

Hawks Ridge Neighbourhood Structure Plan

Office Consolidation November 2019

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Development Service
Urban Planning and Economy
City of Edmonton

Bylaw 15547 was adopted by Council in September 13, 2010. In November 2019, this document was consolidated by virtue of the incorporation of the following bylaws, which were amendments to the original Bylaw 15547:

<i>Bylaw 15547</i>	Approved September 13, 2010 (to adopt the Big Lake Neighbourhood 3 NSP)
<i>Bylaw 15819</i>	Approved July 18, 2011 (to rename the NSP to Hawks Ridge NSP*, update Figures 11,15 and 16, and replace a portion of text in the Water Servicing Sec.)
Bylaw 16736	Approved May 26, 2014 (to amend land uses in the western portion of the plan area, and updating the land use statistics and figures accordingly)
Bylaw 19069	Approved November 25, 2019 (To align the Hawks Ridge NSP with the North Saskatchewan River Valley Area Redevelopment Plan)

Editor's Note:

This is an office consolidation edition of the Big Lake Neighbourhood 3 Neighbourhood Structure Plan, Bylaw 15547, as approved by City Council on September 13, 2010.

For the sake of clarity, new maps and a standardized format were utilized in this Plan. All names of City departments have been standardized to reflect their present titles. Private owners' names have been removed in accordance with the Freedom of Information and Protection of Privacy Act. Furthermore, all reasonable attempts were made to accurately reflect the original Bylaws. All text changes are noted in the right margin and are italicized where applicable.

This office consolidation is intended for convenience only. In case of uncertainty, the reader is advised to consult the original Bylaws, available at the office of the City Clerk.

City of Edmonton

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** References to "Big Lake Neighbourhood Three" have been replaced with "Hawks Ridge".*

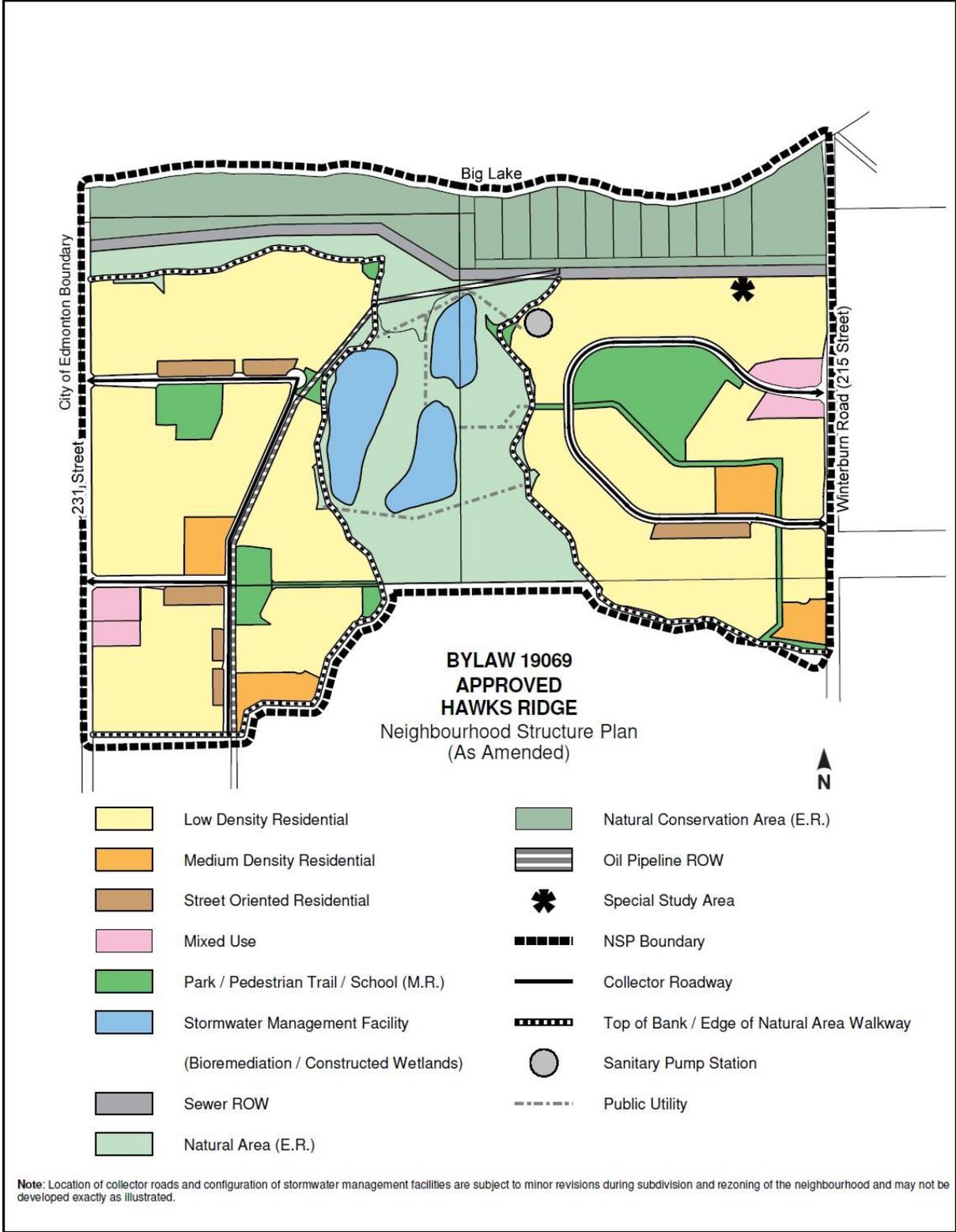


TABLE OF CONTENTS

1	ADMINISTRATION.....	1
1.1	Purpose	1
1.2	Authority	1
1.3	Timeframe.....	1
1.4	Interpretation	1
1.5	Monitoring	2
1.6	Amendments.....	2
2	CONTEXT	3
2.1	Location.....	3
2.2	Background.....	3
2.3	Related Documents	4
2.4	Land Ownership.....	4
2.5	Site Context	6
2.5.1	Existing Land Uses	6
2.5.2	Soil and Groundwater Conditions	6
2.5.3	Topography.....	6
2.5.4	Natural Areas and Ecological Resources	7
2.5.5	Environmental Site Assessments	7
2.5.6	Pipelines and Oil Well Sites.....	7
2.5.7	Historic Resources	8
3	LAND USE, TRANSPORTATION & SERVICING.....	10
3.1	Land Use Concept and Population Statistics	11
3.2	Vision	12
3.3	Goals	12
3.4	Development Objectives.....	13
3.5	Policy and Implementation.....	15
3.5.1	Green Development	15
3.5.2	Urban Design	18
3.5.3	Ecology.....	21
3.5.4	Environment	22
3.5.5	Historical Resources	23

3.5.6	Residential	24
3.5.7	Mixed Uses	26
3.5.8	Parkland, Recreational Facilities and Schools.....	29
3.5.9	Transportation	33
3.5.10	Infrastructure Servicing and Staging	41
APPENDIX A: POLICY CONTEXT		43
3.6	Capital Region Land Use Plan.....	43
3.7	Municipal Development Plan - The Way We Grow	45
3.8	Transportation Master Plan - The Way We Move.....	48
3.9	Suburban Neighbourhood Design Principles.....	49
3.10	Urban Parks Master Plan	51
3.11	City of Edmonton Housing Mix Guidelines	52
3.12	Natural Area Systems (Policy C531)	53
3.13	North Saskatchewan River Valley and Ravine System Protection Overlay	53
4	APPENDIX B: TECHNICAL STUDIES.....	54
5	APPENDIX C: FIGURES.....	55

List of Figures

1	Location Plan
2	Context Photo
3	Context of Big Lake
4	Lois Hole Centennial Provincial Park
5	Land Ownership
6	Existing Site Features
7	Topography Analysis
8	Slope Analysis
9	Drainage Analysis
10	Low Impact Design Opportunities
11	Land Use Concept
12	Trail Network
13	Transportation Network
14	Storm Servicing
15	Water Servicing
16	Sanitary Servicing
17	Staging

List of Tables

1	Land Ownership
2	Environmental Site Assessments and Historic Resources
3	Land Use Concept & Population Statistics

1 ADMINISTRATION

1.1 Purpose

The purpose of the *Hawks Ridge* Neighbourhood Structure Plan (NSP) is to depict the land use framework as well as the development and servicing goals for the Big Lake area. The *Hawks Ridge* NSP specifies the following:

- ✍ The location, configuration and area of various land uses including, residential, commercial, parks and open spaces, and public utility land uses.
- ✍ The density of residential development.
- ✍ The manner in which unique and environmentally significant areas and natural features will be incorporated into the development concept.
- ✍ The pattern and alignment of the transportation network as it relates to the *Hawks Ridge* area.
- ✍ An open space concept and pedestrian walkway system.
- ✍ A conceptual servicing scheme showing utility services and infrastructure; and
- ✍ The implementation and phasing of development.

1.2 Authority

The *Hawks Ridge* NSP was adopted by Edmonton City Council in (*insert approval date*) as Bylaw (*insert Bylaw number*) in accordance with Section 633 of the Municipal Government Act.

1.3 Timeframe

Development in *Hawks Ridge* is expected to commence in 2011.

1.4 Interpretation

All symbols, locations, and boundaries shown in the NSP figures shall be interpreted as conceptual unless otherwise specified in the document, or where they coincide with clearly recognizable physical or fixed features within the plan area.

For each subsection under Land Use Concept, a description of applicable land use strategies (i.e. Urban Design) and types (i.e. Residential) is provided for the plan followed by applicable objectives, policies, implementation, rationale, and technical summary.

A policy statement(s) containing “shall” is mandatory and must be implemented. Where a policy proves impractical or impossible, an applicant may apply to amend the plan. A policy statement(s) containing “should” is an advisory statement and indicates the preferred objective, policy and/or implementation strategy. If the “should” statement is not followed because it is impractical or impossible, the intent of the policy may be met through other agreed-upon means.

Hawks Ridge
Neighbourhood Structure Plan

1.5 Monitoring

Policies, text, and mapping information contained within this document may be amended from time to time, by Council resolution, in order to respond to, and remain current with, planning and development issues and trends affecting suburban development.

1.6 Amendments

Amendments to *Hawks Ridge* NSP document involving policies, text or mapping shall be completed in accordance with the Municipal Government Act, Capital Regional Land Use Plan, Big Lake ASP (Bylaw 14802), and all other applicable City bylaws, policies and procedures.



2 CONTEXT

2.1 Location



Hawks Ridge is generally located along the south shore of Big Lake, between 215 Street NW (Winterburn Road NW) and 231 Street NW (City of Edmonton boundary). *Hawks Ridge* denotes one of six neighbourhoods in the Big Lake Area Structure Plan (ASP), which covers approximately 890 hectares in the northwest portion of Edmonton. **Figure 1.0 – Location Plan, Figure 2.0 – Context Photo and Figure 3.0 – Context of Big Lake** illustrate the plan area relative to the northwest portion of Edmonton.

Hawks Ridge is comprised mainly of several parcels of land within the SW & SE ¼ 24-53-26-W4 and the southern portions of the NW & NE ¼ 24-53-26-W4. The NSP area also includes a small portion of the NW & NE ¼ 13-53-26-W4.

The NSP area is defined by the following boundaries (see **Figure 3.0 – Context of Big Lake**):

- ☛ **North:** Big Lake;
- ☛ **East:** 215 Street NW (Winterburn Road);
- ☛ **South:** Horseshoe Ravine Edge;
- ☛ **West:** 231 Street NW (City Boundary)

Land uses surrounding *Hawks Ridge* include:

- ☛ **North:** Big Lake & the Lois Hole Centennial Provincial Park (see **Figure 4 – Lois Hole Centennial Provincial Park**);
- ☛ **East:** Big Lake Neighbourhood One (Bylaw 14803);
- ☛ **South:** Agriculture / Future Suburban development, as well as a portion of natural area;
- ☛ **West:** Helenslea Estates / Parkland County

2.2 Background

The *Hawks Ridge* NSP was prepared in response to the current and anticipated market demands in the Edmonton area as well as the aspirations of the landowner in the plan area. Further information regarding land ownership, site context and implementation can be found in subsequent sections.

The plan area represents a logical extension of infrastructure and services relative to currently planned neighbourhoods. The preparation of this NSP has been guided by the existing City of Edmonton statutory plans and policies including the Capital Region Land Use Plan, The Way We Grow - Municipal Development Plan, The Way We Move - Transportation Master Plan, Big Lake ASP, Suburban Neighbourhood Design Principles (SNDP), and the Urban Parks Management Plan (UPMP). The *Hawks Ridge* NSP conforms to the above noted plans and policies and is referenced in **Appendix A: Policy Context**.

2.3 Related Documents

The *Hawks Ridge* NSP is supported by a related application to amend the Big Lake ASP submitted cover. The list below summarizes the proposed changes to the Big Lake ASP:

- ✦ Delineation of the Ravine within to reflect the Office of Natural Areas Natural Connections Biodiversity Core Area and the North Saskatchewan River Valley Area Redevelopment Plan (NSRVARP);
- ✦ As a result of the delineation of the Ravine, consolidation of neighbourhoods Five and Six as shown on the existing Exhibit 11 – Neighbourhood Plan (Figure 3 – Existing Neighbourhood Plan within this document) in the ASP, renumbering neighbourhoods in a logical manner and updating neighbourhood boundaries due to the approval of Big Lake Neighbourhood One (Trumpeter) and logical future neighbourhood patterns, as shown on Figure 4 – Proposed Changes to Neighbourhood Plan;
- ✦ Reconfiguration of the collector roadway network to eliminate two “Natural Conservation Area” crossings;
- ✦ As a result of the reconfigured neighbourhood boundary and collector roadway network, redistribution of low and medium density residential uses and parks and open space within the plan area;
- ✦ Removal of one commercial site and a public elementary school site;
- ✦ Addition of mixed use, street oriented residential uses and a bio-remediation area;
- ✦ Reclassification of land use designations as per current practice in new NSP’s as either Low Density or Medium Density Residential; and
- ✦ Updates to the land use and population statistics to reflect the above-listed changes.

2.4 Land Ownership

Hawks Ridge NSP was prepared on behalf of a private corporation who owns approximately 126 ha of the land within the Plan area. The remaining lands are held by the Province of Alberta, City of Edmonton and two non-participating land owners. Current (2010) land ownership is shown in **Figure 5 – Land Ownership**. A listing of the legal parcels is described in **Table 1** below.

Table 1 – Land Ownership

Titled Owner	Legal Description	Titled Area (ha)
Private Corporate	SW ¼ 24-53-26-W4	64.7
Private Corporate	SE ¼ 24-53-26-W4	55.05
Private Corporate	NW ¼ 24-53-26-W4	6.38
City of Edmonton	Lot 1, Plan 7550 U	3.36
City of Edmonton	Lot 2&3, Plan 7550 U	0.77 + 0.88
City of Edmonton	Lot 4, Plan 7550 U	0.71
City of Edmonton	Lot 5, Plan 7550 U	0.72
City of Edmonton	Lot 6, Plan 7550 U	0.77
City of Edmonton	Lot 7, Plan 7550 U	0.87
City of Edmonton	Lot 8, Plan 7550 U	0.95
City of Edmonton	Lot 9, Plan 7550 U	0.95
City of Edmonton	Lot 10, Plan 7550 U	0.84
City of Edmonton	Lot 11, Plan 7550 U	0.85
Province of Alberta	NE ¼ 24-53-26-W4	2.31*
Private Non-Corporate	Lot 1, Blk 1, Plan 8821424	0.78
Private Corporate	NE ¼ 13-53-26-W4	5.83*
Private Corporate	NW ¼ 13-53-26-W4	16.46*
Total Titled Area		163.18
*Denotes area only within neighbourhood boundary		

2.5 Site Context

2.5.1 Existing Land Uses

At present, the majority of the area is used for agricultural purposes. The land is, for the most part, under cultivation, with several exceptions. Farm buildings occupy a portion of the northeast corner of the site while the lands north of the SE¼ 24-53-26-W4 are owned by the City of Edmonton and remain undeveloped. The lands in the centre of the NSP remain predominantly undeveloped forming a large natural area as part of the North Saskatchewan River Valley Ravine system, with the exception of a disturbed area towards Big Lake that has been cultivated for the past several decades. See **Figure 6 – Existing Site Features**.

An oil pipeline right-of-way runs east-west through the northern portion of the plan area and then realigns towards the south-southwest through the western portion. A sewer pipeline right-of-way runs along the northern portion of *The Hawks Ridge neighbourhood*, forming part of a Capital Region sanitary sewer line. These uses do not pose any constraints on development of the neighbourhood.

2.5.2 Soil and Groundwater Conditions

A preliminary geo-technical investigation of the lands determined that in general, the soil conditions consist of surficial topsoil, underlain by a silty clay, overlaying a glacial till material followed by sandstone.

The groundwater table was generally moderate to low, with observed water levels between 0.6m to 5.5m below the ground surface.

Based on the preliminary investigations, the soil and groundwater conditions are feasible for development, and overall the clay soils place no major constraints on subdivision design or construction.

Each subdivision and development stage will require additional geotechnical investigation and a separate detailed report, as directed by the City of Edmonton.

2.5.3 Topography

The topography of *Hawks Ridge* varies considerably, featuring a few hills, a ravine, as well as the shoreline of Big Lake. Two elevated areas generally slope towards the ravine in the centre of the site, which ultimately slopes towards the lake. Elevation ranges from 674m at the highest point in the west, 687m in the east, 656m towards the centre, and 651m along the shore of the lake. Stormwater, following natural drainage patterns, generally flows toward the central ravine then northward where it flows into Big Lake. See **Figure 7 – Topography Analysis**, **Figure 8 – Slope Analysis** and **Figure 9 – Drainage Analysis**.



2.5.4 Natural Areas and Ecological Resources

The *Hawks Ridge* NSP contains a portion of the North Saskatchewan River Valley Ravine System, which is located in the central portion of the neighbourhood and is immediately south of the Big Lake waterbody. (See **Figure 6 – Existing Site Features**).

The City of Edmonton's Inventory of Environmentally Sensitive and Significant Natural Areas (Geowest, 1993) identifies one natural area (NW78) within the neighbourhood boundary; however, the natural area is not discussed in detail in the Geowest Report. The Geowest Report also identifies a portion of the plan area as an environmentally sensitive area. Both the Big Lake waterbody and the North Saskatchewan River Valley Ravine System are major environmental features within the *Hawks Ridge* NSP.

The Big Lake area and the North Saskatchewan River Valley Ravine System are distinct regionally significant environmentally sensitive areas that contain high community and plant species, wildlife habitat, fish population and rare species diversity, as well as a critical linking function and wildlife movement corridor to local, regional and provincial table lands. In addition, the Big Lake Area serves a significant function in maintaining and balancing the hydrology of the provincially significant Big Lake waterbody and is particularly sensitive to disturbances.

The City of Edmonton's Integrated Natural Areas Conservation Plan, *Natural Connections* (2007), identifies a portion of the plan area as being part of a Regional Biodiversity Core Area. This area is based on the North Saskatchewan River Valley and Ravine System Protection Overlay, and as such should be protected from development and encroachment. This linear natural area extends from the shores of Big Lake to a large natural area in the centre of the *Hawks Ridge* NSP.

Required setbacks, conservation easements, and other efforts to preserve and enhance the environmental features within the neighbourhood will be pursued, wherever possible and feasible, in accordance to the City of Edmonton policies and guidelines.

