be designed with transparent sides for maximum visibility to and from the interior, to maximize visibility and pedestrian safety;
 - iii. Shelters should be located on the boulevard adjacent to the travelled portion of the road to maximize passenger convenience;
 - iv. Curbside transit stops and loading areas should be located in areas clear of other land uses and/or infrastructure. They should be located on a hard level surface area to permit safe exit by all passengers, including mobility device users. In all cases, shelters should be set back from curbs and sidewalks to protect them from damage by snowplows;
 - v. Surface texture changes should be provided at transit stops to assist the visually challenged; and
 - vi. Where four-sided transit shelters are not possible, overhead open-air canopies should be provided to protect transit users from sun, rain and snow.
- n) Transit stops should be designed to offer amenities such as seating areas, lighting, weather protection, and waste receptacles.

4.5 Parking, Loading, and Access

4.5.1 Parking Supply

- a) The following parking policies apply to all development in the city:
 - i. Minimum parking requirements for various land uses will be established in the City's Zoning By-law;

- ii. Parking and loading facilities will be provided on site. These facilities will not be located between the building(s) and adjacent roads except for in an exterior side yard and may permit a limited amount of visitor parking within the front yard. Shared access and parking among various developments is encouraged;
 - iii. Where a development is unable, or does not wish to provide all the required parking spaces, the City may accept cash-in-lieu of parking spaces, subject to the following:
 - 1. The minimum parking rate will be used to calculate any parking space deficiency;
 - 2. The cost of each parking space will be established by the City, and may be waived for any specific development, at the discretion of the City; and
 - 3. The funds raised through this provision will be utilized by the City solely for the purchase of property for public parking and/or the building or improvements of public parking facilities in Downtown or other Strategic Growth Areas, including on street parking.
 - iv. In addition to minimum vehicular parking space requirements, parking facilities for bicycles will be provided, at a ratio to be established in the Zoning By-law.
- b) In addition to parking secured through new development, an appropriate supply of parking, both vehicular and bicycle, will be secured in Downtown, through the following policies:
- i. The City will provide public parking areas (surface lots and/or structured parking facilities) within the Downtown to augment the supply of parking for bicycles and automobiles;
 - ii. Where new development is proposed within 250 metres of an existing public parking facility, the City may, subject to a Parking Needs Study, reduce the minimum non-residential parking requirement, identified in the Zoning By-law in recognition of the enhanced public parking supply;
 - iii. On-street parking, where possible and appropriate, may be accommodated on all streets in Downtown; and
 - iv. The City may consider in the implementing Zoning By-law a range of parking ratios within each of the designations in Downtown.

4.5.2 Parking Facility Design

- a) In all Strategic Growth Areas, surface parking is discouraged. Parking for new developments should be provided below grade, or, where necessary, in above grade structures.
- b) Where a parking structure is above grade, permitted commercial uses will be provided within the façade at-grade and the façade will include appropriate architectural articulation to reflect the character of the neighbourhood.
- c) Surface parking:
 - i. Will not be permitted in front yards, except for:
 - 1. Dwelling units with individual driveways; and
 - 2. Schools;
 - ii. Will be permitted in side yards or rear yards;
 - iii. Where larger surface parking is provided, it will be divided into defined sections with curbs and landscaping features. Landscaped islands will be incorporated into the parking lot design;
 - iv. Will be appropriately screened from view from the street, public open spaces, and adjacent residential areas with fencing, planting, berming, trees and/or hedges; and
 - v. When located at the street edge, include trees and low shrubs (less than 1.0 metre high) along the street line to provide a landscaped buffer and may provide additional areas for snow storage.
- d) Where surface parking must be provided, the visual impact of large surface lots will be mitigated by a combination of setbacks and landscaping including:
 - i. Pavement treatments;
 - ii. Low walls or decorative fencing;
 - iii. Landscaping and trees; and
 - iv. Lighting throughout parking lots and along the edges.

- e) To ensure safety of pedestrians in parking areas and promote pedestrian priority over vehicular traffic:
 - i. Pedestrian pathways on a development site will be provided and will connect directly to public roads/sidewalks and building entrances. These pathways should:
 - 1. Be identified and delineated with decorative paving materials and where possible landscape planting and/or tree rows that differentiate them from the driving surfaces;
 - 2. Be made continuous across driving aisles as well as across driveway entrances at the street; and
 - 3. Include soft landscaping along their length, along with features such as outdoor furniture and pedestrian-scale lighting.
 - ii. Parking facilities will be lit with pedestrian-scale, dark-skies friendly lighting which is low and spaced at appropriate intervals.
- f) All new or redeveloped parking facilities (whether at-grade, or above/below grade), should consider sustainable design, including but not limited to:
 - i. Permeable paving surfaces;
 - ii. On-site stormwater management technologies;
 - iii. Electric vehicle charging infrastructure;
 - iv. Dedicated parking and charging areas for micro-mobility devices such as e-bikes and e-scooters;
 - v. Alternative energy systems (such as solar panel-covered shade structures); and
 - vi. Support for car-sharing services.
- g) Winter maintenance and salt management will be considered in the design of surface parking lots. New lots, additions to existing lots, or resurfacing/redesign of existing surface parking lots may be required to provide a parking lot design brief and a salt management plan demonstrating general conformity to the Lake Simcoe Region Conservation Authority's Parking Lot Design Guidelines to Promote Salt Reduction, or its successor.

4.5.3 Access and Loading

- a) To reinforce roads as primary public spaces, parking facilities, service access points, loading areas and any visible garbage containers and/or mechanical equipment are to be located in a manner that have a minimum physical impact on sidewalks and accessible open spaces.
- b) Consolidated access points and shared parking among various developments is encouraged in all areas of the city.
- c) Servicing and loading access from side roads and/or shared rear service lanes is preferred for all development in Strategic Growth Areas, including Downtown. On-street loading is discouraged.
- a) Loading areas and servicing facilities:
 - i. Will not be permitted in front yards;
 - ii. Will be permitted in side yards or rear yards; and
 - iii. Will be appropriately screened from view from the street, public open spaces, and adjacent residential areas with fencing, planting, berming, trees and/or hedges.
- b) Conflicts between shipping vehicles and pedestrians must be minimized through signage and delineation of the pedestrian right-of-way.

4.6 Goods Movement

- a) It is the policy of the City, in recognition of the importance of an efficient goods movement system to the health of the city's economy, to give appropriate weight to the consideration of the need to move goods, products and other materials in the resolution of transportation issues.
- b) The following policies will ensure protection of Neighbourhoods with regard to commercial traffic:
 - i. Through-way movement of large commercial vehicles will generally be restricted on Local and Collector streets within Neighbourhoods wherever possible; and

- ii. Activities generating substantial commercial traffic will be located near or adjacent to Provincial Highways and/or Arterial streets.
- c) In line with the Multi-Modal Transportation Master Plan, the City will develop a goods movement strategy that aligns with the Provincial Ministry of Transportation Freight Supportive Guidelines, and the 2051 Strategic Goods Movement Network as outlined in Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe, which will be implemented through an amendment to this Plan.

4.7 Transportation Demand Management and Smart Mobility

- a) The City will support private and public transportation demand management programs that reduce single-occupant vehicle travel.
- b) Development proposals, including Neighbourhood Plans, site plan, and plans of subdivision, are encouraged to consider integrating multi-modal transportation into their designs to enhance and leverage available or planned transportation improvement, including but not limited to the following:
 - i. Providing on-site amenities such as safe, attractive, and direct walkways for pedestrians, or bicycle repair stations, or facilities to encourage cycling;
 - ii. Including facilities and infrastructure for shared bikes or cars so that residents and the surrounding community may use a shared option instead of needing to own a car or bike; and
 - iii. For employers or property owners of employment uses, initiating private shuttle services to transit to lessening vehicles trips and parking supply needs.
- c) A Transportation Demand Management Checklist of applicable measures for new developments based on land use may be developed to support planning applications.
- d) The City will consider developing a program to support education and incentives to encourage residents and employees to choose alternative transportation options and routes, including transit and active transportation.

- e) The City will consider coordinating with local school boards to implement school travel planning within the community to:
 - i. Identify school locations that maximize active transportation opportunities and avoid high-traffic Arterial streets;
 - ii. Enhance roadway safety around schools and encourage utilization of planned active transportation improvements identified in this Plan and the Multi-Modal Transportation Master Plan; and
 - iii. Achieve accessible transportation infrastructure around schools by applying principles of universal design, particularly for pedestrian and cycling facilities.
- f) Future mobility measures, including any related City initiatives or studies, will be considered and supported through the implementation of this Plan and land use planning, including:
 - i. Ride-hailing services;
 - ii. Car-sharing;
 - iii. Microtransit;
 - iv. Mobility-as-a-service;
 - v. Autonomous and connected vehicles; and
 - vi. Intelligent Transportation Systems (ITS) and smart infrastructure.
- g) Micromobility measures, including e-scooters, e-bikes, and bike-sharing may support policies of this Plan, by reducing reliance on motor vehicles and actions to mitigate climate change. Land use and infrastructure planning in the city (both private and public) will support any micromobility measures undertaken by the City or its partners, including through:
 - i. Consideration of appropriate location for storage of and maintenance facilities for micromobility devices;
 - ii. Design of the city's complete streets network with micromobility devices in mind; and
 - iii. Encouraging development proposals to integrate micromobility considerations, such as docks for a bike sharing service.

5 Parks and Open Space

5.1 Introduction

- a) A network of City-owned parks, woodlots, and trails will form part of Orillia's open space network that will grow with the city and connect to the shoreline of Lake Couchiching and Lake Simcoe, further supported by privately-owned open spaces, such as the privately owned golf course and cemeteries. The open space network may complement and provide connections to support the Natural Heritage System.
- b) Parks will provide equitable access and distribution of amenities, recreation programming, natural areas, or naturalized spaces across all Community and Strategic Growth Areas, generally within a 400 to 600 metre walk from home.
- c) The open space network will support climate change mitigation and adaptation by protecting green space and providing opportunities to expand the urban tree canopy.
- d) Opportunities for place keeping in consultation with First Nations and urban Indigenous residents is encouraged to celebrate and commemorate Indigenous culture and history in the open space networks.
- e) The provision and acquisition of parks has traditionally occurred through the development of new Neighbourhoods. As the city welcomes new residents through infill and intensification, the City will explore a wide range of tools to secure parks in more redeveloping contexts to offer equitable access to the open space network to residents within Strategic Growth Areas.

5.2 Open Space Network Policies

5.2.1 Parks Provision and Acquisition

- a) The City's Parks, Recreation, Culture, and Trails Master Plan will guide the provision, design, and maintenance of parks in Orillia.
- b) The City will acquire land and funding for parks through the Parkland Dedication By-law and in accordance with the provisions of the *Planning Act*. The City may accept cash-in-lieu of parkland.
- c) Gaps or an undersupply of parks within a community, including emerging Strategic Growth Areas, Designated Growth Areas, or other areas where fewer residents may have access to private backyards, should be resolved in one or more of the following ways:
 - i. Increase the functionality of existing parks by adding amenities and programming;
 - ii. Improve direct, convenient walking connections to existing parks;
 - iii. Supporting co-operation between landowners within Strategic Growth Areas and Designated Growth Areas to secure larger, more contiguous parks early in the development process;
 - iv. Repurpose other city-owned land and space as parks while balancing the need against other City priorities; and/or
 - v. Purchase or otherwise secure new lands for parks when viable.
- d) The City may prepare a parkland acquisition strategy to implement the recommendations of the Parks, Recreation, Culture, and Trails Master Plan.
- e) The City will develop parks, recreational facilities and services in consultation with residents and other providers of open space such as institutional and public service facility operators. The City may explore arrangements for direction provision and partnerships, as well as facility sharing with other institutions and community groups.
- f) Where possible, the City encourages the co-location of parks adjacent to institutional and public service facilities to support shared use, accessibility, and community activity.

- g) Where possible, the City will seek larger, contiguous parks and provide continuous and accessible linkages, including trails, mid-block connections, and alternative use of utility corridors.
- h) Parks will provide opportunities for physical activity, socialization, cultural pursuits, traditional food harvesting, Indigenous land-based practices, community gardens, and nature education.
- i) Lands to be reserved for future parks will be identified and secured through the development application process.
- j) No component of parks to be dedicated will be accepted as parkland dedication if it incorporates components of the Natural Heritage System (excluding woodlots), floodplain, or public utilities that encumbers its use for programming or building in any way.
- k) Where a stormwater management facility precludes the use of a portion of land for park purposes, the stormwater management facility will not be accepted as parkland dedication.
- l) The City will not accept parkettes (land less than 0.3 ha. in size) or trails as parkland dedication.
- m) Through the Zoning By-law, the City will require multi-residential developments to provide on-site private amenity spaces and landscaped areas to supplement the public open space network.

5.2.2 Parks Classification

- a) Lands designated Parks and Major Open Space are identified on **Schedule B** and include City parks and other publicly and privately owned open spaces.
- b) City-owned lands within the open space network are organized into six categories that reflect the scale of facilities and operations, role in the city's overall network of parks, location within the community, and size, as shown on **Schedule H**.

5.2.2.1 Waterfront Parks

- a) Parks shown as a Waterfront Park on **Schedule H** are large-scale parks serving a wide geographic area, drawing in users from across the greater region. These parks encompass greenspace, playgrounds, waterfronts, washrooms, public beaches, boardwalks, horticulture displays, playgrounds, and public gathering spaces. They

require extensive planning and management due to their size and scope and contribute significantly to both the city's economic development and tourism.

- b) Development within Downtown will consider, where feasible, the provision of active transportation connections to the Downtown Waterfront Park area.

5.2.2.2 Community Parks

- a) Parks shown as a Community Park on **Schedule H** are designed to serve several neighbourhoods. They typically include amenities such as parking, washrooms, sports fields, playground, walking trails, and picnic areas.
- b) Community Parks will be planned as focal points for the community, may be located with other public service facilities, and will have direct access to public streets, which should offer existing or planned transit service, active transportation, and trails.
- c) Development of new Community Parks will be guided by detailed design including accessibility, storm water management, lot grading, landscaping and lighting.
- d) Community Parks will typically be 3-5 ha. in size, be located in prominent locations within the City and where possible, adjacent to the Natural Heritage System.

5.2.2.3 Neighbourhood Parks

- a) Parks shown as a Neighbourhood Park on **Schedule H** are smaller parks meant to serve a single neighbourhood. They focus on local needs, offering amenities such as playgrounds, splashpads, open spaces, and benches, and have simpler maintenance requirements to Community Parks.
- b) Access to Neighbourhood Parks should be provided by mid-block connections and trails and offer both active and passive recreational features that facilitate social gathering.
- c) Neighbourhood Parks will typically be 0.4 ha. in size, be centrally located within a neighbourhood, and where possible, adjacent to the Natural Heritage System and offer connections to adjacent school sites.

5.2.2.4 Parkettes

- a) Parks shown as a Parkette on **Schedule H** are existing small parks or greenspaces located in built-up areas, offering limited amenities such as seating, a small garden, or simple level of play equipment. They require minimal planning and maintenance.
- b) Access to Parkettes should be connected to sidewalks and trails.

5.2.2.5 Woodlots

- a) Woodlots, which form part of Orillia's Natural Heritage System, and may form part of the open space network as shown on **Schedule H**. They are forested areas designed for passive recreation, including trails which will be hard surfaced if they are part of a larger multi-use trail network. Management includes healthy tree management, trail upkeep, safety, invasive species control, and habitat preservation.
- b) Woodlots will be planned and managed in accordance with the policies of the Natural Heritage System.
- c) Ownership and management of woodlots may be undertaken by a third-party organization in accordance with the policies of the Natural Heritage System.
- d) The City's Woodlot Policy will be adhered to prior to the City or other agency assuming ownership of any woodlot.

5.2.2.6 Open Space / Conservation Areas

- a) Orillia's legacy Open Space / Conservation Area, Scout Valley, is shown on **Schedule H** which includes naturalized landscapes, native plants, streams, fields, and forested areas. Amenities such as hiking trails, public parking, and a public washroom may be included, and management is to focus on trail upkeep, safety, invasive species control, and habitat preservation.
- b) Open Space / Conservation Areas will be planned and managed in accordance with the policies of the Natural Heritage System and conservation easements, where applicable.

5.2.2.7 Other Open Spaces

- a) Existing private open spaces, such as golf courses, and cemeteries are shown in the Parks and Major Open Space designation on **Schedule B**.

- b) Golf courses provide recreational benefits to residents and visitors. Those golf courses designated as Parks and Major Open Space on **Schedule B** are permitted to continue operating. No new golf courses (excluding mini golf or golf simulators) will be permitted.

5.2.3 Parkland Dedication

- a) Parkland dedication will occur in accordance with the provisions of the *Planning Act*, through the City's Parkland Dedication By-law.
- b) All development will be subject to the parkland dedication provisions of the *Planning Act*, except that the alternative parkland dedication requirement of 1.0 hectares per 600 dwelling units will not apply.
- c) The City may accept cash-in-lieu of parkland dedication on any application for development where such contributions may be more effective in achieving local parkland targets as set out in the City's Parkland Dedication By-law.
- d) Lands designated Natural Heritage or encumbered for use by a public utility or easement will not be considered as part of parkland dedication unless the encumbrance does not impact the parkland use.

5.2.4 Trails Network

- a) Orillia's network of existing and proposed off-road trails, conceptually shown on **Schedule G** and guided through policies in section 4.3 of this Plan, is considered a key component of the city's open space network and transportation network. Minor refinements to the alignment of trails on **Schedule G** will be updated through regular updates to this Plan and will not require an amendment to this Plan.

5.2.5 Downtown Parks and Open Space Network

- a) The provision of parks and the open space network in Downtown, which serves current and future residents and visitors, will be guided by the Downtown Tomorrow Plan and the Parks, Recreation, Culture, and Trails Master Plan.
- b) The open space network in Downtown should be focused on an interconnected system of streets, walkways and parks, that are inviting and safe for pedestrians and cyclists. The open space network should be supported by four-season amenities such as washrooms and drinking water access. Active transportation connections for all ages and abilities will be prioritized where they link to the waterfront, schools, and public service facilities, including the Orillia Recreation Centre.
- c) Existing Waterfront Parks will be the primary parks feature that sets the stage for a high-quality of living in Downtown. Wherever possible, through the development process, Waterfront Parks and existing trails are to be enhanced through parkland dedication and high-quality, four-season design and urban architecture.
- d) The City will integrate amenities for existing and future Downtown residents in the open space network including dog parks, shade and heat mitigation infrastructure, low-cost streetscape improvements and seating, and outdoor gathering spaces.

6 Cultural Heritage

6.1 Introduction

- a) Cultural heritage resources will be identified, conserved, promoted, and enhanced to incorporate the past into planning for the future of Orillia.
- b) Cultural heritage planning will be a joint responsibility between the City and Province.
- c) The City will engage early with First Nations rights-holders and urban Indigenous residents and consider their interests when identifying, protecting and managing cultural heritage landscapes, built heritage resources, and archaeological resources.
- d) The City will ensure that cultural heritage resources are conserved using the provisions of the *Ontario Heritage Act*, the *Planning Act*, the *Environmental Assessment Act*, the *Funeral, Burial and Cremation Services Act*, and the *Municipal Act*.

6.2 General Policies

- a) All development or redevelopment will embrace, celebrate, and conserve cultural heritage resources, including those in Downtown. Significant built heritage resources and cultural heritage landscapes will be identified and conserved to provide for their long-term appreciation.
- b) Development and redevelopment will have regard for cultural heritage resources and where possible, incorporate these resources into development plans.
- c) The City will maintain a Municipal Heritage Committee to advise on matters related to the conservation of cultural heritage resources.
- d) The City will conserve significant built heritage resources, cultural heritage landscapes and archaeological resources in the undertaking of municipal public works, such as road and infrastructure projects.

6.2.1 Heritage Conservation Incentives

- a) The City may offer financial incentives, including the use of a community improvement plan, to encourage and assist with the conservation, restoration and reuse of cultural heritage resources.
- b) Grants and funding offered by other orders of government and agencies to conserve, restore, and reuse cultural heritage resources are encouraged.

6.2.2 Municipal Heritage Register

- a) The City will maintain a register of properties and sites that are deemed to possess cultural heritage value or interest in accordance with the *Ontario Heritage Act*. This heritage register will include properties and sites that are individually designated or within a heritage conservation district under the *Ontario Heritage Act*.
- b) Individual properties may be added to the City's heritage register, in consultation with the Municipal Heritage Committee, if they possess two or more of the criteria for determining cultural heritage value or interest listed in Ontario Regulation 9/06, or any of its successors.
- c) The Municipal Heritage Committee will seek to proactively and collaboratively work with property owners to explore:
 - i. Listing properties on the heritage register that possess cultural heritage value or interest; and
 - ii. Evaluating properties already listed on the heritage register for designation in accordance with the *Ontario Heritage Act*.

6.2.3 Designated Heritage Properties

- a) Designation of individual properties under the *Ontario Heritage Act* will be used as a tool, where appropriate, to conserve built heritage resources and cultural heritage landscapes.
- b) Alterations, demolition, and new construction within or adjacent to a designated property requires:
 - i. Submission of a Heritage Impact Assessment to the City that meets the requirements of section 6.2.6 of this Plan; and

- ii. The approval of a Heritage Permit, with recommendation from the Municipal Heritage Committee.
 - c) The character of an individual historically designated property as defined through a Heritage Character Statement, will be maintained or enhanced through the careful consideration of plans for additions, alterations, renovation and restoration.
 - d) It is the intent of the City to conserve and enhance cultural heritage resources in situ, wherever possible.
- 6.2.4 The proposed relocation, removal or demolition of designated structures, and the development of new structures on a designated property will be subject to the provisions of the *Ontario Heritage Act*.

6.2.5 Heritage Conservation Districts

- a) The City may designate areas of cultural heritage value or interest as heritage conservation districts in accordance with the *Ontario Heritage Act*. Prior to designating an area as a heritage conservation district, the City will undertake a Heritage Conservation District Study to assess its feasibility.
- b) After the adoption of the recommendations of a heritage conservation district study, a heritage conservation district plan will be adopted by Council and enabled by By-Law which includes guidelines for managing alterations, additions, new development, demolitions and removals within the district.

6.2.6 Heritage Impact Assessments and Conservation Plans

- a) A Heritage Impact Assessment will be required as part of a complete application for development, redevelopment, and/or site alteration that has the potential to impact a cultural heritage resource and is proposed:
 - i. On or adjacent to a protected heritage property; and/or
 - ii. On properties listed as non-designated properties of cultural heritage values or interest on the municipal heritage register.

- b) A Heritage Impact Assessment required by the City must be prepared by a qualified person in accordance with the minimum requirements as outlined in the City's Terms of Reference, which will set out the contents of each statement.
- c) Any conclusions and recommendations of the Heritage Impact Assessment as approved by the City will be incorporated as mitigative and/or conservation measures into the plans for development or redevelopment and into the requirements and conditions of approval of any application submitted under the *Planning Act*.
- d) Heritage Impact Assessments required by the City may be scoped or waived by the City, as deemed appropriate.

6.2.7 Archaeological Resources

- a) Archaeological resources include artifacts, archaeological sites, and marine archaeological sites, as defined under the *Ontario Heritage Act*. The identification and evaluation of such resources will be based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act*.
- b) The City will work with First Nations rights-holders to develop working protocols and processes related to archaeological resources.
- c) Development or site alteration on lands containing archaeological resources and areas of archaeological potential are to be determined and assessed through an Archaeological Assessment and confirmed by the Province:
 - i. A Stage 1 Archaeological Assessment will be carried out by an archaeologist licenced under the *Ontario Heritage Act* prior to submission of an application for plan of subdivision or plan of condominium and may be required for development that is proposed to be located in an area of archaeological significance or where subsurface site alteration is contemplated. Further stages of Archaeological Assessment (if recommended in the Stage 1 Archaeological Assessment) should be undertaken prior to any ground disturbing activities. If archaeological resources are identified in the assessment, the application will include a Conservation Plan to conserve any archaeological resources identified for protection. Further, the preparation of an Archaeological Management Plan will be required;

- ii. The City, using the Provincial Checklist\Criteria for Evaluating Areas of Archaeological Potential, will determine the need for Archaeological Assessments for any new development. Where such potential is determined to exist, as a condition of development the proponent will retain a licensed archaeologist to carry out an Archaeological Assessment of the subject property prior to any demolition, grading or other soil disturbance in compliance to Provincial Archaeological Assessment standards and guidelines;
 - iii. If in-water or shoreline works are contemplated, the City, using the Provincial Criteria for Evaluating Marine Archaeological Potential, will determine If an area is considered of marine archaeological potential. If so, the City will require the proponent to carry out a marine Archaeological Assessment by a licensed marine archaeologist in accordance with the *Ontario Heritage Act*;
 - iv. The City may require a peer review of the Archaeological Assessment in support of a development application, which will be conducted at the expense of the applicant; and
 - v. All Archaeological Assessment reports must be submitted and entered into the Ontario Public Register of Archaeological Report. A copy of the assessment report and Provincial written confirmation that the Archaeological Assessment report(s) have been entered into the Register will be provided to the City by applicant or it's licensed archaeologist who completed the assessment. The City will maintain copies of all reports and written confirmations for information purposes.
- d) The City may permit development and site alteration on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by conservation on site. when significant archaeological resources must be preserved on site, only development and site alteration which maintain the heritage integrity of the site may be permitted.
- e) Where burial sites or ancestral remains are encountered during any excavation or other action, the provisions of the *Funeral, Burial and Cremation Services Act* and its regulations will apply. First Nations rights-holders will be notified about the encounter of all burial sites, ancestral remains, and those Archaeological Resources of an Indigenous context.

7 Economy

7.1 Introduction

- a) The city's location between Lake Couchiching and Lake Simcoe, together with its Downtown and proximity to Chippewas of Rama First Nation, including Casino Rama, make Orillia a destination for tourism and recreation. The city features excellent transportation infrastructure, including Provincial Highways 11 and 12, and proximity to Lake Simcoe Regional Airport in Oro-Medonte and the Orillia Rama Regional Airport in Ramara, which ensures efficient logistics for business operations. Orillia is also home to key institutions such as the Ontario Provincial Police Headquarters, Orillia Soldiers' Memorial Hospital, and Lakehead University, and supports the regional agriculture and food production economy.
- b) Orillia's Economic Development Strategic Plan provides a framework to guide economic development and build economic vitality. The policies of this section complement the framework of the Economic Development Strategic Plan, including considerations for planning decisions.
- c) Orillia's economy will be made more resilient by attracting new industries and incorporating sustainable planning and building practices to allow for business retention and expansion.
- d) The City will work collaboratively with First Nations rights-holders and urban Indigenous residents to identify shared priorities for economic development and recognize Orillia's Indigenous past, present, and future through economic opportunities.

7.2 Economic Drivers

7.2.1 Retaining and Attracting a Diverse Workforce

- a) Economic development in the city will be supported by a range and mix of housing options, investments in the transportation network, and providing an array of public service facilities, including child care, which allow residents to live and work in a complete community.
- b) The City should also promote and facilitate post-secondary education opportunities that enhance job opportunities in the community, promote the retention of post-secondary graduates, and drive demand for additional community services, retail facilities and housing options.

7.2.2 Supporting Innovation

- a) Partnerships and collaboration are encouraged between post-secondary institutions and local industries on research projects, supporting the development of new products, services, and startups.
- b) Development is encouraged on and around Major Institutional sites that support employment and post-secondary learning opportunities related to those uses. In particular, the development of health science industries and institutions, as well as leading health care facilities, around the future site for Orillia's Soldiers Memorial Hospital is encouraged.
- c) Land uses that facilitate creative industries on an interim or permanent basis are encouraged, including live/workspaces, home industries, home occupations, maker spaces, studios, performing arts venues, and galleries.

7.2.3 Attracting and Maintaining Investment

- a) Employment Areas will be planned and protected in accordance with the policies of this Plan, alongside infrastructure and energy planning, as primary clusters of economic activity.
- b) The City will promote the remediation and redevelopment of brownfield sites, consistent with Provincial policies and guidelines and may identify incentives to support this work.

- c) The City may consider preparing a Community Improvement Plan to stimulate investment and provide incentives, including but not limited to support:
 - i. Development and redevelopment in Strategic Growth Areas, including Downtown;
 - ii. Public realm and accessibility improvements;
 - iii. Local food system infrastructure and food assets, including in underserved areas;
 - iv. Cultural heritage conservation; and
 - v. Affordable housing initiatives.

7.2.4 Tourism

- a) Orillia's accommodation and food services, arts, and entertainment and recreation sectors are major employers within the community. This Plan will foster sustainable growth of the tourism sector by recognizing the existing value of seasonal tourism and promoting the expansion of year-round tourism.
- b) The introduction of new tourism-related uses is permitted and encouraged, provided that the uses:
 - i. Do not adversely impact natural heritage features and areas and ecological functions, heritage structures or views;
 - ii. Are compatible with adjacent lands with respect to noise, traffic, and visual impact;
 - iii. Are adequately serviced in compliance with Provincial standards; and
 - iv. Meet all other requirements and policies of this Plan.
- c) Climate resilient tourism is encouraged by supporting and providing flexibility for the evolution of the tourism industry and fostering a collaborative approach to tourism that increases the offering of all-season activities by:
 - i. Promoting and encouraging waterfront-related facilities and development;
 - ii. Promoting and encouraging sports tourism to attract visitors, drive public service facility and infrastructure development, generate revenue for local businesses, increase

community engagement and pride through hosting significant events, and increase brand recognition as a sports tourism destination;

- iii. Enhancing and developing the necessary infrastructure to attract and welcome cyclists and snow-based winter activities;
- iv. Improving active transportation connections to the waterfront from other areas of the city to encourage use of the waterfront year-round;
- v. Providing support to public and private partners to establish new festivals, events, and programming that support a thriving Downtown, waterfront and community year-round;
- vi. Enabling use of the waterfront parks and parking areas year-round for events and venues; and
- vii. Promoting year-round pop-up retail, markets, and food trucks, which can also serve neighbourhoods with limited access to fresh food.

7.2.5 Manufacturing and Warehousing

- a) Industrial uses, including manufacturing, research and development, warehousing, and logistics, are intended to continue to be key sectors of the city's economy and key job-providers.
- b) Pursuant to policies in section 3.4 of this Plan, manufacturing and warehousing uses will be encouraged in the Core Employment and Flex Business designations. Certain types of these uses may also be appropriate in Strategic Growth Areas, if they can fit into a mixed-use context and not pose issues of compatibility with nearby sensitive uses.
- c) Small-scale, entrepreneurial industries are encouraged throughout the city, including innovative uses of buildings and lands in Employment Areas and Strategic Growth Areas for maker spaces and shared workshops.

7.2.6 Major Institutional Uses and Health Services

- a) Orillia is home to several major institutional uses, including Lakehead University, the Ontario Provincial Police headquarters, as well as the Orillia Soldier's Memorial Hospital (both the existing location and the planned new campus at Lakehead University).

- b) The City supports the continued growth of higher-learning and other institutional uses as job-creators across the city.
- c) Development and land uses will be encouraged that complement nearby major institutional uses, as well as benefiting from them. Specifically, new institutional and health-care related development is encouraged in the vicinity of the city's new hospital and the expanded Lakehead University campus which directly or indirectly serve users of those institutions such as medical clinics.

7.2.7 Arts and Culture

- a) The City's Parks, Recreation, Culture, and Trails Master Plan and Economic Development Strategy will guide the provision of cultural services in Orillia as a draw for residents and visitors, and a way of life. The Downtown Tomorrow Plan provides further direction which supports the cultural richness of Downtown.
- b) The City will support the arts and culture industry with grants and financial incentives and providing connections to funders. Other initiatives which support coordination between departments and interim use of buildings for arts purposes will be encouraged.
- c) Public art should be identified through different mechanisms such as the City's capital construction program and other public realm initiatives. Public art will be permitted in both the public and private realm.

7.2.8 Local Food Production

- a) The City will consider cross-jurisdictional connections with the broader regional and Provincial agricultural systems in its planning, including supporting the agri-food network.
- b) Urban agriculture, farmers' markets, and access to local food will be encouraged in recognition of its benefits on the local and regional economy, food security, sustainability, and community building.
- c) The City will collaborate with local public health authorities and community partners to implement the Orillia and Area Food Strategy and advance actions that support food access, local food production, and a resilient agri-food network, including climate resilience and equity objectives.

- d) Access to local food will be supported and expanded to reduce the city's reliance on commercial agricultural practices and the transportation emissions associated with shipping by:
 - i. Permitting and encouraging processing of agricultural goods and other agri-food businesses in Employment Areas to support the local food supply chain;
 - ii. Permitting and encouraging urban agriculture (e.g., community gardens, backyard growing, shared garden allotments, and urban livestock) in certain land use designations;
 - iii. Permitting and supporting the use of City-owned land for growing food; and
 - iv. Allowing for small-scale home industries and home occupations, including food-based enterprises that are supportive of agricultural activities.
- e) The City will work collaboratively with First Nations and urban Indigenous residents to support Indigenous-led food initiatives, including traditional food harvesting, cultivation, and distribution, where permitted by this Plan and in accordance with cultural protocols.

8 Environment and Climate Change

8.1 Introduction

- a) All potential environmental impacts will be considered in reviewing development applications, including but not limited to:
 - i. The protection and enhancement of natural heritage features and areas and ecological functions;
 - ii. Water quality and quantity in Lake Simcoe and Lake Couchiching watersheds;
 - iii. Water conservation and source water protection;
 - iv. Climate change mitigation;
 - v. Climate change adaptation and resilience; and
 - vi. Solid waste disposal and strategies for reduction, reuse, and recycling.
- b) Green corridors, which include street trees and other landscaping features will be prioritized to connect neighbourhoods to the Natural Heritage System and the waterfront. An applicant will supplement and enhance the city's tree canopy either on municipal or private property or otherwise make cash-in-lieu contributions for the planting of trees elsewhere in the city.
- c) New opportunities will be identified to reduce landfill waste, while integrating enhanced composting and recycling initiatives, through both private development and City-led programs.
- d) Efforts will be taken to ensure that all new and existing municipal facilities perform to the highest environmental standards that are feasible, accounting for such considerations as energy efficiency, greenhouse gas emissions, water conservation and consumption, waste reduction and management, site design, and landscaping.

8.2 Natural Heritage System

8.2.1 Introduction

- a) Supporting a robust Natural Heritage System follows two steps. The first is establishing a network of natural heritage features and areas and their associated ecological functions. The second is to protect and integrate nature throughout the city to benefit wildlife, water resources, air quality and ecosystems, and resilience to climate change, while integrating nature close to where people live to support health and wellbeing.
- b) The Natural Heritage System helps protect the health and water quality of the Lake Simcoe Watershed, conserves biodiversity, protects natural heritage features and areas and their associated ecological functions, and protects surface and groundwater water resources.
- c) The City encourages the continuum of conservation, which includes in priority order: protecting features, minimizing negative impacts, mitigating negative impacts, and offsetting negative impacts.
- d) The City will support partnerships for the protection and enhancement of the Natural Heritage System and the ecological restoration of enhancement areas and linkages, including those to the County of Simcoe's Natural Heritage System.
- e) Public access, where appropriate, should be provided to the Natural Heritage System for the purposes of environmental education, traditional harvest, and nature-based recreation.

8.2.2 Establishing the Natural Heritage System

8.2.2.1 General Policies

- a) Orillia's Natural Heritage System, as depicted on **Schedule A** and further designated on **Schedules B and C**, consists of natural heritage features and areas and hydrologic functions.
- b) The precise boundaries of the Natural Heritage System will be determined on a site-specific basis through applicable Environmental Impact Studies and other environmental studies prepared through the development application process and in consultation with relevant agencies.
- c) Minor refinements to the boundaries of the Natural Heritage System and areas, as confirmed through detailed Environmental Impact Studies may occur without an

amendment to this Plan. The land use designation abutting that portion of the Natural Heritage designation on **Schedule B** will apply.

- d) The unlawful removal or destruction of a natural heritage feature and areas or any associated ecological function will not provide the rationale for the removal of these lands from the Natural Heritage designation.
- e) The Natural Heritage System will be zoned appropriately in the Zoning By-law.
- f) Lands shown forming the Natural Heritage System will not be construed to imply that the lands are free and open to the public or that such lands will be purchased by the City or any other public agency.

8.2.2.2 Significant Wetlands and Local Wetlands

- a) Development and site alteration will not be permitted within significant wetlands.
- b) Development and site alteration will not be permitted within local wetlands unless it has been demonstrated through an Environmental Impact Study that there will be no negative impacts on the natural heritage features and areas or ecological functions.
- c) Development and site alteration will not be permitted on adjacent lands to significant wetlands and local wetlands unless:
 - i. For significant wetlands, the ecological function of the wetland and adjacent lands has been evaluated, and it can be demonstrated that there will be no negative impact on the natural heritage features and areas, hydrologic functions, or ecological functions; and
 - ii. For local wetlands, the feature has been evaluated, and it can be demonstrated that its ecological function and hydrologic function provides only a limited contribution to the ecological function of the Natural Heritage System and can be successfully replicated elsewhere on site, that there will be no net loss to the Natural Heritage System, and that net ecological gain can be achieved.

8.2.2.3 Significant Woodlands and Local Woodlands

- a) Development and site alteration will not be permitted within significant woodlands or local woodlands or on adjacent lands unless it has been demonstrated through an

Environmental Impact Study that there will be no negative impacts on the natural heritage features and areas or ecological functions.

8.2.2.4 Significant Wildlife Habitat

- a) Development and site alteration will not be permitted within significant wildlife habitat or on adjacent lands unless it has been demonstrated through an Environmental Impact Study that there will be no negative impacts on the natural heritage features and areas or ecological functions.

8.2.2.5 Habitat of Endangered and Threatened Species

- a) Development and site alteration will not be permitted in the habitat of endangered and threatened species except in accordance with Provincial and Federal requirements.
- b) The locations of habitat of endangered and threatened species are not identified on the Schedules of this Plan but may be in the city, as determined through an Environmental Impact Study or Species at Risk Study.
- c) A Species at Risk Study may be required as part of a complete application to provide further study of the habitat of endangered and threatened species.

8.2.2.6 Fish Habitat

- a) Development and site alteration will not be permitted on adjacent lands to fish habitat except in accordance with relevant Provincial and Federal requirements.

8.2.2.7 Valleylands and Watercourses

- a) Where a significant valleyland is identified, field investigations will be required to identify the appropriate top-of-bank boundary and the associated buffers.

8.2.3 Protecting and Enhancing the Natural Heritage System

8.2.3.1 Development Policies

- a) An Environmental Impact Study (EIS), completed by a qualified professional to the satisfaction of the City in consultation with other relevant public agencies and in accordance with section 8.2.4 of this Plan, will be required for all development and site alteration:
 - i. Within the Natural Heritage System;
 - ii. Within 120 metres from the extent of significant wetlands and significant woodlands; and/or
 - iii. Within 30 metres from all other natural heritage features and areas which form the Natural Heritage System.
- b) The minimum distances listed in ii) and iii) of policy 8.2.3.1a) may be reduced at the City's discretion where there are intervening urban land uses.
- c) Development or site alteration will be prohibited in the Natural Heritage System or on adjacent lands unless it has been demonstrated, through the Environmental Impact Study, that there will be no negative impacts on the natural heritage features and areas or their ecological functions.
- d) Development or site alteration will be prohibited within significant wetlands.
- e) In evaluating an Environmental Impact Study, consideration will be given to the potential impacts on the integrity of the natural heritage features and areas, ecological functions, and linkages.

8.2.3.2 Buffers

- a) Proposals for development and site alteration on adjacent lands to the Natural Heritage System will require establishment of a minimum buffer width through an Environmental Impact Study, delineated and maintained to support the health and integrity of natural heritage features and areas and hydrologic functions, which:
 - i. Is of sufficient width to protect the natural heritage feature and area or hydrologic function from the impacts of the proposed change and associated activities that may occur before, during, and after construction, and where possible, restore or enhance the feature and its function;
 - ii. Is maintained as natural, native, and self-sustaining vegetation; and
 - iii. Considers the need for additional setbacks in conjunction with buffer areas to support grading, infrastructure, trails, and water balance mitigation measures.
- b) When an Environmental Impact Study has determined the need for a buffer area, the Buffer Area will be added to the Natural Heritage designation to protect its ecological functions and hydrologic functions, and the following applies:
 - i. Development and site alteration on lands identified as a buffer area will be prohibited; and
 - ii. Trails may be permitted to be located within a buffer area, subject to appropriate technical review that confirms that the trail will not have a negative impact on natural heritage features and areas and ecological functions.

- c) Minimum buffer areas will be established in accordance with **Table 3**. Where an Environmental Impact Study establishes the need for a buffer area that exceeds the minimum width established in **Table 3**, the larger recommended buffer area will apply.

Table 3 – Minimum Buffer Area Widths Between Development or Site Alteration and Natural Heritage Features or Areas

Natural Heritage Feature or Area	Minimum Buffer Area Width	Measured From
<u>Significant Wetlands</u>	30 metres	The feature limit
<u>Local Wetlands</u>	15 metres	The feature limit
<u>Significant Woodlands</u>	30 metres	The dripline
<u>Local Woodlands</u>	15 metres	The dripline
<u>Valleylands</u>	10 metres	The feature limit
Watercourses	15 metres	The high-water mark on all sides
Lake Simcoe and Lake Couchiching Shoreline	30 metres (See policy 8.2.3.2d))	The high-water mark
<u>Significant Wildlife Habitat</u>	30 metres, or as determined through an <u>Environmental Impact Study</u> .	The feature limit
Habitat for Threatened or Endangered Species	As determined through application of appropriate legislation through an <u>Environmental Impact Study</u> .	The feature limit

- d) Notwithstanding the minimum buffer area for Lake Simcoe and Lake Couchiching,
 - i. Shoreline structures will be permitted in accordance with the requirements of the implementing Zoning By-law; and
 - ii. Expansion to or reconstruction of existing buildings and structures or dwellings will be permitted within the minimum buffer area, in accordance with the Lake Simcoe Protection Plan where applicable.
- e) Where different components of the Natural Heritage System overlap, the limit of development will be set at the outermost edge of the area or feature and any associated minimum buffer area.
- f) Lands within the Natural Heritage designation may be dedicated to the City or other public authority, subject to the approval of the City, without cost to the City, and will not be considered as part of the required parkland dedication.

8.2.3.3 Linkages and Enhancement Areas

- a) **Schedule C** conceptually identifies areas that may be suitable as linkages, to be determined and delineated through an Environmental Impact Study.
- b) Development and site alteration on adjacent lands to a linkage will be required to undertake a Scoped Environmental Impact Study to support the establishment of a linkage, including:
 - i. Whether it is feasible to maintain, restore, or where possible improve ecological linkages, given the function of the linkage and nature of the adjoining lands;
 - ii. The ecological function of the linkage;
 - iii. The size and extent of the linkage necessary to achieve the ecological function; and
 - iv. The ability to realize the necessary size along the extent of the linkage.
- c) Enhancement areas should be identified through technical studies undertaken or accepted by the City, through the conservation and land securement programs of other public agencies, through private land stewardship, or through the development application process. Where enhancement areas are identified through the development application

- process, excluding site plan applications, the lands will be subject to the Natural Heritage System policies of this plan and protected in the implementing Zoning By-law.
- d) Enhancement areas will be managed in accordance with the approved Environmental Impact Study to provide for planting of appropriate native species and/or allow for natural succession.

8.2.4 Environmental Impact Studies

- a) An Environmental Impact Study will be used to demonstrate, where applicable, that the relevant policies of this Plan are met and that proposed development or site alteration will not have a significant impact on natural heritage features and areas, ecological functions, and/or hydrologic functions.
- b) Where required by the policies of this Plan, an Environmental Impact Study will:
- i. Identify, delineate and evaluate the potential effects of a proposed development, redevelopment or site alteration on the Natural Heritage System;
 - ii. Recommend means of preventing, minimizing or mitigating impacts as well as opportunities for enhancing or restoring the quality and connectivity of the elements comprising the Natural Heritage System;
 - iii. Identify and assess the presence and function of elements of the Natural Heritage System, where insufficient information exists; and/or,
 - iv. Interpret the boundaries of the Natural Heritage System, where appropriate.
- c) The requirements of an Environmental Impact Study may be scoped to the satisfaction of the City and any agency having jurisdiction to have a more limited scope. A Scoped Environmental Impact Study addresses specified potential impacts of a development application and may take the form of a letter or checklist prepared by a qualified professional including but not limited to the following circumstances:
- i. To undertake and confirm prior Environmental Impact Study findings; and
 - ii. To evaluate the nature of a redline revision to an existing draft plan or site plan and the potential for impacts on ecological functions in the Natural Heritage System,

where the Natural Heritage designation remains unchanged, but where a change of adjacent land use triggers a development application.

- d) Environmental Impact Studies will be prepared by a qualified professional and submitted as part of a complete application, where required by this Plan and contain detailed and specific information.
- e) As part of the pre-consultation process, the Terms of Reference prepared by the applicant for a required Environmental Impact Study (see **Appendix 1** for Environmental Impact Study Guidelines) will be confirmed to address the following matters:
 - i. Identification of all natural heritage features and areas and natural hazard lands on the property and adjacent lands, which may require confirmation through field investigations;
 - ii. Identification of the ecological functions and hydrologic functions provided by each natural heritage feature and area and any cultural keystone species;
 - iii. The rationale for the proposed development or site alteration, including any alternatives that were considered;
 - iv. Whether the proposed development or site alteration will have any negative impacts on the Natural Heritage System, and any mitigation measures or monitoring that may be required;
 - v. Demonstration of how connectivity within the Natural Heritage System will be maintained, restored, or enhanced during and after construction, including achievement of enhancement areas or linkages;
 - vi. Determination of the minimum buffer areas required, as identified in this Plan, and confirmation that the buffer areas provided demonstrate no negative impacts on the ecological function or hydrologic function of the natural heritage features and areas;
 - vii. Determination if any lands outside of the Natural Heritage System would be appropriate for restoration or re-naturalization to enhance the features and functions within the Natural Heritage System; and
 - viii. Determination if any lands should be redefined to the Natural Heritage designation to protect natural heritage features and areas, and their ecological functions and hydrologic functions.

- f) The City, in consultation with First Nations rights-holders and Provincial and Federal governments, may prepare Environmental Impact Study Terms of Reference to assist applicants in identifying the scope of a required Environmental Impact Study.

8.3 Water Resources

8.3.1 Introduction

- a) The City will protect, improve, and restore the quality and quantity of drinking water by protecting all municipal drinking water supplies and designated vulnerable areas including surface and ground water features, and their hydrologic functions in accordance with the South Georgian Bay Lake Simcoe Source Protection Plan.
- b) The ecological health of Lake Simcoe and its watershed will be protected and restored in accordance with the Lake Simcoe Protection Plan.
- c) The City will continue to protect its drinking water sources through the development review process by requiring new development to minimize stormwater volumes and contaminant loads through low impact development, where appropriate, appropriate site grading, and encourage increased native vegetation plantings.

8.3.2 Source Water Protection

- a) Wellhead protection areas, intake protection zones, significant groundwater recharge areas, issue contributing areas, and vulnerability scores are delineated in **Schedule E** to protect and enhance water quality and safeguard municipal drinking water. Changes to the boundaries of wellhead protection areas and intake protection zones will not require an amendment to the Official Plan if a study is undertaken by the Source Protection Authority. Where conflict exists between the policies of this Official Plan and the Source Protection Plan, the more restrictive requirement will apply.
- b) Orillia's Risk Management Official will be responsible for determining when an existing or future land use or activity is, or may be, a significant drinking water threat.
- c) All land uses, except residential, are designated for the purposes of section 59 of the *Clean Water Act*. Any planning application for non-residential uses that are submitted on lands within wellhead protection areas and intake protection zones must include a Notice from the Risk Management Official as part of a complete application.

- d) Development and site alteration within a significant groundwater recharge area will be supported by a hydrogeological assessment, in accordance with the City's Terms of Reference, which demonstrates that the quality of groundwater in these areas, and the function of the recharge areas, will be protected, improved, or restored.
- e) The following new land uses will be prohibited on the lands identified as wellhead protection areas, intake protection zones, and issue contributing area on **Schedule E** where the use has been determined to be a significant drinking water threat by the City's Risk Management Official in accordance with the South Georgian Bay Lake Simcoe Source Protection Plan:
 - i. The establishment, operation, or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*;
 - ii. The establishment, operation, or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage;
 - iii. The management or storage of agricultural source material or application of agricultural source material to land;
 - iv. The handling, storage, or application of non-agricultural source material to land;
 - v. The handling, storage, or application of commercial fertilizer to land;
 - vi. The handling, storage, or application of pesticides to land;
 - vii. The handling, storage, or application of road salt;
 - viii. The storage of snow;
 - ix. The handling and storage of fuel;
 - x. The handling and storage of a dense non-aqueous phase liquid;
 - xi. The handling and storage of an organic solvent;
 - xii. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body; and
 - xiii. An activity that reduces the recharge of an aquifer;

- f) The significant drinking water threat land uses listed above that are prohibited will be treated and managed as existing threat uses even though those land uses will commence after the effective date of the South Georgian Bay Lake Simcoe Source Protection Plan only where:
 - i. A drinking water threat land use that is related to a development proposal where a complete application was made under the *Planning Act* or *Condominium Act* prior to the day the South Georgian Bay Lake Simcoe Source Protection Plan came into effect. This policy also applies to any further applications required under the *Planning Act*, *Condominium Act*, or prescribed instruments to implement the development proposal;
 - ii. A drinking water threat land use that is related to an application for a Building Permit, which has been submitted in compliance with Division C 1.3.1.3 (5) of the *Building Code Act* prior to the day the South Georgian Bay Lake Simcoe Source Protection Plan came into effect; or
 - iii. A drinking water threat land use that is related to an application made for the issuance or amendment of a prescribed instrument prior to the day the South Georgian Bay Lake Simcoe Source Protection Plan came into effect.
- g) New development and site alteration within wellhead protection areas and intake protection zones should incorporate best management practices such as low impact development with the goal to maintain the pre-development recharge.
- h) The following policies will apply to the construction of infrastructure within wellhead protection areas and intake protection zones:
 - i. The design of new stormwater management facilities in vulnerable areas will minimize the risk of contaminating drinking water by encouraging grading and drainage designs that reduce ponding and direct any runoff outside of vulnerable areas, where it would be a low, moderate, or significant drinking water threat; and
 - ii. Where a development proposal is located within a vulnerable area and includes stormwater management facilities, a Stormwater Management Plan will be required as part of a complete application to ensure that the design of the new facilities minimizes the risk to drinking water and directs the discharge to lands outside of vulnerable areas.

8.3.3 Lake Simcoe Watershed

8.3.3.1 General

- a) Lands identified within the Lake Simcoe Watershed, as shown on **Schedule C**, are subject to the Lake Simcoe Protection Plan. In the event of conflict between the policies of the Lake Simcoe Protection Plan and this Official Plan, the Lake Simcoe Protection Plan will prevail.
- b) Terms in this section that are followed by an asterisk* are defined in the Lake Simcoe Protection Plan.

8.3.3.2 Development and Site Alteration

- a) An application for development* or site alteration* within the Lake Simcoe Watershed will, where applicable:
 - i. Increase or improve fish habitat* in streams, lakes* and wetlands*, and any adjacent riparian areas*;
 - ii. Include landscaping and habitat restoration that increase the ability of native plants and animals to use valleylands * or riparian areas* as wildlife habitat* and movement corridors;
 - iii. Seek to avoid, minimize and/or mitigate impacts associated with the quality and quantity of urban run-off into receiving streams, lakes and wetlands*; and
 - iv. Establish or increase the extent and width of a vegetation protection zone adjacent to Lake Simcoe to a minimum of 30 metres, where feasible.
- b) Structures will only be permitted within the vegetation protection zone along the Lake Simcoe shoreline if:
 - i. There is no alternative but to place the structure in this area;
 - ii. The area occupied by such structure is minimized;
 - iii. The ecological function* of the vegetation protection zone is maintained; and
 - iv. Pervious materials and designs are used to the extent feasible.