A comprehensive assessment of all of the environmentally sensitive areas within *Hawks Ridge* will be conducted and submitted under separate cover, as the Big Lake Neighbourhood Three Ecological Design Report.

2.5.5 Environmental Site Assessments

As part of the land development approval process, property owners are required to submit a Phase 1 ESA for their respective lands. Phase 1 Environmental Site Assessments that have been completed for *The Hawks Ridge neighbourhood* are submitted under separate cover and are shown on **Table 2 – Environmental Site Assessments and Historic Resources**. Table 2 also identifies properties for which Environmental Site Assessments will be required for review by *Sustainable Development* prior to rezoning.

2.5.6 Pipelines and Oil Well Sites

Information obtained from the Energy Resources Conservation Board (ERCB) shows that there are several well sites and one pipeline corridor within the NSP area. One active pipeline carrying natural gas runs through the site, from the southwest corner to the north-central portion. There are also six abandoned well sites within the subject area. Five are located within the neighbourhood area boundary, while the sixth site is within the roadway R-O-W along the western boundary. The locations of these abandoned well sites are shown in **Figure 6 – Existing Site Features**.

A Phase I ESA and potential Phase II ESA will be required in order to confirm well location, status and potential impact on future development prior to rezoning lands within *Hawks Ridge* NSP. Future development surrounding the abandoned oil well sites will adhere to the policies and requirements established by the ERCB.

2.5.7 Historic Resources

As part of the NSP submission, the participating landowner is required to submit a Historic Resources Overview of the plan area for consideration by Alberta Community Development, as shown on **Table 2 – Environmental Site Assessments and Historic Resources**. Table 2 also outlines properties of non-participating landowners for which a Historic Resources Overview will be required prior to development. Pursuant to Section 31 of the Historical Resources Act, development proponents and their representative(s) are required to report the discovery of any archeological, historic period or paleontological resources, which may be encountered during construction.



Table 2 – Environmental Site Assessments and Historic Resources

Property	ESA	HRO / HRIA
SW ¼ 24-53-26-W4	Phase I ESA submitted	HRO and HRIA submitted
SE ¼ 24-53-26-W4	Phase I ESA submitted	HRO and HRIA submitted
NW ¼ 24-53-26-W4	Phase I ESA submitted	HRO and HRIA submitted
*NE ¼ 24-53-26-W4	Required	Required
*Lot 1, Plan 7550 U	Required	Required
*Lot 2&3, Plan 7550 U	Required	Required
*Lot 4, Plan 7550 U	Required	Required
*Lot 5, Plan 7550 U	Required	Required
*Lot 6, Plan 7550 U	Required	Required
*Lot 7, Plan 7550 U	Required	Required
*Lot 8, Plan 7550 U	Required	Required
*Lot 9, Plan 7550 U	Required	Required
*Lot 10, Plan 7550 U	Required	Required
*Lot 11, Plan 7550 U	Required	Required
*Lot 1, Blk 1, Plan 8821424	Required	Required
*NE ¼ 13-53-26-W4	Required	Required
*NW ¼ 13-53-26-W4	Required	Required
<i>* Non-Participating Landowners</i>		

3 LAND USE, TRANSPORTATION & SERVICING



Hawks Ridge Neighbourhood Structure Plan

3.2 Vision



The Hawks Ridge neighbourhood is a vibrant, attractive, and ecologically sensitive residential community in northwest Edmonton.

Bordered by Big Lake, the neighbourhood embraces the natural beauty of the area by establishing connectivity through the careful integration of the natural and built environment.

The neighbourhood offers a mix of housing types, opportunities for community interaction as well as recreation and local commercial activities.

The Hawks Ridge neighbourhood establishes a sense of place

for all residents with the following:

Environmental integrity involves protection and improvement of the air, water and land, upon which all living things depend on for sustained health. Environmental protection focuses on minimizing the impacts of development, enhancing the existing environment and increasing biodiversity through appropriate land use, development, and individual decisions and practices.

Economic health is enhanced through development that is cost effective. Economic prosperity leads to community well being and attracts high quality residential and commercial development, which in turn, provides opportunities for all members of the community.

Community sense of place is enhanced through access to recreational opportunities, open spaces and trails. Natural areas provide quiet, visual diversity and beauty. To maximize mobility and independence for all age groups, the development takes advantage of planned transportation options and provides easy access to employment areas, education and shopping.

3.3 Goals

The Hawks Ridge NSP was prepared in accordance with the policies and principles identified in Capital Region Growth Plan, The Way We Grow, the Big Lake ASP and other relevant municipal policy and statutory documents. The overall goals of the plan to establish a neighbourhood that:

- ✦ Provides a unique neighbourhood identity with focal points centered on the central natural area, Big Lake and school/park site.
- ✦ Establishes a variety of housing forms and residential densities that meet the consumer needs, encourage diversity and support public transit ridership.
- ✦ Provides a walkable, attractive, safe and comfortable community for residents, with easy access to the natural areas and recreational amenities.
- ✦ Preserves and integrates the central natural area into the community.
- ✦ Supports the utilization of neighbouring educational, recreational, municipal and commercial facilities.
- ✦ Provides a balanced transportation system which maximizes access to public transit and connects major inter- and intra-neighbourhood focal points.

☛ Provides efficient, contiguous and staged urban and infrastructure development.

3.4 Development Objectives

Green Development

1. Ensure a compact urban form that uses the land resources responsibly and efficiently.
2. Consider sustainable, alternative or low impact development standards in the design of the neighbourhood.
3. Provide sustainable and cost effective landscape development of the open space areas over the long term with the use of native plant species and the added benefit of the re-establishment of natural habitat.



Urban Design

4. Design residential streets which are pedestrian friendly, safe, and form an integral and attractive component of the public realm within the neighbourhood.
5. Develop non-ground oriented residential sites to a higher urban design standard.
6. Orient buildings to optimize views and vistas to Big Lake, the central natural area and other neighbourhood amenities and features.
7. Emphasize Big Lake, the central natural area, school/park site and bioremediation / constructed wetland SWMF's as key focal points within the neighbourhood.

Ecology

8. Protect the Big Lake and the North Saskatchewan River Valley and Ravine System.

Environment

9. Ensure the environmental status of the lands in the NSP are suitable for development and that Environmental Site Assessments (ESAs) are complete and up-to-date at the time of rezoning.
10. Ensure urban development around the abandoned well-sites adheres to the requirements of the ERCB and City of Edmonton Policy C515 – Oil and Gas Facilities, Abandoned Well Sites.
11. Ensure the ongoing operation and integrity of the existing sewer and pipeline corridor.



Hawks Ridge

Neighbourhood Structure Plan

Historical Resources

12. Identify and document areas within the North Saskatchewan River Valley system and buildings with possible historical significance.

Residential

13. Provide a variety of housing types and forms to foster a more complete and resilient community to respond to demographic changes such as smaller households, aging populations and empty nesters.
14. Provide the necessary residential densities to ensure a healthy and strong community for generations to come.
15. Provide transition between residential uses of significantly different densities and heights.
16. Establish affordable housing in *The Hawks Ridge neighbourhood*.

Mixed Uses

17. Develop mixed use nodes with a variety of residential and commercial uses developed in a compact and pedestrian friendly manner which supports higher densities and public transit use.

Parkland, Recreational Facilities and Schools

18. Accommodate the requirements of the City for the dedication of the school/park site and Natural Area within the neighbourhood.
19. Provide a school/park site which is accessible via walkway linkages, automobiles and transit.
20. Promote pedestrian accessibility to Big Lake, the central natural area, school/park site, constructed wetlands, mixed-use areas, and public transit routes.
21. Maintain a top-of-bank line according to the requirements of the Municipal Government Act (MGA), Top-of-Bank Policy C542 and the North Saskatchewan River Valley Area Redevelopment Plan (ARP).



Transportation

22. Provide a collector roadway system which moves vehicular traffic efficiently through the neighbourhood.
23. Mitigate the impact of automobile traffic associated with higher residential densities.
24. Design a logical local street system which provides numerous connection points throughout the neighbourhood, and which maximizes access to public transit for the greatest number of residents.



25. Provide strong connections with surrounding communities.
26. Integrate land use and circulation patterns, considering safety of pedestrians and cyclists.
27. Provide public transit services within the plan area in accordance with City of Edmonton Transit System Guidelines and demands, and ensure access to future transit routes and facilities.
28. Design an alternative circulation system which promotes pedestrian, bicycle, in-line skating and wheelchair accessible travel and which is linked to key focal points within and outside the neighbourhood.
29. Establish an Urban Development Line, based upon geotechnical recommendations and current City Policy, to ensure enjoyment, preservation and protection of the North Saskatchewan River Valley and Ravine System.
30. Provide noise attenuation where residential development is immediately adjacent to 215 Street arterial.

Infrastructure Servicing and Staging

31. Ensure that the neighbourhood is serviced to a full urban standard, in an efficient, contiguous and staged manner.

3.5 Policy and Implementation

3.5.1 Green Development

The holistic approach to the development of *Hawks Ridge* NSP incorporates the foundations of sustainability (economy, society and ecology).

Objective (1) Ensure a compact urban form that uses the land resources responsibly and efficiently.	
NSP Policy	Implementation
<p>Development shall support increased densities to make more efficient use of land.</p> <p>The development should be walkable, conducive to bicycles and integrated with transit facilities, to encourage alternatives to the automobile.</p>	<p>Figure 11 – Land Use Concept and Table 3 – Land Use Concept & Population Statistics illustrate that the neighbourhood is planned with increased densities and designed to encourage a walkable, pedestrian-oriented environment.</p>
<p>Rationale: Increasing residential densities in a compact form utilizes land, municipal infrastructure and facilities more efficiently. Locating mixed uses and recreational amenities adjacent to greenways / walkways and transit routes provides residents with the opportunity to walk, cycle or in-line skate to a destination, thereby reducing automobile dependency.</p>	

Hawks Ridge

Neighbourhood Structure Plan

Objective (2) Consider sustainable, alternative or low impact development standards in the design of the neighbourhood.

NSP Policy	Implementation
<p>Consider incorporating alternative development standards such as energy efficient lighting, building techniques/technologies and alternative road construction standards.</p>	<p>Figure 10 – Low Impact Design Opportunities illustrates the sustainable design opportunities available to <i>The Hawks Ridge neighbourhood</i>.</p> <p>Allow for flexibility between developers, homebuilders and the City in regulating the introduction and implementation of alternative designs, techniques and technologies that support ecological processes, cost effectiveness and environmental stewardship in the development of the neighbourhood.</p> <p>All alternative development standards shall be reviewed and considered for approval by the City of Edmonton.</p>

Rationale: Many aspects of sustainability can be addressed through the design of the neighbourhood and at the site specific building level. This plan encourages consultations with the City and affected agencies to explore the use of alternative development standards (i.e. consideration of servicing techniques or infrastructure provisions that differs from current City standards) as one way of achieving sustainability.

Innovative techniques that may be explored in *The Hawks Ridge neighbourhood* include the following:

Low Impact Development

Low Impact Development (LID) is an approach that uses simple ecological principles to reflect natural ecosystem processes with respect to managing stormwater in a developed area.

Planning for alternative stormwater management systems in the initial stages of land development can yield significant cost and environmental benefits for developers, municipalities, and residents. Stormwater management systems can simultaneously satisfy regulatory requirements, act as site design elements, protect the environment by reducing runoff and improving water quality, and reduce infrastructure costs — all the attributes of minimizing the impact of development.

One concept is to implement alternate conveyance systems to slow the erosive velocity of stormwater, increase time of concentrating, and use natural systems to filter pollutants such as sediment, nutrients and heavy metals. Another initiative is to reduce the quantity of stormwater runoff to improve the quality of water entering Big Lake. This can be achieved through the installation of various infiltration systems which encourage the downward movement of water into the underlying soil to reduce the total quantity of overland runoff and pollutants from impervious surfaces. **Figure 10 – Low Impact Design Opportunities** provides illustrations of alternate conveyance systems and infiltration systems that may be implemented in this neighbourhood design.

Bioswales / Vegetated Channels

Vegetated swale systems or bioswales are alternatives for conveying water away from streets, downspouts, and structures. They are low-cost alternatives to conventional conveyance systems, such as curbs and gutter or concrete channels. These alternatives reduce storm water velocities, allowing

sediment and pollutants contained within stormwater to be filtered, as well as allowing water infiltration. In residential settings, swales are an effective way to convey water to bioretention areas located a short distance away from structures and foundations. When used in conjunction with bioretention areas, swales function as treatment mechanisms that filter stormwater. These systems consist of two general components: the buffer (filter strips) and the channel (vegetated swale).

The buffers, or filter strips, are considered pre-treatment devices, meaning that water is routed through them before entering systems such as bioswales or bioretention areas. The filter strip is a low-grade vegetated area that permits sediment deposition and associated contaminant filtration during sheetflow and that slows water before it enters the swale.

The swales collect and convey stormwater, and act as initial sites for stormwater treatment. These vegetated channels improve water quality by decreasing water velocity and thus allowing suspended solids and heavy metals to fall out of the flow. Some metals and nutrients (like nitrogen or phosphorous) can also be absorbed by the plant life in the channels.

Bioretention and Constructed Wetlands

Bioretention areas are shallow, topographic depressions filled with engineered soils and vegetation that retain, treat, and infiltrate water. Bioretention systems are designed for the temporary storage of rainwater. They successfully remove pollutants through increased contact time with soils and plant materials. As compared with conventional storm water management systems, bioretention areas more closely mimic the natural hydrologic cycle, allowing soils and plants to filter pollutants from stormwater and permitting the processes of infiltration, evaporation, and transpiration to occur. The systems can also create wildlife habitat, minimize erosion, and recharge local groundwater supplies.

For residential applications, treatment areas are generally located some distance away from houses to increase flow paths and treat runoff from rooftops and driveways. In either case, bioretention systems route storm water to bioretention areas that are designed to accumulate water. In the event that storm water volumes exceed treatment capacities, bioretention areas are usually equipped with overflow drop inlets routed to municipal stormwater systems.

Constructed wetlands systems use soils, vegetation, and hydrology to remove pollutants from stormwater. The systems are effective in attenuating flood flows, reducing pollutant loadings, and providing wildlife habitat. From a community design standpoint, wetlands systems can create open space, offer improved aesthetics over traditional treatment systems, and provide recreational and educational opportunities.

This NSP proposes three constructed wetlands as the primary means for stormwater retention, filtration and infiltration. For the purposes of this document and for greater clarity, the terms bioremediation / constructed wetlands refer to stormwater management facilities designed and constructed to attenuate runoff and reduce pollutant loading prior to discharge to the receiving waterbody.

Similar to their natural counterparts, constructed wetlands types can vary from seasonally inundated to year-round, open-water systems. To optimize pollutant removal capacities, engineers typically aim to maximize flow paths through wetlands systems to prolong exposure to soils and vegetation, thereby facilitating nutrient and pollutant uptake, retention, and settling.

Naturalized Outfall & Channel

The proposed outfall will be located along the northern edge of the NSP area. From this point, water will flow through a vegetated channel, along a historical drainage pathway into Big Lake. A bioengineered erosion control method may be implemented to create a more attractive channel, one that will support more plant life and that will provide one additional opportunity for filtration prior to discharge.

Wildlife Corridors

The specified corridor for wildlife movement is through the central treed area. Secondary routes for smaller animals can also follow the greenway/bioswale system, to connect ravine areas and park spaces

Hawks Ridge

Neighbourhood Structure Plan

to the Big Lake / Lois Hole Centennial Provincial Park area. The secondary corridors have been designed to allow movement of smaller animals such as birds, porcupine, amphibians, etc. The corridors should use native vegetation as much as possible.

Wildlife Friendly Lighting

Street lighting in this neighbourhood will use strategically placed fixtures that reduce light pollution, especially avoiding projecting light into natural areas. Fixture design and placement shall ensure that most of the light will be projected downwards, rather than laterally into the surrounding environment. The use of long wavelength bulbs will be encouraged, as they have less impact on wildlife.

Objective (3) Provide sustainable and cost effective landscape development of the open space areas over the long term with the use of native plant species and the added benefit of the re-establishment of natural habitat.

NSP Policy	Implementation
Landscaping in the neighbourhood should encourage the use of native plant species within all open spaces and stormwater management facilities.	Specific species for landscaping shall be determined between the developer and City Administration at the time of review of landscaping plans as part of Engineering Drawing or Development Permit review.

Rationale: Using native plant materials promotes a healthier natural ecosystem that over time will integrate with the surrounding landscape. Specific species for landscaping will be determined by the developer and City.

Technical Summary: No specific technical requirements were further identified.

3.5.2 Urban Design

The following objectives and policies are established to assist in fulfilling the plan goals of creating a neighbourhood that is focused on creating a walkable, attractive, and safe environment and on focal points such as Big Lake, the central natural area, school/park and bioremediation / constructed wetland stormwater management facilities.

Objective (4) Design residential streets which are pedestrian friendly, safe, and form an integral and attractive component of the public realm within the neighbourhood.

NSP Policy	Implementation
a) Streetscape design should consider symmetry, variety, massing and opportunities for innovative building and site design.	a) Details regarding the specific type and location of residential uses will be determined at the rezoning and subdivision application stage where consideration for these elements will be given. Symmetry can be achieved by creating a compatible housing form and zoning designation on either side of a street.

<p>b) Streets that are part of the major pedestrian linkage system (i.e. arterial or collector roads) should have treed boulevards and sidewalks that are not interrupted by front drive access.</p>	<p>b) The design of arterial and collector roadways and the provision of sidewalks shall be implemented at the detailed design stage of development, to the satisfaction of <i>Transportation Services</i>.</p>
<p>Rationale: Designing attractive residential streetscapes by using compatible housing forms and zoning designations provides a comfortable physical environment and creates a consistent mass and scale. Orientation of buildings towards public areas (i.e. streets, parks and constructed wetlands) also plays an important part of creating interesting and varied streetscapes and increases a sense of resident awareness of neighbourhood activities and safety (“eyes on the street”).</p> <p>At the detailed design stage the function of the roadway will dictate the appropriate cross-sections to be implemented (i.e. arterial or collector). To ensure pedestrian connectivity and safety is maintained along all primary pedestrian linkages, sidewalks should be separated from the main vehicular route by a treed boulevard, and where possible front drive access should be minimized to reduce vehicular and pedestrian conflict.</p>	

<p>Objective (5) Develop non-ground oriented residential sites to a higher urban design standard.</p>	
<p>NSP Policy</p>	<p>Implementation</p>
<p>Non-ground oriented residential uses shall be designed to have a strong street presence, with parking areas located underground or away from the street.</p>	<p>Figure 11 – Land Use Concept illustrates the location of non-ground oriented residential uses.</p> <p>The development officer should have regard for site design, parking areas and building articulation.</p>
<p>Rationale: Parcels of non-ground oriented multi-unit residential (i.e. stacked row housing or low rise apartments) are likely to be developed on a self-contained basis, however, opportunities exist to develop street-oriented row housing alongside ground-oriented single/semi-detached housing through sensitive urban streetscape design, attention to transitioning and landscaping. The use of a conventional residential zoning (i.e. RF5, RF6 or RA7) of the Edmonton Zoning Bylaw shall be applied for the development of these residential uses.</p>	

<p>Objective (6) Orient buildings to optimize views and vistas to Big Lake, the central natural area and other neighbourhood amenities and features.</p>	
<p>NSP Policy</p>	<p>Implementation</p>
<p>a) Street frontage along roadways should consider opportunities for maximizing views of Big Lake, the central natural area, school/park and parkette’s.</p> <p>b) Parks and stormwater management facilities shall be designed using CPTED principles, accessible through public lands and not land-locked by</p>	<p>a) The Subdivision Authority shall have regard for the provision of adequate street frontage abutting parks, the central natural area and SWMF’s to maintain and enhance view opportunities.</p> <p>b) The location and configuration of SWMF’s and parks are conceptually illustrated in Figure 11 – Land Use</p>

Hawks Ridge Neighbourhood Structure Plan

<p>private development.</p> <p>c) The SWMF's shall include naturalized shoreline plantings intended to provide habitat opportunities for wildlife and improve water quality.</p> <p>d) Emergency access to SWMF's shall be provided from abutting roadways.</p>	<p>Concept and may be refined prior to rezoning and/or subdivision.</p> <p>c) SWMF's landscaping will be determined between the developer and City Administration at the time of review of landscaping plans and as part of engineering drawing review.</p> <p>d) The location of boat launches or other emergency access requirements within SWMF's for emergency response purposes shall be determined at time of subdivision.</p>
<p>Rationale: The plan affords the community with significant visual connections and vista opportunities through the provision of appropriate development setback including 100% of top of bank walkway and as well as top of bank roadway and park along Big Lake. Additional walkways and vistas are provided by a walkway and portions of roadway frontage along the edge of natural area. These locations provide un-interrupted public access and view potential, ensuring visibility and passive surveillance of Big Lake and central natural area.</p>	

Objective (7) Emphasize Big Lake, the central natural area, school/park site and bioremediation / constructed wetland SWMF's as key focal points within the neighbourhood.

NSP Policy	Implementation
<p>a) Focal points in the neighbourhood shall function as amenity space for residents and should be comprised of one or a combination of the following elements: public art, seating area, plaza, street furniture, fountain/water feature or other architectural elements.</p> <p>b) Pedestrian connections from the neighbourhood into and through open spaces / focal points shall be provided.</p>	<p>a) Figure 11 – Land Use Concept illustrates the key focal points.</p> <p>b) Figure 12 - Trail Network conceptually illustrates pedestrian connections, which will be determined at the subdivision approval stage.</p>
<p>Rationale: Neighbourhood focal points serve as community destinations and help establish identity. Through careful design and site planning, the development of these focal points creates active places which are alive and utilized to promote community interaction. The important neighbourhood focal points within this neighbourhood are Big Lake, the central natural area, top-of-bank / edge of natural area trail, mixed usesites, school/park site and constructed wetlands. These provide key amenity spaces for local residents and add to the neighbourhood's attractiveness, character and image as a pedestrian-oriented community. Areas are linked within the pedestrian network and provide areas for passive or active recreation.</p>	

3.5.3 Ecology

The lands within *Hawks Ridge neighbourhood* are farmland with the exception of Big Lake and a significant natural corridor running through the centre of the neighbourhood. These two features are identified within the North Saskatchewan River Valley ARP. The following objectives support the plan goals of preserving Big Lake and the natural area and integrating them into the neighbourhood. This in turn helps create the unique identity of the neighbourhood with the focal point centred on this unique natural feature. The preservation and integration of this feature will facilitate wildlife movement to neighbouring natural areas located outside the plan boundary.

Objective (8) Protect the Big Lake and the North Saskatchewan River Valley and Ravine System.	
NSP Policy	Implementation
<p>a) The lands within the North Saskatchewan River Valley Ravine shall be protected from urban development through implementation of the requirements specified by the MGA and North Saskatchewan River Valley ARP.</p> <p><i>Hawks Ridge NSP shall comply with the policies and directives established under the North Saskatchewan River Valley and Ravine System Protection Overlay.</i></p>	<p>The North Saskatchewan River Valley Ravine will be dedicated to the City of Edmonton at the time of subdivision as Environmental Reserve (ER) as per the Municipal Government Act.</p> <p>A geotechnical report and flood plain analysis, detailing the required setbacks and other recommendations, to ensure bank stability for development planned within the overlay will be submitted prior to rezoning and/or subdivision approval.</p> <p>A Natural Area Management Plan for the central natural area shall be required prior to approval of rezoning within 200m of the natural area to the satisfaction of the Office of Natural Areas and the Drainage Services Branch of Infrastructure Services.</p> <p>No disturbances will occur within the central natural areas prior to the approval of the Natural Area Management Plan.</p>
<p>b) The lands along and below the Top-of-Bank and the Natural Area will be dedicated Environmental Reserve.</p>	<p>b) Prior or concurrent with rezoning of lands adjacent to or within the Natural Area an amendment to the North Saskatchewan River Valley ARP, an Environmental Screening Report and a Site Location Study may be required for the proposed constructed wetlands (stormwater management lakes), if the relocation of the watercourse is justified within the boundary of the North Saskatchewan River Valley ARP.</p>

Hawks Ridge Neighbourhood Structure Plan

Rationale: Big Lake and the North Saskatchewan River Valley Ravine are an extremely important and diverse ecological system within the NSP and the entire Capital Region. The ravine is protected and preserved as per the Municipal Government Act (MGA), North Saskatchewan River Valley ARP, and the MDP strategic policies and guidelines.

Relocation of the Watercourse

The City of Edmonton has requested further analysis to justify the realignment of a portion of the existing watercourse on the western portion of the central natural area. Realignment of a portion of this watercourse is proposed as part of the overall concept for reclamation and enhancement of the disturbed area within the natural area. Approval of the Natural Area Management Plan is required prior to any disturbance of the existing watercourse.

Special Study Area

A Special Study Area is designated within the northeast portion of the neighbourhood. An existing slope failure impacting the Alberta Capital Region Wastewater Commission (ACRWC) sewer line is situated within this area. A Special Study Area designation for this area will allow time for technical investigations and discussions of these lands with ACRWC and other applicable stakeholders.

The result of these studies will form the basis of a future plan amendment addressing the Special Study Area lands to be presented for Council's consideration in the future.

3.5.4 Environment

In order to ensure that the lands within the NSP area are suitable for development, the environmental status of the land was evaluated. The City requires that Phase I Environmental Site Assessments (ESA) be submitted, reviewed, and endorsed prior to the rezoning stage of development. The following objectives are established to contribute to the plan goal of providing a safe environment for residents and to achieve the goals of higher order city policies.

Objective (9) Ensure the environmental status of lands in the Hawks Ridge NSP are suitable for development and that Environmental site Assessments (ESAs) are complete and up-to-date at the time of rezoning.

NSP Policy	Implementation
<p>a) Determine the likelihood, types, and location of environmental concerns which may be present on the lands prior to rezoning.</p> <p>b) Phase I ESA reports older than 1 year from the date of rezoning application shall be updated, and any Phase I report older than 5 years from the date of rezoning application shall be redone.</p> <p>Where necessary, contaminated material shall be removed and disposed of in an environmentally sensitive manner, in accordance with Federal, Provincial, and Municipal regulations.</p>	<p>a) Environmental Site Assessments will be submitted and any follow-up will receive sign-off by the City administration prior to the rezoning stage of development.</p> <p>b) Site remediation, where necessary, shall be conducted prior to rezoning. An environmental site assessment report verifying the remediation shall be submitted for approval by the City administration prior to the rezoning of the subject lands.</p>

Rationale: Lands within the NSP boundary shall be suitable for development and their environmental status confirmed prior to rezoning. Those lands identified as contaminated must undergo remediation according to Federal, Provincial, and Municipal standards.

Objective (10) Ensure urban development around the abandoned well-sites adheres to the requirements of the ERCB and City of Edmonton Policy C515 – Oil and Gas Facilities, Abandoned Well Sites.

NSP Policy	Implementation
<p>a) Abandoned sites shall be dealt with in an environmentally appropriate manner and in accordance with regulations.</p> <p>b) Abandoned well areas should only assume land uses that will allow for immediate maintenance should the well ever require servicing.</p>	<p>Figure 6 – Existing Site Features illustrates the approximate locations of existing facilities, which will be confirmed prior to subdivision and rezoning approval.</p>

Rationale: Development surrounding the abandoned well sites is subject to the policies and requirements by the Energy Resource Conservation Board (ERCB) and must be in accordance with City of Edmonton Policy C515 – Oil and Gas Facilities, Abandoned Well Sites.

Objective (11) Ensure the ongoing operation and integrity of the existing sewer and pipeline corridors.

NSP Policy	Implementation
<p>Integrate the existing regional sewer and pipeline corridors into the NSP to make use of potential multi-use corridors and pedestrian linkages while having regard for the safe, ongoing operation of these facilities.</p>	<p>Figure 6 – Existing Site Features illustrates the location of the regional sewer and pipeline corridors. Exact locations of pedestrian linkages will be determined at subdivision and development.</p>

Rationale: Development abutting the sewer and oil pipeline corridors shall be implemented according to the Edmonton Zoning Bylaw with respect to setbacks from development to ensure the safe and ongoing operations of these facilities.

Technical Summary: Phase I Environmental Site Assessments (ESA) for some properties within the neighbourhood have been submitted to the City of Edmonton to confirm the Plan area will be suitable for residential and other intended development. (see **Table 2 – Environmental Site Assessments and Historic Resources**). Any follow-up items identified by ESAs shall be addressed prior to the rezoning of the subject areas, as per the implementation strategy.

3.5.5 Historical Resources

Historical resources investigations involved the evaluation and reporting of existing information collected through a record review of provincially designated historic buildings, archaeological sites and paleontological sites. Additional review involved the evaluation of the *Hawks Ridge neighbourhood* for historical resource potential.

Hawks Ridge

Neighbourhood Structure Plan

Objective (12) Identify and document areas within the Plan Area and the North Saskatchewan River Valley system and buildings with possible historical significance.

NSP Policy	Implementation
<p>Past and current activities within the <i>Hawks Ridge</i> NSP shall be reviewed to identify items of historical significance.</p>	<p>A Historical Resources Overview (HRO) and Historical Resources Impact Assessment (HRIA) for the plan area has been approved by Alberta Culture and Community Spirit (ACCS) for some properties within the Plan boundary, as shown in Table 2. HROs and HRIAs are required for lands that have not been reviewed, prior to rezoning</p>
<p>Rationale: A Historical Resources Overview (HRO) and Historical Resources Impact Assessment (HRIA) were completed in support of the <i>Hawks Ridge</i> NSP, and subsequently approved by Alberta Culture and Community Services.</p>	

Technical Summary: Both an HRO and HRIA reports were prepared by Stantec Consulting Ltd. and approved by ACCS. Therefore, the landowner has clearance to proceed with development.

3.5.6 Residential

A variety of low and medium density residential land uses are proposed for the majority of the land in the *Hawks Ridge* neighbourhood. The specific land uses will be determined on the basis of market conditions and consumer preferences at the time of zoning and subdivision (See **Figure 11 – Land Use Concept**).

Approximately 67 ha of the plan area is designated for residential land uses.

Approximately 57 ha of the plan area is designated as Low Density Residential (LDR) which will allow for the development of single detached, semi-detached and duplex housing at a density of approximately 25 units per ha.

Approximately 3 ha of the plan area is designated as Street-Oriented Residential (SO). Street-Oriented Residential will typically be developed as semi-detached and row housing with smaller front yard setbacks (street-oriented) and rear lanes. Street-Oriented Residential will typically be developed at an average density of 45 units per ha.

Approximately 5 ha of the plan area is designated as Medium Density Residential (MDR). MDR will allow for the development of either row housing, stacked row housing, or low-rise apartment housing at a blended density of approximately 90 units/ha. The maximum allowable height of the buildings is dependent on the type of housing developed, with the overall maximum of 4 storeys for low-rise apartment housing.

Approximately 2 ha is attributed to the residential portion of the Mixed Use Area to be developed as either vertical or horizontal mixed use at an approximate residential density of 125 units per hectare. *Hawks Ridge* NSP proposes an overall net residential density of 34 net residential units per hectare, surpassing the Capital Region Board's 30 units per net residential hectare target. This mix of residential densities is essential in creating a compact, effervescent, and walkable community.

Objective (13) Provide a variety of housing types and forms to foster a

more complete and resilient community responding to demographic changes such as smaller households, aging populations and empty nesters.

NSP Policy	Implementation
<p>a) A mixture of housing types shall be provided including: single/semi-detached, row house, stacked row house and low rise apartment residential.</p>	<p>a) Figure 11 – Land Use Concept illustrates the general location of all residential uses.</p> <p>The City of Edmonton Zoning Bylaw provides for a range of densities and housing forms that will be applied at the rezoning stage through one of the applicable zones.</p>
<p>Rationale: Providing a variety of housing types promotes the creation of a well-balanced and complete community, one which can accommodate a range of income groups, household structures and market segments throughout their lifecycle.</p>	

Objective (14) Provide the necessary residential densities to ensure a healthy and strong community for generations to come.

NSP Policy	Implementation
<p>Medium Density Residential parcels should be located adjacent to arterial and/or collector roadways and along future transit routes.</p>	<p>Figure 11 – Land Use Concept illustrates the general location of all residential uses.</p>
<p>Rationale: Medium Density Residential uses are vital in creating sufficient population densities in a neighbourhood. Mixing diverse forms of housing within the neighbourhood can be a way to provide a more heterogeneous mix which accommodates various household sizes, incomes, age, etc. The location of MDR sites takes into consideration the principles of a “Walkable Community”. These principles support higher residential densities, a balanced mix of land uses, access to public spaces and a built form that supports future public transit. Accordingly, MDR parcels have been strategically designed and configured in relation to key focal points, such as the North Saskatchewan River Valley Ravine, adjacent to or within walking distance to future transit routes and collector and/or arterial roadways, pedestrian corridors linking open space and neighbourhood parks.</p>	

Objective (15) Provide transition between residential uses of significantly different densities and heights.

NSP Policy	Implementation
<p>Street oriented residential uses (i.e. semi-detached or row housing) should be encouraged to create a transition between low rise apartments and lower density housing.</p>	<p>Figure 11 – Land Use Concept illustrates the general location of street-oriented residential land uses.</p>

Hawks Ridge

Neighbourhood Structure Plan

Rationale: Provision of semi-detached or row housing units as a transitional land use will serve to moderate the use differences between single detached and low rise apartments.

Street-oriented housing will be developed primarily along collector roadways or as a transition from non-ground oriented residential to ground-oriented residential uses and will provide active and inviting streetscapes with buildings typically featuring doorways, porches and windows at ground level and smaller front yard setbacks to engage the pedestrian and support natural surveillance of the street. Appropriate conventional zones within the Zoning Bylaw will be applied to facilitate the developments. Providing a range of housing forms discourages homogenous streetscapes by allowing a variety of compatible housing forms to create interest and market appeal. Vehicular access to all street-oriented uses should be from a lane to minimize vehicular conflicts along busier roadways. Densities will vary dependant on the housing form, but should generally not exceed 40 units per hectare for row housing units.

Objective (16) Establish affordable housing in Hawks Ridge.

NSP Policy	Implementation
a) Developments shall comply with the City of Edmonton's affordable housing policies and guidelines.	a) City of Edmonton's affordable housing policies and guidelines will be applied prior to rezoning.
b) The NSP shall allow for a wide variety of housing types, with a wide range of price points, to create a more inclusive neighbourhood.	b) Figure 11 – Land Use Concept indicates the location of various residential land uses.
c) Opportunities such as secondary suites, garage suites or garden suites should be encouraged among builders.	c) Secondary suites, garage suites or garden suites shall be implemented through Section 100 and 200 of the Edmonton Zoning Bylaw.

Rationale: *Hawks Ridge* strives to address housing affordability through potential provision of a more intensive form of residential housing which may address many contemporary suburban issues such as:

- urban sprawl (by maximizing land and servicing efficiencies);
- diversity of housing (by providing a variety of lot sizes and housing forms)
- auto dependence (by improving walkability and pedestrian environments); and
- alternative servicing to reduce dependence on non-renewable resources (i.e. such as use of green initiatives like solar or geothermal heating).

This plan encourages the exploration of innovation whether it is driven by the developer or city. Secondary suites can provide an important potential source of affordable housing for singles and other small households, and create mortgage helpers for the owner of the principle dwelling.

3.5.7 Mixed Uses

The *Hawks Ridge* NSP proposes three Mixed Use (MU) sites. Two sites are located within the eastern portion of the neighbourhood adjacent to 215 Street and a neighbourhood collector roadway. The second site is located within the western portion of the neighbourhood at the intersection of 231 Street and a neighbourhood collector roadway. These mixed use sites are envisioned to accommodate medium density residential development with compatible small-scale commercial development, integrated either

horizontally or vertically within the sites. Small-scale commercial may include specialty or convenience retail, restaurants, cafes, professional services and offices. These sites also present opportunities for live-work spaces, for those who would combine home and work space. The mixed use sites are highly accessible through the integration of pedestrian linkages to surrounding residential areas, open spaces, greenways and transportation networks. Moreover, intensification within these locations creates community destination areas and focal points. Implementation of these mixed use sites will require the use of a Direct Control zoning.

Objective (17) Develop mixed use nodes with a variety of residential and commercial uses developed in a compact and pedestrian friendly manner which supports higher densities and public transit use.	
NSP Policy	Implementation
<p>The Mixed Use sites shall generally provide the opportunity for small-scale commercial uses such as specialty or convenience retail, restaurants or cafes, professional services and offices, and medium density residential uses.</p> <p>The Mixed Use sites shall be designed around urban open spaces (i.e. squares, courtyards, terraces) that can serve as a focal point for community activities.</p> <p>The Mixed Use sites shall be designed in a scale that is compatible with adjacent development and pedestrian-oriented.</p>	<p>Implementation of the Mixed Use policies shall be achieved through a Direct Control Provision of the Edmonton Zoning Bylaw.</p>
<p>Rationale: The Mixed Use sites provide the opportunity for development that can meet most of the day-to-day needs of neighbourhood residents. These areas may serve as a centre of activity for the neighbourhood, and provide opportunities to reduce inter-neighbourhood travel for basic goods and services. There is also an opportunity to include some live/work units within the Mixed-Use sites to encourage local business activity within the neighbourhood. The range of housing choices planned for the Mixed-Use sites provides flexibility to accommodate different types and sizes of households as well as of various income groups to live in proximity to one another.</p> <p>The Mixed Use sites are located at prominent entranceways into the neighbourhood from 215 and 231 Streets. These sites will be developed using a Direct Control Provision. A Direct Control Provision will ensure that the development is transit-supportive, provides guidance on a compatible mix of uses and site planning, and creates a distinct character and built form on the basis of good urban design principles and high quality architecture. The Direct Control Provisions should be based on, but not limited to, the following design guidelines:</p> <p>Site Planning and Design</p> <ul style="list-style-type: none"> ☛ The development should encourage walking, mixed use development with opportunities to live, work, and shop. ☛ Mixed use should contain vertically and/or horizontally mixed areas. ☛ Retail uses should be placed at street level, while residential or office uses should be placed above. ☛ The interface with the street should provide active storefronts with multiple doorways and windows allowing a high level of transparency. ☛ Residential building entrances should reinforce a privacy zone at the primary entrance 	

Hawks Ridge

Neighbourhood Structure Plan

and be distinguished from commercial uses.

Built Form

- ✦ Building heights should be greatest adjacent to the collector roadway entrances and transition into the neighbourhood.
- ✦ The mixed use sites should transition into the neighbourhood, and consider the sensitivity of scale and massing internal to the neighbourhood.
- ✦ Each building should be designed to form part of the larger composition of the area.
- ✦ Adjacent buildings should relate in similarity of scale, height, and configuration.
- ✦ Larger buildings should be broken down in scale using proportioned articulation.
- ✦ Perceived height and massing should be minimized through building setback variations at the upper levels, building orientation, roof treatment and by adding interest through the choice of exterior materials and colours.