- c) Significant alteration of the shore of Lake Simcoe or the shore of a freshwater estuary of a stream connected to Lake Simcoe is not permitted unless the significant alteration is for the purpose of stabilizing, protecting, restoring or rehabilitating the shore, or the alteration will be undertaken by a public body and the project is consistent with the objectives of the Lake Simcoe Protection Plan or the alteration entails erosion control works along the City's Waste Diversion Site shoreline. Such works will only be permitted if it is demonstrated that natural shoreline treatments that maintain the natural contour of the shoreline will be used where practical, and a vegetative riparian area will be established to the extent feasible. A significant alteration includes any alteration that has an adverse effect on the ecological functions* of the shoreline.
- d) No structures, including boathouses, will be permitted in Lake Simcoe's waterbody or in a permanent or intermittent stream if the structure impedes the natural flow of water along the shoreline or in the stream, if the structure is intended to be used as a dwelling, or if the structure or its construction harmfully alters fish habitat*. This policy does not prohibit drainage works such as those permitted under the *Drainage Act*, those required for infrastructure or those structures required for the purposes of stewardship, conservation, restoration or remediation undertakings.
- e) The City, or any public agency having ownership, will where practical and feasible, actively re-naturalize public land adjacent to shorelines and streams to a minimum of 30 metres.
- f) All new development* on lands adjacent to the Lake Simcoe shoreline will be subject to Site Plan Control.
- g) The alteration of the shore of Lake Simcoe, other lakes* or any permanent or intermittent stream* for the purpose of establishing or altering drainage works such as those works under the *Drainage Act*, infrastructure* or for stabilization, erosion control or protection purposes will only be permitted if it is demonstrated that natural shoreline treatments (e.g. planting of natural vegetation, bioengineering*) that maintain the natural contour of the shoreline will be used where practical, and a vegetative riparian area* will be established to the extent feasible.
- h) Where, through an application for development* or site alteration*, a buffer is required to be established by the implementation of an Environmental Impact Study or natural

heritage evaluation, the buffer will be composed of and maintained as natural self-sustaining vegetation.

- i) Where development* or site alteration* is permitted within 120 metres of the Lake Simcoe shoreline*, or any permanent or intermittent stream* or wetland*, the development* or site alteration* should be integrated with and should not constrain ongoing or planned stewardship and remediation efforts.
- j) Where development* or site alteration* is permitted in relation to existing uses*, the following policies apply:
 - i. All existing uses* lawfully used for such purposes on June 1, 2009 are permitted;
 - ii. The construction of a building on an existing lot of record is permitted, provided it was zoned for such on June 2, 2009, or where an application for an amendment to a zoning by-law is required as a condition of a severance granted prior to June 2, 2009;
 - iii. The development* permitted in (ii), expansion to existing buildings or structures, accessory structures and uses, and conversions of legally existing uses which bring the use more into conformity with this Plan are permitted subject to a demonstration that the use does not expand into a key natural heritage feature and area, a key hydrologic feature and any minimum buffer area associated with a feature or the Lake Simcoe shoreline, unless there is no alternative in which case any expansion will be limited in scope and kept within close geographical proximity to the existing structure; and
 - iv. The expansion to existing agricultural buildings and structures, residential dwellings and accessory uses to both, may be considered within a key natural heritage feature and area, a key hydrologic feature, and any minimum vegetation protection zone associated with these features or the Lake Simcoe shoreline, if it is demonstrated that:
 - 1. There is no alternative to the expansion or alteration, and the expansion or alteration is directed away from the feature and vegetation protection zone to the maximum extent possible;
 - 2. The impact of the expansion or alteration on the feature and its functions is minimized to the maximum extent possible; and
 - 3. Expansion, maintenance, or replacement of existing infrastructure is permitted.

8.3.3.3 Wastewater Infrastructure

- a) No new municipal sewage treatment plant* will be established in the Lake Simcoe Watershed* unless:
 - i. The new plant is intended to replace an existing municipal sewage treatment plant*; or
 - ii. The new sewage treatment plant* will provide sewage services to,
 - 1. A development* that is on partial services*; or
 - 2. A development* where one or more subsurface sewage works* or on-site sewage systems* are failing.
- b) No new non-municipal sewage treatment plant* will be established in the Lake Simcoe Watershed* unless the plant can demonstrate that:
 - i. The plant will result in a net reduction of phosphorous loadings to the watershed from the baseline conditions for the property that would be serviced by the new plant; or
 - ii. The undertaking that the plant will serve will not add phosphorous loadings to the Lake Simcoe Watershed*.
- c) A new on-site sewage system* or subsurface sewage works* will not be permitted within 100 metres of the Lake Simcoe shoreline*, other lakes*, or any permanent stream* except in the following circumstances:
 - i. A proposal for an on-site sewage system* or subsurface sewage works* that would serve a public open space;
 - ii. A proposal for an on-site sewage system* or subsurface sewage works* that would replace or expand the capacity of an existing on-site sewage system* or subsurface sewage works* that will serve a use that would have been permitted by the Zoning By-law as of June 2, 2009; or
 - iii. A proposal for an on-site sewage system* or subsurface sewage works* that relates to a development* proposal for only one dwelling, where the proposal would have been permitted by the Zoning By-law as of June 2, 2009.

- d) Subdivision agreements and site plan agreements within the Lake Simcoe Watershed* will include, and individuals undertaking site alteration* activities will have regard to, the following conditions:
 - i. Keep the removal of vegetation, grading and soil compaction to the minimum necessary to carry out development* activity;
 - ii. Removal of vegetation will not occur more than 30 days prior to grading or construction;
 - iii. Put in place structures to control and convey runoff;
 - iv. Minimize sediment that is eroded offsite during construction;
 - v. Seed exposed soils once construction is complete and seasonal conditions permit; and
 - vi. Ensure erosion and sediment controls are implemented effectively.
- e) Upon completion of the shoreline management strategy and subwatershed evaluations, as outlined in the Lake Simcoe Protection Plan, this Plan will be amended to ensure it is consistent with their recommendations.
- f) An application to establish or expand a major recreational use* will be accompanied by a recreation water use plan that demonstrates:
 - i. Water use for maintenance and/or snow-making are kept to a minimum;
 - ii. Grassed, watered and manicured areas are limited to sports fields surfaces, golf fairways, tees and greens, and landscaped areas around buildings and structures; grass mixtures that require minimal watering and upkeep will be used for sports fields and golf fairways where applicable;
 - iii. Crossings of intermittent and permanent streams* are kept to a minimum;
 - iv. Water-conserving technologies (such as low-flow toilets and shower heads) are used in clubhouses and restaurants where applicable;
 - v. Water-conserving technologies (such as timed irrigation systems designed to reduce evaporation losses, and recycling of water from under greens) are used in the irrigation and watering of sports field surfaces, golf fairways, tees and greens, and landscaped areas around buildings and structures, where applicable;

- vi. Other water conservation technologies (such as rainwater harvesting or reuse of stormwater) will be used to reduce water use; and
- vii. Stormwater treatment facilities are used to capture and treat runoff from areas with impervious surfaces.
- g) No new mineral aggregate operations and no wayside pits and quarries, or any ancillary or accessory use thereto will be permitted in the following key natural heritage features and areas and key hydrologic features:
 - i. Significant wetlands*;
 - ii. Significant habitat of endangered species and threatened species*; and
 - iii. Significant woodlands* unless the woodland is occupied by young plantation or early successful habitat.
- h) An application for a new mineral aggregate operation or a new wayside pit or quarry may only be permitted in a key natural heritage feature and area, a key hydrologic feature or its related vegetation protection zone, other than a feature mentioned in subsection g) where the application demonstrates the following:
 - i. The health, diversity and size of these key natural heritage features and areas will be maintained or restored and, to the extent possible, improved to promote a net gain of ecological health;
 - ii. Any permitted extraction of mineral aggregates that occurs in a feature will be completed, and the area will be rehabilitated, as early as possible in the life of the operation; and
 - iii. Ancillary uses related to mineral aggregate activities such as wayside pits and quarries may be subject to technical cultural heritage studies, such as Heritage Impact Assessment and/or Archaeological Assessment.
- i) Every application for a new mineral aggregate operation must demonstrate:
 - i. How the connectivity between key natural heritage features and areas or key hydrologic features will be maintained before, during and after the extraction of mineral aggregates; and

- ii. How the operator could immediately replace or restore any habitat that would be lost from the site with equivalent habitat or another part of the site or on adjacent lands.
- j) When approving a development* along the Lake Simcoe shoreline*, the City will ensure that public access to the Lake is maintained.
- k) Where, in accordance with the policies of the Lake Simcoe Protection Plan, development* and site alteration* is permitted within 120 metres of the Lake Simcoe shoreline* or a permanent or intermittent stream or a wetland, the development* or site alteration* will be integrated with existing or proposed parks and trails to the extent feasible.
- l) An application for major development* within the Lake Simcoe Watershed*, as delineated on **Schedule C**, will be accompanied by a Stormwater Management Plan that:
 - i. Evaluates stormwater management on a “watershed” based approach and that is consistent with local sub-watershed evaluations and water budgets where available. Evaluations will be consistent with the City’s stormwater management master plan, subwatershed evaluation and water budget, in keeping with the Lake Simcoe Protection Plan, when completed;
 - ii. Incorporates an integrated treatment train approach to minimize stormwater management flows and reliance on end-of-pipe controls through measures including source controls, lot-level controls and conveyance techniques, such as grass swales, where appropriate;
 - iii. Identifies the specific location of permanent end of pipe facilities, the areas they will service, and considerations for their size, shape and design criteria;
 - iv. Evaluates, at appropriate geographic scales, predicted changes in the water balance between pre-development and post-development conditions, and evaluates how such changes will be minimized;
 - v. Evaluates, at appropriate geographic scales, anticipated changes in phosphorus loadings between pre-development and post-development, and evaluates how phosphorus loading will be minimized;
 - vi. Offers specific direction on how end of pipe stormwater management works will be designed, to satisfy, at a minimum, the enhanced protection level specified in the Province’s Storm Water Management Planning and Design Manual, as amended; and

- vii. Identifies criteria and circumstances upon which interim storm water facilities may be considered or precluded.
- m) Stormwater runoff volume and pollutant loadings from major development* and within the city will be reduced by:
 - i. Encouraging implementation of a hierarchy of source, lot-level, conveyance and end-of pipe controls;
 - ii. Encouraging the implementation of innovative stormwater management measures;
 - iii. Allowing for flexibility in development standards to incorporate alternative community design and stormwater techniques, such as those related to site plan design, lot grading, ditches and curbing, street widths, street and driveway surfaces, and the use of open space as temporary detention ponds;
 - iv. Supporting implementation of programs to identify areas where source control or elimination of cross connections may be necessary to reduce pathogens or contaminants; and
 - v. Support implementation of source control programs, which are targeted to existing areas that lack adequate stormwater controls.
- n) Stormwater management works to serve new major development* will not be permitted unless the works are designed to satisfy the Enhanced Protection Level specified in Chapter 3 of the Ministry of the Environment Planning and Design Manual 2003, as amended.
- o) This policy does not apply if the works are intended to serve infill development or redevelopment, if it is not feasible to comply with the specified design standard, and the person seeking to establish the works demonstrates that the works incorporate the most effective measures in the circumstances to control the quality and quantity of stormwater related to the development or redevelopment.
- p) A permit may be required from the Lake Simcoe Region Conservation Authority prior to development or site alteration being permitted in hazard lands, wetlands and any proposed alterations to watercourses and shorelines within the Lake Simcoe Watershed in accordance with the *Conservation Authorities Act*.

8.4 Energy Conservation and Climate Change

8.4.1 Introduction

- a) The City's approach to climate change through land use will focus on resilience, that being the ability of the community, built form, economy, and infrastructure of Orillia to respond to the impacts of climate change. Other sections of this Plan address the resilience of natural systems, housing, and transportation.
- b) This resilience-centred approach recognizes that many tools and processes can contribute to both climate change mitigation and adaptation and should be looked at comprehensively.
- c) The City will act on climate change in accordance with and in support of the Climate Change Action Plan and the Climate Change Adaptation Strategy.
- d) Orillia's Climate Change Action Plan targets net zero emissions for corporate operations by 2040 and net zero emissions for the community by 2050. The City will make strategic progress towards these targets in consideration of planning applications, policy decisions, procurement, asset management planning, and capital projects.
- e) The City will collaborate with First Nations rights-holders to explore ways to mitigate and adapt to a changing climate.
- f) Together with community and agency partners, Orillia will prioritize climate mitigation and adaptation demonstrating leadership in City operations.
- g) The creation of complete communities and promoting development of the City Structure will allow residents and businesses to support themselves during extreme weather events.

8.4.2 Community Resilience

- a) The City will collaborate with the Simcoe Muskoka District Health Unit and local health organizations to use climate and health data to better understand the people and places in Orillia that are more vulnerable to climate change.
- b) The City, in collaboration with other orders of government and agencies, will assess and plan for climate and weather-related impacts and capacity for emergency preparedness and response.

- c) Through the review of development applications, the City may identify opportunities for the early introduction of transit service in new neighbourhoods.
- d) The Zoning By-law will provide direction on parking requirements across the city and support sustainable transportation and more cost-effective development by:
 - i. Reducing private property parking requirements in Strategic Growth Areas;
 - ii. Encouraging shared parking and secure bicycle parking spaces; and
 - iii. Supporting zero-emission vehicle charging, including electric vehicle-ready parking spaces as part of new residential, commercial, and industrial development.
- e) The City will develop a transportation demand management strategy to identify initiatives to encourage shifting travel behaviour away from the use of single-occupant vehicles and support the use of Orillia's entire transportation network.
- f) Orillia's urban tree canopy provides ecological benefits that support natural functions and assists in mitigating and adapting to climate change and the urban heat island effect. In support of a resilient urban tree canopy, the City should:
 - i. Prepare an Urban Tree Canopy Strategy;
 - ii. Implement, monitor, and regularly review the Tree Conservation By-law;
 - iii. Partner with the development community and community groups to undertake tree planting initiatives through Orillia's Tree Planting Program; and
 - iv. Develop guidelines for tree planting on private property and along public boulevards for development applications.

8.4.3 Built Form Resilience

- a) To reduce energy demand and greenhouse gas emissions, the design of buildings is encouraged to:
 - i. Shift to low-carbon energy alternatives, where possible;
 - ii. Incorporate or provide rough-in for renewable and low-carbon energy technologies, including electric vehicle charging stations;

- iii. Use designs, practices, and materials that reduce emissions, minimize waste and embodied carbon, and promote a circular economy;
 - iv. Maximize passive solar energy gain and minimize energy loss;
 - v. Implement high performance building envelopes and ventilation systems; and
 - vi. Conserve drinking water and integrate greywater reuse.
- b) The City encourages the retrofitting and reuse of existing buildings, in accordance with the land use policies of this Plan.

8.4.4 Economic Resilience

- a) A resilient economy will be fostered in accordance with the policies of Chapter 7 of this Plan, and by:
- i. Cultivating a diverse economy by embracing industries and services that support climate change mitigation and adaptation and the energy transition;
 - ii. Encouraging businesses to explore opportunities for efficient, renewable, low carbon, and integrated energy systems; and
 - iii. Supporting businesses and major institutions to track and record energy performance so they can better identify retrofit opportunities.
- b) The City will consider the impacts of climate change through its asset management plan and practices.

8.4.5 Energy and Infrastructure Resilience

- a) New planning, engineering, and building technologies need to be considered to support climate and energy resilience. The City encourages and provides further technical direction on:
- i. The implementation of green infrastructure, including low impact development, green and blue roofs, and permeable pavement;
 - ii. On-site energy generation, geothermal energy, and community energy systems;
 - iii. Futureproofing electrical capacity for further retrofits; and

- iv. On-site and public realm tree and vegetation planting in new development, including Strategic Growth Areas, and in existing neighbourhoods.
- b) To encourage energy generation, conservation, and resilience, the City may prepare a city-wide Community Energy Plan and will require the preparation of a Community Energy Plan in support of development within Designated Growth Areas.
- c) Through the design and construction of or major upgrades to City-owned parks, public service facilities, and streets, Orillia will seek opportunities to integrate green infrastructure with multi-purpose functions.

8.5 Natural Hazards

8.5.1 Introduction

- a) Natural hazard lands are identified on **Schedule D** as lands that could be unsafe for development due to naturally occurring processes, including flooding hazards or erosion hazards adjacent to Lake Simcoe, Lake Couchiching, and separate watercourses including Ben's Ditch and Mill Creek.
- b) Natural hazard lands are identified on **Schedule D** as follows:
 - i. Natural hazard lands impacted by Mill Creek are identified on **Schedule D** as **one-zone** areas where the entire floodplain is considered the floodway.
 - ii. Natural hazard lands impacted by Ben's Ditch are identified on **Schedule D** as **two-zone** areas where the floodplain is divided into a floodway and a flood fringe.
 - iii. Low-lying areas are identified on **Schedule D** based on their elevation in relation to Lake Simcoe and Lake Couchiching.
- c) The floodplain consists of all natural hazard lands identified on **Schedule D**.

8.5.2 General Policies

8.5.2.1 General Policies for Natural Hazard Lands

- a) The implementing Zoning By-law will, through an Overlay Zone, prescribe restrictions and requirements for development on natural hazard lands.

- b) Additional requirements for development on natural hazard lands will be prescribed in the City's Site Plan Control By-law, Site Alteration By-law and other terms of reference and will be applied through the development review and building permit processes.
- c) Minor revisions to the limits of the natural hazard lands on **Schedule D** will not require an amendment to this Official Plan where such revisions are supported by technical studies or reports completed to the satisfaction of the City.
- d) The City encourages naturalization and the use of low impact development practices on natural hazard lands to mitigate thermal impacts, while improving water quality and building resilience for potential flooding and erosion risks.
- e) Natural hazard lands will not be considered as contributing to parkland dedication requirements.
- f) Development and site alteration in the flood fringe will demonstrate that no adverse impacts on the hydraulic characteristics of flood flows are created and that upstream and downstream properties are not adversely affected.
- g) Development and site alteration may be permitted within floodplain spill areas where it can be demonstrated on a reach basis, through a technical report or study to the satisfaction of the City, that:
 - i. Measures to remediate the floodplain spill area to the flood level, either through a revised valley or stream corridor or through remedial measures that are permanent, can be implemented with no upstream or downstream impacts and no adverse impacts to natural heritage features and areas and hydrologic functions; or
 - ii. Alternatives to full remediation (e.g., site-specific floodproofing) may only be permitted where complete remediation is not feasible, provided protection at the flood level is achieved and safe ingress/egress are available.

8.5.3 Prohibited Uses and Buildings

8.5.3.1 Prohibited Uses and Buildings on All Natural Hazard Lands

- a) The following uses and buildings are prohibited on all natural hazard lands:
 - i. Public service facilities, including essential emergency services, and any other institutional uses;

- ii. Activities that involve the use of hazardous substances;
- iii. Basements; and
- iv. Underground parking.

8.5.3.2 Additional Prohibited Uses and Buildings in the Floodway

- a) In addition to the prohibited uses in Policy 8.5.3.1, the following additional uses and buildings are prohibited in the floodway:
 - i. Development, with the exception of the permitted uses, buildings and structures listed in Policy 8.5.4;
 - ii. Site alteration, except in accordance with Policy 8.5.2.1 g) and the City's Site Alteration By-law; and
 - iii. The construction of new, or expansion of existing parking areas.

8.5.4 Permitted Uses, Buildings and Structures

8.5.4.1 Permitted Uses, Buildings and Structures in the Flood Fringe and Low-Lying Areas

- a) The following uses, buildings and structures, where permitted in the underlying land use designation, are permitted in the flood fringe and the low-lying areas subject to Policy 8.5.5:
 - i. Legally existing uses and buildings, including reconstruction, renovation, or restoration;
 - ii. Residential uses, including additional dwelling units, mobile home dwelling units, and additions to existing residential buildings;
 - iii. Accessory structures, which may contain habitable space;
 - iv. Commercial or industrial uses;
 - v. Decks, porches and fences;
 - vi. Swimming pools;
 - vii. New or expanded parking areas;
 - viii. Private sewage disposal systems, subject to Policy 9.1.2;

- ix. Flood or erosion control measures;
- x. Conservation uses; and
- xi. Site alteration, in accordance with the City's Site Alteration By-law.

8.5.4.2 Permitted Uses, Buildings and Structures in the Floodway:

- a) The following uses, buildings and structures, where permitted in the underlying land use designation, are permitted in the floodway subject to Policy 8.5.5:
 - i. Legally existing uses, buildings and structures, including reconstruction, renovation or restoration;
 - ii. Accessory structures that do not contain habitable space;
 - iii. Decks, porches and fences;
 - iv. Swimming pools;
 - v. Private sewage disposal systems, subject to Policy 9.1.2;
 - vi. Flood or erosion control measures; and
 - vii. Conservation uses, exclusive of new buildings or additions to existing buildings.

8.5.5 Development Policies

- a) A use, building or structure may be permitted under Policy 8.5.4 provided that:
 - i. There is no feasible alternative location for the use, building or structure on the lot outside of the floodplain;
 - ii. For lots fronting on Lake Simcoe or Lake Couchiching, a coastal engineering study is provided which demonstrates the means to address the lake hazards such as flooding, erosion and wave uprush, to the satisfaction of the City and applicable agencies;
 - iii. No adverse effects on the hydraulic characteristics of flood flows are created;
 - iv. No new habitable floor space is created below the existing elevation of habitable floor space;

- v. Floodproofing is undertaken to the extent practical and in accordance with requirements of the Ontario Building Code, to the satisfaction of the City; and
- vi. It can be demonstrated to the satisfaction of the City that safe pedestrian and vehicular ingress and egress would be available during a regulatory flood event.

8.5.6 Hazardous Forest Types and Wildland Fires

- a) Development will generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire, as defined and shown on Provincial mapping.
- b) Development may be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards.

8.6 Human-Made Hazards

8.6.1 Introduction

- a) Contaminated lands and former waste disposal sites pose a risk to human and environmental health but also provide opportunities for potential redevelopment and intensification and the efficient use of land, resources, and existing infrastructure. Prior to permitting development or redevelopment, these sites will be identified to reduce the potential risks and costs associated with such human-made hazards by ensuring that sites do not pose adverse effects and ensure they are suitable for the proposed land uses.
- b) The development of sensitive land uses around former waste sites and the City's active landfill, as shown on **Schedule F** will be appropriately designed, buffered, and/or separated from each other to prevent adverse effects from odour, noise, and other contaminants and to minimize risk to public health and safety.
- c) Community improvement plans may be prepared to encourage the remediation of environmentally contaminated lands.

8.6.2 General Policies

- a) Development on, abutting or adjacent to lands affected by human made hazards such as mineral aggregate operations, oil, gas and salt hazards may be permitted only if

rehabilitation measures to address and mitigate known or suspected hazards are underway or have been completed.

- b) Site-specific risks will be controlled or remediated, as identified through the risk assessment process, prior to an activity on the site associated with the proposed use such that there will be no adverse effects.
- c) The City will require a property owner to submit a Record of Site Condition (RSC) to be filed in the Environmental Site Registry when proposing a change in the use of a property from industrial or commercial use to sensitive use defined in O. Reg 153/04.

8.6.3 Waste Disposal Sites

- a) **Schedule F** identifies the approximate location of known active or abandoned landfills and former waste disposal sites within the city.
- b) No development will be permitted in a waste disposal assessment area shown on **Schedule F** unless it can be demonstrated to the satisfaction of the City, in consultation with the Province, that there will be no adverse effects. Studies related to ground and surface water and noise, odour, dust, and methane gas mitigation, prepared in accordance with the Provincial Guideline D-4 – Land Use on or Near Landfills and Dumps, may be required as part of a complete application within a waste disposal assessment. The waste disposal assessment area for closed sites may be reduced in consultation with the Province through study and documentation, appropriate to the Province.
- c) If the studies produced indicate that there may be a potential for adverse effect, the City and Province may require the proponent to undertake specific measures, including specific building measures, to ensure public health and safety.
- d) Lands within a waste disposal assessment area will be subject to a Holding provision in the implementing Zoning By-law, requiring that studies be completed to determine potential adverse effects and risks associated with new buildings and structures. The holding provision will not apply to:
 - i. Interior alterations to existing structures;
 - ii. Exterior alterations that do not expand the footprint of an existing structure;

- iii. New structures or alterations to existing structures which are not habitable and where such structures do not prevent the free movement of air into the atmosphere; and
- iv. Any structure that does not require a building permit.
- e) Minor refinements to the boundaries of the waste disposal assessment areas shown on **Schedule F** resulting from the completion of a D-4 Study to the satisfaction of the City will not require an amendment to the Official Plan.

8.7 Aggregate Resources

8.7.1 Introduction

- a) Lands identified within the Aggregate Resources overlay on **Schedule F** have been identified as having potential for mineral aggregate extraction. Notwithstanding the land use designations on **Schedule B**, where deemed appropriate by the Province, Council's consideration of new public works and/or private development proposals within these areas will be preceded by a geological assessment of a proposed development site's mineral aggregate resources to establish the precise quality, quantity and extent of any mineral aggregate deposits.
- b) Where geological investigation reveals a high potential for mineral aggregate extraction, the identified resource is permitted for extraction and will be removed prior to the occurrence of development, without the need for an amendment to **Schedule F** of this Plan, subject to Provincial licensing of the aggregate operation.

8.7.2 General Policies

- a) Mineral aggregate operations in the city are shown on **Schedule F**. Proposed development and site alteration in the vicinity of mineral aggregate operations will not be permitted unless it is demonstrated through an Aggregate Potential Assessment/Compatibility Study that the proposed use will not preclude or hinder the aggregate operations existing use, expansion or be incompatible for reasons of public health, public safety or environmental impact.
- b) **Schedule F** also identifies mineral aggregate resources in the city. Proposed development within, or adjacent to this area will not be permitted unless it is demonstrated that:
 - i. Resource use would not be feasible;

- ii. The proposed land use or development serves a greater long-term public interest; and
 - iii. Issues of public health, public safety, and environmental impact are addressed.
- c) If the mineral aggregate potential of an identified site has been exhausted, or shown to be insignificant, development may proceed in accordance with the land use designations delineated on **Schedule B**.
- d) Mineral aggregate extraction may, subject to the approval of the Province, be undertaken as a component of the general development process, whereby the aggregate is predominantly utilized in the construction of onsite services and/or is provided to the municipality for similar use in other parts of the city.
- e) Wayside pits and quarries and portable asphalt plants, which provide sand, gravel, and other mineral aggregates for road construction and maintenance and other public projects, are permitted uses within all land use designations and zones, excluding the Natural Heritage System. Temporary, portable asphalt plants may be permitted in Employment Areas on lands affected by the Aggregate Resources overlay.
- f) The following general development policies will apply:
- i. The establishment of a new commercial pit or quarry and/or the expansion of an existing pit or quarry will require an amendment to the Official Plan;
 - ii. Where mineral aggregates are to be extracted, as part of the development process for the same site, such extraction may be permitted without the need for an amendment to the Official Plan;
 - iii. The permitted uses will be limited to the preparation of a site for mineral aggregate extraction, the extraction and storage of mineral aggregates, and the rehabilitation of a site after extraction occurs. Ancillary uses such as limited screening and washing may be permitted; and
 - iv. Ancillary uses related to mineral aggregate activities such as wayside pits and quarries may be subject to technical cultural heritage studies, such as Heritage Impact Assessment and/or Archaeological Assessment, pursuant to policies in Chapter 6 of this Plan.