Pedestrian Circulation

- ✦ Safe and attractive pedestrian linkages should be provided between various land uses within the site, into the neighbourhood and to transit facilities.
- ✦ The internal street system and pedestrian linkages should foster connectivity from various parts of the site and surrounding area.
- ✦ Pedestrian routes should be direct and should minimize potential conflicts with vehicles.
- ✦ To aid pedestrian navigation and comfort, provide pedestrian-oriented streetscape elements such as: landscaping; pedestrian scaled lighting; small, color-coded way-finding signs, or a directory; vertical architectural elements, such as markers or arches; seating and resting spots; and, special paving.

Roadways, Parking & Transit

- ✦ Locate buildings close to the street and/or pedestrian pathway, with off-street parking provided behind, beside and/or under buildings where possible and appropriate.
- ✦ Surface, structured and underground parking should be located behind buildings or in the interior of a block wherever possible.
- ✦ Shared parking is encouraged between adjacent or vertically mixed uses whose peak demand is off-set from each other (i.e. Offices and Housing).
- ✦ Any large surface parking areas should be visually and functionally segmented to reduce the visual mass of parking areas.
- ✦ A transit stop should be provided in proximity to the mixed use sites with easy access to pedestrian linkages and the surrounding streets.

Landscaping

- ✦ Landscaping, hard and soft should tie developments together within the mixed use areas.
- ✦ Lighting should be provided as a means of providing a safe and visible pedestrian realm as well as establishing a theme or character for the mixed use area.
- ✦ A lighting program should consider street lighting, pedestrian lighting at intersec

and key nodes, and internal illumination from the storefronts.

- ☛ The corners of street intersections, particularly gateways and site entries (both street and sidewalk) should be distinguished by landscape treatments such as, but not limited to: flower displays, trees and shrubs, low walls, signage, decorative lighting, sculpture, architectural elements, and/or special paving.
- ☛ Fences should be of complimentary design, materials and construction to the architectural theme of the development. Fences should supplement the existing and/or required plantings.
- ☛ Property owners are encouraged to provide outdoor public art within open space and or gathering areas to enrich the pedestrian experience and create a stronger sense of place.

3.5.8 Parkland, Recreational Facilities and Schools



An integrated open space system is proposed for *The Hawks Ridge neighbourhood*, as shown on **Figure 11 - Land Use Concept** and **Figure 12 – Trails System**. The NSP proposes a school site, multiple parkettes and a pedestrian network that ultimately connects to Big Lake and the North Saskatchewan River Valley. Overall, approximately 20 ha are dedicated to Environmental Reserves, 17 ha to Natural Areas and 10 ha to parks and open space.

Objective (18) Accommodate the requirements of the City for the dedication of the school/park site and natural area within the neighbourhood.	
NSP Policy	Implementation
<p>(a) The NSP shall follow the guidelines for the hierarchy and distribution of school/park space and the Natural Area as prescribed within the Urban Parks Management Plan(UPMP).</p>	<p>(a) Figure 11 – Land Use Concept illustrates the location of the school/park and the natural area within the neighbourhood.</p> <p>The school/park will be dedicated to the City of Edmonton through Municipal Reserve (MR) at the time of subdivision.</p> <p>The appropriate mechanism for dedication of the Natural Area as Environmental Reserve will be determined at time of rezoning and/or subdivision.</p>
<p>(b) The NSP shall provide Municipal Reserves as a</p>	<p>(b) The Subdivision Authority will determine</p>

Hawks Ridge Neighbourhood Structure Plan

<p>combination of land, cash-in-lieu of land or a combination thereof, up to 10% of the gross developable area.</p> <p>(c) Prior to acceptance of Municipal Reserve into City inventory, a site inspection must be jointly conducted by Sustainable Development (Urban Planning and Environment & Corporate Properties) and the developer(s)/consultant(s) to ensure that future park sites are in development ready condition to the satisfaction of Urban Planning and Environment. Future parkland (MR) will be clear and free of buildings, debris, stockpiles and other such encumbrances or nuisances, and existing native topsoil is to be left in place. School and park site fencing (post & rail or fast fence) may be required to be provided by the developer to prevent unauthorized dumping and trespass. Drainage and storm water from private property onto parkland will not be permitted at any stage of development.</p> <p>All school and/or park sites are to be fully serviced (water, storm sewer, sanitary sewer, gas, 3 phase power, telephone etc.) along the entire roadway frontage. Pocket parks of 0.5 ha or less in size may not require full servicing and will be dealt with on an individual basis. Specific requirements will be outlined and addressed at the subdivision and engineering stages to the satisfaction of the Parks Branch.</p>	<p>the Municipal Reserve owing for the NSP, which shall be dedicated in full as land, money-in-lieu, or an acceptable combination thereof, at the time of subdivision.</p> <p>(c) The Urban Parks Management Plan and the North Saskatchewan River Valley ARP will guide the future acquisition, design, construction and maintenance of City parks and Natural Areas.</p>
<p>Rationale: The <i>Hawks Ridge</i> NSP incorporates a large natural area located within the central portion of the neighbourhood, Big Lake on the north and a school/park site in the eastern portion. These features are accessible to all residents to meet their passive and active recreational needs.</p> <p>School Site and Community Park Space <i>Hawks Ridge</i> NSP proposes one school site of approximately 5.0 ha in size, located in the eastern half of the neighbourhood. This site is intended to accommodate a future Public Elementary / Junior High School with associated park space facilities. As a result of the school site's size and location, adjacent to a collector roadway, the school site will serve as a major gathering place for the neighbourhood, provide opportunities for passive and active recreation opportunities and ensure adequate automobile and future transit accessibility. In addition, this site will offer views of the lake and of the surrounding area due to its elevation and will become a destination for sightseeing. The development timing of the school site is dependent upon available funding from the Province and demand (i.e. a threshold of school aged population being present in the neighbourhood).</p> <p>Park Space Pocket Parks will be used to serve residential sub-areas within the neighbourhood for passive and active recreation opportunities. A variety of park spaces are proposed within the neighbourhood to meet the needs of all users within this community. Their placement will ensure that all residents have convenient access to parkland for everyday activities. A 1.4 hectare park is located within the western portion of the neighbourhood surrounded by residential land uses. This park is ideally located along a primary collector road with ample frontage allowing for good access. The site will be programmed to accommodate a</p>	

variety of passive and active recreation uses.

A number of promontory parks are located through the plan area. These parks take advantage of the views towards the natural area and Big Lake.

Linkages

A significant feature of the *Hawks Ridge* NSP is the extension of a green “spine” from Big Lake and the North Saskatchewan River Valley Ravine into the neighbourhood.

All parks and open space are connected to the pedestrian network within the NSP to ensure that they are accessible with the residential uses and the surrounding developing neighbourhoods. The park locations are linked with linear corridors, enabling additional recreational options and increasing active transportation (i.e. walking, bicycling, rollerblading) possibilities within the neighbourhood. These connections will be provided by a combination of greenways, multi-use trails along arterial roadways and minor pedestrian connections. Trails are proposed along the edge of Big Lake and natural area, which link all open space areas including connections to Lois Hole Provincial Park.

Utilizing existing pipeline and utility right-of-ways, the multi-use corridor network connects residents and neighbouring communities to recreation focal points within the NSP. Multi-use trail connections may also ultimately extend beyond the boundaries of the NSP to link with existing / future neighbourhoods.

Overall, *The Hawks Ridge neighbourhood* provides an internal pedestrian network that is highly connected, direct and convenient.

Walkways

A number of walkways are proposed in the plan area, which serve as minor pedestrian connections. These walkways will consist of concrete sidewalks and will enhance pedestrian connectivity in the neighbourhood by establishing pedestrian connections to open spaces. The exact location of these connections will be determined at the subdivision stage.

Objective (19) Provide a school/park site which is accessible via walkway linkages, automobiles and transit.

NSP Policy	Implementation
<p>a) The school/park site shall have frontage along public roadways to accommodate flexible building design, parking access, drop-off/pick-up areas and school bus zones as well as to ensure sightlines, natural surveillance, adequate lighting and connectivity to pedestrian routes.</p>	<p>a) Figure 11 – Land Use Concept and Figure 12 – Trail Network illustrate the location of the school/park site adjacent to collector roadways, pedestrian links, and multi-use trails.</p>
<p>b) The school building envelope shall be a minimum 200m from the pipelines, or as stated in approved applicable regulations and policies.</p>	<p>b) The design layout of the school developed by Urban Planning and Environment shall comply with all applicable city policies.</p>
<p>c) Design of the collector roadways abutting the school/park site shall include sidewalks on both sides.</p>	<p>c) and d) The Subdivision Authority shall have regard for the provision of sidewalks on roadways and the location of residential uses adjacent to the school.</p>
<p>d) No front drive accesses will be permitted onto collector roadways from residential areas across</p>	

Hawks Ridge Neighbourhood Structure Plan

from the school/park site.	
Rationale: The school/park is adjacent to a collector roadway and is well-connected through a network of multi-use trails, walkways and sidewalks.	

Objective (20) Promote pedestrian accessibility to Big Lake, the central natural area, school/park site, mixed use areas, and public transit routes.

NSP Policy	Implementation
<p>The Hawks Ridge Neighbourhood incorporates an array of pedestrian linkages along sidewalks, walkways and multi-use trails that connect to Big Lake, the central natural area, top-of-bank, school/park site, mixed use sites, public transit and neighbouring amenities.</p>	<p>Figure 11 – Land Use Concept and Figure 12 – Trail Network conceptually illustrate the location of neighbourhood focal points and the pedestrian connections to be provided at the time of subdivision and rezoning.</p>
<p>Rationale: The NSP provides a well-connected and integrated network which accommodates multiple modes of transportation, with a focus on pedestrians, bicycles and public transit usage. Figure 12 – Trail Network highlights this network of multi-use trails and walkways, which are intended to provide a high degree of connectivity within the plan.</p> <p>Multi-use trails shall be provided along the top-of-bank, edge of natural area, pipeline corridor, greenways, and the east side of 215 Street connecting the neighbourhood to various external locations. The constructed wetlands area also considered an amenity and part of the overall open space system within the neighbourhood. These facilities provide a visual amenity for residents and additional passive recreational opportunities, harmonizing the pedestrian network and open space system within the neighbourhood. The landscape design of the bioremediation / constructed wetlands and the walkway system in the Hawks Ridge NSP area shall utilize native plant material in order to extend and support the ecology of Big Lake and the North Saskatchewan Ravine System.</p>	

Objective (21) Maintain a top-of-bank line according to the requirements of the Municipal Government Act (MGA), Top-of-Bank Policy C542, and the North Saskatchewan River Valley Area Redevelopment Plan (ARP).

NSP Policy	Implementation
<p>The TOB line along Big Lake shall be surveyed in cooperation with, and endorsed by City of Edmonton Departments. The agreed-upon TOB line shall be subsequently registered at Land Titles by the landowner.</p>	<p>The TOB line has been surveyed for lands of participating landowners and endorsed by the applicable City of Edmonton Departments.</p>
<p>Rationale:</p> <p>Top-of-Bank</p> <p>The design of Hawks Ridge proposes a combination of top-of-bank trail and road along Big Lake. Providing a top-of-bank trail and road is supported by both neighbourhood planning principles and environmental rationale while still fulfilling the goal of the Policy to provide open space between ravines and urban development, and to provide public access to the ravine.</p> <p>In summary, the choice for a top-of-bank trail is supported by:</p> <ul style="list-style-type: none"> Consistency with the overall Big Lake minimal impact design philosophy; 	

- ☞ A more tranquil nature appreciation experience;
- ☞ The fact that opportunities for parking and staging areas can still be incorporated with a top-of-bank trail;
- ☞ Minimizing the pollutants entering the ravine, as automobile traffic is the largest contributor of pollutants running off from roadways;
- ☞ Minimizing conflicts between vehicles and wildlife, thereby reducing wildlife mortality;
- ☞ Minimizing wildlife barriers to movement by keeping vehicles/roadways at a greater distance from the ravine. Some species who require more vegetated areas for protection during movement may perceive vehicles/roadways as a threat;
- ☞ Reducing vehicular noise impacts to wildlife species residing or preying in the ravine.

The plan proposes to dedicate 100 % Top-of-Bank walkway and 30% top-of-bank roadway along Big Lake and the central Natural Area which complies with the City’s policy C542. Accordingly, the design includes a combination of top-of-bank roadway buffered by viewpoint/pocket parks. The combined approach fulfills the purpose of the Policy to provide public access and protection with numerous open spaces, the top-of-bank setback, portions of top-of-bank roadway and other public access points (walkways) proposed adjacent to the ravine.

The top-of-bank trail shall provide a continuous linkage with various access points from residential sub-areas. The TOB walkway should accommodate pedestrian and bicycle access along Big Lake and the ravine edge, and provide vistas at strategic viewpoints throughout the neighbourhood.

A Top-of-bank walk / NSRVARP Bylaw delineation is required on the lands legally known as the NW ¼ 13-53-25-4 and NE ¼ 13-53-25-40 (which are lands owned by non participants of the NSP). Prior to rezoning, the applicants are required to conduct a top-of-bank walk with the City of Edmonton to establish the appropriate development limits in accordance with City policies.

3.5.9 Transportation

The transportation network has been designed to meet both the internal and external traffic generated by the neighbourhood in accordance with City of Edmonton’s guidelines and standards. A hierarchy of arterial, collector and local roadways are intended to facilitate the efficient movement of vehicular traffic (see **Figure 13 – Transportation Network**). Vehicular access to the surrounding arterial roadways will be provided via five neighbourhood entrance/exits.

Objective (22) Provide a collector roadway system which moves vehicular traffic efficiently through the neighbourhood.	
NSP Policy	Implementation
The number of residential lots fronting onto and having direct access to a collector road should be minimized, where possible. Access to medium density residential and mixed uses will be reviewed on a site by site basis.	<p>Figure 13– Transportation Network illustrates the alignment of arterial and collector roadways.</p> <p>Zoning and subdivision approval will ensure ground oriented residential uses do not access directly to the collector roadway directly across from the school/park site.</p> <p>The Subdivision Authority will have regard for the number of lots having direct access onto collector roadways the subdivision stage and according to current policy and</p>

Hawks Ridge Neighbourhood Structure Plan

	<p>directives.</p> <p>The Development Officer shall have regard for access locations to non-ground oriented residential uses.</p>
<p>Rationale:</p> <p>Regional Roadway Network</p> <p>The <i>Hawks Ridge</i> NSP will benefit from a high level of accessibility to the metropolitan Edmonton area, the City of St. Albert, Sturgeon and Parkland Counties, as a result of its close proximity to the following existing and proposed arterial roadways (see Figure 13 - Transportation Network). These roadways include:</p> <ul style="list-style-type: none"> ➤ 215 Street (Winterburn Road) ➤ 231 Street ➤ Highway 16 (Yellowhead Trail) ➤ Anthony Henday Drive <p>The northwest portion of Anthony Henday Drive is scheduled for completion by fall 2011. The development and continuation of this facility will provide this area with an added level of accessibility to the Capital Region.</p> <p>Arterial Roadways</p> <p>Arterial roadways facilitate the movement of intra-municipal traffic and generally maintain limited direct access to adjacent land uses. Within the plan area, 215 Street (Winterburn Road) is designated as an arterial roadway, which will provide <i>Hawks Ridge</i> with major north-south access to the surrounding areas. Appropriate spacing of intersections and access-egress requirements are respected along this roadway. The TIA will dictate the appropriate road network required for the development of the neighbourhood.</p> <p>Collector Roadways</p> <p>Collector roadways, which provide internal/external accesses, are spaced at appropriate intervals to facilitate traffic progression (if traffic signals are required) and to ensure that sufficient distance is available to allow for right and left turn-bay development. The collector roadway network provides efficient and convenient access to residential sub-areas and prevents cut-through traffic while enhancing the overall safety of the community. This serves to further reinforce a local 'sense of place' among residential sub-areas, reduce traffic volume and speeds, and establish a pedestrian-oriented streetscape (i.e. walkable environment). Two accesses are proposed to 215 Street and two from 231 Street (see Figure 13- Transportation Network).</p> <p>The proposed lane requirements for these roadway facilities as well as the arterial roadway network will be addressed in detail in the Big Lake Neighbourhood Three TIA, which will be submitted under separate cover. Other access and roadway requirements will be determined at the redistricting and subdivision stages to the satisfaction of Transportation Services.</p> <p>Local Roadways</p> <p>Local roadways provide access to adjacent land uses and maintain a limited role in the overall movement of traffic within the <i>Hawks Ridge</i> NSP.</p>	

Objective (23) Mitigate the impact of automobile traffic associated with higher residential densities.

NSP Policy	Implementation
<p>Locate non-ground oriented residential uses adjacent to arterial or collector roadways, to the greatest extent possible.</p>	<p>The Subdivision Authority may review tentative plans of subdivision to ensure non-ground oriented density residential development is primarily accessed from abutting collector and arterial roadways and avoid access via local roadway fronted by ground oriented residential development, to the greatest extent possible.</p>
<p>Rationale: Non-ground oriented residential uses are to be located adjacent to arterial or collector roadways, where possible, to reduce the impact of increased traffic on lower density areas. Parking for vehicles will generally be provided off-street in conjunction with residential development applications (i.e. garage or underground parkade for higher density sites).</p>	

Objective (24) Design a logical local street system which provides numerous connection points throughout the neighbourhood, and which maximizes access to public transit for the greatest number of residents.

NSP Policy	Implementation
<p>Local road linkages and walkways shall be incorporated at appropriate locations between residential uses to improve neighbourhood connectivity.</p> <p>Ensure that the maximum length of cul-de-sacs in residential settings does not compromise City emergency response plans or operation of maintenance equipment.</p>	<p>The Subdivision Authority shall have regard for subdivision design in residential settings to maximize vehicular and pedestrian connections and ensure the provision of adequate emergency services access.</p>
<p>Rationale: All roadways shall be developed with sidewalks in order to facilitate safe and efficient movement of pedestrians. These sidewalks will encourage residents to walk to open spaces, commercial developments and transit, overall reducing the number of vehicle trips and promoting health and social interaction. Where the pattern of roadways does not facilitate a direct route to an amenity or transit, minor walkways will be provided to ensure walkability and accessibility to neighbourhood destinations and transit.</p> <p>Subdivision design should ensure, where practical, that cul-de-sac length does not exceed 120 m. Where this cannot be achieved, the provision of an emergency access to an adjacent cell of development will be required.</p>	

Objective (25) Provide strong connections with surrounding communities.

NSP Policy	Implementation
<p>a) The NSP shall establish strong connections with the adjacent neighbourhoods through the use of arterial and collector roadways, sidewalks, and</p>	<p>a) Figure 11 - Land Use Concept, Figure 12 - Trail Network and Figure 13 - Transportation Network illustrate the</p>

Hawks Ridge Neighbourhood Structure Plan

multi-use trails.	major street patterns and connections with surrounding neighbourhoods.
b) Multi-use trails shall be provided along 215 Street NW.	b) The location and design of multi-use trails along arterial roadways shall be reviewed by Transportation Services at the subdivision stage.
<p>Rationale: Neighbourhood connectivity contributes to the development of a compact, integrated community with a balanced transportation network. Neighbourhoods that have a high degree of connectivity encourage residents to walk to places, reduce the number of trips made by vehicles and promote health and neighbour interaction. Connectivity is characterized by a logical network for movement that links destinations within and outside of the neighbourhood, provides accesses and is integrated with the environment.</p>	

Objective (26) Integrate land use and circulation patterns, considering safety of pedestrians and cyclists.