- g) Applications to amend the Zoning By-law to permit a new commercial pit or quarry or the expansion of an existing commercial pit or quarry will be accompanied by the following:
 - i. A site plan prepared in accordance with the provisions of the *Aggregate Resources Act* and Ontario Regulations as may be amended from time to time;
 - ii. A report prepared by a geologist indicating the estimated or approximate pattern, quality and quantity of the resource;
 - iii. A transportation report indicating the anticipated number of truck movements, anticipated truck routes, and the daily time period during which trucks will be travelling on Local streets;
 - iv. Reports prepared by a professional engineer, biologist or other qualified professional indicating the impact of the proposed operation on the environment, including air and water pollution, noise, changes in the water table, changes in surface drainage both on and off the site and the effectiveness of the proposed ameliorative measures; and
 - v. Where necessary, a Certificate of Approval from the Province in accordance with section 8 of the *Environmental Protection Act*.
- h) Pits and quarries will be zoned in a separate category in the implementing Zoning By-law.

9 Infrastructure

9.1 Introduction

- a) Planning for infrastructure and public service facilities will be integrated with planning for growth so that these are available to meet current and projected needs of the city.
- b) The use of existing infrastructure and public service facilities is to be optimized, where feasible prior to consideration being given to the development of new infrastructure and public service facilities.
- c) All infrastructure and utilities will be located underground where feasible, notwithstanding the consideration of cost. Where components of utilities must be located above ground, they should be located within the public right-of-way or on common elements, such as a rear lane or in locations where there is no conflict with the street tree planting line.

9.2 Water and Wastewater

9.2.1 Introduction

- a) It is the intent of this Plan that adequate municipal drinking water and wastewater (sanitary) services be provided for the residents and businesses of the city in an economically and environmentally responsible manner.
- b) Planning for water and wastewater infrastructure will generally be undertaken in accordance with the City's Water Master Plan and Wastewater Master Plan, or any of their successors.

9.2.2 General Policies

- a) Unless otherwise permitted in this Plan or by Amendment to this Plan, all new development in the city will be connected to municipal sewer and water systems.
- b) Private water or wastewater systems will only be permitted where already existing and will be required to be upgraded to connections to municipal services subject to City by-law.

- c) Before the approval of any development application, the City must be satisfied that adequate municipal servicing infrastructure, including overall system treatment capacity, as well as collection and distribution infrastructure capacity, is available or can efficiently and economically be provided to support the proposal.
- d) Where adequate municipal servicing infrastructure does not exist to support a proposed development, the City:
 - i. May refuse the application, or may use Holding provisions in the City Zoning By-law to regulate the timing of development; and
 - ii. Will not be obligated to provide such servicing in advance of development, in accordance with a service allocation policy to be developed by the City.
- e) When water and wastewater expansion is considered, methods to conserve water use and to recycle greywater will be explored.
- f) Development in areas to be added to the Settlement Area boundaries must consider and implement, at the City's direction, new dedicated source water and treatment.
- g) Pursuant to policies in section 8.3 of this Plan, new municipal wastewater services that would constitute a Significant Drinking Water Threat as determined by the City's Risk Management Official should be located outside of wellhead protection areas, intake protection zones, and significant groundwater recharge areas delineated on **Schedule E**.
- h) The City will consider enacting a by-law to require mandatory connection to municipal sewer and water systems in wellhead protection areas, intake protection zones, and/or significant groundwater recharge areas delineated on **Schedule E** where existing private sewage systems have been determined to be a Significant Drinking Water Threat by the City's Risk Management Official.

9.3 Stormwater

9.3.1 Introduction

- a) The intent of this section of the Plan is to manage development impacts on streams and the lake systems to maintain and enhance water quality, protect fish and wildlife habitat and prevent erosion and flooding.

- b) Stormwater management in the city will be undertaken in accordance with the City's Stormwater Management Master Plan or any of its successors.

9.3.2 General Policies

- a) Stormwater management facilities will be permitted as-of-right in all land use designations except for the Natural Heritage designation.
- b) Stormwater management facilities may be conditionally permitted in the Natural Heritage designation, subject to the direction provided in policy 3.4.11.3.
- c) Stormwater management facilities will be key features within the community contributing to the appearance and ambience, while achieving functional objectives related to flow moderation and water quality.
- d) The use of green infrastructure and low impact development will be prioritized and supported in all new stormwater management infrastructure investments in the city, where feasible.

9.3.3 Stormwater Management Facilities Design

- a) Stormwater ponds are envisioned to blend with the natural landscape, therefore, geometric forms and standard slope gradients will be avoided in favour of organic shapes and landform grading designed to replicate natural landforms in the area, while remaining consistent with the guidance provided within the Provincial Stormwater Management Planning and Design Manual.
- b) Inlet and outlet structures will be concealed using a combination of planting, grading and natural stone.
- c) Native species and flood tolerant water's edge plants, including a mixture of herbaceous and woody vegetation, will be planted to stabilize banks of ponds. The perimeter of the permanent pool will be planted with emergent, strand and submergent species to improve the aesthetics and enhance the performance of the facility.
- d) Generally, ponds will be designed with trails, overlooks and interpretive signage so that they are an integral part of the parks system.
- e) Where there is a need to discourage public access to areas around the perimeter of the ponds, living fences and barrier plantings will be utilized in place of fencing. Barrier

plantings will be installed along the crest of steep slopes, adjacent deep-water areas and around inlet and outlet structures.

- f) The design of stormwater management facilities will minimize the risk of contaminating the city's drinking water and, where possible, direct the discharge of stormwater to lands outside of the vulnerable areas associated with the wellhead protection areas and intake protection zones shown on **Schedule E**, where determined to be a Significant Drinking Water Threat by the City's Risk Management Official or successor.

9.3.4 Stormwater Management in Development

- a) A Stormwater Management Plan will be required to accompany the following development applications in accordance with sections 10.4 and 10.5:
 - i. Applications for Consent to Sever;
 - ii. Applications for Plans of Subdivision or Plans of Vacant Land Condominiums; and
 - iii. Applications for Site Plan Control for infill development, a redevelopment, or significant site alteration with an impervious area equal to or greater than 500 m² of new construction, including but not limited to parking facilities.
 - iv. An application to establish a recreational use that requires large-scale modification of terrain, vegetation, or both and usually also require large-scale buildings or structures.
- b) Stormwater Management Plans will demonstrate:
 - 1. Consistency with the City's Stormwater Management Master Plan; and
 - 2. Consistency with the Oro Hawkstone Creek Subwatershed evaluations and water budgets for lands located within the Lake Simcoe Watershed Boundary shown on **Schedule C**.
- c) For the applications listed in policy 9.3.4a), an integrated treatment train approach using low impact development (LID) techniques will be used to minimize stormwater management flows and reliance on end-of-pipe controls through source controls, lot-level controls and conveyance techniques where feasible. Where LID techniques are pursued, a Hydrogeological Assessment will be required to inform the design, in accordance with

the Hydrogeological Assessment Submissions Conservation Authority Guidelines for Applications (2013) (see **Appendix 3**).

- d) Where LID techniques that promote infiltration are not feasible, the minimum requirement will be post-development flow controls to meet the pre-development conditions and filtration that meets or exceeds the Enhanced Protection level specified in Chapter 3 of the Provincial Stormwater Management Planning and Design Manual 2003, as amended from time to time, including:
 - i. Through an evaluation of anticipated changes in the water balance between pre-development and post-development, how such changes shall be minimized; and
 - ii. Through an evaluation of anticipated changes in phosphorus loadings between pre-development and post-development, how the loadings shall be minimized.

9.3.5 Hydrogeological Assessments

- a) In order to be considered a Complete Application as set out in Chapter 10 of this Plan, development applications within significant groundwater recharge areas and/or ecologically significant groundwater recharge areas, as shown on **Schedule E** of this Plan, will be accompanied by a Hydrogeological Assessment completed in accordance with the Hydrogeological Assessment Submissions Conservation Authority Guidelines for Applications (2013) (see **Appendix 3**) that demonstrates that the quality and quantity of groundwater in these areas and the function of the recharge areas will be protected, improved or restored.
- b) The Hydrogeological Assessment must also demonstrate that there will be no negative impacts on the associated aquatic features that depend on the significant groundwater recharge area, including wetlands, watercourses, seeps and springs and fish habitat. The Hydrogeological Assessment will be prepared by a qualified professional.

9.4 Utilities and Pipelines

- a) The following policies apply to the TransCanada Pipeline Corridor identified on **Schedule F**, which includes high-pressure natural gas transmission pipelines within a right-of-way operated by TransCanada PipeLines Limited (TCPL):

- i. The City will require early consultation with TCPL for any public works and private development proposals within 200 metres of the right-of-way;
 - ii. TCPL is regulated by the Canada Energy Regulator (CER), which has several requirements regulating development in proximity to the pipelines, including approval for activities within 30 metres of the pipeline centreline;
 - iii. New development, including buildings, structures, accessory structures, and parking or loading areas, in proximity to the right-of-way will incorporate appropriate setbacks in accordance with TCPL's development standards and the implementing Zoning By-law; and
 - iv. The City encourages the use of the TCPL right-of-way for passive parkland or open space, subject to TCPL's easements rights.
- b) Notwithstanding policy 9.3a), required setbacks from pipelines will not apply to electricity generation facilities and transmission and distribution systems.
- c) Where public and/or private utility infrastructure is permitted and deemed necessary by the City, the said infrastructure will require detailed design approval and, where applicable, the completion of an Environmental Impact Study.
- d) Secondary uses, such as active and passive recreation, agriculture, community gardens, other utilities and uses such as parking lots and outdoor storage that are accessory to adjacent land uses, are encouraged on hydro corridor lands, where compatible with surrounding land uses. However, a proponent should be aware of the primacy of a hydro corridor for the electricity transmission and distribution systems and that secondary uses require technical approval from Hydro One Networks Inc.

10 Implementation

10.1 Introduction

- a) The policies in Chapters 1 through 9 of this Plan will be implemented through various planning tools and processes. This includes work led by the City (Monitoring and Implementation Tools), work led by the private sector with oversight from the City (Planning and Development Controls and Applications), and work done in collaboration by the City and the private sector (Consultation and Engagement).

10.2 Monitoring

- a) The City will regularly incorporate amendments to this Plan through Office Consolidations.
- b) Reviews of this Plan will be undertaken in accordance with the requirements of the *Planning Act*. The City may undertake regular housekeeping amendments to this Plan to correct any minor technical errors or omissions and to bring this Plan into compliance with new or amended Provincial legislation and policies.
- c) City staff may prepare an annual report to outline how the Official Plan is being implemented, including information regarding:
 - i. Overall progress towards the vision and guiding principles;
 - ii. Achievement of forecasts and targets, including density targets, intensification targets, affordable housing targets, and provision of parkland;
 - iii. The number of *Planning Act* applications received and approved; and
 - iv. Other aligned initiatives underway or being contemplated to implement the policies of this Plan.

10.3 Implementation Tools

- a) Implementing this Official Plan will be achieved through many tools, some of which are provided by Provincial and Federal legislation, while others may be through City by-laws, plans, and guidelines.

10.3.1 Community Improvement Plans

- a) All lands within the city are considered eligible for Community Improvement initiatives, and eligible to be designated as a Community Improvement Project Area, pursuant to the provisions of the *Planning Act*.
- b) Council may designate, by by-law, Community Improvement Project Areas that support the following objectives and/or reasons set out in the *Planning Act*:
 - i. Encourage the renovation, repair, rehabilitation, redevelopment or other improvement of lands and/or buildings, including environmental remediation, development, redevelopment, construction and reconstruction of lands and buildings for rehabilitation purposes, or for the provision of energy efficient or accessible uses, buildings, structures, works, improvements or facilities;
 - ii. Encourage the conservation, restoration, adaptive reuse, maintenance and improvement of designated heritage buildings/properties and other historically or architecturally significant buildings/properties;
 - iii. Encourage the conservation and enhancement of existing commercial areas through the stimulation of private sector investment, especially in Downtown;
 - iv. Maintain and improve the physical and aesthetic qualities and amenities of streetscapes, especially in Downtown;
 - v. Encourage maximum use of existing public infrastructure through the infilling, intensification and redevelopment of lands and buildings which are already serviced with municipal services;
 - vi. Maintain and improve municipal services including water distribution, sanitary sewers, stormwater management, roads, sidewalks, and street lighting;

- vii. Maintain and improve the transportation network to ensure adequate traffic flow, pedestrian circulation and parking facilities, especially in Downtown;
 - viii. Encourage the restoration, maintenance, improvement and protection of natural habitat, parks, open space, recreational and heritage facilities and amenities;
 - ix. Encourage the development of an adequate supply of affordable housing which meets the needs of local residents;
 - x. Encourage the eventual elimination and/or relocation of incompatible land uses, and where this is not feasible, encourage physical improvements to minimize the incompatibility;
 - xi. Encourage community improvement activities which contribute to a strong economic base including commercial, industrial, recreational and tourism activity and job creation;
 - xii. Promote and encourage the rehabilitation, re-use and redevelopment of brownfield sites;
 - xiii. Improve environmental conditions;
 - xiv. Improve social conditions;
 - xv. Promote cultural and tourism development;
 - xvi. Facilitate and promote community economic development; and
 - xvii. Improve community accessibility, quality, safety and stability.
- c) A Community Improvement Plan will set out the actions required to implement a Community Improvement Plan within a defined Community Improvement Plan Area.
- d) For an area to be designated as a Community Improvement Project Area, it must satisfy at least one, and preferably more than one of the following general criteria:
- i. Deficiencies or deterioration of physical infrastructure including but not limited to the sanitary sewers, storm sewer system, watermains, roads, sidewalks, curbs, street lighting, street furniture, municipal and private parking and loading facilities;

- ii. Deficiencies or deterioration in the level of public service facilities such as public open space, parks, community centres, libraries, arenas, gymnasiums, ball diamonds and similar types of facilities;
- iii. Buildings, building facades, and/or property, in need of maintenance, preservation, restoration, repair, rehabilitation, energy efficiency or renewable energy improvements, or redevelopment;
- iv. Presence of buildings and/or lands of architectural or heritage significance;
- v. Commercial and mixed-use areas with high vacancy rates and/or poor overall visual quality of the built environment, including but not limited to, building facades, streetscapes, public amenity areas and urban design, especially such areas that form part of a Business Improvement Area;
- vi. Vacant lots and/or underutilized properties and buildings which have potential for infill, intensification or redevelopment to better utilize the land base, particularly where there is the potential for mixed-use development or the introduction of additional dwelling units;
- vii. Non-conforming, conflicting, encroaching or incompatible land uses or activities that result in conflicts that threaten to disrupt the predominant land use and/or economic function of the area;
- viii. Demonstrated problem or deficiency associated with the circulation and/or access of traffic;
- ix. Human-Made hazards which should be eliminated to ensure a greater degree of public safety and to further enhance the community function;
- x. A shortage of land to accommodate widening of existing rights-of-way, building expansion, parking and/or loading facilities;
- xi. Inadequate outside storage facilities;
- xii. Flood prone areas;
- xiii. Known or suspected environmental contamination;

- xiv. Other significant barriers to the repair, rehabilitation or redevelopment of underutilized land and/or buildings; and
 - xv. Other significant environmental, social or community economic development reasons for community improvement.
- e) Priority for the designation of Community Improvement Project Areas and the preparation and adoption of Community Improvement Plans will be given to the following areas, as determined by Council:
- i. Downtown;
 - ii. Those areas where the greatest number of criteria for selection of Community Improvement Project Areas are present;
 - iii. Those areas where one or more of the criteria for selection of Community Improvement Project Areas is particularly acute; and/or
 - iv. Those areas where one or more of the criteria for selection of Community Improvement Project Areas exists across the city or large part of the city.
- f) Where the City is satisfied that a Community Improvement Plan has been carried out, it may, by by-law, dissolve the Community Improvement Project Area and Plan.

10.3.2 Community Benefits Charge

- a) The City may complete a Community Benefits Charge Strategy and enact a Community Benefits Charge By-law, pursuant to the requirements of the *Planning Act* and Provincial regulations, to provide for community benefits including affordable housing, parks, public art and culture, public service facilities, parking, and civic administration and studies.

10.3.3 Comprehensive Development Plans

- a) The City may require the preparation of a Comprehensive Development Plan as a requirement of a complete planning application to illustrate and provide details of a proposed development within its surrounding context. The requirements and limits of the Comprehensive Development Plan will be identified by the City through the pre-consultation process.

- b) The Comprehensive Development Plan may be required to address the following matters on a detailed basis:
 - i. The proposed building heights, housing mix, densities, and employment projections;
 - ii. The pattern of lots, streets, and blocks, including connectivity to surrounding development;
 - iii. The connectivity of the street network, street classification, and transit connectivity;
 - iv. Area-specific urban design and architectural control guidelines;
 - v. The provision of pedestrian and cycling facilities and connections to existing networks;
 - vi. The adequate provision of municipal water and wastewater capacity to support the proposed development;
 - vii. The provision of stormwater management facilities;
 - viii. The protection and enhancement of the Natural Heritage System;
 - ix. The location of any parks, schools, and public service facilities; and
 - x. The proposed phasing of development.
- c) The City may place a Holding provision on any lands pending the completion of the Comprehensive Development Plan.
- d) A Comprehensive Development Plan may be implemented through an Official Plan Amendment and/or Zoning By-law Amendment.

10.3.4 Municipal By-laws

- a) The City will undertake and update a Development Charge Background Study and enact a Development Charges By-law that will establish the capital costs to be funded by development charges for development.
- b) The City may enact a Property Standards By-law under the *Building Code Act* to maintain properties in a state of good repair and safe for occupancy.

- c) The City may enact a Tree Cutting By-law and Tree Replacement By-law to support the protection and enhancement of the urban tree canopy.
- d) The City may enact a Site Alteration By-law in accordance with the *Municipal Act*, to regulate the placement or removal of fill, or alteration of land that may disrupt natural vegetation and/or drainage.
- e) The City may enact a Sign By-law to regulate the placement and location of signs.
- f) The City may enact a Demolition Control By-law to designate all lands within Orillia as a Demolition Control Area.

10.3.5 Public Land Acquisition

- a) The City may acquire land to implement any feature of this Plan in accordance with the provisions of Provincial Statutes and Regulations.
- b) The City may require the conveyance of Natural Heritage System lands through the development application process, as permitted by the *Planning Act* or other applicable legislation, and in accordance with the policies of this Plan. Where a conveyance has been required, the effect of the conveyance will not have an impact on the zoning compliance or the ability for further development or redevelopment.
- c) Where public ownership cannot be achieved through conveyance, the City may secure the Natural Heritage System lands through other means including but not limited to easement agreements, land exchange, long-term lease, land trusts and land protection under the planning process.

10.3.6 Zoning By-laws

- a) A Zoning By-law prepared in accordance with the *Planning Act* will implement the policies of this Plan by regulating the use of land and the location, size, massing, and use of buildings and structures.
- b) Within three years of the adoption of, or five-year update of this Plan, the existing Zoning By-law will be reviewed and amended, or a new Zoning By-law prepared and adopted, to conform to the policies of this Plan.

10.3.6.1 Holding By-laws and Overlay Holding Zones

- a) A Holding provision (“H”) may be applied when the City has determined the specific land use for an area or parcel of land but has determined that development of the lands for the intended use is premature until certain appropriate requirements and/or conditions are fulfilled.
- b) Until such time as the Holding provision is removed, the Zoning By-law may permit an interim use, including existing uses or another use which will not prohibit the future intended use.
- c) The City will enact a by-law to remove the Holding provision when all the conditions set out in the holding provision have been satisfied, permitting development or redevelopment in accordance with the underlying zone.
- d) Council may, by By-law, delegate the authority to approve a Zoning By-law Amendment to remove a Holding provision.
- e) An Overlay Holding Zone(s) may be applied where the City in its sole discretion has determined that development may be inappropriate or should be restricted due to, but not limited to, the following:
 - i. the inability of existing infrastructure to support additional development;
 - ii. risks to public safety, including Waste Disposal Assessment Areas and the Active Waste Disposal Site as shown on **Schedule F** and natural hazard lands as shown on **Schedule D**; and/or
 - iii. proximity to the shorelines of Lakes Simcoe and Couchiching.
- f) An Overlay Holding Zone may be removed by By-law on a site-specific basis if the City is satisfied that development may occur with no negative impacts.

10.3.6.2 Minor Variances

- a) The Committee of Adjustment will consider applications for minor variances to the use and/or regulation provisions of the implementing Zoning By-law in accordance with the provisions of the *Planning Act*.

- b) The Committee of Adjustment, when dealing with an application for minor variance, will be satisfied that the general intent and purpose of this Plan and the Zoning By-law would be maintained, and that the variance would be minor in nature and desirable for the appropriate development or use of the land, building, or structure.

10.3.6.3 Temporary Use By-laws

- a) The City may pass Temporary Use By-laws as provided for by the *Planning Act*. A Temporary Use By-law should be considered where it is deemed inappropriate for the City to permit the proposed use(s) on a permanent or continuing basis and where alternatives, such as relocation, are not practical.

10.3.6.4 Interim Control By-laws

- a) In accordance with section 38 of the *Planning Act*, the City may pass an interim control by-law to restrict the use of land, buildings or structures within a defined area until a review or study of land use policies has been completed.

10.3.6.5 Minor Zoning By-law Amendments

- a) Council may, by by-law, delegate the authority to pass by-laws under section 34 of the *Planning Act* that are of a minor nature to a committee of Council or an individual who is an officer, employee, or agent of the City.

10.3.6.6 Community Planning Permit System

- a) The City may consider establishing a Community Planning Permit System in accordance with the *Planning Act*. An Amendment to this Plan may be required to establish a Community Planning Permit System.

10.3.7 Non-Conforming Uses

- a) Land uses, buildings, or structures that do not conform with the City's Zoning By-law but were legally existing at the time of the Zoning By-law's enactment will be considered legal non-conforming.
- b) The eventual transition of legal non-conforming uses to conforming uses is encouraged; however, such uses may continue in accordance with the *Planning Act*. Extensions or enlargements to legal non-conforming uses or a change in non-conforming use may be authorized by the Committee of Adjustment pursuant to section 45 of the *Planning Act*.

- c) Legally existing uses which do not conform with the other policies of this Plan may be zoned in the City's Zoning By-law in accordance with their present use.

10.4 Planning and Development Controls

10.4.1 Development Phasing

- a) The sequence of development in Orillia will be controlled through tools such as Holding provisions, to allow the financing and construction of infrastructure to be undertaken without undue financial hardship on the part of the City.
- b) Development will proceed in a phased and contiguous manner, with connectivity to existing development, infrastructure, complete streets, and pedestrian and cycling linkages.
- c) The planning and delivery of necessary infrastructure will be phased in a manner consistent with the City's applicable Master Plans and Strategies. Prior to any phase of a development being approved, the City will be satisfied that adequate water and wastewater capacity exists to service the phase.
- d) The City may develop a growth management strategy to effectively stage growth in a way that links capital budget and development charge processes within the relative priority for growth across the City Structure, including in Designated Growth Areas, Employment Areas, and Strategic Growth Areas.

10.4.2 Subdivision of Land

10.4.2.1 Plan of Subdivision

- a) All lands within the city will be subject to subdivision control, pursuant to the *Planning Act*.
- b) A plan of subdivision will be required for development proposals meeting the following criteria:
 - i. When two or more new lots are proposed in the Neighbourhoods designation or when four or more new lots are proposed outside the Neighbourhoods designation; and
 - ii. Where the City deems it necessary for the proper and orderly development of the municipality.

10.4.2.2 Plan of Condominium

- a) Pursuant to the *Condominium Act*, the City will consider approval of plans of condominium to:

- i. Provide for new residential and non-residential condominium development;
 - ii. Permit the conversion of rental housing to condominium, in accordance with the policies of this section; and
 - iii. Permit the division of non-residential buildings and/or land for condominium ownership.
- b) A development application to create a plan of condominium which would result in the conversion of rental housing to condominium ownership, may only be permitted where:
- i. The rental vacancy rate for comparable units in the city has been at or above 3% for the preceding three years;
 - ii. The conversion will address and result in the creation of affordable housing for affordable home ownership; and
 - iii. Applicants have:
 - 1. Submitted a detailed inspection report of the physical condition of the property by a qualified architect or engineer;
 - 2. Provided written notice to all tenants of the details and timing of the application;
 - 3. Offered tenants the option to continue to lease their units following the approval of the conversion; and
 - 4. Entered into an agreement with the City stating that tenants have first right to purchase their units or allow them to rent despite the tenure of the building.

10.4.2.3 Part Lot Control Exemption

- a) Part Lot Control Exemption that has the result of creating new lots may only be used where a developer has been authorized by the City through a Development Agreement or otherwise to utilize this method of creating new lots. In all other cases, either a Plan of Subdivision or Consent will be required to create new lots.

10.4.2.4 Consent to Sever

- a) Approval for consent to sever (create new lots) will only be permitted where:

- i. A plan of subdivision is deemed not to be necessary for the proper and orderly development of the municipality;
- ii. Within the Neighbourhoods designation, a maximum of one (1) lot is being created by consent from an existing lot of record. Outside of the Neighbourhoods designation, a maximum of three (3) lots is being created by consent.
- iii. The proposed use and lot are compatible with adjacent permitted land uses and lots and will not result in undue adverse impacts on surrounding properties;
- iv. The additional lot does not limit the potential for development of retained lands and adjacent lands;
- v. The proposed severed and retained lots front onto and have direct access from an improved public street which is maintained year-round by the City;
- vi. If the lot is proposed to have direct access from a Provincial Highway, an entrance permit from the Province has been granted;
- vii. Impacts have been considered related to traffic, public safety, cultural heritage, stormwater, and soil stability;
- viii. Impacts to the Natural Heritage System have been addressed through the preparation of an Environmental Impact Study;
- ix. The existing municipal road that would provide access to the proposed lot(s) meets the municipal standards required for width of the road allowance, width of pavement, underground stormwater management, sidewalks and road base stability to support the additional vehicular and pedestrian traffic;
- x. The criteria in Subsection 51(24) of the *Planning Act*, as referenced by Subsection 53(12) of the *Planning Act*, have been satisfied;
- xi. The proposed severed and retained lots generally do not have disproportionate depth and width;
- xii. The proposed severed and retained lots can be adequately serviced with municipal sewer and water; or for lands subject to the Municipal Services Overlay where municipal sewer and water service is not existing or planned, consent may be granted

on residential lots dependent on individual septic systems and wells, subject to a condition that connection will be made to the municipal system if and when available at the expense of the property owner; and

- xiii. The proposed severed and retained lots comply with the Zoning By-law or an approved minor variance.
- b) The Committee of Adjustment may apply conditions deemed reasonable to a consent. All conditions imposed by the Committee will be to the satisfaction of and at no cost to the City.
- c) A consent for technical or legal purposes may be permitted provided that the lots that are the subject to the application comply with or can be brought into compliance with the Zoning By-law.
- d) In the case of an accidental merger of two or more adjacent lots that were historically separate, the original configuration of the lots may be restored through consent even in the case where the resultant lots do not comply with the frontage and area provisions of the implementing Zoning By-law, provided that the City has satisfactory evidence of the original configuration of the lots.

10.4.3 Site Plan Control

- a) All lands in the City of Orillia are designated as a Site Plan Control area, pursuant to the *Planning Act* and its attendant regulations, to achieve well-designed, functional, accessible, safe, and sustainable public realm as it relates to the built form.
- b) The following types of development are exempted from Site Plan Control:
 - i. The construction, erection or placing of a building or structure for residential purposes on a parcel of land if that parcel of land will contain no more than 10 residential units; and
 - ii. The placement of a portable classroom on a school site of a District School Board, if the school site was in existence on January 1, 2007.
- c) Notwithstanding policy 10.4.3b), all development is subject to Site Plan Control in the following areas:
 - i. Lands within 300 metres of a railway line which has not been abandoned or discontinued; or

- ii. Land within 120 metres of:
 - 1. A wetland;
 - 2. Lake Simcoe or Lake Couchiching; or
 - 3. A river or stream valley that has depressional features associated with a river or stream, whether or not it contains a watercourse.
- d) The City may require, as a condition of Site Plan Control, road widenings, turning lanes or tapers, turnarounds, public transit rights-of-way, trail accesses, sight triangles, and/or the dedication of land within the Natural Heritage System.
- e) Where land abuts a street under the jurisdiction of the City, prior to development, the City may require, in those circumstances where the right-of-way for a Local or Collector street is less than 20.0 metres and 26.0 metres respectively or less than 30.0 metres for an Arterial street, that land may be dedicated to the City, at no expense to the City, for the widening of the street, so as to establish the required right-of-way widths. This will be exclusive of any sight triangles, turning lanes, turnarounds, or turning tapers that may also be required by the City.
- f) The City may require a developer of land subject to Site Plan Control to enter into one or more agreements to ensure the provision of the required works and facilities as well as maintenance thereof. Site plan agreements will be registered against the title of land to which they apply.

10.5 Planning and Development Applications

10.5.1 Pre-consultation

- a) Consultation with City staff prior to the submission of an application requiring a *Planning Act* approval is encouraged in all instances, in particular applications for an Official Plan Amendment, Zoning By-Law Amendment, Draft Plan of Subdivision, Draft Plan of Condominium, and Site Plan Approval.
- b) Pre-consultation offers the opportunity for the City and the proponent to identify the specific reports and studies that will be required to be submitted with a complete application.

- c) The City will provide additional direction on pre-consultation, including recommended materials for the proponent to provide, as well as fees associated with pre-consultation, through additional non-statutory guidance, which may be found in the Appendices to this Plan.

10.5.2 Complete Application Requirements

- a) All required reports and studies will be carried out by qualified professionals. The City may deem an application incomplete if required reports and studies are not coordinated or consistent with each other.
- b) Any required report or study may be subject to peer review to be carried out by the City at the expense of the applicant.
- c) The City and other agencies may issue Terms of Reference, Standards, and Guidelines to establish technical standards and forms for any required studies or reports. Some of these guiding documents may be found in the Appendices to this Plan.
- d) Where technical standards are not available from the City, applicants may be required to prepare a Terms of Reference to the satisfaction of the City and its peer review consultants and/or review agencies prior to submission of the report or study.
- e) An application will be deemed complete by the City when:
 - i. The applicable fee has been paid;
 - ii. The applicable development application form has been completed;
 - iii. When all required drawings have been submitted; and
 - iv. When all required studies and reports have been submitted to the City and it has been confirmed that they address all required matters as set out in the pre-submission consultation meeting.
- f) The following materials identified in Table 10.1 may be identified as being required as part of a complete application for an Official Plan Amendment, Zoning By-Law Amendment, Draft Plan of Subdivision, Draft Plan of Condominium, Consent to Sever, and Site Plan Approval:

Table 10.1: Required Information, Studies, Reports, and Materials

Required Information, Studies, Reports, and Materials	
Planning	• Planning Justification Report • Zoning Compliance Review • Comprehensive Development Plan • Neighbourhood Plan • Consultation Strategy and Summary Report • Archaeological Assessment(s) • Conservation Plan • Heritage Reports • <u>Heritage Impact Assessment</u> • Urban Design Brief • Shadow Study • Noise, Odour, Dust and Vibration Impact Assessment • Landfill Impact Assessment • Lighting Plan/Photometric Analysis • Retail Impact Study / Commercial Needs Study • Fiscal Impact Assessment • Aggregate Compatibility Study • Aggregate Potential Assessment • D4 Assessment Study • Land Use Compatibility Assessment Study • Drawings ○ Topographic and Boundary Survey ○ Landscape Plan and Landscape Details ○ Streetscape Plan ○ Building Elevations

Required Information, Studies, Reports, and Materials

Transportation	• Connectivity Plan • Driveway Location and On-Street Parking Plan • Transportation (Traffic) Impact Study • Streetscape Plan • Parking Justification Report • Parking and Pavement Marking Plan • Right-of-way Cross Sections • <u>Transportation Demand Management</u> Report • Truck Turning Movement Plan • Entrance Analysis • Transit Needs Analysis
Environment	• <u>Environmental Impact Study</u> • Shoreline Protection Plan / Coastal Engineering Study • Phase 1 and 2 Environmental Site Assessment • Tree Protection Plan / Inventory Plan and removal • Salt Management Plan • Snow Storage Plan • Subwatershed Study • Species at Risk Study • Hydrogeological/Hydrology Assessment • Flood Protection Study • Arborist Report
Engineering (Servicing and Infrastructure)	• Functional Servicing Report • Record of Site Condition • Stormwater Management Report • Site Grading and Servicing Plans • Private Servicing Assessment, and associated Well Monitoring • Geotechnical Soils Study • Erosion and Sediment Control Plan • Drainage Areas Plan • Water Conservation Plan • Waste Management Plan • Slope Stability Study • Construction Impact Study / Plan

10.5.3 Official Plan Amendments

- a) The City will consider applications for site specific Amendments to this Plan within the context of the policies and criteria set out throughout this Plan.
- b) A Planning Justification Report prepared in support of an Official Plan Amendment will demonstrate the rationale for the proposed Amendment and evaluate matters including but not limited to:
 - i. Provincial plans, policies, and legislation;
 - ii. How the proposed Amendment supports the vision, guiding principles and policies of this Plan;
 - iii. How the proposed Amendment supports the City Structure;
 - iv. The need for and suitability of the proposed amendment, including matters related to land use compatibility; and
 - v. The adequacy of municipal services, parks and open space, and public service facilities.
- c) Technical revisions will not require an amendment to this Plan provided they do not change the intent of this Plan, and include:
 - i. Changing numbering, cross-references, and the arrangement of text and tables, schedules, and figures;
 - ii. Updating non-operative call-out boxes;
 - iii. Modifying materials contained in an appendix to this Plan; and
 - iv. Correcting grammatical, mathematical, or typographical errors.

10.5.4 Existing Approvals

- a) Site-specific development approvals and land use permissions granted prior to the approval of this Plan by the Ministry of Municipal Affairs and Housing are deemed to conform with this Plan. Subsequent implementing development applications will be subject to the land use policy framework in place prior to the approval of this Plan by the Ministry of Municipal Affairs and Housing and will not require an amendment to this Plan.

- b) Applications deemed complete prior to the approval of this Plan by the Ministry of Municipal Affairs and Housing may continue towards final approval under the policy framework (including urban design guidelines) in place at the time the Notice of Complete Application was issued. This would include any subsequent implementing approvals.

10.6 Consultation and Engagement

10.6.1 Indigenous Consultation

- a) In the spirit of reconciliation and in accordance with the Aboriginal and treaty rights set out under section 35 of the *Constitution Act*, the City will work with First Nations rights-holders and urban Indigenous residents on building a constructive and cooperative relationship, based on mutual respect, between planning authorities to facilitate knowledge-sharing and inform decision-making in land use planning.
- b) The City will undertake early engagement with First Nations rights holders and urban Indigenous residents and coordinate on land use planning matters to facilitate knowledge-sharing, support consideration of Indigenous interests in land use decision-making and support the identification of potential impacts of decisions on the exercise of Aboriginal or treaty rights.

10.6.2 Community Consultation

- a) Community consultation and engagement on planning matters in Orillia will be undertaken pursuant to the requirements of the *Planning Act*, the *Accessibility for Ontarians with Disabilities Act*, the *Environmental Assessment Act*, and other legislation, policies, and regulations.
- b) Community consultation will, wherever possible, use inclusive, accessible, and culturally safe engagement practices that proactively reach equity-deserving groups, youth, older adults, newcomers, renters, and lower-income households.
- c) Development proponents may be required to host an open house with neighbouring landowners prior to consideration of the application by City Council.
- d) Applicants applying for Official Plan Amendments and Zoning By-law Amendments will be required to undertake a Consultation Strategy whereby the applicant will undertake consultation with the public and report to the City on the consultation approach and results prior to the City scheduling the Public Meeting.

10.7 Glossary

A

10.7.1.1 Accessory Use

- a) A use which is located on the same parcel of land as a principal use, but which is separate, subordinate and incidental to the principal use.

10.7.1.2 Additional Dwelling Unit

- a) A separate dwelling unit associated with a single detached, semi-detached, or townhouse dwelling.

10.7.1.3 Adjacent Lands (Natural Heritage)

- a) Those lands contiguous to natural hazard lands, a specific natural heritage feature or area, where it is likely that development, redevelopment or site alteration would have a negative impact on the hazard, or natural heritage feature or area. The extent of the adjacent lands may be recommended by the Province or based on municipal approaches which achieve the same objectives.

10.7.1.4 Adjacent Lands (Cultural Heritage)

- a) Those lands contiguous to a protected heritage property.

10.7.1.5 Adverse Effect

- a) As defined in the *Environmental Protection Act*, means one or more of:
 - i. Impairment of the quality of the natural environment for any use that can be made of it;
 - ii. Injury or damage to property or plant or animal life;
 - iii. Harm or material discomfort to any person;
 - iv. An adverse effect on the health of any person;
 - v. Impairment of the safety of any person;
 - vi. Rendering any property or plant or animal life unfit for human use;

vii. Loss of enjoyment of normal use of property; and

viii. Interference with normal conduct of business.

10.7.1.6 Affordable Housing

- a) In the case of ownership housing, the least expensive of:
 - i. Housing for which the purchase price results in annual accommodation costs which do not exceed 30 percent of gross annual household income for low- and moderate-income households; or
 - ii. Housing for which the purchase price is at least 10 percent below the average purchase price of a resale unit in the regional market area.
- b) In the case of rental housing, the least expensive of:
 - i. A unit for which the rent does not exceed 30 percent of gross annual household income for low- and moderate-income households; or
 - ii. A unit for which the rent is at or below the average market rent of a unit in the municipality.

10.7.1.7 Agri-food Network

- a) Within the agricultural system, a network that includes elements important to the viability of the agri-food sector such as regional infrastructure and transportation networks; agricultural operations including on-farm buildings and primary processing; infrastructure; agricultural services, farm markets, and distributors; and vibrant, agriculture-supportive communities.

10.7.1.8 Alternative Energy Systems

- a) A system that uses sources of energy or energy conversion processes to produce power, heat and/or cooling that significantly reduces the amount of harmful emissions to the environment (air, earth and water) when compared to conventional energy systems.

10.7.1.9 Archaeological Resources

- a) Archaeological Resources: Includes artifacts, archaeological sites, marine archaeological sites, as defined under the *Ontario Heritage Act*. The identification and evaluation of such

resources are based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act*.

- b) Significant Archaeological Resources: Resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*.

10.7.1.10 Areas of Archaeological Potential

- a) Areas with the likelihood to contain archaeological resources, as evaluated using the processes and criteria that are established under the *Ontario Heritage Act*.

B

10.7.1.11 Brownfield Sites

- a) Undeveloped or previously developed properties that may be contaminated. They are usually, but not exclusively, former industrial or commercial properties that may be underutilized, derelict or vacant.

10.7.1.12 Buffer Area

- a) An area surrounding a natural heritage feature and area that is intended to protect the feature and its ecological and hydrologic functions from the negative impacts of adjacent land uses.

10.7.1.13 Built Heritage Resource

- a) A building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community.

C

10.7.1.14 Communal Housing

- a) Communal housing forms may include Nursing Homes, Long-Term Care Facilities, Retirement Homes, Group Homes, Boarding Houses, Student Residences, Continuum of Care Developments, Seniors' Accommodations and similar forms of service-oriented, communal housing and may be developed in conjunction with the on-site provision of

related services, facilities, and amenities including, but not limited to, a cafeteria, medical office and/or pharmacy. Hotels and Motels are not forms of communal housing.

10.7.1.15 Complete Community

- a) Places such as mixed-use neighbourhoods or other areas within cities, towns, and Settlement Areas that offer and support opportunities for equitable access to many necessities for daily living for people of all ages and abilities, including an appropriate mix of jobs, a full range of housing, transportation options, public service facilities, local stores and services. Complete communities are inclusive and may take different shapes and forms appropriate to their contexts to meet the diverse needs of their populations.

10.7.1.16 Compatible (Compatibility)

- a) Development that, while not necessarily the same as, or even similar to existing or planned land uses, can integrate into its surroundings in a manner that allows it to co-exist in a balanced and cohesive manner. Compatibility is achieved when a new use or built form respects and supports the character, function, and planned vision of the surrounding area, is supported by suitable infrastructure, and minimizes or avoids adverse effects on adjacent properties. This includes consideration of applicable Provincial guidelines related to land use compatibility, noise, and the capacity of existing or planned infrastructure to accommodate the proposed development.
- b) The inverse definition of compatible applies to incompatible and incompatibility.

10.7.1.17 Complete Street

- a) Complete streets are streets designed to provide safe, accessible, and comfortable travel for everyone, regardless of how they travel. Complete streets allocate space across the street's width to balance the needs of pedestrians, cyclists, transit users, and motorists through dedicated lanes, signals, and other design features, while incorporating streetscaping elements that support broader community functions such as snow storage, stormwater management, and public spaces.

10.7.1.18 Conservation (also Conserve)

- a) The identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained. This may be achieved by the implementation of

recommendations set out in a Conservation Plan, Archaeological Assessment, and/or Heritage Impact Assessment that has been approved, accepted or adopted by the relevant planning authority and/or decision-maker. Mitigative measures and/or alternative development approaches should be included in these plans and assessments.

10.7.1.19 Conservation Use

- a) The use of land dedicated towards the protection, stewardship and management of natural heritage features and functions, hydrological features and functions, ecological features and functions, and includes the structures of a public authority used only for managing the resource and for managing natural hazard lands, such as flood and slope control.

10.7.1.20 Cultural Heritage Landscape

- a) A defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association.

D

10.7.1.21 Designated Growth Areas

- a) Lands within Settlement Areas designated for growth or lands added to Settlement Areas that have not yet been fully developed. Designated Growth Areas include lands which are designated and available for residential growth, as well as lands required for employment and other uses.

10.7.1.22 Development

- a) The creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the *Planning Act*, but does not include:
 - i. Activities that create or maintain infrastructure authorized under an environmental assessment process or identified in Provincial standards; or
 - ii. Works subject to the *Drainage Act*.

E

10.7.1.23 Ecological Function

- a) The natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include biological, physical and socioeconomic interactions.

10.7.1.24 Employment Areas

- a) Areas designated in this Plan for clusters of business and economic activities including manufacturing, research and development in connection with manufacturing, warehousing, goods movement, associated retail and office, and ancillary facilities. An Employment Area also includes areas of land described by subsection 1(1.1) of the *Planning Act*. Uses that are excluded from employment areas are institutional and commercial, including retail and office not associated with the primary employment use listed above.

10.7.1.25 Employment Uses

- a) Business and economic activities which are defined in the *Planning Act* as:
 - i. Manufacturing uses;
 - ii. Uses related to research and development in connection with manufacturing anything;
 - iii. Warehousing uses, including uses related to the movement of goods;
 - iv. Retail uses and office uses that are associated with uses mentioned in i to iii.;
 - v. Facilities that are ancillary to the uses mentioned in i to iv.;
 - vi. Any other business and economic uses prescribed in a Provincial regulation.

10.7.1.26 Enhancement Areas

- a) Terrestrial and aquatic areas that have been restored or that have the potential to be restored to a natural state. Enhancement areas include naturally vegetated or potentially revegetated lands that expand, connect, link or border natural heritage features and areas and that have been or are planned to be rehabilitated or restored to support ecological functions. Enhancement areas include but are not limited to linkages.

10.7.1.27 Environmental Impact Study

- a) A study conducted prior to development, redevelopment, or site alteration in to investigate potential environmental impacts of the proposed undertaking. An Environmental Impact Study will determine whether development, redevelopment, or site alteration may proceed, and if so, will identify actions which could be taken in order of preference to prevent, minimize or mitigate the environmental impacts of the development, redevelopment, or site alteration.

10.7.1.28 Essential Emergency Services

- a) Services which would be impaired during an emergency as a result of flooding, the failure of floodproofing measures and/or protection works, and/or erosion including, but not limited to, fire stations, ambulance stations, police stations, hospitals, and electrical substations.

10.7.1.29 Existing Lot of Record

- a) A lot or parcel of land lawfully created under the provisions of the *Planning Act* prior to the date of the adoption of this Plan, which is held in distinct and separate ownership from abutting lands, and is capable of being legally conveyed. For additional clarity, lots created by Consent pursuant to the *Planning Act* since the date of adoption of this Plan are not existing lots of record.

F

10.7.1.30 Flood Fringe

- a) The portion of the Ben's Ditch floodplain outside the floodway where flood depths and velocities are generally less severe than in the floodway and where development and site alteration may be permitted subject to floodproofing and safe access/egress requirements.

10.7.1.31 Flood Level

- a) The maximum water level elevation (C.G.D.) at a particular point during a flood event. For the purposes of considering development or floodproofing measures in the floodplain identified on **Schedule D**, the water level will be that produced by the following flood standards:
 - i. For the Mill Creek Floodplain, the Timmins storm (1961), transposed and centred over the watershed and combined with the local conditions; or
 - ii. For the Ben's Ditch Floodplain, the 100-year flood.

10.7.1.32 Floodplain

- a) For river, stream and small inland lake systems, means the area, usually lowlands adjoining a watercourse, which has been or may be subject to flooding hazards.

10.7.1.33 Floodplain Spill Area

- a) Includes the floodway and the flood fringe and may include adjacent areas where floodwaters exit to surrounding lands, which can occur as a result of downstream barriers to the passage of flood flows, such as undersized bridges or culverts. As a consequence, the limit and depth of flooding are difficult to determine.

10.7.1.34 Floodproofing

- a) The combination of measures incorporated into the basic design and/or construction of buildings and structures or properties to reduce or eliminate flood hazards.

10.7.1.35 Floodway

- a) The portion of the floodplain where development and site alteration would cause a danger to public health and safety or property damage.
 - i. For the Mill Creek Floodplain, the floodway is the entire contiguous floodplain.
 - ii. For the Ben's Ditch Floodplain, the floodway is the contiguous inner portion of the floodplain, representing that area required for the safe passage of flood flow and/or that area where flood depths and/or velocities pose a potential threat to life and/or property damage.

10.7.1.36 Fish Habitat

- a) As defined in the Canadian *Fisheries Act*, means spawning grounds and any other areas, including nursery, rearing, food supply and mitigation areas on which fish depend directly or indirectly to carry out their life processes.

10.7.1.37 Food Asset

- a) Any physical place, service, or infrastructure that enables access to nutritious, affordable, and culturally appropriate food, supports local food production, processing, distribution, or food literacy, and contributes to a resilient local food system. Examples include grocery

stores, farmers markets, community food centres, community gardens, greenhouses, orchards, food banks, mobile food markets, and food-related public service facilities.

G

10.7.1.38 Green Infrastructure

- a) Natural and human-made elements that provide ecological and hydrological functions and processes. Green infrastructure can include components such as natural heritage features and areas and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces, and green roofs.

H

10.7.1.39 Habitat of Endangered and Threatened Species

- a) Habitat as defined by the applicable Provincial legislation.

10.7.1.40 Hazardous Site

- a) Property or lands that could be unsafe for development and site alteration due to naturally occurring hazards. These may include unstable soils (sensitive marine clays, organic soils) or unstable bedrock (karst topography).

10.7.1.41 Hazardous Substance

- a) A substance which, individually, or in combination with other substances, is normally considered to pose a danger to public health, safety and the environment. These substances generally include a wide array of materials that are toxic, ignitable, corrosive, reactive, radioactive or pathological.

10.7.1.42 Statement of Cultural Heritage Value or Interest

- a) A written description that identifies the cultural heritage value or significance of the said cultural heritage resource. It also describes the resource's heritage attributes and physical features that must be conserved in order to protect its cultural heritage value or significance. A statement of cultural heritage interest or value is prepared once a cultural heritage resource has been recommended and/or approved for heritage designation.

10.7.1.43 Heritage Impact Assessment

- a) A study to determine the impacts to known and potential cultural heritage resources within an area proposed for future development. The study would include an inventory of all cultural heritage resources onsite and adjacent to the planning application area. The study would also include an evaluation of the significance of the identified cultural heritage resources and would provide an overview of how the proposed development will impact the identified cultural heritage resources and neighbouring properties. The study would assess alternative development options, conservation measures, site alteration approaches and mitigation measures to conserve the cultural heritage resources. The study must also include an evaluation of potential cultural heritage resources identified, including a recommendation as to whether or not the subject property is of cultural heritage value or interest and therefore is eligible for heritage designation.

10.7.1.44 Hydrologic Function

- a) The functions of the hydrological cycle that include the occurrence, circulation, distribution and chemical and physical properties of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere, and water's interaction with the environment including its relation to living things.

10.7.1.45 Improved Public Street

- a) A publicly owned and maintained street that has been constructed to municipal standards and is open for public use. An improved public street is typically equipped with the infrastructure necessary to support development, which may include a paved travel surface, drainage, street lighting, sidewalks or other pedestrian facilities, and municipal water, sanitary sewer, and stormwater services, where applicable.

10.7.1.46 Infrastructure

- a) Physical structures (facilities and corridors) that form the foundation for development. Infrastructure includes sewage and water systems, septage treatment systems, stormwater management systems, waste management systems, electricity generation facilities, electricity transmission and distribution systems, communications / telecommunications including broadband, transit and transportation corridors and facilities, active transportation systems, oil and gas pipelines, and associated facilities.

10.7.1.47 Institutional Use

- a) For the purposes of the Natural Hazards policies of this Plan, land use where there is a threat to the safe evacuation of vulnerable populations such as older persons, persons with disabilities, and those who are sick or young, during an emergency as a result of flooding, failure of floodproofing measures or protection works, or erosion.

10.7.1.48 Intensification

- a) The development of a property, site or area at a higher density than currently exists through:
 - i. Redevelopment, including the reuse of brownfield sites and underutilized shopping malls and plazas;
 - ii. The development of vacant and/or underutilized lots within previously developed areas;
 - iii. Infill development; and
 - iv. The expansion or conversion of existing buildings.

10.7.1.49 Intake Protection Zones

- a) An area that is related to a surface water intake and within which it is desirable to regulate or monitor drinking water threats.

L

10.7.1.50 Lake Simcoe Watershed

- a) Lake Simcoe and the part of Ontario, the water of which drains into Lake Simcoe, or the boundaries of the area shown on **Schedule C**.

10.7.1.51 Legally Existing Use

- a) The use of a parcel or parcels of land which was established as of the adoption of this Plan, and which was permitted by the City's Zoning By-law at the time of its establishment.

10.7.1.52 Linkage

- a) A linear area intended to provide connectivity (at the regional or site level), supporting a complete range of community and ecosystem processes, enabling plants and smaller

animals to move between core areas and other larger areas of habitat over a period of generations.

10.7.1.53 Low- and Moderate-Income Households

- a) In the case of ownership housing, households with incomes in the lowest 60 percent of the income distribution for the regional market area; or,
- b) In the case of rental housing, households with incomes in the lowest 60 percent of the income distribution for renter households for the regional market area.

10.7.1.54 Low Impact Development

- a) An approach to stormwater management that seeks to manage rain and other precipitation as close as possible to where it falls to mitigate the impacts of increased runoff and stormwater pollution. It typically includes a set of site design strategies and distributed, small-scale structural practices to mimic the natural hydrology to the greatest extent possible through infiltration, evapotranspiration, harvesting, filtration, and detention of stormwater. Low impact development can include, for example: bio-swales, vegetated areas at the edge of paved surfaces, permeable pavement, rain gardens, green roofs, and exfiltration systems.

10.7.1.55 Low-lying Areas

- a) Lands with an elevation lower than 220.0 m C.G.D., which could be vulnerable to lake-based flooding impacts.

M

10.7.1.56 Major Facilities

- a) Facilities which may require separation from sensitive land uses, including but not limited to airports, manufacturing uses, transportation infrastructure and corridors, rail facilities, marine facilities, sewage treatment facilities, waste management systems, oil and gas pipelines, industries, energy generation facilities and transmission systems, and resource extraction activities.

10.7.1.57 Major Goods Movement Facilities and Corridors

- a) Transportation facilities, corridors and networks associated with the inter- and intra-Provincial movement of goods. Examples include inter-modal facilities, ports, airports, rail

facilities, truck terminals, freight corridors, freight facilities, and haul routes, primary transportation corridors used for the movement of goods and those identified in Provincial transportation plans. Approaches that are freight-supportive may be recommended in Provincial guidance or based on municipal approaches that achieve the same objectives.