NSP Policy	Implementation
Ensure pedestrian crossings are safe, convenient and developed at visible locations.	<p>Figure 12– Trail Network illustrates the location of two important pedestrian crossings.</p> <p>The location and design of pedestrian crossings shall be identified at the subdivision approval stage and confirmed by the Transportation Services at the roadway design stage.</p>
<p>Rationale: A number of greenways / walkways cross the collector roadways within the plan area. The greenway in the eastern portion of the neighbourhood crosses the collector roadway in two locations. These are anticipated to be significant pedestrian crossing locations, carrying pedestrian and bicycle traffic to the natural area and school/park site, and should be given extra attention at the subdivision, development and/or roadway design stage through the use of design features such as pavement markings, changing surface materials, or curb extensions to provide additional focus at these key crossing locations.</p>	

Objective (27) Provide public transit services within the plan area in accordance with City of Edmonton Transit System Guidelines and demands, and ensure access to future transit routes and facilities.

NSP Policy	Implementation
The alignment and design of the internal collector roadway system shall maximize access to public transit for the greatest number of residents.	<p>Edmonton Transit Systems will determine the routing for public transit along the arterial and collector roadways which have been identified as future transit routes.</p> <p>The Subdivision Authority will have regard for sidewalk, multi-use trail, and walkway placement to minimize walking distances to transit (within 400 m). Local roadways and</p>

	walkways will be designed to minimize the walking distance to transit as much as possible.
<p>Rationale:</p> <p>Transit Buses</p> <p>A bus network, for both internal and external neighbourhood circulation will be routed using collector and arterial roadways. Public transit service will be extended into the neighbourhood area in accordance with the City of Edmonton Transit System Guidelines and demands. The street network will provide sufficient infrastructure to support effective transit service within the neighbourhood and to external destinations along a variety of options.</p> <p>Transit service will be initiated within the neighbourhood as demands warrant and service delivery becomes economically feasible. Collector roadways will be developed to a suitable standard to accommodate transit and will provide a readily accessible service to all areas of the neighbourhood.</p> <p>Route planning will continue to be adjusted in order to determine the number and frequency of service options required to serve the remaining neighbourhood areas being planned.</p>	

Objective (28) Design an alternative circulation system which promotes pedestrian, bicycle, rollerblade and wheelchair accessible travel and which is linked to key focal points within and outside the neighbourhood.

NSP Policy	Implementation
<p>a) A network of hard-surfaced sidewalks, walkways, and Multi-use trails shall be provided to promote walkability and access to the amenity areas and transit routes.</p>	<p>a) Figure 12 – Trail Network outlines the network, which includes sidewalks alongside roadways, hard surface multi-use trails and a trail along the top-of-bank and central natural area.</p> <p>Multi-use trails will be wider walkways suitable for all modes of alternative circulation (pedestrian, cyclist, etc). They are located within the pipeline corridor, greenways, Top-of-Bank, edge of natural area and within or adjacent to the constructed wetlands and along 215 Street.</p> <p>A naturalized trail is intended for pedestrian circulation adjacent to the north edge of the central natural area, within the buffer area. The width and surface will be determined by Asset Management and Public Works.</p> <p>Pedestrian links illustrate the approximate location of minor walkways intended to connect residential cells to the pipeline corridor, greenways, mixed use sites, and arterial roadways (215 Street). In all instances, the Subdivision Authority will have regard for the dedication of</p>

Hawks Ridge Neighbourhood Structure Plan

<p>b) Traffic calming may be employed to reduce automobile speeds, increase pedestrian safety and improve the streetscape.</p>	<p>pedestrian links to promote walkability and appropriate access to transit facilities. Details regarding location will be determined at the subdivision approval stage.</p> <p>b) Traffic calming measures such as roundabouts, raised intersections or curb extensions may be incorporated along roadways. Details will be confirmed with Transportation Services prior to development.</p>
<p>Rationale:</p> <p>Walkways</p> <p>A number of walkways are proposed in the plan area, which serve as minor pedestrian connections. These walkways enhance pedestrian connectivity in the NSP area by establishing pedestrian connections to open spaces.</p> <p>Greenways</p> <p><i>The Hawks Ridge Neighbourhood</i> provides an extensive greenway network, as identified on Figure 12 – Trail Network. In accordance with the guidelines established under the UPMP, only 0.5 % of the gross developable area (GDA) shall be credited as Municipal Reserve greenways. The purpose of greenways is to link parks and other public open spaces together. Greenways that fit these criteria will be given preference for MR credit. The remainder of the identified greenways shall be dedicated as road right-of-way (ROW). Greenways are approximately 10 m wide, and can accommodate a 3 m wide Multi-use trail. Some of these greenways within the plan area are planned to accommodate bioswales, which will collect stormwater from the greenway and adjacent land uses and channel the flow towards the bioremediation/constructed wetland facility. Greenways that include a bioswale will be dedicated as Public Utility Lots and not as Municipal Reserve. In addition, the greenways may include such things as grassed or naturalized planting, park furniture (i.e. benches, garbage receptacles), trees and shrub beds, and directional and interpretive signage. The overall greenway network will connect the residential sub-areas of the neighbourhood with parks, public spaces as well as Big Lake and the North Saskatchewan River Valley Ravine.</p> <p>Alternative Circulation System</p> <p>All local and collector roadways in <i>The Hawks Ridge neighbourhood</i> will be developed with sidewalks providing a general level of pedestrian access within the community. Pedestrian traffic is emphasized and numerous access and egress points are also provided at neighbourhood boundaries (See Figure 12 – Trail Network). Specifically, all collector roadways have been identified as “Pedestrian Sidewalk along Roadway (both sides)” to illustrate the importance of these roadways in carrying pedestrian traffic.</p> <p>An efficient and continuous pedestrian network connecting key nodes (i.e. school/park, naturalized constructed wetlands, Big Lake, central natural area, mixed use areas) within the NSP will accommodate pedestrian circulation throughout the neighbourhood.</p> <p>A hard-surface multi-use trail is proposed within the pipeline ROW and greenways that runs through the neighbourhood. The land uses abutting the multi-use trail will benefit from improved access and pedestrian traffic.</p> <p>Bicycle circulation within the NSP is designed to follow collector and local roadways within the</p>	

neighbourhood area. Bicycle routes will be integrated with MUT corridors and connect internal and adjacent residential areas and amenities. Routes will be clearly marked using appropriate signage and markings in order to minimize potential conflicts between vehicles, cyclists, and pedestrians in the neighbourhood.

Within the natural area it is proposed that a naturalized trail be provided in order to enhance connectivity from the pipeline corridor to the constructed wetlands, while protecting the integrity of the trees from the impact associated with hard surfaced walkways. Specific details will be confirmed through the Natural Area Management Plan and at the time of development.

Traffic Calming

Traffic calming such as roundabouts, raised intersections or curb extensions at significant roadway intersections are beneficial as they reduce vehicular speeds and enhance pedestrian safety. Roundabouts for instance provide for the continuous movement of vehicles and can beautify the streetscape with trees and plantings or include public art and become neighbourhood focal points. Raised intersections reduce vehicle speeds, improve driver’s awareness of crossings and visually turn intersections into pedestrian-oriented zones. Curb extensions enhance pedestrian safety by reducing crossing distances, relieve sidewalk crowding and provide space for functional elements such as seating, plantings, and furniture.

Objective (29) Establish an Urban Development Line, based upon geotechnical recommendations and current City Policy, to ensure enjoyment, preservation and protection of the North Saskatchewan River Valley and Ravine System.

NSP Policy	Implementation
<p>a) The Urban Development Line (UDL) shall separate developable from non-developable areas to preserve and protect the North Saskatchewan River Valley and Ravine System, ensuring that urban development is reasonably safe from environmental hazard risk and that public access, visual amenities and recreational opportunities are maximized.</p>	<p>a) Geotechnical reports and slope stability analysis have been submitted for the NSP plan area demarcating the Urban Development Line.</p> <p>Additional studies may be required at the rezoning and subdivision stage of development. The recommendations and requirements of these reports as well as current City of Edmonton policy shall be considered prior to rezoning and subdivision approval.</p> <p>The plan proposes to dedicate 100 % Top-of-Bank walkway and 30% top-of-bank roadway along Big Lake and the central Natural Area to conform to the requirements of Policy C542. Accordingly, the design includes a combination of top-of-bank roadway buffered by viewpoint/pocket parks.</p>
<p>b) Lands below the Urban Development Line shall be protected from urban development.</p>	<p>b) Lands that meet the criteria for Environmental Reserve (ER) under</p>

Hawks Ridge Neighbourhood Structure Plan

<p>c) A minimum setback of 10 m, or the setback recommendations of the geotechnical and slope stability analysis - whichever is greater - shall be provided between the top-of-bank and the Urban Development Line. This area shall provide for public access circulation, and civic purposes including geotechnical monitoring and repair, fire fighting, emergency and public safety, drainage control, and dealing with private property encroachment issues.</p> <p>d) A restrictive covenant shall be registered on all properties abutting the Urban Development Line.</p>	<p>Section 664 (1) of the MGA shall be dedicated to the City of Edmonton at the time of subdivision.</p> <p>c) The Urban Development Line shall be demarcated at time of rezoning and subdivision. A Top-of-bank walk / NSRVARP Bylaw delineation is required on the lands legally known as the NW ¼ 13-53-25-4 and NE ¼ 13-53-25-40. Prior to rezoning, the applicants are required to conduct a top-of-bank walk with the City of Edmonton to establish the appropriate development limits in accordance with City policies.</p> <p>d) The Subdivision Authority shall ensure all subdivisions abutting the Urban Development Line provide restrictive covenant pursuant to the geotechnical requirements and slope stability analysis.</p>
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Rationale: Top of Bank Roadway/Park and Top of Bank Walkway

A combination of top-of-bank (TOB) roadway and park, totaling a minimum of 30% of the length of the Urban Development Line, shall be provided as illustrated on **Figure 11 - Land Use Concept** and **Figure 12 - Trail Network**. The City and the single participating landowner have agreed to the plan providing a combination of TOB roadway and park along 30% of the length of the Urban Development Line (UDL) and providing a continuous TOB walkway along the entire length of the UDL. The combined approach fulfills the purpose of the TOB Roadway Policy to provide public access and helps protect the stability of the River Valley. The intention is to prevent encroachment by urban development into the River Valley, facilitate environmental protection, provide access for servicing/maintenance purposes, and to provide an area of public lands for public access along and into the River Valley consistent with the geo-technical slope stability recommendations and the City TOB Policy C542. Final location and alignment of TOB roadway and parks will be established once the Urban Development Line is surveyed and prior to the subdivision of applicable lands.

The *Hawks Ridge* NSP identifies a continuous top of bank / edge of natural area walkway as the primary means of public access along the bank of Big Lake and central natural area. Public access to Big Lake and the natural area will be provided principally through a multi-use trail but will also include a combination of top-of-bank/edge of natural area roadway, park and pedestrian connections. The design of this comprehensive and linked public amenity will reflect the geotechnical requirements of the NSP as well as ensuring public sector access. The top of bank / edge of natural area walkway component will be designed primarily as a hard surfaced multi-use trail, unless otherwise dictated by geotechnical constraints or other considerations, and will be constructed to accommodate pedestrians, bicycles and other wheeled users at the subdivision stage of development on the lands adjacent to Big Lake.

As illustrated on **Figure 11 - Land Use Concept**, the top of bank and edge of natural area line along a portion of the NW and NE ¼ Sec. 13-53-26-W4 were interpreted based upon review of aerial photos, as

the landowners were non-participating and the top of bank was not walked. At the time of rezoning, a formal top of bank walk will be required and the landowners shall provide the appropriate geo-technical and slope stability studies.

Objective (30) Provide buffering (i.e. noise or vibration attenuation) where residential development backs on to major transportation infrastructure.	
NSP Policy	Implementation
Appropriate attenuation study(s) may be required for residential development adjacent to 215 Street NW.	Transportation Services will determine if a noise study and/or vibration study is required for residential development at the subdivision approval stage.
<p>Rationale: If required by Transportation Services, noise level evaluations will be carried out by the developers prior to subdivision application at the design phase of the project. Based on the results of the study, noise attenuation may be required. At a minimum, Transportation Services will require that a double board, no gap fence with a minimum density of 20 kg/m³ be incorporated in the design of arterial roadway and the subdivisions adjacent to arterial roadways.</p> <p>Noise attenuation impacts adjacent to 215 Street NW will be determined at the subdivision stage.</p>	

Technical Summary: The transportation network for the NSP will be provided in accordance with the requirements of the City of Edmonton’s Transportation Services. A Traffic Impact Assessment (TIA) was prepared by Stantec Consulting Ltd. (June 2010) to confirm the appropriateness of the planned transportation network for the neighbourhood.

3.5.10 Infrastructure Servicing and Staging

Hawks Ridge NSP will be a fully serviced neighbourhood designed and constructed in accordance with City servicing standards.

Objective (31) Ensure the <i>Hawks Ridge</i> NSP is serviced to a full urban standard, in an efficient, contiguous and staged manner.	
NSP Policy	Implementation
<ul style="list-style-type: none"> a) Sanitary and stormwater servicing shall be provided in accordance with the associated Neighbourhood Design Report (NDR). b) Water servicing to the NSP area shall be provided in accordance with the associated Water Network Analysis (WNA). c) Shallow utilities shall be extended into the plan area as required. 	<ul style="list-style-type: none"> a) and b) Approval of engineering drawings and servicing agreements shall be required for installation of water, sanitary, and stormwater servicing. c) Installation of shallow utilities shall be executed through servicing agreements.
<p>Rationale:</p> <p>Sanitary Servicing</p> <p>The flow of the sanitary system designed for <i>The Hawks Ridge neighbourhood</i> moves from west to east. Sewage will be conveyed south to the West Edmonton Sanitary Sewer (WESS). The sanitary servicing system is illustrated on Figure 16 – Sanitary Servicing. Further details regarding the sanitary drainage schemes for <i>The Hawks Ridge neighbourhood</i> are provided in the associated Neighbourhood Servicing Review to be submitted under separate cover.</p>	

Hawks Ridge Neighbourhood Structure Plan

Stormwater Servicing

As shown on **Figure 14 – Stormwater Servicing**, three bioremediation/constructed wetland stormwater management facilities are designated within the NSP. They have been located based on natural drainage patterns and pre-development sub-basin drainage boundaries. One naturalized outfall channel is proposed to accommodate discharge into Big Lake (following the historical drainage pattern). Overall stormwater drains to the north central portion of the plan area and discharges further north into Big Lake. More details regarding the stormwater drainage schemes for *The Hawks Ridge neighbourhood* are provided in the associated Neighbourhood Design Report submitted under separate cover.

Water Servicing

Water services for the neighbourhood will be extended from Big Lake Neighbourhood 1 (Trumpeter) via a 450 mm water main. In-development booster pumps are required on Mixed Use and MDR sites along Winterburn Road (215 Street) prior to booster station commissioning. The in-development booster pumps may still be required when the booster station is in service. In-residence pressure reducing valves at lower elevation LDR sites east of the environmental reserve and between 231 Street and the environmental reserve. Pressure monitoring station is required within one of the Mixed Use parcels west of Winterburn Road (215 Street). A future Booster Station for Hawks Ridge Neighbourhood will be located east of Big Lake Neighbourhood 2 (Starling). Water servicing within the neighbourhood will be designed to provide peak hour flows and fire flows for low and medium density residential uses. Water looping will be provided in accordance with the requirements of EPCOR Water along with submission of a Water Network Analysis for review and approval.

Shallow Utilities

Power, gas, and telecommunication services are all located in proximity to the NSP and will be extended into the plan area as required.

Development Staging

The anticipated sequence of development for the *Hawks Ridge* neighbourhood is shown in **Figure 17 – Staging**. Initial development is expected to advance from the east to west.

Infrastructure to service the initial stages of the NSP will be extended from the east at 215 Street (Winterburn Road) into the plan area. The initial stages of development are intended to begin at the outer edge of the neighbourhood and advance towards the west.

In general, development will proceed in a manner that is contiguous, logical and economical with respect to municipal servicing. Development of individual phases may vary from the actual zoning and subdivision applications depending on contemporary market demands and aspirations of the respective landowners. Should sufficient demand warrant or engineering design be made more efficient, portions of separate phases may be developed concurrently.

Technical Summary: The *Hawks Ridge* NSP will be designed in accordance with City of Edmonton servicing standards. Development staging and extension of infrastructure will be contiguous, efficient, and economical while having regard for potential environmental and ecological impacts.

Details regarding stormwater drainage and sanitary service schemes for the *Hawks Ridge* NSP are provided in the associated Neighbourhood Design Report (NDR) to be submitted under separate cover by Stantec Consulting Ltd.

Water looping will be provided in accordance with the requirements of EPCOR Water Services Inc. A Water Network Analysis (WNA) was reviewed and approved by EPCOR Water Services.

Bylaw 15819
July 18, 2011

APPENDIX A: POLICY CONTEXT

This section outlines the various statutory plans, policies, and design principles which are applicable to the *Hawks Ridge* NSP including “The Capital Region Land Use Plan”, “The Way We Grow”, “The Way We Move”, the “City of Edmonton’s Suburban Neighbourhood Design Principles” (SNDP), “Big Lake Area Structure Plan”, and other relevant policies. Applicants seeking amendments to the NSP or applying for rezoning, subdivisions or development permits are required to consult the actual documents for specific guidance on detailed requirements as they apply to particular properties.

3.6 Capital Region Land Use Plan

The Capital Region Land Use Plan’s primary purpose is to manage sustainable growth that protects the region’s environment and resources, minimizes the regional development footprint, strengthens communities, increases transportation choice and supports economic development. The Plan aims to accomplish these objectives through an integrated and strategic approach to planning which coordinates planning and development decisions in the Region and identifies a regional development pattern to complement existing infrastructure, services and land uses.