10.7.1.58 Micromobility

- a) Small, compact, low-speed vehicles that are generally electrified. Micromobility devices can include e-bikes, bicycles, cargo bikes/trikes, folding bikes, electric two, three, or four-wheeled cycles, urban mobility vehicles, e-mopeds, electric kick scooters (e-scooters) and more.

10.7.1.59 Microtransit

- a) Shared transportation that lies between traditional fixed route transit and ride hailing technology. Microtransit routes are nimble, with schedules that may shift based on rider demand, and vehicles that range in size from vans, shuttles, or buses.

10.7.1.60 Mineral Aggregate Operation

- a) Lands under license or permit, other than for wayside pits and quarries, issued in accordance with the *Aggregate Resources Act*;
- b) For lands not designated under the *Aggregate Resources Act*, established pits and quarries that are not in contravention of municipal zoning by-laws and including adjacent land under agreement with or owned by the operator, to permit continuation of the operation; and
- c) Associated facilities used in extraction, transport, beneficiation, processing or recycling of mineral aggregate resources and derived products such as asphalt and concrete, or the production of secondary related products.

10.7.1.61 Mobility-as-a-service

- a) An integrated platform for transportation services which combines multiple modes including public transit, taxis, ride-hailing, scooter, bike, and car sharing, and sometimes even parking fees and road tolls on one easy-to-use navigation and payment app.

10.7.1.62 Multi-modal

- a) Relating to the availability or use of more than one form of transportation, such as automobiles, walking, cycling, buses, rapid transit, higher order transit, rail (such as freight), trucks, air, and marine.

N

10.7.1.63 Natural Hazard Lands

- a) Property or lands that could be unsafe for development due to naturally occurring processes. Along river, stream and small inland lake systems, this means the land, including that covered by water, to the furthest landward limit of the flooding hazard or erosion hazard limits.

10.7.1.64 Natural Heritage Features and Areas

- a) Features and areas, including significant wetlands, significant coastal wetlands, other coastal wetlands in Ecoregions 5E, 6E and 7E, fish habitat, significant woodlands and significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River), habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area.

10.7.1.65 Natural Heritage System

- a) A system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include natural heritage features and areas, federal and Provincial parks and conservation reserves, other natural heritage features, lands that have been restored or have the potential to be restored to a natural state, areas that support hydrologic functions, and working landscapes that enable ecological functions to continue. The Province has a recommended approach for identifying Natural Heritage Systems, but municipal approaches that achieve or exceed the same objective may also be used.

10.7.1.66 Negative Impacts

- a) In regard to water and wastewater facilities, potential risks to human health and safety and degradation to the quality and quantity of water, sensitive surface water features and sensitive ground water features, and their related hydrologic functions, due to single, multiple or successive development. Negative impacts should be assessed through environmental studies including hydrogeological or water quality impact assessments, in accordance with Provincial standards;

- b) In regard to fish habitat, any harmful alteration, disruption or destruction of fish habitat, except where an exemption to the prohibition has been authorized under the *Fisheries Act*;
- c) In regard to other natural heritage features and areas, degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities.
- d) In regard to water resources, degradation to the quality and quantity of water, sensitive surface water features and sensitive ground water features, and their related hydrologic functions, due to single, multiple or successive development or site alteration activities.
- e) In regard to transportation corridors, any development or site alteration that would compromise or conflict with the planned or existing function, capacity to accommodate future needs, and cost of implementation of the transportation corridor.

P

10.7.1.67 Placemaking

- a) Placemaking is a community-driven approach to urban design that enhances public spaces by fostering social interaction, cultural expression, and local identity through thoughtful infrastructure, landscaping, and amenities.

10.7.1.68 Podium

- a) The lower floors of a mid-rise or tall building. The role of the podium is to help a building fit harmoniously within the existing or planned street wall, define the edges of adjacent streets, parks, and open space at good proportion, and maintain access to sunlight and sky view for pedestrians and neighbouring properties.

10.7.1.69 Protected Heritage Property

- a) A property designated under Part IV or VI of the *Ontario Heritage Act*; property included in an area designated as a heritage conservation district under Part V of the *Ontario Heritage Act*; property subject to a heritage conservation easement or covenant under Part II or IV of the *Ontario Heritage Act*; property identified by a Provincial ministry or a prescribed public body as a property having cultural heritage value or interest under the Standards and Guidelines for the Conservation of Provincial Heritage Properties; property protected under federal heritage legislation; and UNESCO World Heritage Sites.

10.7.1.70 Public Service Facilities

- a) Land, buildings and structures, including but not limited to schools, hospitals and community recreation facilities, for the provision of programs and services provided or subsidized by a government or other body, such as social assistance, recreation, police and fire protection, health, child care and educational programs, including elementary, secondary, post-secondary, long-term care services, and cultural services.

Q

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R

10.7.1.71 Reach

- a) A specific length or segment of a stream or river, typically defined by relatively uniform characteristics such as slope, depth, discharge (flow), and channel morphology. It is a fundamental unit used to study, survey, or restore a specific portion of a waterway.

10.7.1.72 Redevelopment

- a) The creation of new units, uses or lots on previously developed land in existing communities, including brownfield sites.

10.7.1.73 Regulatory Flood Event

- a) For the Mill Creek Floodplain, the Timmins Storm (1961); and
- b) For the Ben's Ditch Floodplain, the 100-year Storm.

10.7.1.74 Renewable Energy Source

- a) An energy source that is renewed by natural processes and includes wind, water, biomass, biogas, biofuel, solar energy, geothermal energy and tidal forces.

10.7.1.75 Renewable Energy Systems

- a) A system that generates electricity, heat and/or cooling from a renewable energy source.

10.7.1.76 Resilience

- a) The ability and capacity of a community to foresee and manage the adverse effects of climate change. Resilience can include measures that both mitigate and adapt to climate change. For example, enlarging a community's tree canopy can help to provide carbon capture and reduce greenhouse gas emissions (mitigation), but also reduce the heat island effect in the community (adaptation).

10.7.1.77 Roadway

- a) The portion of a highway, road or street which is designed, or ordinarily used for vehicular travel, exclusive of the sidewalk, shoulder, or boulevard.

S

10.7.1.78 Sensitive Land Use

- a) Buildings, amenity areas, or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one or more adverse effects from contaminant discharges generated by a nearby major facility. Sensitive land uses may be a part of the natural or built environment. Examples may include, but are not limited to residences, day care centres, and educational and health facilities.

10.7.1.79 Settlement Area

- a) Settlement Areas are:
 - i. Built-up areas where development is concentrated and which have a mix of land uses; and
 - ii. Lands which have been designated in an official plan for development over the long term.

10.7.1.80 Significant (Cultural Heritage Resources)

- a) In regard to cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*.

10.7.1.81 Significant Groundwater Recharge Areas

- a) A type of vulnerable area defined under the *Clean Water Act* within which it is desirable to regulate or monitor drinking water threats that may affect the recharge of an aquifer.

10.7.1.82 Significant Wildlife Habitat

- a) Areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter, and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory or non-migratory species.

10.7.1.83 Site Alteration

- a) Activities, such as grading, excavation and the placement of fill that are subject to the City's Site Alteration By-law that would change the landform and natural vegetative characteristics of a site.

10.7.1.84 Small-Scale Uses

- a) Retail, service commercial, or office uses which do not require large floor areas or multiple floors, and which will not generate significant patronage requiring additional parking. Examples include small stores, cafes, medical offices, after-school programs, cleaners, barbers and professional offices.

10.7.1.85 Strategic Growth Area

- a) Downtown, Nodes, Corridors, and other areas in the city that have been identified to be the focus for accommodating intensification and higher-density mixed uses in a more compact built form.
- b) Future Strategic Growth Areas may include existing and emerging lands in close proximity to publicly-assisted post-secondary institutions and other areas where growth or development will be focused, that may include infill, redevelopment (e.g., underutilized shopping malls and plazas), brownfield sites, the expansion or conversion of existing buildings, or greyfields.

10.7.1.86 Street Wall

- a) A street wall is formed by continuous building frontages flanking the edge of a street, on one or both sides. Street walls define the street space and create a feeling of enclosure and security to pedestrians.

T

10.7.1.87 Transit-Supportive

- a) In regard to land use patterns, means development that makes transit viable, optimizes investments in transit infrastructure, and improves the quality of the experience of using transit. It often refers to compact, mixed-use development that has a high level of employment and residential densities, including air rights development, in proximity to transit stations, corridors and associated elements within the transportation system.

10.7.1.88 Transportation Demand Management

- a) A set of strategies that result in more efficient use of the transportation system by influencing travel behaviour by mode, time of day, frequency, trip length, regulation, route, or cost.

U

10.7.1.89 Urban Agriculture

- a) Food production in Settlement Areas, whether it is for personal consumption, commercial sale, education, or therapy. Examples include, but are not limited to, vertical agriculture facilities, community gardens, greenhouses, and rooftop gardens.

V

10.7.1.90 Valleylands

- a) A natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year.

W

10.7.1.91 Wellhead Protection Areas

- a) An area surrounding a wellhead that is related to the wellhead and within which it is desirable to regulate or monitor drinking water threats.

10.7.1.92 Wetlands

- a) Wetlands: Lands that are seasonally or permanently covered by willow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens. Periodically soaked or wetlands being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the purposes of this definition.
- b) Significant Wetlands: Wetlands identified as Provincially significant by the Province using evaluation procedures established by the Province, as amended from time to time.
- c) Local Wetlands: Lands that meet the definition of a wetland and which have not been evaluated as significant and may include wetlands that were evaluated by the Province as non-significant but are locally significant.

10.7.1.93 Woodlands

- a) Woodlands: Treed areas that provide environmental and economic benefits to both the private landowner and the public, such as erosion prevention, hydrological and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of wildlife habitat, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products. Woodlands include treed areas, woodlots or forested areas.
- b) Significant Woodlands: Woodlands in the context of Orillia that:
 - i. Comprise an area of two or more contiguous hectares based on the spatial extent of the woodland irrespective of ownership. Significant woodland areas are considered contiguous even if intersected by narrow gaps of 20 metres in width of less; or
 - ii. Have at least:

1. 1,000 trees of any size, per hectare; and
 2. 750 trees, measuring over five centimetres in diameter, per hectare; and
 3. 500 trees, measuring over 12 centimetres in diameter, per hectare; and
 4. 250 trees, measuring over 20 centimetres in diameter, per hectare; and
 5. But do not include a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees; or
- iii. Are treed areas, woodlots and forested areas which have substantive ecological functional importance due to a combination of characteristics such as species composition and distribution, age of trees, stand history, and the ability to provide core habitat. Their contribution to the broader landscape in terms of potential social, cultural and recreational attributes due to location, size and configuration are also to be considered.
- c) Local Woodlands: Woodlands that do not include woodlands meeting the criteria for significant woodlands and include all terrestrial treed vegetation communities with a percent tree cover greater than 25%.

X - Z

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Appendices

Appendix 1 - Environmental Impact Study Guidelines

A Terms of Reference (TOR) for an Environmental Impact Study (EIS) must be submitted to and approved by City of Orillia staff prior to the submission of an EIS. The TOR will clearly outline the proposed report components and establish the study area, characterize the general nature and extent of the development proposal, briefly summarize the scoping exercise, planning context, and known triggers for the EIS (e.g., natural heritage designations). The TOR shall also outline the proposed methodology for undertaking the EIS.

The TOR will be provided in a report template and include (depending on the scope of the EIS):

- The name and contact information of the applicant, address of the subject, property, lists the principal author of the report, the consulting firm, and the date the report was completed.
- **Introduction:** Description of subject property (natural features and areas, land cover, existing hard surfaces or buildings), type and scale of the development proposal (including any required servicing, infrastructure upgrades or stormwater facilities, existing or proposed trails), historical and present uses of the subject property, and map(s) of the development location, subject property and study area.
- **Planning Context:** Current designation and zoning for the subject property and for the adjacent lands and identify environmental legislative, regulatory, and policy requirements that may affect the development proposal. This includes but is not limited to the Provincial Planning Statement, the City of Orillia Official Plan, other municipal policies, and by-laws, Lake Simcoe Protection Plan regulations, *Endangered Species Act*, *Federal Fisheries Act*, and *Migratory Birds Convention Act*.
- **Background Review:** Identify relevant information from existing studies, plans, and databases, to be analyzed as part of the EIS.
- **Approach and Methodology:** Detailed study methods for studying natural heritage features and areas, wildlife habitat, and species at risk (including time of year, level of searcher effort, etc.). Including but not limited to geology and soils, hydrology and hydrogeology, wetland assessments and/or delineations, aquatic and fish habitat, terrestrial vegetation (including wetlands), vegetation communities (ecological land classification), plants, wildlife, natural hazards, connectivity, and ecological linkages.

- **Evaluation of Significance:** Assess the various natural heritage features and areas against the appropriate policies and guidelines to determine significance, natural hazards, and assessment of appropriate buffers and/or setbacks.
- **Impact Assessment:** Identify that the scope includes direct impacts, indirect impacts, cumulative impacts, etc. and an evaluation of alternative options/measures.
- **Mitigation:** Develop measures including avoidance, enhancement, restoration, compensation, outreach, education, and stewardship
- **Monitoring:** Outline of the types of monitoring to be included in the EIS
- **Recommendations and Conclusion:** Recommendations and concluding statement (confirm they are to be provided in the EIS)

Appendix 2 - Native Tree Species (Orillia)

The following list identifies those tree species native to the Orillia area. Other native tree species not listed may be permitted, provided they are appropriate to site conditions and contribute positively to urban forest diversity, resilience, and long-term canopy health.

- White Oak (*Quercus alba*)
- Red Oak (*Quercus rubra*)
- Bur Oak (*Quercus macrocarpa*)
- Swamp White Oak (*Quercus bicolor*)
- Serviceberry / Amelanchier (*Amelanchier* spp.)
- Sugar Maple (*Acer saccharum*)
- Black Maple (*Acer nigrum*)
- Freeman Maple – hybrid of Red and Silver Maple (*Acer x freeman*)
- White Spruce (*Picea glauca*)
- Eastern White Pine (*Pinus strobus*)
- Eastern Hemlock (*Tsuga canadensis*)
- Eastern Red Cedar (*Juniperus virginiana*)
- Tamarack (*Larix laricina*)

Appendix 3 - Hydrogeological Assessment Submissions Conservation Authority Guidelines for Applications (2013)

Note to Reader: This document has been provided in an attempt to standardize the hydrogeological study requirements to support development applications reviewed by Conservation Authorities and should be referred to for guidance purposes only. It is not a legal document and should not be used as such. In addition, this document has not been endorsed by all Conservation Authorities. This document has been drafted to satisfy specific requirements applicable to hydrogeologic studies that meet the needs of most Conservation Authorities and for that reason, not all content of the document may be appropriate for your hydrogeologic study or Conservation Authority. Therefore, while this document may serve as an excellent starting point for undertaking hydrogeologic studies, independent judgment and pre-consultation with your Conservation Authority and municipality is strongly recommended to determine the scope of your study.

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Appendix 3 - Table of Contents

1	INTRODUCTION	196
2	HYDROGEOLOGICAL ASSESSMENT CONTENT AND REQUIREMENTS	198
	2.1 Qualifications	198
	2.2 Study Check list	199
3	HYDROGEOLOGICAL ASSESSMENT REPORT REQUIREMENTS	202
	3.1 Existing Conditions	202
	3.1.1 Introduction & Background	202
	3.1.2 Site Location & Description	202
	3.1.3 Topography & Drainage	203
	3.1.4 Physiography	203
	3.1.5 Geology and Soils	203
	3.1.6 Test Pits and Boreholes	204
	3.1.7 Monitoring Wells	205
	3.1.8 Private Well Surveys	205
	3.1.9 Hydrogeology/Hydrostratigraphy	206
	3.1.10 Description of Surface Water Features	207
	3.1.11 Water Taking Permit Details	207
	3.1.12 Water Quality	207
	3.1.13 D-5-5 (Water Supply)	210
	3.2 Impact Assessment	210
	3.2.1 Groundwater Levels	210
	3.2.2 Pumping Tests	210
	3.2.3 Groundwater Discharge (Baseflow)	210
	3.2.4 Water Balance Analysis	211
	3.2.5 Groundwater Quality	213
	3.2.6 D-5-4 Technical Guideline for Individual on-Site Sewage Systems: Water Quality Impact Risk Assessment 1996 – Septic System Suitability Evaluation	214
	3.3 Mitigation Requirements	215
	3.3.1 Maintenance of Infiltration	216

3.3.2	Maintenance of Groundwater Quality	218
3.3.3	Monitoring Program	218
3.3.4	Contingency Plans	219
3.4	Summary and Recommendations	220
3.5	Figures	220
3.6	References	220
3.7	Appendices	220
4	REFERENCES	221

List of Tables

Table 1:	Hydrogeological Assessment Check List intended to Support Development Applications	200
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List of Appendices

APPENDIX A:	Water Balance Example	222
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1 INTRODUCTION

This guidance document has been developed by the Conservation Authorities Geoscience Group which is made up of Conservation Authority hydrogeologists. The main purpose of this document is to provide information and guidance material to Conservation Authorities, their municipalities and consultant hydrogeologists related to hydrogeological assessment requirements that can be used to ensure comprehensive evaluations of potential impacts associated with development on natural ecological features and functions that are supported by groundwater resources. The intent is that it be used as a resource to promote consistency amongst Conservation Authorities in the development of terms of reference and the Conservation Authority review of the resulting technical studies. The document may also be used as a resource to assist the consulting community in the understanding of the Conservation Authority perspective regarding potential watershed impacts and serve to increase efficiencies and reduce approval timelines.

This guidance document provides a list of recommended requirements for hydrogeological investigations. The checklist outlines specific study requirements depending on the type of development application. Short descriptions of report expectations, report components, as well as some of the resources available have also been provided. Where a Conservation Authority has adopted these guidelines, the scope of the investigation and report requirements should follow this guidance document unless otherwise agreed upon during pre-consultation with Conservation Authority staff. It should be noted, however, that this is a guideline document aimed at consistency and not a legally binding instrument. A municipality and their Conservation Authority may choose to change the scope of the analyses required within their jurisdiction.

In carrying out plan review and regulation responsibilities, Conservation Authorities can be involved in the review of hydrological assessments addressing matters such as:

1. groundwater infiltration and recharge;
2. groundwater discharge and baseflow (supporting streams and wetlands);
3. coldwater fisheries supported by groundwater discharge;
4. water quality and temperature (wetland species/fisheries);
5. groundwater elevations and flow paths (potential to divert flow, cause flooding, divert shallow flow causing impacts on shallow rooted vegetation and wetland features); and
6. cumulative watershed impacts.

In summary, this guidance document may assist Conservation Authority involvement in requirements for hydrogeological submission by:

1. establishing a consistent approach in the review of studies;
2. clarifying upfront the information that should be included in hydrogeological studies;
3. providing a clearer understanding of potential hydrogeological issues and concerns;
4. providing minimum information requirements and best management practices in the preparation of hydrogeological reports;

As indicated earlier, this document attempts to satisfy specific requirements applicable to hydrogeological studies that meet the needs of most Conservation Authorities. The guidance information is not intended to be prescriptive or to replace professional judgment and is based upon a review of current practices for hydrogeologic reviews at Conservation Authorities. Therefore, while this document may serve as an excellent starting point for undertaking hydrogeologic studies, independent judgment and pre-consultation is strongly recommended to determine the scope of a hydrogeological submission.

Where applicable, this document takes into consideration existing provincial (e.g. Oak Ridges Moraine Conservation Plan, Niagara Escarpment Plan, Lake Simcoe Protection Plan, etc.), municipal and Conservation Authority policies and guidelines for information requirements for land development applications. Information contained within this document was drawn from Ministry of Environment and Energy (MOEE) Hydrogeological Technical Information Requirements for Land Development Applications (MOEE, 1995) but simplified and focused on watershed and ecological impacts associated with development.

2 HYDROGEOLOGICAL ASSESSMENT CONTENT AND REQUIREMENTS

Hydrogeological studies will vary in scope, level of detail, and methodologies depending upon project scale and the study objectives. Sufficient detail should be provided to facilitate a review of the hydrogeological analysis and conclusions.

It is strongly recommended, that prior to the commencement of any study, the proponent and their consultant(s) undertake pre-consultation with Conservation Authority staff to confirm the scope of the required technical study. This guidance document provides a list of recommended requirements for hydrogeological investigations. The checklist (Table 1 in Section 2.2) outlines specific study requirements depending on the type of development application. Section 3 provides a short description of report expectations, report components, as well as some of the resources available. Where a Conservation Authority has adopted these guidelines, the scope of the investigation and report requirements should follow this guidance document unless otherwise agreed upon during pre-consultation with Conservation Authority staff. It should be noted, however, that this is a guideline document aimed at consistency and not a legally binding instrument. A municipality and their Conservation Authority may choose to change the scope of the analyses required within their jurisdiction. Further, where this guideline is adopted, a staged study approach may be taken whereby a preliminary phase of a study may be initially required followed in sequence by secondary, more detailed phases over a period of time. A broader scale of investigation is generally undertaken for larger scale developments such as supporting documentation for secondary plans.

The studies are expected to provide new or updated sources of data, particularly on a local, site-specific scale and identify potential changes in environmental conditions. Data provided should be of a qualitative and a quantitative nature and be suitable to identify a linkage between impact on recharge/discharge capability, long- and short-term watershed planning and environmental quality. The information provided should be sufficient to identify areas of concern. Additionally, it will give the opportunity for developers to indicate where potential concerns can be mitigated or avoided. In this respect, developments can be accurately assessed from a site specific and broader watershed development impact perspective.

It is strongly recommended that, prior to the commencement of any study, the proponent and their consultant(s) undertake pre-consultation with Conservation Authority staff to confirm the scope of the required technical study (ies).

2.1 QUALIFICATIONS

Proponents of development applications will be required to submit reports which summarize the work completed. These reports shall be prepared by Qualified Persons (QPs). A QP is a licensed

Professional Geoscientist or an exempted Professional Engineer as set out in the Professional Geoscientists Act of Ontario.

2.2 STUDY CHECK LIST

The general purpose of a planning application hydrogeological study is to evaluate whether the proposed application is likely to result in adverse/negative impacts to the aquifer, existing groundwater users or natural functions of the ecosystem relying on groundwater. As such, the level of detail required in the hydrogeological study is normally expected to correspond with the level of risk posed to the ground and surface water resources, and the level of uncertainty associated with the available information. Where there is a low risk of negative impacts, a QP may be able to complete their report by qualitatively applying hydrogeological principles to existing information, such as in the form of a desk-top study. Where there is a high risk of negative impacts, a detailed site investigation and monitoring program may be required.

Table 1 has been developed to serve as an easy reference resource to identify hydrogeological study requirements in support of planning applications at the Conservation Authority. Table 1 outlines the type of planning application and general requirements most commonly required by Conservation Authorities in the review of different types and scales of Hydrogeological Assessments. However, it should be noted that Table 1 is not a complete list of all types of applications dealt with by each Conservation Authority, nor are all components of the checklist appropriate for every development type/situation. The following checklist represents recommended minimum requirements. Additional information may be required in some cases.

The table is not intended to replace professional judgment. Individual Conservation Authorities should be consulted for additional specific study requirements or conversely where study components may not be required. A description of the guidance checklist components is provided in more detail within Section 3 of this document.

The expected content of a hydrogeological assessment is broken out into three sections:

- 1) Existing Conditions;
- 2) Impact Assessment; and
- 3) Mitigation.

Table 1: Hydrogeological Assessment Check List intended to Support Development Applications

Groundwater Assessment	Master Environmental Servicing Plan or Equivalent	Environmental Assessment (EA)	Site Plan Commercial, Institutional, or Industrial	Subdivision or Condominium Development		Single lot Residential	Dewatering
				Municipal Servicing	Private Servicing		
1. EXISTING CONDITIONS:							
Introduction and background	☐	☐	☐	☐	☐	☐	☐
Site location and description	☐	☐	☐	☐	☐	☐	☐
Description of: • Topography & Drainage • Physiography • Geology & Soils	☐	☐	☐	☐	☐	☐	☐
Test pits/Boreholes	☐	☐	☐	☐	☐	GNR	☐
Monitoring Wells	☐	☐	☐	☐	☐	GNR	☐
Private Well Survey	☐	☐	☐	☐	☐	GNR	☐
Hydrostratigraphy/Hydrogeology: • Aquifer properties • Groundwater Levels • Groundwater flow direction	☐	☐	☐	☐	☐	☐	☐
Description of surface water features and functions	☐	☐	☐	☐	☐	☐	☐
Water Taking Permit details	GNR	GNR	GNR	GNR	GNR	GNR	☐
Water Quality	☐	☐	☐	☐	☐	GNR	☐
D-5-5 (Water Supply)	GNR	GNR	GNR	GNR	☐	GNR	GNR

Groundwater Assessment	Master Environmental Servicing Plan or Equivalent	Environmental Assessment (EA)	Site Plan Commercial, Institutional, or Industrial	Subdivision or Condominium Development		Single lot Residential	Dewatering
				Municipal Servicing	Private Servicing		
2. IMPACT ASSESSMENT:							
Groundwater Levels	☐	☐	☐	☐	☐	GNR	☐
Pumping Tests*	☐	☐	GNR	GNR	☐	GNR	☐
Groundwater Discharge (Baseflow)	☐	☐	☐	☐	☐	GNR	☐
Water Balance	☐	☐	☐	☐	☐	GNR	GNR
Groundwater Quality	☐	☐	☐	☐	☐	GNR	☐
D-5-4 (Onsite Sewage Systems)	GNR	GNR	GNR	GNR	☐	GNR	GNR
3. MITIGATION MEASURES:							
Maintenance of Infiltration/Recharge	☐	☐	☐	☐	☐	GNR	GNR
Maintenance Groundwater Quality	☐	☐	☐	☐	☐	GNR	☐
Monitoring Program	☐	☐	☐	☐	☐	GNR	☐
Contingency Plans**	GNR	GNR	GNR	☐	☐	GNR	☐

NOTES: This table outlines the type of planning application and associated requirements most commonly required by Conservation Authorities in the review of Hydrogeological Assessments. This table is not a complete list of all types of applications dealt with by each Conservation Authority nor is the checklist appropriate for every development situation. Individual Conservation Authorities should be consulted with for specific requirements.