The *Hawks Ridge* NSP complies with the following Capital Region Land Use Plan principles and policies:

Capital Region Land Use Policy	NSP Compliance with Capital Region Land Use Policy
I. Protect the Environment and Resources:	
A. Preserve and Protect the Environment	
Policy (i) Any development which may cause detrimental effects such as erosion or pollution to lakes, rivers, water bodies and shorelines shall be prohibited unless appropriate mitigating measures are implemented.	Development of lands in proximity to the North Saskatchewan River Valley and Ravine System shall conform to applicable legislation.
II. Minimize Regional Footprint:	
A. Identify, Protect and Prioritize Lands for Regional Infrastructure	
Policy (i) Ensure that lands identified for regional infrastructure such as energy transmission, highways, municipal infrastructure, transit and related facilities are protected from incompatible development. Policy (ii) The Province and the municipalities shall continue to identify lands that will be used for regional infrastructure. Once identified, these lands shall be protected for the designated use in applicable plans.	A regional sanitary sewer corridor located within the neighbourhood will be integrated with urban development.
B. Concentrate New Growth Within Priority Growth Areas	
Policy (i) Most new growth shall occur within priority growth areas.	<i>The Hawks Ridge</i> neighbourhood is located in Priority Growth Area “B” which sets a minimum

Hawks Ridge
Neighbourhood Structure Plan

Capital Region Land Use Policy	NSP Compliance with Capital Region Land Use Policy
<p>Policy (ii) Priority shall be given to accommodating growth in major employment areas and in locations that meet at least three of the following four criteria:</p> <ul style="list-style-type: none"> a) Existing and proposed multi-movement corridors, including transit nodes; b) Adjacent to existing and proposed major employment areas; c) Redevelopment and intensification opportunities within existing urban areas; and d) Locations that utilize existing infrastructure and servicing capacity or logical and efficiently extend that infrastructure. <p>Policy (v) Priority growth areas shall incorporate intensive forms of development that significantly exceed existing development patterns.</p>	<p>density target of 30 units per net residential hectare in order to facilitate development which existing development patterns.</p> <p>The <i>Hawks Ridge</i> NSP exceeds the density target by providing approximately 34 units per net residential hectare.</p>
<p>D. Support Expansion of Medium and Higher Density Residential Housing Forms</p>	
<p>Policy (i) New residential development shall provide a greater proportion of higher density residential units.</p> <p>Policy (iii) Greenfield developments shall make provision for a mixture of uses including a diversity of housing forms, community services, local retail and employment opportunities.</p> <p>Policy (iv) Transit accessibility must be included in the design of all new developments.</p>	<p>The <i>Hawks Ridge</i> NSP provides approximately 37% of the overall number of residential units as low-rise/multi-medium units in highly accessible locations adjacent to transit service and in proximity to commercial land uses.</p>
<p>III. Strengthen Communities:</p>	
<p>B. Support Healthy Communities</p>	
<p>Policy (ii) Improve accessibility to community services by providing sidewalks, bicycle trails to encourage walking and cycling and locate these services within proximity to transit, where possible.</p>	<p>The <i>Hawks Ridge</i> NSP has a well connected and integrated open space system which allows residents the opportunity to choose alternative modes of transportation other than the single occupancy vehicle.</p>
<p>C. Support Public Transit</p>	
<p>Policy (i) Provide a mix of higher intensity land uses along transit corridors, at nodes, and employment centres.</p> <p>Policy (iii) New developments shall be designed for connectivity and accessibility to transit facilities.</p>	<p>Higher residential densities and commercial uses have been located adjacent to collector or arterial roadways to promote walkability and transit usage.</p>
<p>D. Support Innovative and Affordable Housing Options</p>	
<p>Policy (ii) All residential developments shall provide</p>	<p>The <i>Hawks Ridge</i> NSP allows for the development</p>

Capital Region Land Use Policy	NSP Compliance with Capital Region Land Use Policy
a greater variety of housing types.	of a range of residential housing types based on single/semi-detached, row housing, and low-rise/multi-/medium units.
IV. Increase Transportation Choice:	
A. Integrate Transportation Systems with Land Use	
<p>Policy (iii) Design transportation infrastructure to support multiple modes of transport.</p> <p>Policy (iv) Support development of inclusive communities to reduce the need for travel.</p>	A network of arterial, collector and local roadways along with sidewalks, walkways and multi-use trails will provide residents with the ability to drive, walk, cycle, rollerblade or other through the neighbourhood or into the surrounding region.
B. Support the Expansion of Transit Service in Various Forms	
<p>Policy (i) Expand and extend the level, quality and range of public transportation options available to serve the Region.</p> <p>Policy (iv) Support multi-modal transportation options by providing multi-use streets sufficient to accommodate bicyclists, motorists and pedestrians.</p>	A network of arterial, collector and local roadways along with sidewalks, walkways and multi-use trails will provide residents with the ability to drive, walk, cycle, rollerblade or other through the neighbourhood or into the surrounding region.
V. Ensure Efficient Provision of Services:	
A. Design Integrated Physical Infrastructure within the Region	
Policy (ii) Identify and protect corridors for transportation, transit and infrastructure requirements.	A regional sanitary corridor operated by the Alberta Capital Region Wastewater Commission (ACRWC) will be appropriately integrated with urban development.

3.7 Municipal Development Plan - The Way We Grow

The Way We Grow – the City of Edmonton’s Municipal Development Plan (MDP), is a comprehensive plan which provides direction for development and implementation of more specific and detailed plans by the industry / private landowners and the City. The Way We Grow “Land Development Concept” map designates this community as “Developing, Planned and Future Neighbourhoods” suitable for urban development. The growth coordination strategy emphasizes completion of developing neighbourhoods and a focus of land development activity and infrastructure provision and expansion to approved neighbourhood plans to fulfill the City’s commitment to residents and make efficient use of infrastructure investments.

The NSP complies with the following MDP strategies:

MDP Policy	NSP Compliance with MDP Policy
MDP Policy 3.2.1.1 - Ensure a combination of single family and multi-family housing development	The NSP will provide single family and multi-family housing for approximately 10 to 15 years at current absorption and development rates in northwest

Hawks Ridge Neighbourhood Structure Plan

MDP Policy	NSP Compliance with MDP Policy
potential is available for the next 30 years.	Edmonton.
MDP Policy 3.2.1.3 - Achieve a balance between residential, industrial, commercial, institutional, natural and recreational land uses in the city through land development policies and decisions.	The <i>Hawks Ridge</i> NSP establishes a variety of development opportunities through the provision of several types of land components (single/semi-detached residential, row housing, low rise/multi-/medium units and Mixed Use).
MDP Policy 3.2.2.3 - Ensure City departments and agencies collaborate to identify all municipal land needs within an Area Structure Plan, Neighbourhood Structure Plan or Area Redevelopment Plan boundary prior to plan approval.	The City has identified the need for school and park spaces within the NSP boundary for municipal purposes.
MDP Policy 3.6.1.6 - Support contiguous development and infrastructure in order to accommodate growth in an orderly and economical fashion.	The NSP represents contiguous growth in northwest Edmonton, as the surrounding neighbourhoods develop concurrently.
MDP Policy 4.3.1.1 - The City of Edmonton will take municipal reserve, school reserve or municipal and school reserve in accordance with the Municipal Government Act and will use the land or money for the purposes as defined by the Municipal Government Act.	The NSP provides municipal reserve as a combination of land and cash-in-lieu.
MDP Policy 4.3.1.11 - Use the Community Knowledge Campus program in new neighbourhoods as a means of creating a focal point, improving educational related partnership opportunities at school sites and encouraging lifelong learning facilities.	The central location of the school/park site within the <i>Hawks Ridge</i> NSP endows the residents with excellent access to the open space and educational opportunities and has been designed with input from the Edmonton Public School Board.
MDP Policy 4.4.1.1 - Provide a broad and varied housing choice, incorporating housing for various demographic and income groups in all neighbourhoods.	The NSP allows for the development of a range of residential housing types based on single/semi-detached, row housing and low-rise/multi-/medium units.
MDP Policy 4.6.1.1 – Support Corporate initiatives to improve walkability and other active transportation modes.	The NSP has a well connected and integrated open space system which allows residents the opportunity to choose alternative modes of transportation other than the single occupancy vehicle.
MDP Policy 4.6.1.3 – Support the design of accessible and safe active transportation networks in accordance with best practices in universal design..	The network of sidewalks, walkways and multi-use trails will be designed according to best practices in universal design and will provide residents with the ability to walk, cycle, rollerblade or other through the neighbourhood.
MDP Policy 5.6.1.4 – Design density, land uses and buildings to benefit from local transit service by minimizing walking distances to transit service and	Higher residential densities and amenity areas have been located adjacent to collector or arterial roadways to promote walkability and transit usage.

MDP Policy	NSP Compliance with MDP Policy
by providing safe and comfortable pedestrian streetscapes and high quality transit amenities.	
MDP Policy 5.6.1.7 – Identify and preserve public views and vistas of the North Saskatchewan River Valley and Ravine System as new development occurs and require public access in accordance with the Top of Bank Policy.	The NSP provides Top of Bank Roadway/Park in accordance with the Top of Bank policy which will preserve public vistas of the North Saskatchewan River Valley.
MDP Policy 5.7.1.1 – Design streets, sidewalks and boulevards to provide safe, accessible, attractive, interesting and comfortable spaces for pedestrians, cyclists, automobiles and transit and to accommodate utilities, landscaping and access requirements for emergency response services.	The NSP supports the use of enhanced pedestrian crossings and traffic calming measures such as roundabouts as a means of providing pedestrian safety and attractive street designs.
MDP Policy 6.2.1.4 – Plan for retail centres that meet the daily needs of residents in area and Neighbourhood Structure Plans.	A variety of commercial opportunities are available in the NSP through the proposed mixed use sites.
<p>MDP Policy 7.1.1.4 – Determine appropriate buffer areas around the periphery of natural areas identified for protection.</p> <p>MDP Policy 7.3.2.1 – Ensure that the North Saskatchewan River Valley and Ravine System remains primarily an area of unstructured, low-intensity and passive recreation, while accommodating appropriate balance of recreation activity within park nodes as described in the Urban Parks Management Plan and the Ribbon of Green.</p> <p>MDP Policy 7.3.2.3 – Ensure that the lands within the North Saskatchewan River Valley and Ravine System Area Redevelopment Plan boundary will be acquired for parks purposes and natural areas protection.</p> <p>MDP Policy 7.3.2.4 – Make selected areas of the North Saskatchewan River Valley and Ravine System accessible to all citizens regardless of age or mobility, where feasible.</p> <p>MDP Policy 7.3.2.5 – Provide pedestrian and bicycle connections to increase movement and accessibility.</p> <p>MDP Policy 7.3.3.2 – Maintain adequate separation between new urban development and the North Saskatchewan River Valley and Ravine System through the City’s Top of Bank Policy, with viewscapes and public access to the River Valley preserved.</p>	<p>The top of bank (TOB) and Urban Development Line (UDL) have been established through site visits with participating landowners and city staff, pursuant to geo-technical and slope-stability analysis, and the requirements of the Top of Bank Policy.</p> <p>A minimum 10m Public Upland Area has been provided in all instances along the entire length of the TOB, between the TOB and UDL, except where a greater setback is warranted based upon geotechnical considerations.</p> <p>A TOB Walkway along the entire length of the UDL, within the Public Upland Area, will maximize access for local residents and the general public to a continuous circulation system abutting the River Valley and Ravine System. This access is provided for circulation and amenity purposes, connection to the park system within the River Valley and Ravine System, slope repair and geotechnical monitoring, fire fighting, emergency and public safety, drainage control and for dealing with encroachment issues.</p>

Hawks Ridge Neighbourhood Structure Plan

MDP Policy	NSP Compliance with MDP Policy
<p>MDP Policy 7.4.1.1 – Link parks and open spaces with natural systems through development and design to strengthen the connectivity of Edmonton’s ecological network, where feasible.</p>	<p>Parks and constructed wetlands have been located and inter-connected to promote them as walking destinations. These have been designed to serve as destination for pedestrians and cyclists and to provide passive recreation opportunities.</p> <p>The stormwater management facilities will be constructed as naturalized constructed wetlands to provide additional wildlife habitat and improve water quality via their filtration systems.</p>
<p>MDP Policy 8.1.3.1 – Plan for residential and economic development within the City which supports the Capital Region Growth Plan.</p> <p>MDP Policy 8.1.7.3 – Upon provincial approval of the Capital Region Plan Addendum, Edmonton’s new Area Structure and Neighbourhood Structure Plans in the Capital Region Plan’s priority growth area B, F, Cw or Ce will be required to meet or exceed the Capital Region’s minimum density targets.</p>	<p>The neighbourhood is located in the Capital Region Growth Plans Priority Growth Area “B” which sets a minimum density target of 30 units per net residential hectare. The <i>Hawks Ridge</i> NSP exceeds this target.</p>
<p>MDP Policy 9.2.1.1 – Apply City of Edmonton Policy C515 Oil and Gas Facilities regarding setbacks, risk management and urban development.</p> <p>MDP Policy 9.2.1.4 – Collaborate with the ERCB, Government of Alberta, industry operators and the development industry to plan for compatibility with adjacent land uses so that negative impacts from oil and gas activities are minimized.</p> <p>MDP Policy 9.3.1.4 - In consultation with the Energy and Resources Conservation Board (ERCB), ensure development setbacks from oil and gas pipelines are achieved through the subdivision approval process.</p>	<p>Urban development in the vicinity of all resource well sites will be planned in accordance with the City policy document entitled “Policy Guidelines for the Integration of Resource Operations and Urban Development” (1985) and Policy C515 “Oil and Gas Facilities” (2007) and other relevant City procedures.</p> <p>Development of lands involving abandoned wells will comply with ERCB guidelines for development around abandoned wells. An assessment of risk and nuisance will be conducted on operating or suspended oil and gas wells, as directed by existing or future City policy for the integration of oil prior to any rezoning of the parcel where the facility is located.</p>

3.8 Transportation Master Plan - The Way We Move

The Way We Move – the City of Edmonton’s Transportation Master Plan (TMP), establishes a framework for how the City will address its future transportation needs. The TMP identifies seven strategic transportation goals related to Transportation and Land Use Integration, Access and Mobility, Transportation Mode Shift, Sustainability, Health and Safety, Well-Maintained Infrastructure, and Economic Vitality. The TMP in conjunction with the MDP will guide and shape the transportation system and land use patterns to achieve a sustainable and livable city.

The *Hawks Ridge* NSP complies with the following Transportation Master Plan strategic goals:

TMP Strategic Goal	NSP Compliance with TMP Strategic Goal
<p>TMP Strategic Goal: Transportation and Land Use Integration – The transportation system and land use/urban design complement and support each other so that the use of transit and transportation infrastructure is optimized and supports best practises for land use.</p>	<p>The <i>Hawks Ridge</i> NSP provides a range of land uses which allows opportunities for residents to live, work and play within the neighbourhood.</p>
<p>TMP Strategic Goal: Access and Mobility – The transportation system is interconnected and integrated to allow people and goods to move efficiently throughout the city and provide reasonable access with a variety of modes for people across demographic, geographic, socio-economic and mobility spectrums.</p>	<p>The NSP has been designed to provide transit access to the greatest number of residents through an inter-connected system of sidewalks, walkways and multi-use trails.</p> <p>Areas of higher density residential have been located adjacent to transit routes to promote shorter walking distances and higher usage.</p>
<p>TMP Strategic Goal: Transportation Mode Shift – Public transportation and active transportation are the preferred choice for more people making it possible for the transportation system to move more people more efficiently in fewer vehicles.</p>	<p>The NSP has a well connected and integrated open space system which allows residents the opportunity to choose alternative modes of transportation other than the single occupancy vehicle.</p>
<p>TMP Strategic Goal: Sustainability – Transportation decisions reflect an integrated approach to environmental, financial and social impacts thereby creating sustainable, livable communities that minimize the need for new infrastructure and increase residents' quality of life.</p>	<p>The NSP creates a sustainable community by providing increased residential densities in support of neighbourhood intensification, public transit and alternative methods of transportation.</p>
<p>TMP Strategic Goal: Health and Safety – The transportation system supports healthy, active lifestyles, and addresses user safety and security including access for emergency response services, contributing to Edmonton's livability.</p>	<p>The network of sidewalks, walkways and multi-use trails provide residents with the ability to walk, cycle, rollerblade or other through the neighbourhood, improving health and wellness.</p>

3.9 Suburban Neighbourhood Design Principles

The purpose of these design principles is to encourage flexibility and innovation in the design and servicing of new neighbourhoods. The applicable principles are listed below:

SND Principle	NSP Compliance to SND Principle
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Hawks Ridge Neighbourhood Structure Plan

SND Principle	NSP Compliance to SND Principle
<p>Principle 1: Design neighbourhoods with the intent of sharing common infrastructure facilities among neighbourhoods</p>	<p>The school / park site and the commercial sites act as common infrastructure for adjacent neighbourhoods. Through site orientation and location, provision of mixed-uses, proximity to the future transit system and connectivity these developments will provide options for service delivery for adjacent residents.</p>
<p>Principle 2: Design and locate school and community facilities to provide inter-neighbourhood focal points</p>	<p>The school / park site within NSP is central to the perceived school catchment area and will be used by neighbourhood residents.</p>
<p>Principle 3: Design the arterial and collector roads along a grid pattern, peripheral to the neighbourhoods. Use local roadways to distribute neighbourhood traffic from/to these arterial and collector roadways.</p>	<p>The arterial roads along the periphery of the NSP are generally designed in a grid pattern.</p>
<p>Principle 4: Design neighbourhood streets (both neighbourhood design and cross section of roadway) with standards that cater to the main intended use of the road</p>	<p>City standards and regulations ensure streets are designed to accommodate pedestrians, cyclists and vehicles. Streets, sidewalks and pathways have standardized widths and materials depending on their function.</p>
<p>Principle 5: Provide convenient pedestrian and bicycle access throughout the neighbourhood and especially between destination points within and outside the neighbourhood</p>	<p>Pathways, walkways, sidewalks and MUT corridors connect pedestrians and cyclists to community focal points and destinations such as Big Lake, the North Saskatchewan River Valley, school / park site, constructed wetland SWMF's, future Big Lake Neighbourhoods and the future adjacent transit system.</p>
<p>Principle 6: Provide Transit Services to the edges of new neighbourhoods using the arterial and collector roadways in conjunction with appropriately designed, strategically located and conveniently accessed transit waiting zones</p>	<p>Higher density residential uses are located adjacent to arterial roadways, transit system, and future neighbourhoods to the south. Transit service is also provided along portions of the internal collector roadway in the NSP.</p>
<p>Principle 7: At the area and neighbourhood planning stage, plan the location of the school / park facilities relative to neighbourhood staging such that they can be consolidated, serviced, and available early in the development of a neighbourhood or catchment area</p>	<p>The Staging Concept for the NSP indicates development will proceed generally from the east advancing west and south. The school / park site will develop in a timely fashion as a result of this staging concept.</p>
<p>Principle 8: Design park and institutional sites and buildings within the neighbourhood and community focal points to be adaptable to other uses or levels of education over time</p>	<p>In time, the buildings developed on the school / park site which accommodates the school may be redeveloped to address the changing needs and uses of the community.</p>
<p>Principle 9: Explore opportunities to provide smaller, dispersed open space and parks in a neighbourhood to provide for localized needs while meeting the recreational needs of residents</p>	<p>There are smaller, dispersed park sites located throughout the NSP.</p>

SND Principle	NSP Compliance to SND Principle
of the catchment area	
Principle 10: Optimize the use of land and capital requirements for facilities such as churches, schools, community leagues and storm water management	Opportunities exist to share parking between the school / park site and the Community League in the NSP. This reduces capital development costs for these uses.
Principle 11: Create a linked open space system through open spaces created by stormwater management facilities, some utility rights-of-way, preservation of appropriate natural areas and drainage courses, and school and park open spaces	The dispersed park sites, the constructed wetland SWMF's, school / park site are all connected by Greenways and multi-use corridors.
Principle 12: Locate multi-family uses toward the edge of new neighbourhoods and close to the community and neighbourhood focal points	Higher density residential uses have been located on arterial and collector roadways and in proximity to parks/open space within the NSP.
Principle 13: Use stormwater management techniques which provide an alternative(s) to the manmade lakes and dry ponds typical to Edmonton	The NSP has been designed to incorporate the existing lay of the land to take advantage of the existing contours and depressions for the constructed wetland SWMF's.
Principle 15: Provide opportunity through the residential districts of the Land Use Bylaw for the intensification of housing forms and for alternative site design and building siting.	The NSP strategically places higher density residential uses throughout the plan area.
Principle 16: Use current population projections and student generation formulas when planning facilities for a neighbourhood. Take into account the life cycle of the neighbourhood.	The school / park site has been situated and sized in accordance with the Edmonton Public School Board.

3.10 Urban Parks Master Plan

The Urban Parks Management Plan (UPMP) provides strategic direction for the acquisition, design, development, and management of Edmonton's parkland until the year 2016. This plan was adopted by City Council in August 2006.