☐ - Recommended

GNR – Generally Not Required

* Where development is municipally serviced, these tests will be necessary on a case by case basis (sensitive aquifer/ aquatic considerations).

**May be scoped, Contingency Plans will not be needed in most cases.

3 HYDROGEOLOGICAL ASSESSMENT REPORT REQUIREMENTS

This section outlines the minimum requirements that should be provided in a report format for review by Conservation Authority staff. The technical requirements are based on the type of planning application as outlined in Table 1. This section should be used along with Table 1 to ensure all application study recommended requirements are being met.

3.1 EXISTING CONDITIONS

3.1.1 Introduction & Background

The following introductory information should be provided within the report:

Description of the planning context and relevant policies

Outline of the scope of the assessment and the specific issues

Contact information for the landowner and/or person engaged in the activity or land use, if they are different people (e.g. tenant versus landlord)

3.1.2 Site Location & Description

Identification of the site location should include the following information:

Site location including street address, UTM (or northing and easting, NAD83),

Township/municipality, lot, concession, size of property, area to be developed/disturbed

Description of the proposed undertaking or development (size and purpose) Identification of the type of site servicing

Description of construction/site disturbance activities

Provision of the development plan or draft plan

Land use designations of the Official Plan(s) and permitted uses in the zoning of the site

Present land use of the site and adjacent lands

Regional map

Local map showing the site, major/minor roads, environmentally sensitive areas, wetland and watercourse features within 500 metres of the site or the area of influence; whichever is greater

3.1.3 Topography & Drainage

The report should include the following information with respect to topography and drainage conditions on the site:

Description and figure of existing surface topography and drainage patterns of the site

Description and figure of the proposed site alteration that clearly outlines ground elevations and change in drainage patterns

3.1.4 Physiography

A description of the physiography of the study area should be presented within the report. Its purpose is to provide background information regarding the landscape and the type of landforms present.

Description of study area physiography

Regional (watershed or larger) physiography map of the study area showing the site

3.1.5 Geology and Soils

The description of the geology should include both regional and site-specific descriptions. This discussion should contain a description of the overburden and bedrock materials including thickness. Features such as bedrock valleys, karst, and tunnel channels should be noted where known/relevant. The consultant should reference existing relevant regional studies e.g. the Ontario Geologic Survey maps and reports, Ontario Ministry of Agriculture and Foods soils maps, Ecological Land Classification data, Watershed Management reports and Assessment Reports prepared under the Clean Water Act, 2006. An overview of the regional stratigraphy including thicknesses of the formations, and unit name is expected. This description should also include an assessment of soils and infiltration properties inferred from grain size analyses from on-site test pits/boreholes where completed.

The report should also contain a minimum of two cross-sections (along perpendicular lines) to support discussions on geology, stratigraphy and flow patterns. Ideally, the cross-sections will be oriented along the groundwater flow path and across the groundwater flow path. In some cases, the cross-sections will be constructed based on the available data (regional sections along roads, etc.). Borehole logs should be shown on the cross sections with an interpretation of geologic units encountered. For shallow construction, test pit data may be correlated where possible.

Description of surficial and bedrock material

Summary of on-site borehole information Characterization of soil stratigraphy

Provision of detailed cross sections showing boreholes and interpolation (a min. of 2 sections are highly recommended).

Figures:

- Surficial and bedrock geology
- Soils
- Cross sections with plan

3.1.6 Test Pits and Boreholes

On-site investigations comprised of excavation of test pits with a backhoe, or shallow boreholes, are advised to determine surficial geologic and hydro-geologic conditions. While no minimum number of test pits is stipulated, the consultant is expected to construct as many test pits as required by the geo-technical regulations and to use professional judgment to determine the number and location of test pits required to adequately assess the soils and overburden materials present on the site.

Boreholes may be constructed in place of test pits and may be finished as monitoring wells. Like test pits, boreholes should be installed at strategic locations across the site so that potential impacts to sensitive groundwater dependent features can be adequately assessed.

Test pits/boreholes should be advanced to a depth to correspond with the engineering plans associated with planned development. Test pit/borehole locations should be provided on a figure and all data should be provided in an Appendix. Each test pit or borehole record should show the date of excavation and data collection. Ground elevation (masl) must be provided for each pit.

Representative soil samples shall be analysed in the laboratory to determine grain size distribution and an estimate of material percolation rates provided.

Description of test pits/boreholes on site including date of construction/abandonment

Grain size analysis and logs are required within the appendix of the report

Figures:

- Site test pit/borehole location map including historic boreholes

3.1.7 Monitoring Wells

Monitoring wells provide access to groundwater and may be required to assess short and long term changes in water levels, aquifer properties, hydraulic gradients, groundwater flow direction, connection to surface water features and impacts from dewatering.

It is recommended that a representative number of monitoring wells are constructed onsite and water levels be recorded upon well installation and at least two other occasions to determine stabilized water levels, seasonal influences and the seasonally highest (spring) and seasonally low (fall) water table elevation. A field survey should be conducted to establish reference elevations for each monitoring point and used to provide consistent elevations of soil contacts and groundwater elevations.

It may be necessary to install piezometers instead of monitoring wells where shallow groundwater levels need to be obtained and an area that is not accessible to drill rigs due to the proximity to a sensitive feature(s).

Description of monitoring wells/piezometers on site including date of construction/abandonment

Grain size analysis and logs are required within the appendix of the report

Figures:

- Site test monitoring wells/piezometers location map including historic boreholes
- Water levels (with sample dates) and hydrographs if available

3.1.8 Private Well Surveys

In addition to boreholes installed on the site, well data from wells within 500m of site should be used to characterize the groundwater conditions. If used, all relevant/supporting information should be provided within the report.

A house-to-house water well survey within 500 m of the site should be completed to obtain well location, construction details and water levels where possible. In addition, Ministry of the Environment (MOE) water well data within 500 m of the site should be obtained to supplement and confirm the data collected through the house-to-house survey.

Well data for private wells within 500 m of the site is to be used for the impact assessment

Figure of the well locations

3.1.9 Hydrogeology/Hydrostratigraphy

Hydraulic conductivity (K) of each geologic unit should be characterized or estimated. The proponent may refer to published reports regarding typical hydraulic conductivity properties for the geologic units or utilize data from field tests (single well response tests) conducted on monitoring or test wells on the site. Both Kh and Kv estimates should be provided where available.

To characterize the groundwater conditions at the site, both groundwater levels and flow patterns should be discussed along with the appropriate documentation. This should include: 1) a description of groundwater levels and seasonal fluctuations; 2) direction of groundwater flow; and 3) areas of groundwater discharge along with estimated volumes. A description of both shallow and deep (where appropriate) groundwater flow systems should be provided along with a contour plan showing flow direction. Flow system attributes such as the average horizontal hydraulic gradient, and vertical gradients between hydrogeological units should be included. An indication of seasonal fluctuations and highest seasonal water table is expected over a period of time. Where site grade alterations are anticipated, the water table should be discussed in relation to both pre-development and the finished grade.

Field work should be carried out to assess the potential impacts of the proposed development on sensitive groundwater dependent features such as surface water and wetlands. In addition, the consultant should also provide a description of regional groundwater conditions that can be summarized from regional monitoring well data (where available) and water well records within the vicinity of the site (range and average well depth, range and average pumping rate, shallowest/deepest well, any flowing well conditions, etc.) to supplement site specific data.

Identification and characterization of hydrostratigraphic units, including local and regional aquifers

A summary of infiltration and recharge rates associated with the site materials

Description and characterization of hydraulic conductivity and hydraulic gradients

General description of surface water/groundwater relationships

Water well characteristics that may be useful in characterization of the system (well depth, pumping rate, water level, types of wells, flowing conditions etc.)

Summary of groundwater levels, including seasonal fluctuations and highest water table evaluation

Groundwater flow characteristics

Characterization of hydraulic gradients

General description of surface water/groundwater relationships

Figures:

- Water table figure showing shallow groundwater flow direction
- Piezometric surface for deeper aquifers showing groundwater flow direction (if applicable to the study)

3.1.10 Description of Surface Water Features

A description of the study area should include all stream orders (Strahler, 1952) and other surface water features (e.g. wetlands) on/or bounding the site.

Surface and groundwater interactions and associated features should be noted. Areas of groundwater discharge should be noted where anticipated; either through water table elevations generated from water well records mapped above or near ground surface elevation or observed in the field. Where groundwater models exist, figures showing simulated groundwater discharge within the gauged reach may be provided. Where tile drainage is known to exist, it should be noted.

General description of surface water features on or near the site and their relationship to groundwater discharge and location to the water table

Figure of watercourses and wetlands (provincially and locally significant) on or near the site

3.1.11 Water Taking Permit Details

Where a Permit to Take Water (PTTW) is required from the MOE, the proponent should provide the Conservation Authority with the supporting PTTW information as provided to the MOE (if available). This should include permitted and actual planned taking details as well as special conditions of the permit, where applicable.

Permit to Take Water application material should be provided

3.1.12 Water Quality

A description of water quality (ground and surface) should be provided. This is to establish a baseline to assess potential future impacts. The consultant should request monitoring data where such data are available, and comment on anticipated impacts from the development to both ground and surface water bodies in the area. Where impacts are anticipated, the consultant should suggest ways to mitigate these impacts. Even where these impacts may be unavoidable or necessary to

ensure human safety (such as impacts from road salting), such considerations would allow a holistic approach to the maintenance of watershed health.

A description of surface and groundwater quality

3.1.13 D-5-5 (Water Supply)

Where a planned development is to establish a private water supply, the Ministry of Environment D-5-5 (Technical Guideline for Private Wells: Water Supply Assessment, 1996) is the provincial technical guideline that a proponent is generally required to adhere to. It is noted that the health and public works departments of some Ontario municipalities set their own requirements for applications for private servicing. Per the D-5-5 guideline, the capability of the aquifer to supply a sufficient quantity of water in accordance with the requirements of Regional

'Guidelines for Small Groundwater Supply Systems August 1987' (MOE, 1995) must be demonstrated. Pumping tests are required as part of the guideline and details for the number of test wells required as well as the duration of the pumping test are outlined.

D-5-5 stipulates the minimum number of test wells as well as other considerations for a given size of property and a survey of private wells within a minimum of 500m of the site. Where there are private water wells in the vicinity of the development, information should be obtained where possible to establish pre-development conditions and to assess impacts during pumping tests. Where possible, new subdivision water supply wells should be developed in deeper confined aquifers to provide protection from surface activities. In locations where a protective aquitard does not exist, or it is limited in vertical thickness and extent, recommendations and decisions associated with the location of wells should take into consideration potential sources of off-site and on-site contamination such as septic leaching beds, farming operations, industrial operations, etc., recognizing, where appropriate, the potential formation of contaminant plumes from these sources.

Regardless of the aquifer chosen for the water supply, the water quality of the upper shallow aquifer, if applicable, should be determined. The shallow aquifer assessment will also include the potential impact of the development to the overall groundwater flow system which could lead to potential impacts on nearby groundwater dependent features such as wetlands and watercourses.

3.2 IMPACT ASSESSMENT

Developments typically result in impacts including: increased runoff, reduction in infiltration potentially leading to reduced interflow and baseflow discharge, raised or lowered water levels in shallow aquifers, changes in shallow groundwater flow direction, and creation of preferential

pathways that may increase susceptibility of contamination in the subsurface. Impacts may be cumulative in areas where intensive development is planned.

The proponent must provide an assessment of potential impacts. The impact assessment will vary depending on the trigger of the hydrogeological assessment (e.g. a significant recharge area may require a water balance). Therefore, each Conservation Authority should be consulted to determine specific policies and associated requirements. In addition, acceptable impacts and appropriate mitigation will require the input of a qualified ecologist and/or biologist.

The assessment of potential development impacts may include, but is not limited to, a description of the following potential impacts:

- Changes to water table elevation (including seasonal fluctuations)

- Changes in groundwater flow direction

- Reduction to infiltration/recharge/discharge rates and volumes on varying time scales (i.e., daily to annual depending upon proximal environmental features)

- Reduction in baseflow Impacts on water quality

- Impacts to nearby receiving surface waters (wetlands, watercourses or other significant features)

- Impacts to environmental features

The impact assessment should demonstrate a degree of understanding of site conditions such that the potential impact of the proposed development is recognized and discussed. In addition, the assessment should evaluate the potential changes to existing conditions of the recharge/discharge features and functions resulting from the proposed development. This should include a description of the estimated post-development change from existing conditions as assessed and the direct and indirect effects over short-term and long-term periods should be described. A pre-development and post-development water balance is expected for most, though not all, development applications (see Table 1). The impact assessment should discuss how pre-development infiltration, evapotranspiration, runoff and flow paths can be maintained. Groundwater quantity, quality, water level patterns (duration, frequency and spatial distribution) and the link to nearby wetlands/watercourses should all be considered.

3.2.1 Groundwater Levels

Where the pre-development shallow groundwater levels are shown to support natural features (wetland and/or discharge to another surface water feature), and where the proposed development will require dewatering or is anticipated to result in a change in the volume and/or alteration to infiltration or recharge rates, an impact assessment of the groundwater levels must be included in the report. The following information should be included:

Where the proposed development will result in a change in the infiltration/recharge rate, information on how and where water levels will be changed (i.e. increased or decreased)

Anticipated impacts to sensitive groundwater-dependent features (wetland and watercourse)
- mitigation plans to address the impacts (see Section 3.3 Mitigation)

3.2.2 Pumping Tests

Where the proposed development requires a dewatering pumping test, the design and interpretation of the test should be done by a qualified professional. The following information should be provided:

Rate and duration of pumping test water level data in the form of hydrographs from observation wells used to measure impacts (i.e. shallow and deep aquifer units, mini-piezometers in surface water features, nearby private wells)

Documentation of the test and interpretations should be provided (i.e. data and output from a manual analysis or from a commercially available software e.g. AquiferTest)

3.2.3 Groundwater Discharge (Baseflow)

As part of their mandate, Conservation Authorities are concerned with the potential impact of development on groundwater contribution to baseflow. In many areas in the province, baseflow represents between 50 and 90% of summer flow in many creeks with established aquatic life and watershed species dependencies. Dewatering and tile drain or large pipe installations can significantly reduce the volume of baseflow contributions from the subsurface. Changes to shallow groundwater flow patterns induced through development have also been linked to flooding and resulting damage to private property. It is recommended that the proponent ensure that the impact assessment considers and either avoids, or sufficiently mitigates, impacts to baseflow.

Estimate/quantify reduction to baseflow

3.2.4 Water Balance Analysis

A water balance analysis is required to estimate the pre-development and post-development infiltration and runoff for most development applications as outlined in Table 1. Many Conservation Authorities have policies related to maintaining infiltration. The maintenance of pre-development ‘recharge’ is a general requirement in the Oak Ridges Moraine Conservation Plan, Lake Simcoe Protection Plan and the Provincial Policy Statement that is often captured in municipal Official Plans. Groundwater frequently supports significant watershed features that are necessary components to the maintenance of a healthy watershed. The purpose of the water budget analysis is to reasonably estimate the current infiltration rates to the subsurface and to then determine how much this rate will change as a result of the proposed development. It is recognized that site specific water budgets are difficult to accurately estimate, the goal should be to assess the difference between pre-development and post development conditions and to mitigate for impacts on infiltration. Please see Section 3.3 for more information on mitigation measures and the example in APPENDIX A: Water Balance Example.

The terms ‘infiltration’ and ‘recharge’ are commonly used interchangeably in development application supporting documents. Infiltration relates to the capacity for the soil to allow water to enter the subsurface. Some of this infiltration results in lateral movement in the shallow unsaturated zone where interflow may predominate and some of the infiltration is directed downward to the deeper aquifer system. Recharge is considered to be primarily water that reaches the saturated zone of the aquifer and becomes part of the regional groundwater flow system. The maintenance of infiltration rates is essential to the sustainability of the groundwater flow system which may support local significant ecological features. In addition, infiltration may move to a regional deeper flow system that may be important at a regional scale from either an ecological or water supply perspective.

It is common practice and an accepted method (by most Conservation Authorities) to provide estimates of surplus using a Thornthwaite and Mather approach where surplus is estimated based on precipitation minus evapotranspiration (Steenhuis and Van Der Molen, 1986). Infiltration portion of the surplus can be estimated by applying the infiltration factors provided in the Ministry of the Environment and Energy Hydrogeological Technical Information Requirements for Land Development Applications (1995). These factors consider slope, vegetation and soils. The remainder of surplus is considered to be runoff.

The water balance should be prepared by subdividing the development site into zones that reflect drainage outlets. In a simple case, there would be one catchment and one drainage outlet, whereas a more detailed case may have multiple stream catchments and several outlets. These catchments would be further subdivided by similar infiltration properties (i.e. grades, soils and vegetations). Pre-

development and post-development water balances may have different catchments depending on the change in drainage patterns, grading, soil and vegetation as a result of the development. These changes should be clearly documented in the report and within a figure.

In most cases, one surplus value may be calculated for the entire site however, it may be requested that the surplus is calculated for each catchment for both pre- and post-development.

Post-development infiltration calculations/estimations should account for changes in imperviousness, vegetation, soil conditions, grading and site design by using adjusted infiltration factors based on these changes. These calculations should take into account the change in surplus (i.e. decrease in evapotranspiration) in areas where there will be impervious surfaces (e.g. roadways, driveways and rooftops). Where an amount of evaporation is assumed to occur on impervious surfaces these assumptions should be documented and supported accordingly. Generally, a 10-20% loss of precipitation is acceptable for these areas and is highly dependant on the drainage of the site.

With the recent completion of technical studies required under The Clean Water Act, 2006, many of the Conservation Authorities now utilize numerical models to estimate, interception, evaporation, potential and actual evapotranspiration, snowmelt, runoff, infiltration, interflow, and groundwater recharge. Many of these model estimates are based on soils, surficial geology and land use mapping products but may also consider detailed vegetation attributes as well as hydrological cycle functions. These modelling output data may be available from the Conservation Authority and consultants are encouraged to liaise with staff for access to the information.

The Ontario Ministry of the Environment Stormwater Planning and Design Manual (2003) provides representative values for evapotranspiration in Ontario and provides guidance for factors to be used (based on MOEE, 1995 guidance) in determining recharge and runoff. It should be noted that the MOE Stormwater Manual (2003) provides examples only and where possible, local estimates of evapotranspiration and water surplus are to be provided using the Thornthwaite and Mather approach and data obtained from a local climatic station.

Regardless of the water balance method applied, site-specific data and estimates should be incorporated as appropriate. The water balance should provide monthly calculations based on Thornthwaite and Mather to show Potential ET, Actual ET, and then use these to determine the annual surplus. However, a monthly water balance may be requested to take into account short-term or seasonal scale in addition to long-term or annual scale effects.

As much as possible, calculations should estimate the amount of infiltration necessary to maintain pre-development conditions. Detailed information on the proposed mitigation measures should be provided to account the loss of infiltration. These details should include location of enhanced

infiltration (e.g. infiltration trench), the volume/rate and condition of the soils to support water being infiltrated. Mitigation is discussed further in Section 3.3.1.

At a minimum, the following are required when conducting a water balance analysis:

- Obtain precipitation values from a reliable source such as Environment Canada Meteorological Services for the area (utilize closest station with adequate data)

- Estimate of local values for major water balance components (evapotranspiration, surplus, runoff, and infiltration) for pre-development, post-development and post-development with mitigation conditions

- Calculations of impervious areas that reflect actual conditions based on the proposed site plan or a reasonable range of impervious areas used in those cases where only a conceptual development plan is provided

- Runoff coefficients consistent with generally accepted numbers (e.g. MOE guidelines)

- The water balance is required to take into account the changes to grading/topography and land cover.

- Grain size analysis for both the fill material and on-site soils to confirm fill material is similar to existing soil conditions (maybe recommended).

- Appropriate catchments should be used within the analysis (i.e. delineate catchments based on drainage, grades, vegetation, soils and show how infiltration and runoff will change within these zones for both pre- and post-development).

- Figure of catchments used within the pre- and post-development water balance.

- All calculations should be provided in a table format which clearly demonstrates that inputs (precipitation, additional runoff, water from municipal wells, etc.) are equal to outputs (i.e. infiltration, runoff, water use).

3.2.5 Groundwater Quality

The impact of the proposed development on groundwater quality should be assessed. This may include impacts to a surface water feature from road maintenance, landscaping practices and/or chemical processing or storage. In addition, water quality should be assessed as it relates to:

- Private water supply servicing

- Discharge water as a result of dewatering activities

Activities that can be undertaken in areas that are delineated as Highly Vulnerable Aquifers (HVAs) and Significant Groundwater Recharge Areas (SGRAs), completed as part of the Assessment Report required in support of The Clean Water Act, 2006.

The existing water quality will need to be determined by sampling and testing of the water source to understand baseline conditions. The parameters analyzed should include general chemistry, bacteriological parameters, and site specific parameters of concern relating to past, existing and proposed land use. Based on the type of proposed development, an appropriate guideline (e.g. Ontario Drinking Water Quality Standards or Provincial Water Quality Objectives) should be selected from which to compare the test results. Other water quality guidelines may be considered for comparison on a case by case basis. Regardless of the aquifer chosen for the water supply, the water quality, and the potential impacts that might arise from the proposed development, within the upper shallow aquifer, if applicable, must be assessed. This assessment will include the potential water quality impacts to the shallow groundwater flow system as well as to any sensitive groundwater dependent features such as wetlands or watercourses.

3.2.6 D-5-4 Technical Guideline for Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment 1996 - Septic System Suitability Evaluation

Where a planned development is to establish individual on-site sewage systems, the Ministry of Environment D-5-4 (Technical Guideline for Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment, 1996) is the provincial technical guideline that a proponent is generally required to adhere to. The septic system study should be consistent with the minimum requirements of the MOE Manual of Policy, Procedures and Guidelines for Private Sewage Disposal Systems and any Regional Health Unit and Public Works Departments Guidelines.

The evaluation should take into consideration the hydrogeological conditions of the site and groundwater resource evaluation and integrate these with septic effluent disposal issues.

The septic system suitability evaluation will require soils investigations to determine soil profiles and to estimate percolation for each lot across the site. Soil profiles to a minimum depth of 2 meters are required for each surficial geologic material on the property. The percolation times can be determined by the following methods:

- Grain size analysis of representative soil samples, and/or
- In-situ Percolation tests, and/or
- Guelph permeameter tests

Any one method can be used to determine percolation times but it is recommended that more than one method be used to provide comparative results. Representative percolation times are required for all soil types on the property. Lot specific testing will be required prior to draft approval for the design of private sewage systems.

Percolation times will be used to determine the design of the septic system according to the details given by MOE's Manual of Policy, Procedures and Guidelines for Private Sewage Disposal Systems, and Regional Health Services and Public Works Departments guidelines. All of the limiting factors such as depth to the water table, thickness of acceptable soils, range of percolation times, and distances to wells and surface water, as set out in the MOE and Regional Guidelines, must be considered in the design. Based on the septic system design and the design sewage flow, the hydraulic loading to the groundwater must be assessed. In determining the hydraulic loading, consideration must be given to the hydraulic properties of the soil materials in which the septic systems will be placed as well as the underlying materials. The loading must be calculated on a lot-by-lot basis as well as in consideration of the development as a whole.

Using all of the information described above, provision of a diagram(s) showing the typical lot plan, building and leaching bed envelopes is recommended for each leaching bed design. Each leaching bed must be designed specific to the conditions on each lot.

3.3 MITIGATION REQUIREMENTS

The majority of development application studies should include recommendation(s) for actions to mitigate potential impacts identified through the hydrogeological studies. Specific measures should be described to mitigate the potential impacts identified in Section 3.2. Mitigation recommendations shall address both the anticipated long-term and short-term impacts. To this end, a monitoring program to address potential impacts prior to, during and post-development may be requested by the Conservation Authority at its discretion. In this case a contingency plan may also be required (see contingency plans).

Mitigation measures might include, but are not limited to:

- Recharge or infiltration basins for urban runoff
- Preservation of setbacks (buffer areas) from recharge/discharge areas
- Sedimentation control plans to prevent siltation of recharge/discharge areas
- Spill Control Plans
- Re-vegetation plans for disturbed areas

- Re-orientation of local surface water drainage
- Provisions for land use and site control plans (e.g., tree cutting restrictions, prohibition of use or storage of specified contaminants, access restrictions, etc.)

3.3.1 Maintenance of Infiltration

The maintenance of infiltration and interflow hydraulic functions is a key target to ensure that discharge to ecological features in close proximity will not be impacted and that the overall watershed health is sustained. It is recommended that especially in areas delineated as High Volume Recharge Areas, Significant Groundwater Recharge Areas, and Ecologically Significant Recharge Areas, pre-development infiltration should be matched in the post-development scenarios utilizing low impact development solutions. In other areas, professional judgement should prevail.

There are various approaches to mitigating the impacts through Low Impact Development (LID) measures. The proponent is encouraged to plan for such measures, even in areas with low infiltration (i.e. low permeability materials) given that the cumulative impact of development even on these areas can be significant over time. Any recommended approaches should be feasible/practical given the site's surficial native soils. Please refer to the Low Impact Development Stormwater Management Planning and Design Guide, Version 1.0 for some more information (Toronto and Region Conservation Authority and Credit Valley Conservation Authority, 2011).

It should be noted that promoting infiltration from paved surfaces, such as parking lots, roadways, etc. will generally not be approved unless the water has been pre-treated to prevent groundwater contamination.

Another consideration in recommending enhanced infiltration techniques is thermal considerations. Thermal impacts are important to aquatic life in areas where shallow discharge to streams is significant. Where proposed mitigation measures to increase infiltration are identified, these can also be beneficial to creeks with cold water thermal regimes by buffering them from prolonged spikes in air temperatures or inputs of hot urban stormwater. Cold water fish community assemblages have limits to the water temperatures they can tolerate. If these limits are surpassed frequently or for prolonged periods of time, then degradation in the health and the makeup of the fish community can be expected. As such, mitigation measures that promote stormwater infiltration can be of great benefit to enhancing groundwater contributions to cold water creeks thereby protecting and enhancing the thermal stability of these fish communities.

Green infrastructure may include downspouts connected to rain water cisterns, rain gardens, green roofs, vegetated filter strips, dry and bio swales, perforated pipe, infiltration trenches, and permeable

pavement. Different approaches may be combined depending on the available space, configuration, topography and soil types associated with the development. These mitigation approaches are intended to move from the more conventional approach of "pipe and convey" to one that maintains the hydrologic cycle and mitigates water quality impacts. The above is not a complete list of current approaches being applied to development. Technical documents should be reviewed for the details on appropriate approaches that may be recommended for any particular site.

Clean water (roof, walkways, parking lot and road runoff with adequate treatment) may be infiltrated through infiltration trenches that may be modular in design. Enhanced infiltration measures should not receive runoff from high traffic areas where large amounts of de-icing salts are used nor areas where there are several or large sources of pollutants. Site topography and the location of the seasonally high water table are additional considerations.

Where a proposed mitigation measure to increase infiltration has been identified, the following points should be presented/discussed:

- the mitigation method(s) selected;

- location of mitigation measures on site plan impacts to groundwater and surface water quality;

- the amount (or range) of the annual enhanced infiltration estimated (based on available literature for each mitigation method recommended);

- limitations - practical matters need to be considered (such as the nature of the native soil and its capacity to allow enhanced infiltration);

- the long term expected success of the measures, for example clogging or siltation of infiltration facilities is a common issue that needs to be addressed;

- long term maintenance of the measure should be discussed (i.e. will maintenance be required and who will undertake such maintenance)

- post-development monitoring - often recommended but it is uncertain whether the monitoring actually occurs and to whom the data is being provided.

The current practice of simply increasing the infiltration factor where a form of mitigation is recommended with no documentation or breakdown calculation on the expected enhancement values for each individual method or how these methods will be evaluated is unacceptable.

It is understood that some developers and or their consultants do work with municipal or Conservation Authority staff in designing and monitoring LIDs but this is not common across the province.

3.3.2 Maintenance of Groundwater Quality

The mitigation measures should address not only water quantity, but also the potential for water quality impacts on groundwater and surface water resources as a result of the development. Depending on the zoned use of the site, water quality concerns will vary. For example, in the case where shallow groundwater flow discharging to nearby streams is significant, potential temperature changes are also relevant, as aquatic life may be impacted. A discussion of potential impacts to sensitive features (i.e. wetlands, watercourses, etc.), along with recommendations for mitigation of the impacts, should be provided.

3.3.3 Monitoring Program

Pre-Development monitoring program:

A monitoring program will need to be implemented prior to development in order to assess existing conditions and to undertake an impact assessment as outlined in Section 3.2. Pre-development monitoring may also assist in addressing public concerns that could arise in the future. The proposed monitoring program should outline the following:

- Location of the proposed monitoring stations;

- Description of the monitoring locations (well type, depth and conditions, wetland, reservoir, stream, etc);

- Frequency of specific data collection;

- Chemical and other parameters to be monitored as well as frequency of monitoring.

Development monitoring program:

In certain cases where an impact assessment indicates that potential impacts may arise during construction, the developer may be required by the Conservation Authority to monitor the impact of development during construction activities. In certain situations a contingency plan may also be required to mitigate observed impacts (see below). The monitoring program would be designed to assess water levels and/or water quality impacts during development activities. Where the MOE has required a monitoring program as a condition of a Permit to Take Water (PTTW) application, these results may also be requested by the Conservation Authority.

In certain cases where an impact assessment indicates that potential impacts may arise during construction, the developer may be required by the Conservation Authority to monitor the impact of development during construction activities. In certain situations a contingency plan may also be required to mitigate observed impacts (see below). The monitoring program would be designed to assess water levels and/or water quality impacts during development activities. Where the MOE has required a monitoring program as a condition of a Permit to Take Water (PTTW) application, these results may also be requested by the Conservation Authority.

Both up gradient and down gradient monitoring wells may be required for baseline data and information. Any required monitoring program would be designed in co-operation with the Conservation Authority to meet their concerns. The program would address:

- rationale for location of the proposed monitoring well(s); source of water supply (i.e. communal vs. individual wells);

- zone(s) to be monitored (i.e. depth of well, aquifer receiving effluent, aquifer supplying water, receptors);

- frequency of monitoring;

- necessary parameters to be monitored (e.g. nitrate, bacteria)

Monitoring results will be provided to the Conservation Authority (and municipality) at a pre-determined interval

Post-development monitoring program:

Post-development monitoring will not be required in most cases. In some circumstances the Conservation Authority may request that the development monitoring program (above) continue for a pre-determined amount of time following development activities to assess delayed impacts to groundwater resources.

3.3.4 Contingency Plans

Where determined during pre-consultation or review of the proposed development, a contingency plan may be required. This requirement would come into effect if significant impacts are anticipated from the proposed development. This could include for example, situations where large quantities or long duration of de-watering are expected, where a significant reduction in recharge is possible, or where degradation to water quality might be anticipated. The report must include contingency plans to address such potential impacts. Contingency plans can be requested to address short and long

term impacts depending on the duration and complexity of the development and the potentiality of impacts.

3.4 SUMMARY AND RECOMMENDATIONS

Each report will summarize the study findings and provide recommendations to minimize negative impacts to the groundwater-dependent features and their functions.

3.5 FIGURES

The report should include appropriately scaled figure(s) sufficient to describe the subject property in the context of the environmental resources under discussion. Sections 3.1 through 3.3 outline the suggested minimum recommended figures to be included within the report.

Figures as outlined in Sections 3.1 through 3.3

3.6 REFERENCES

List references

3.7 APPENDICES

Well records and borehole logs

Pumping test and associated water level information In-situ hydraulic conductivity testing results

Soil analysis results

Water balance calculations – Table format Laboratory water quality results

Copies of relevant planning policies, agency guidelines

4 REFERENCES

Low Impact Development Stormwater Management Planning and Design Guide, Version 1, Toronto and Region and Credit Valley Conservation, 2010.

Ministry of Environment and Energy. 1995, MOEE Hydrogeological Technical Information Requirements for Land Development Applications.

Ministry of Environment and Energy. 1995, MOEE Hydrogeological Technical Information Requirements for Land Development Applications. Appendix C2: D-5-5 Technical Guideline for Private Wells: Water Supply Assessment, 1996.

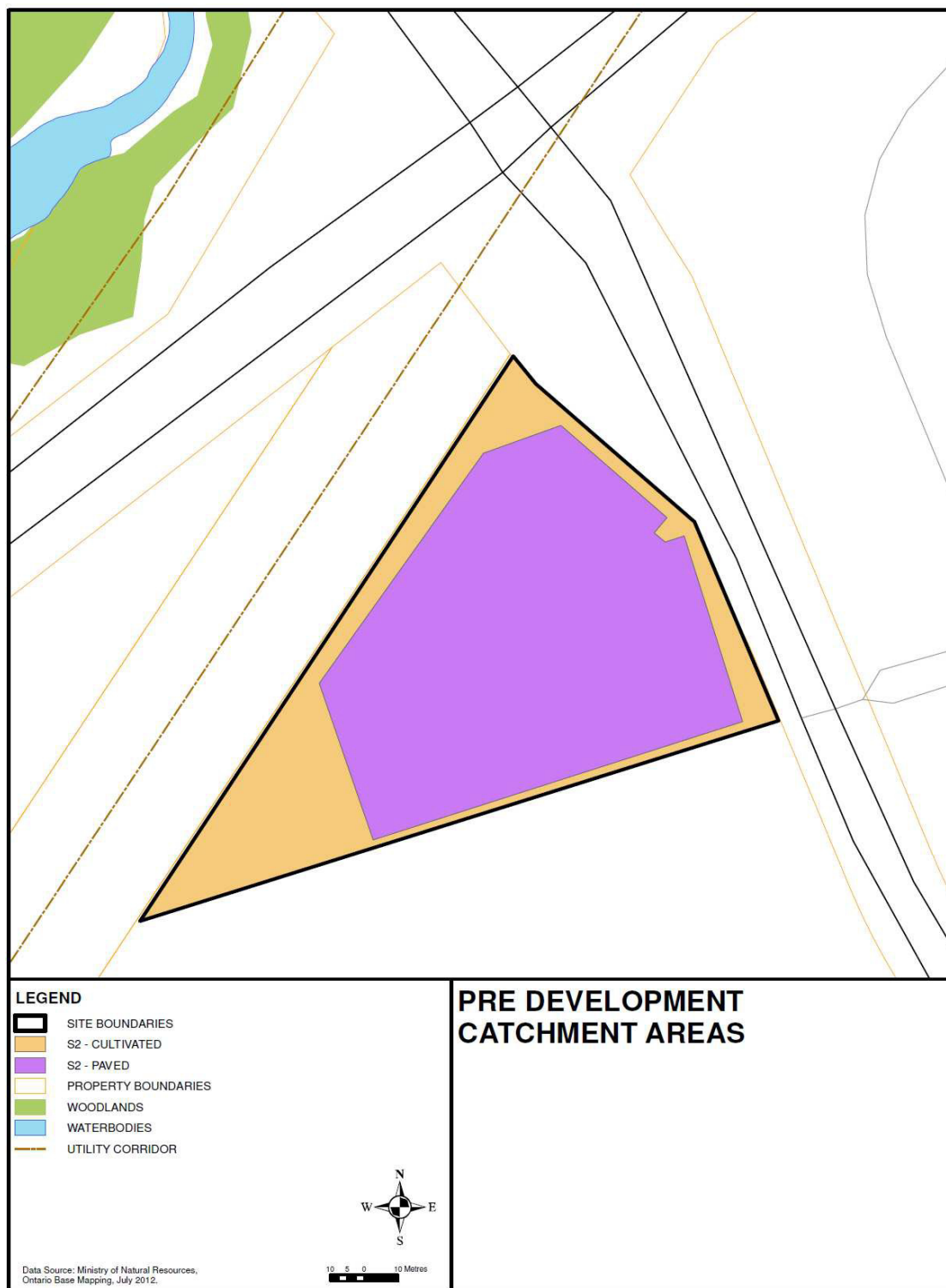
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T.S. Steenhuis, W.H. Van Der Molen, The Thornthwaite-Mather procedure as a simple engineering method to predict recharge, Journal of Hydrology, Volume 84, Issues 3–4, 30 May 1986, Pages 221–229, ISSN 0022-1694, 10.1016/0022-1694(86)90124-1

APPENDIX 3-A: Water Balance Example



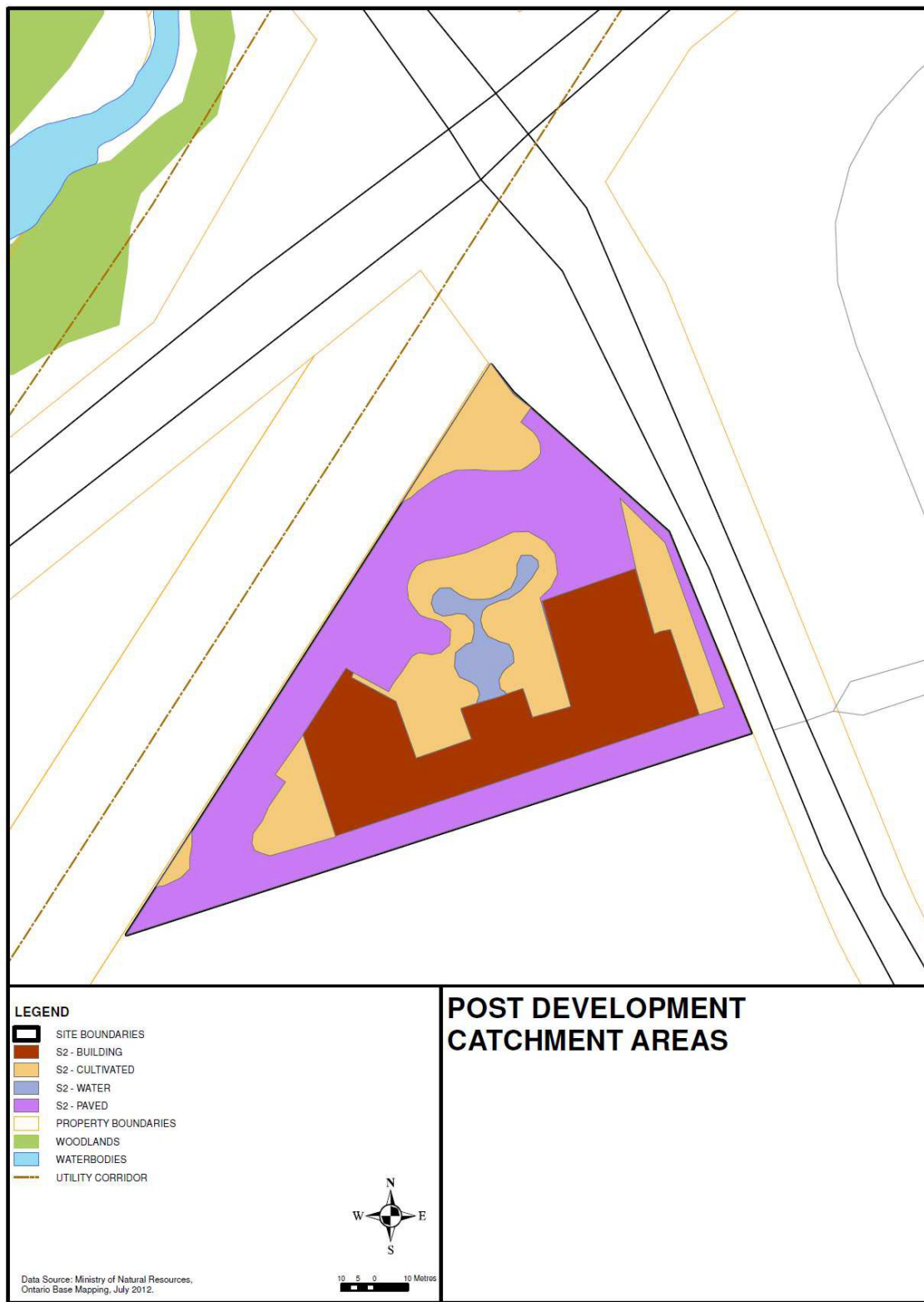


TABLE 1

CLIMATIC WATER BUDGET: CLIMATE NORMAL 1971-2000 (TORONTO LESTER B. PEARSON INT'L AIRPORT:
Potential Evapotranspiration
TRILLIUM HEALTH CENTRE

Thornthwaite (1948)								
Month	Mean Temperature (OC)	Heat Index	Potential Evapo-transpiration (mm)	Daylight Correction Value	Adjusted Potential Evapo-transpiration mm	Total Precipitation (mm)	Surplus (mm)	Deficit (mm)
January	-6.3	0.0	0.0	0.81	0.0	52.2	52.2	0.0
February	-5.4	0.0	0.0	0.81	0.0	42.6	42.6	0.0
March	-0.4	0.0	0.0	1.02	0.0	57.1	57.1	0.0
April	6.3	1.4	28.4	1.12	31.8	68.4	36.6	0.0
May	12.9	4.2	61.8	1.27	78.5	72.5	0.0	6.0
June	17.8	6.8	87.7	1.29	113.1	74.2	0.0	38.9
July	20.8	8.7	103.8	1.30	134.9	74.4	0.0	60.5
August	19.9	8.1	98.9	1.20	118.7	79.6	0.0	39.1
September	15.3	5.4	74.4	1.04	77.4	77.5	0.1	0.0
October	8.9	2.4	41.3	0.95	39.3	64.1	24.8	0.0
November	3.2	0.5	13.6	0.80	10.9	69.3	58.4	0.0
December	-2.9	0.0	0.0	0.74	0.0	60.9	60.9	0.0
TOTALS		37.5			604.6	792.8	332.8	144.6

TOTAL WATER SURPLUS 188.2 mm

NOTES:

- 1) Water budget adjusted for latitude and daylight.
- 2) (°C) - Represents calculated mean of daily temperatures for the month.
- 3) Precipitation and Temperature data from the Toronto Lester B. Pearson Int'l Airport located at latitude 43°40'38.0" N, longitude 79°37'50.0" W, elevation 173.40 m.
- 4) Total Water Surplus (Thornthwaite, 1948) is calculated as total precipitation minus adjusted potential evapotranspiration.
- 5) Total Moisture Surplus (Thornthwaite and Mather, 1957) is calculated as total precipitation minus actual evapotranspiration for 2007 and 2008.

TABLE 2
WATER BUDGET - PRE-DEVELOPMENT
WATER BALANCE/ WATER BUDGET ASSESSMENT

Catchment Designation	Site		
	S2 - Cultivated	S2 - Paved	S2 - Totals
Area (m ²)	4,229	9,427	13,656
Pervious Area (m ²)	4,229	9,427	13,656
Impervious Area (m ²)	4,229	9,427	13,656
Infiltration Factors			
Topography Infiltration Factor	0.15	0.15	
Soil Infiltration Factor	0.1	0.1	
Land Cover Infiltration Factor	0.1	0	
MOE Infiltration Factor	0.35	0	
Actual Infiltration Factor	0.35	0	
Run-Off Coefficient	0.65	1	
Runoff from Impervious Surfaces*	0	0.8	
Inputs (per Unit Area)			
Precipitation (mm/yr)	793	793	793
Run-On (mm/yr)	0	0	0
Other Inputs (mm/yr)	0	0	0
Total Inputs (mm/yr)	793	793	793
Outputs (per Unit Area)			
Precipitation Surplus (mm/yr)	188	634	496
Net Surplus (mm/yr)	188	634	496
Evapotranspiration (mm/yr)	605	159	297
Infiltration (mm/yr)	66	0	20
Rooftop Infiltration (mm/yr)	0	0	0
Total Infiltration (mm/yr)	66	0	20
Runoff Pervious Areas	122	0	122
Runoff Impervious Areas	0	634	1,413
Total Runoff (mm/yr)	122	634	476
Total Outputs (mm/yr)	793	793	793
Difference (Inputs - Outputs)	0	0	0
Inputs (Volumes)			
Precipitation (m ³ /yr)	3,354	7,476	10,829
Run-On (m ³ /yr)	0	0	0
Other Inputs (m ³ /yr)	0	0	0
Total Inputs (m³/yr)	3,354	7,476	10,829
Outputs (Volumes)			
Precipitation Surplus (m ³ /yr)	795	5,977	6,772
Net Surplus (m ³ /yr)	795	5,977	6,772
Evapotranspiration (m ³ /yr)	2,559	1,499	4,057
Infiltration (m ³ /yr)	278	0	278
Rooftop Infiltration (m ³ /yr)	0	0	0
Total Infiltration (m ³ /yr)	278	0	278
Runoff Pervious Areas (m ³ /yr)	517	0	517
Runoff Impervious Areas (m ³ /yr)	0	5,977	5,977
Total Runoff (m ³ /yr)	517	5,977	6,494
Total Outputs (m³/yr)	3,354	7,476	10,829
Difference (Inputs - Outputs)	0	0	0

* Evaporation from impervious areas was assumed to be 20% of precipitation

TABLE 3
WATER BUDGET, POST-DEVELOPMENT
WATER BALANCE/ WATER BUDGET ASSESSMENT

Catchment Designation	Site				
	S2 - Cultivated	S2 - Paved	S2 - Building	S2 - Water	S2 - Totals
Area (m ²)	3,609	5,977	3,655	415	13,656
Pervious Area (m ²)	3,609	0	0	0	3,609
Impervious Area (m ²)	0	5,977	3,655	415	10,047
Infiltration Factors					
Topography Infiltration Factor	0.15	0.15	0.15	0.15	
Soil Infiltration Factor	0.1	0.1	0.1	0.1	
Land Cover Infiltration Factor	0.1	0	0	1	
MOE Infiltration Factor	0.35	0	0	0	
Actual Infiltration Factor	0.35	0	0	0	
Run-Off Coefficient	0.65	1	1	1	
Runoff from Impervious Surfaces*	0	0.8	0.8	0.8	
Inputs (per Unit Area)					
Precipitation (mm/yr)	793	793	793	793	793
Run-On (mm/yr)	0	0	0	0	0
Other Inputs (mm/yr)	0	0	0	0	0
Total Inputs (mm/yr)	793	793	793	793	793
Outputs (per Unit Area)					
Precipitation Surplus (mm/yr)	188	634	634	634	516
Net Surplus (mm/yr)	188	634	634	634	516
Evapotranspiration (mm/yr)	605	159	159	159	277
Infiltration (mm/yr)	66	0	0	0	17
Rooftop Infiltration (mm/yr)	0	0	0	0	0
Total Infiltration (mm/yr)	66	0	0	0	17
Runoff Pervious Areas	122	0	0	0	122
Runoff Impervious Areas	0	634	634	634	1,765
Total Runoff (mm/yr)	122	634	634	634	499
Total Outputs (mm/yr)	793	793	793	793	793
Difference (Inputs - Outputs)	0	0	0	0	0
Inputs (Volumes)					
Precipitation (m ³ /yr)	2,862	4,740	2,898	329	10,829
Run-On (m ³ /yr)	0	0	0	0	0
Other Inputs (m ³ /yr)	0	0	0	0	0
Total Inputs (m³/yr)	2,862	4,740	2,898	329	10,829
Outputs (Volumes)					
Precipitation Surplus (m ³ /yr)	678	3,789	2,317	263	7,048
Net Surplus (m ³ /yr)	678	3,789	2,317	263	7,048
Evapotranspiration (m ³ /yr)	2,183	950	581	66	3,781
Infiltration (m ³ /yr)	237	0	0	0	237
Rooftop Infiltration (m ³ /yr)	0	0	0	0	0
Total Infiltration (m ³ /yr)	237	0	0	0	237
Runoff Pervious Areas (m ³ /yr)	441	0	0	0	441
Runoff Impervious Areas (m ³ /yr)	0	3,789	2,317	263	6,370
Total Runoff (m ³ /yr)	441	3,789	2,317	263	6,811
Total Outputs (m³/yr)	2,862	4,740	2,898	329	10,829
Difference (Inputs - Outputs)	0	0	0	0	0

* Evaporation from impervious areas was assumed to be 20% of precipitation

TABLE 4
WATER BUDGET, POST-DEVELOPMENT WITH MITIGATION
WATER BALANCE/ WATER BUDGET ASSESSMENT

Catchment Designation	Site				
	S2 - Cultivated	S2 - Paved	S2 - Building	S2 - Water	S2 - Totals
Area (m ²)	3,609	5,977	3,655	415	13,656
Pervious Area (m ²)	3,609	0	0	0	3,609
Impervious Area (m ²)	0	5,977	3,655	415	10,047
Infiltration Factors					
Topography Infiltration Factor	0.15	0.15	0.15	0.15	
Soil Infiltration Factor	0.1	0.1	0.1	0.1	
Land Cover Infiltration Factor	0.1	0	0	1	
MOE Infiltration Factor	0.35	0	0	0	
Actual Infiltration Factor	0.35	0	0	0	
Run-Off Coefficient	0.65	1	1	1	
Runoff from Impervious Surfaces*	0	0.8	0.8	0.8	
Inputs (per Unit Area)					
Precipitation (mm/yr)	793	793	793	793	793
Run-On (mm/yr)	0	0	0	0	0
Other Inputs (mm/yr)	0	0	0	0	0
Total Inputs (mm/yr)	793	793	793	793	793
Outputs (per Unit Area)					
Precipitation Surplus (mm/yr)	188	634	634	634	516
Net Surplus (mm/yr)	188	634	634	634	516
Evapotranspiration (mm/yr)	605	159	159	159	277
Infiltration (mm/yr)	66	0	0	0	17
Rooftop Infiltration (mm/yr)	0	0	10	0	3
Total Infiltration (mm/yr)	66	0	10	0	20
Runoff Pervious Areas	122	0	0	0	122
Runoff Impervious Areas	0	634	624	634	1,755
Total Runoff (mm/yr)	122	634	624	634	496
Total Outputs (mm/yr)	793	793	793	793	793
Difference (Inputs - Outputs)	0	0	0	0	0
Inputs (Volumes)					
Precipitation (m ³ /yr)	2,862	4,740	2,898	329	10,829
Run-On (m ³ /yr)	0	0	0	0	0
Other Inputs (m ³ /yr)	0	0	0	0	0
Total Inputs (m³/yr)	2,862	4,740	2,898	329	10,829
Outputs (Volumes)					
Precipitation Surplus (m ³ /yr)	678	3,789	2,317	263	7,048
Net Surplus (m ³ /yr)	678	3,789	2,317	263	7,048
Evapotranspiration (m ³ /yr)	2,183	950	581	66	3,781
Infiltration (m ³ /yr)	237	0	0	0	237
Rooftop Infiltration (m ³ /yr)	0	0	37	0	37
Total Infiltration (m ³ /yr)	237	0	37	0	274
Runoff Pervious Areas (m ³ /yr)	441	0	0	0	441
Runoff Impervious Areas (m ³ /yr)	0	3,789	2,281	263	6,333
Total Runoff (m³/yr)	441	3,789	2,281	263	6,774
Total Outputs (m³/yr)	2,862	4,740	2,898	329	10,829
Difference (Inputs - Outputs)	0	0	0	0	0

* Evaporation from impervious areas was assumed to be 20% of precipitation
Approximately 6% of total roof runoff is to be infiltrated to match pre-development infiltration

TABLE 5
WATER BUDGET SUMMARY
WATER BALANCE/ WATER BUDGET ASSESSMENT

Characteristic	Site				
	Pre-Development	Post-Development	Change (Pre- to Post-)	Post-Development with Mitigation	Change (Pre- to Post-with Mitigation)
Inputs (Volumes)					
Precipitation (m ³ /yr)	10,829	10,829	0.0%	10,829	0.0%
Run-On (m ³ /yr)	0	0	0.0%	0	0.0%
Other inputs (m ³ /yr)	0	0	0.0%	0	0.0%
Total Inputs (m³/yr)	10,829	10,829	0.0%	10,829	0.0%
Outputs (Volumes)					
Precipitation Surplus (m ³ /yr)	6,772	7,048	4.1%	7,048	4.1%
Net Surplus (m ³ /yr)	6,772	7,048	4.1%	7,048	4.1%
Evapotranspiration (m ³ /yr)	4,057	3,781	-6.8%	3,781	-6.8%
Infiltration (m ³ /yr)	278	237	-14.7%	237	-14.7%
Rooftop Infiltration (m ³ /yr)	0	0	0.0%	37	0.0%
Total Infiltration (m ³ /yr)	278	237	-14.7%	274	-1.5%
Runoff Pervious Areas (m ³ /yr)	517	441	-14.7%	441	-14.7%
Runoff Impervious Areas (m ³ /yr)	5,977	6,370	6.6%	6,333	6.0%
Total Runoff (m ³ /yr)	6,494	6,811	4.9%	6,774	4.3%
Total Outputs (m³/yr)	10,829	10,829	0.0%	10,829	0.0%