The following principles are relevant in the context of *Hawks Ridge*:

UPMP Principle	NSP Compliance to UPMP Principle
Principle 1 – Active Living: City and partner actions demonstrate a strong commitment to active living through the acquisition of a network of connected parks and open spaces.	The NSP identifies a network of parks, schools and greenways and natural areas which together create a connected and public open space system.
Principle 2 – Urban Wellness: City and partner actions demonstrate a strong commitment to building social capital and urban wellness in the community through the development of urban	The NSP ensures visual and physical access to parks, and public safety through application of CPTED principles.

Hawks Ridge Neighbourhood Structure Plan

UPMP Principle	NSP Compliance to UPMP Principle
parks.	
Principle 3 – Natural Capital: City and partner actions demonstrate a strong commitment to preservation of natural capital through ecological decision making.	The combination of top of bank roadway/park and walkway along the Urban Development Line and the restriction of development below the Urban Development Line ensure preservation of the North Saskatchewan River Valley.
Principle 4 – Creative Urban Design: City and partner actions demonstrate a strong commitment to a higher quality of life and urban sustainability through placemaking, creative urban design and the provision of diverse landscape opportunities and experiences.	The design of the NSP promotes opportunities to enhance the community’s quality of life through place-making, creative urban design, and provision of diverse landscape opportunities. The NSP ensures land uses adjacent to the natural area and public parks are complementary. Examples of desirable adjacent land uses include multifamily residential, stormwater ponds, trail corridors, and so on.
Principle 5 – Safe Parks: City and partner actions demonstrate a strong commitment to user safety through the creation and management of safe park environments.	The NSP ensures visual and physical access to parks, and public safety through application of CPTED principles.
Principle 7 – Integrated Parks: City and partner actions demonstrate a strong commitment to the integration of City, school and community facilities into the park system to meet community need.	The NSP provides a school/park site and Urban to accommodate future educational and community needs. Front drive accesses directly across from school drop-off zones will not be permitted to ensure safety and reduce operational problems for school boards and the City. The school/park site is fully accessible by public transit.

3.11 City of Edmonton Housing Mix Guidelines

Council approved (1991) guidelines recommend that the ratio of dwelling types in new suburban neighbourhoods be based on a mix of 65% to 85% low density residential (LDR) units and 15% to 35% medium density residential (MDR) units.

The *Hawks Ridge* NSP exceeds this ratio and proposes a mix of 54% LDR (Ground-Oriented Units) and 46% Non-Ground Oriented unit (MDR) development. In keeping with more recent policy, this plan seeks to achieve a degree of intensification, to provide a choice of housing forms within the neighbourhood, and to generally make more efficient use of new suburban land. This density should support public transit, use infrastructure more effectively, provide a user base for community facilities, and encourage greater social mix.

3.12 Natural Area Systems (Policy C531)

Natural area systems provide essential habitat for plants and animals, support biodiversity, and maintain a high quality of life for current and future citizens by supplying critical ecological services, as well as opportunities for education, research, appreciative forms of recreation, and aesthetic and spiritual inspiration. The City of Edmonton will balance ecological and environmental considerations with economic and social considerations in its decision making and demonstrate that it has done so.

The conservation of Big Lake and the central natural area conforms to the following policy principles:

- ✦ Enhances and sustains the quality of life for Edmontonians.
- ✦ Provides ecological information to support planning and development applications;
- ✦ Conserves and protects natural area systems through the physical planning and development process; according to the provisions of municipal, provincial and federal policy and legislation;
- ✦ Promotes the awareness and participation of landowners, the general public and non-government organizations in conserving, preserving, and restoring natural sites.

3.13 North Saskatchewan River Valley and Ravine System Protection Overlay

The purpose of this Protection Overlay is to provide a development setback from the North Saskatchewan River Valley and Ravine System. The *Hawks Ridge* NSP complies with the policies and directives established under the North Saskatchewan River Valley and Ravine System Protection Overlay. A geotechnical report detailing the required setbacks and other recommendations to ensure bank stability for development planned within the overlay has been submitted and approved by the City of Edmonton.

4 APPENDIX B: TECHNICAL STUDIES

The following technical studies have been completed in support of the *Hawks Ridge* NSP:

- ✦ Neighbourhood Design Report (NDR)
- ✦ Hydraulic Network Analysis (HNA)
- ✦ Transportation Impact Assessment (TIA)
- ✦ Phase I Environmental Site Assessment (ESA)
- ✦ Historical Resources Overview (HRO)
- ✦ Historical Resources Impact Assessment (HRIA)
- ✦ Preliminary Geotechnical Report
- ✦ Ecological Design Report (EDR)
- ✦ Parkland Impact Assessment (PIA)

5 APPENDIX C: FIGURES

Hawks Ridge

Neighbourhood Structure Plan



Hawks Ridge
Neighbourhood Structure Plan - May 2011

Figure 1
Location



Legend

--- Neighborhood Boundary

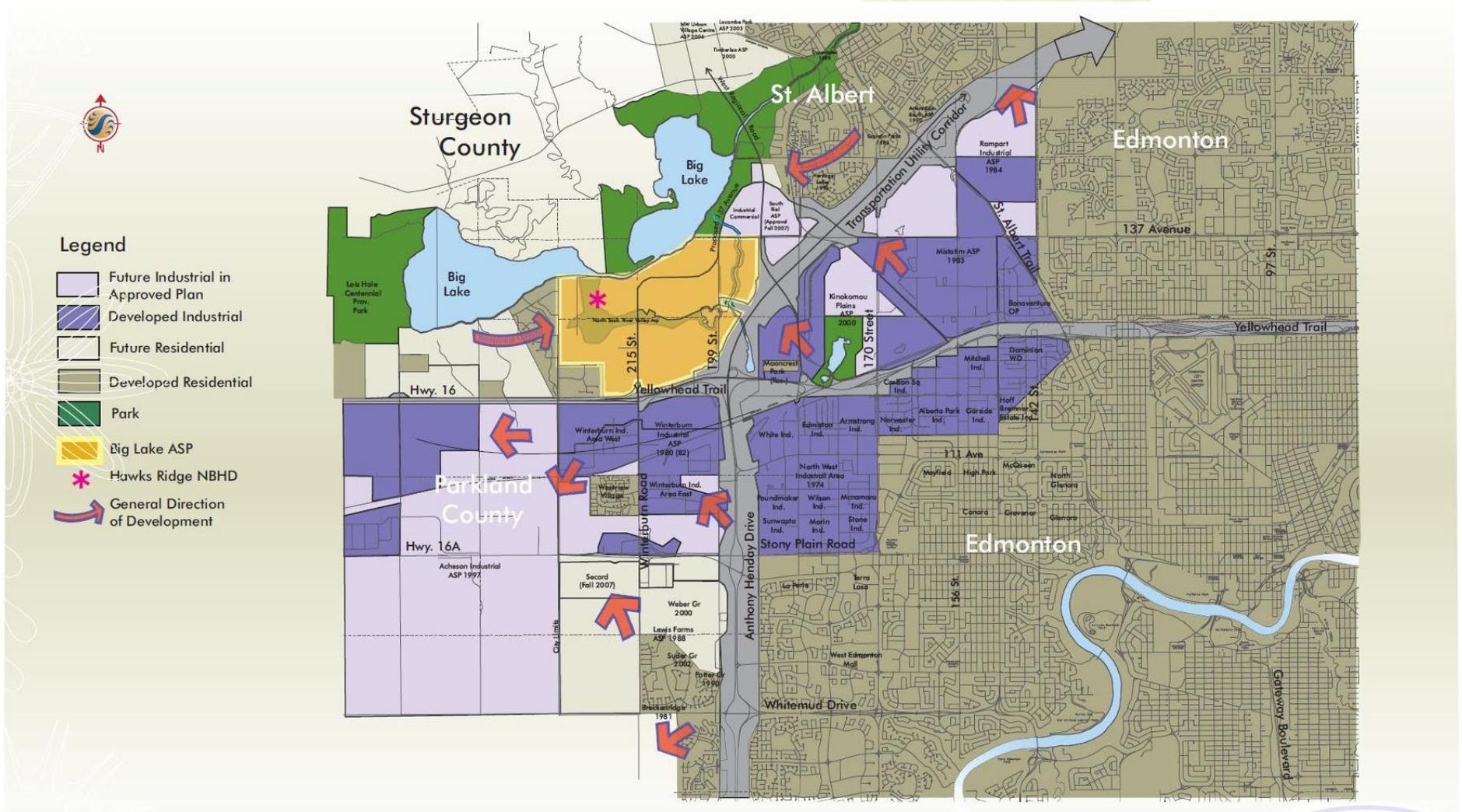


Hawks Ridge

Neighbourhood Structure Plan - May 2011

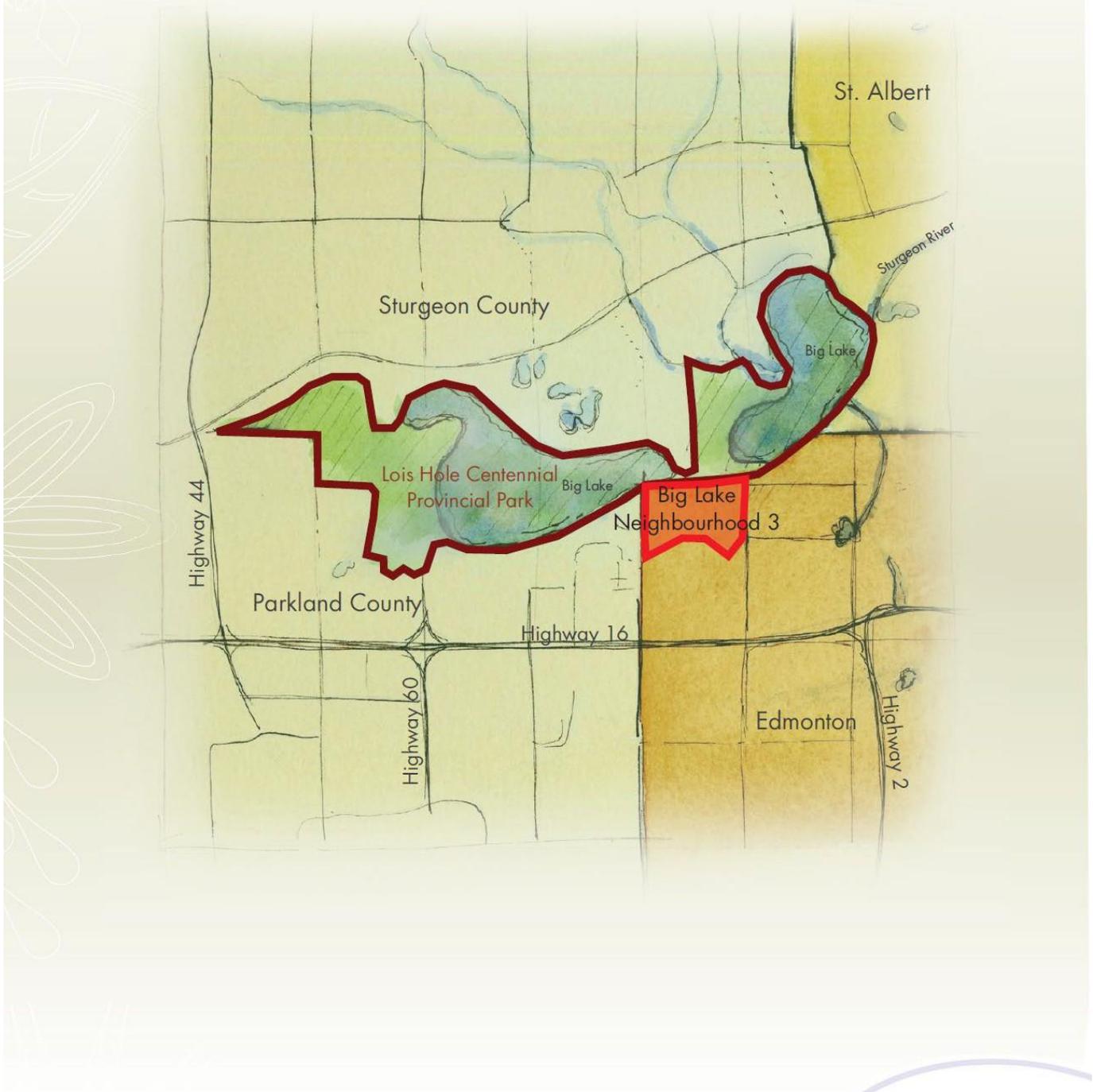
Figure 2
Context Photo

Hawks Ridge Neighbourhood Structure Plan



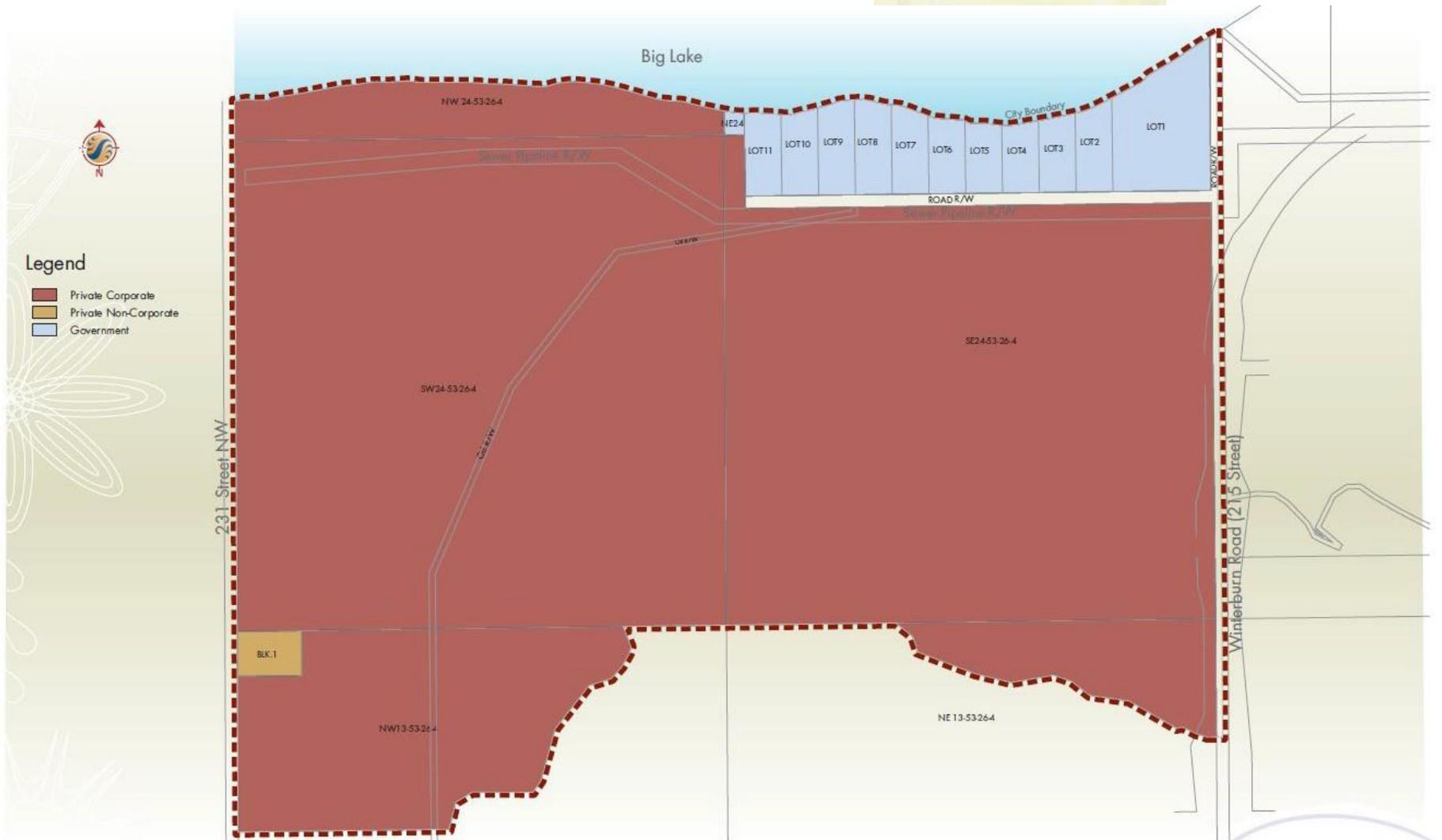
Hawks Ridge
Neighbourhood Structure Plan - May 2011

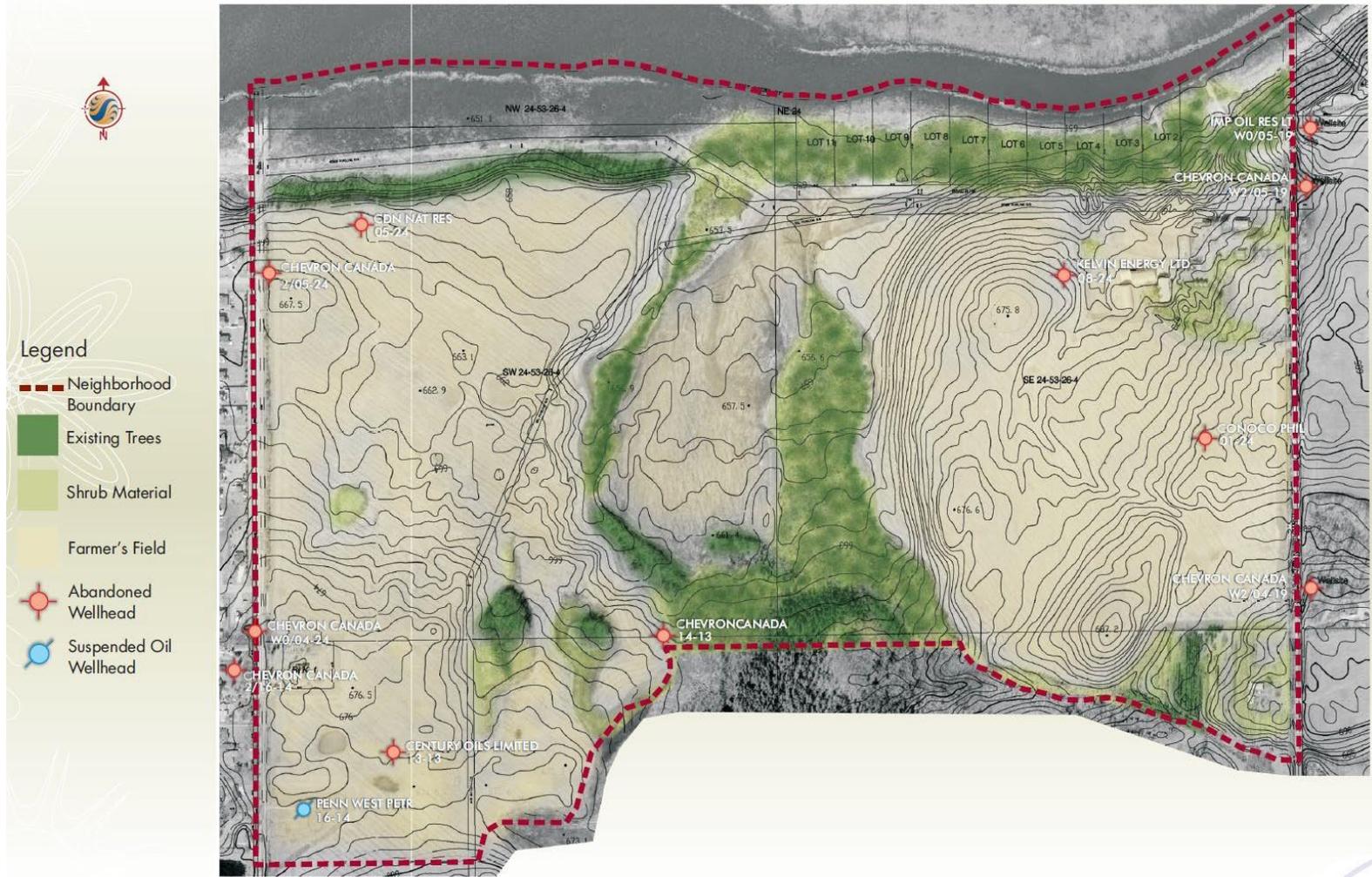
Figure 3
Context Of Big Lake



Hawks Ridge

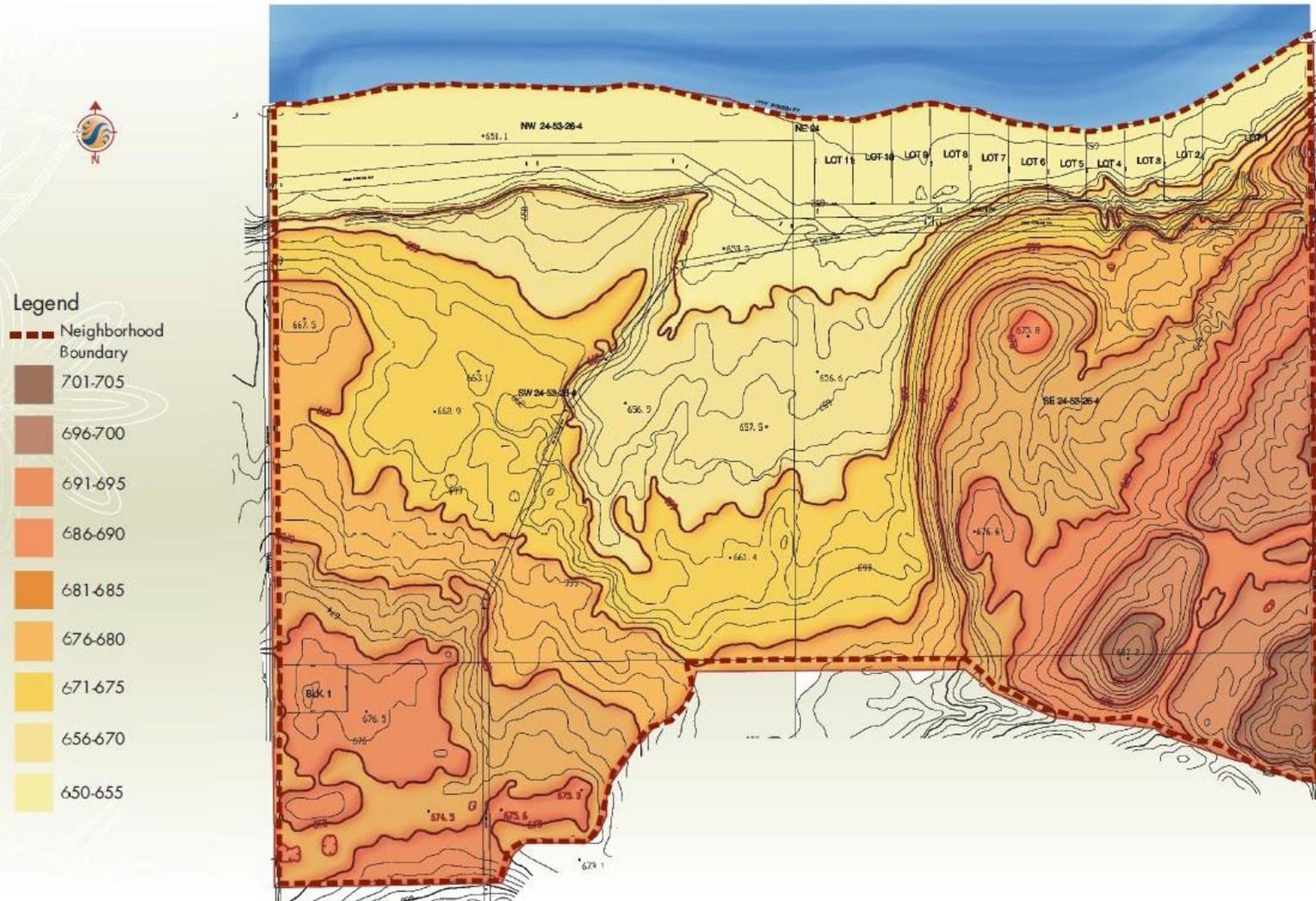
Neighbourhood Structure Plan





Hawks Ridge

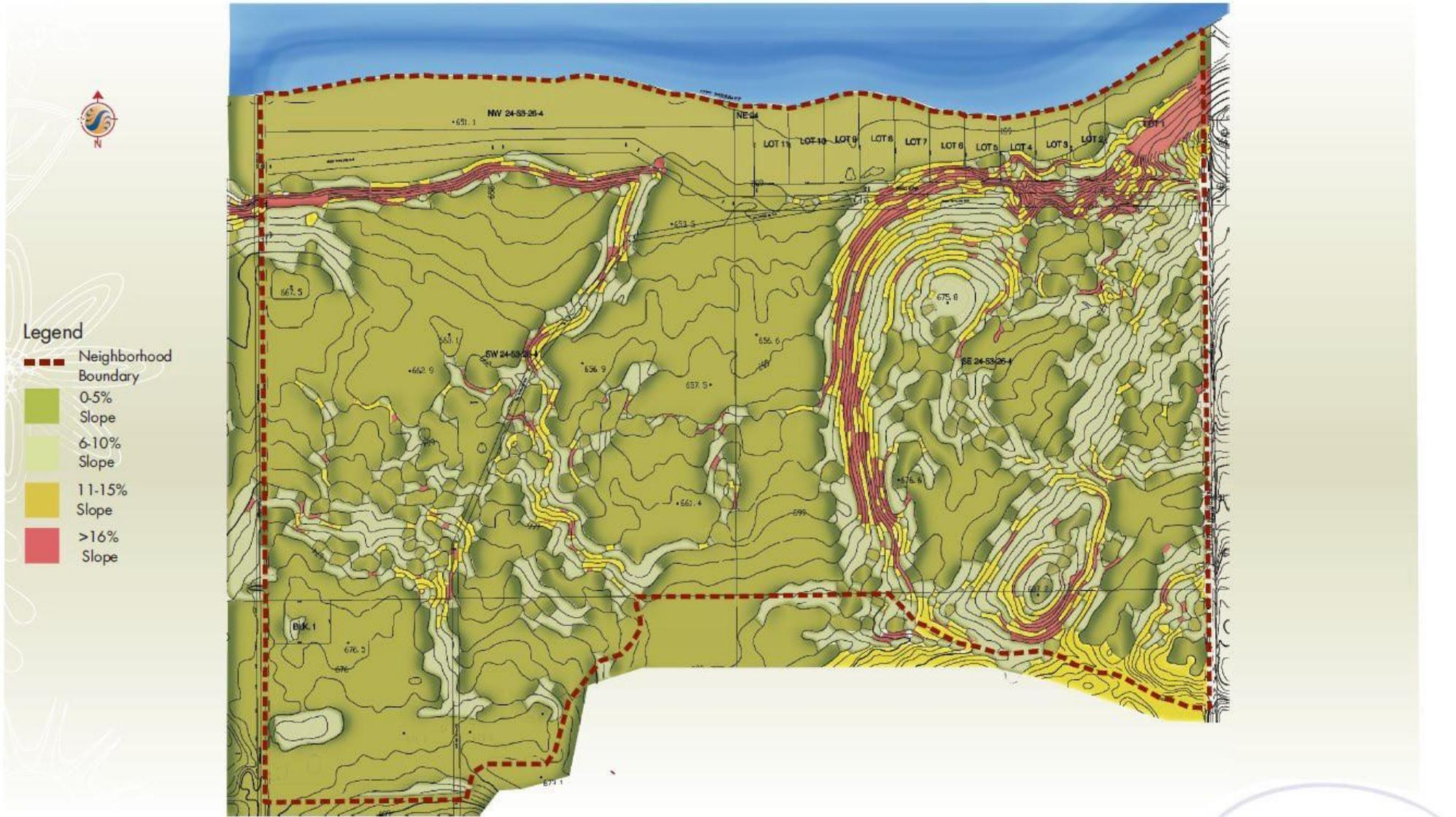
Neighbourhood Structure Plan

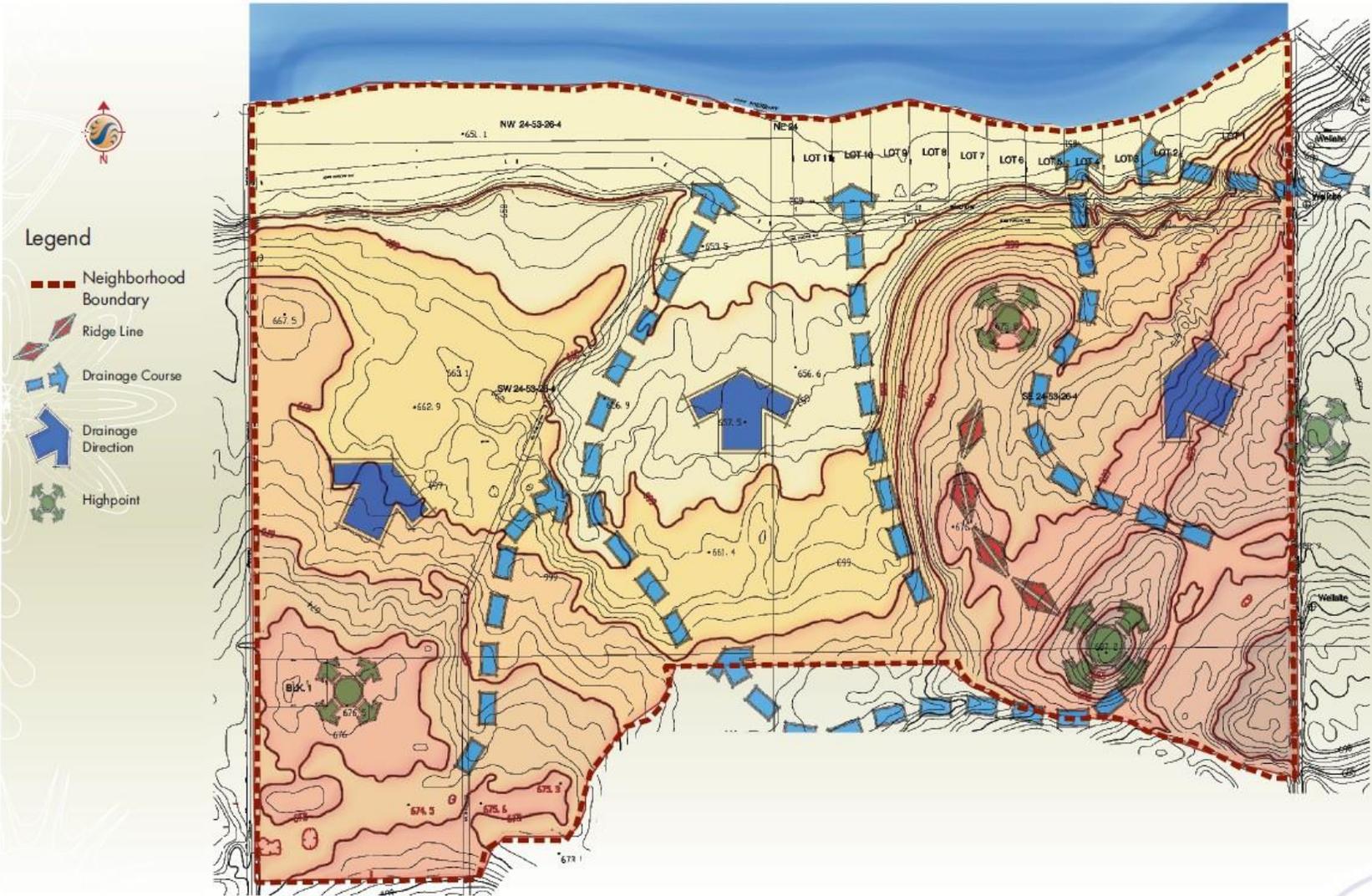


Hawks Ridge
Neighbourhood Structure Plan - May 2011

Figure 7
Topography Analysis







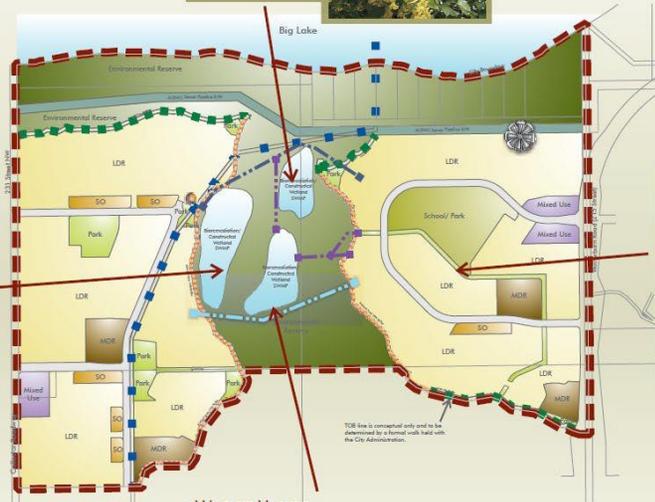


BIOREMEDIATION/ CONSTRUCTED WETLAND STORMWATER MANAGEMENT FACILITY:
 CONSTRUCTED WETLANDS SYSTEMS USE SOILS, VEGETATION, AND HYDROLOGY TO REMOVE POLLUTANTS FROM STORM WATER. THE SYSTEMS ARE EFFECTIVE IN ATTENUATING FLOOD FLOWS, REDUCING POLLUTANT LOADINGS, AND PROVIDING WILDLIFE HABITAT. FROM A COMMUNITY DESIGN STANDPOINT, WETLANDS SYSTEMS CAN CREATE OPEN SPACE, OFFER IMPROVED AESTHETICS OVER TRADITIONAL TREATMENT SYSTEMS, AND PROVIDE RECREATIONAL AND EDUCATIONAL OPPORTUNITIES.

BIOREMEDIATION/ CONSTRUCTED WETLAND STORMWATER MANAGEMENT FACILITY:



NATURALIZED EDGE

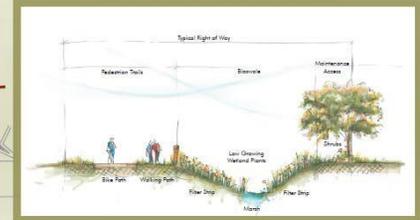


SOE line is conceptual only and to be determined by a formal study lead with the City Administration.



BIOSWALE:
 VEGETATED CHANNEL SYSTEMS AND BIOSWALE ARE ALTERNATIVES FOR CONVEYING WATER AWAY FROM STREETS, DOWN SPOUTS, AND STRUCTURES. THEY ARE LOW-COST ALTERNATIVES TO CONVENTIONAL CONVEYANCE SYSTEMS, SUCH AS CURBS OR CONCRETE CHANNELS. THESE ALTERNATIVES REDUCE STORM WATER VELOCITIES AND ALLOW SEDIMENT AND POLLUTANTS CONTAINED WITHIN STORM WATER TO BE FILTERED.

TYPICAL GREENWAY CROSS SECTION WITH BIOSWALE



HAWKS RIDGE

NEIGHBOURHOOD STRUCTURE PLAN
 NOVEMBER 2013

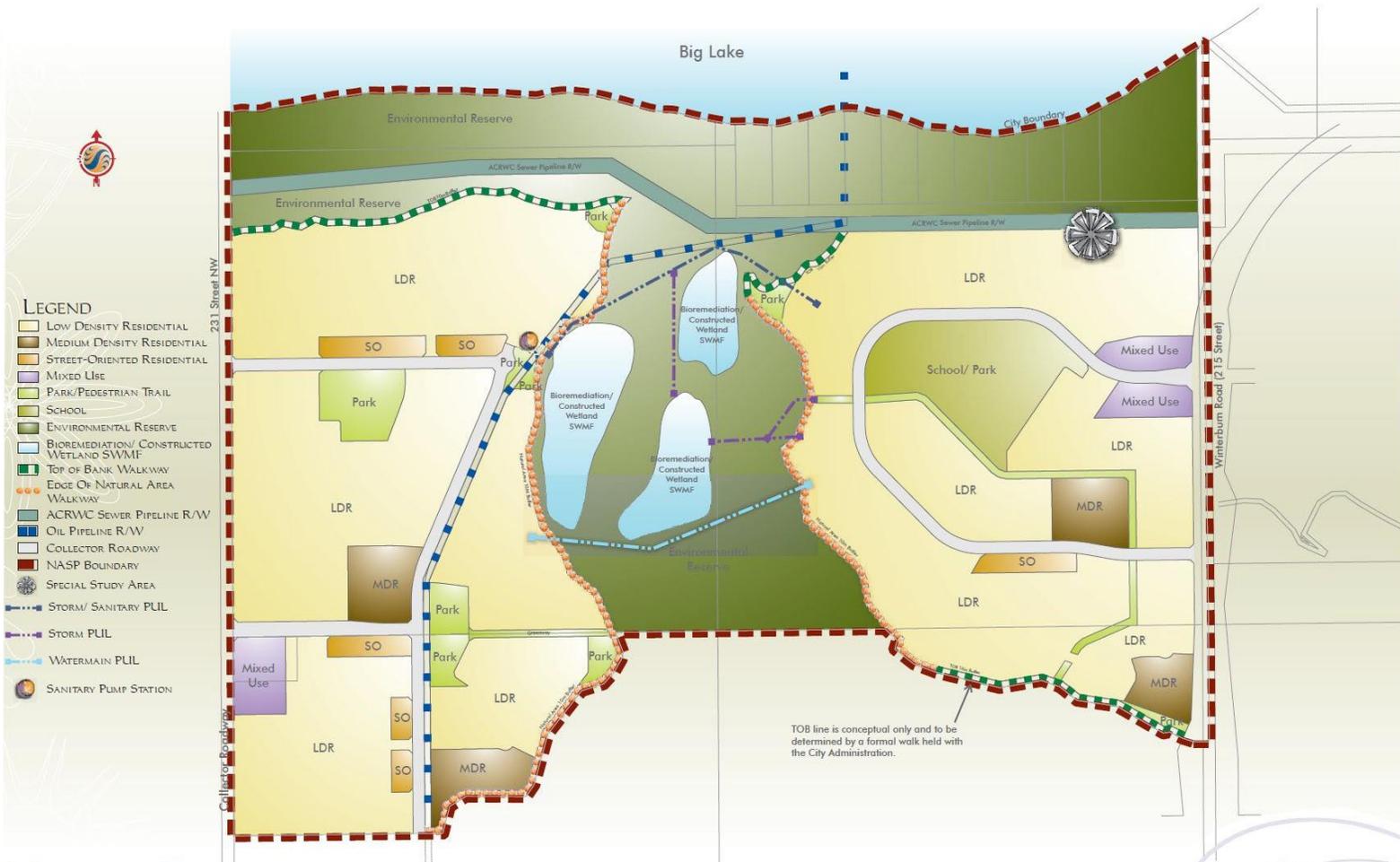
FIGURE 10 LOW IMPACT DESIGN OPPORTUNITIES

Bylaw 16736
 Approved
 May 26,
 2014

Hawks Ridge

Neighbourhood Structure Plan

SCHEDULE "C"

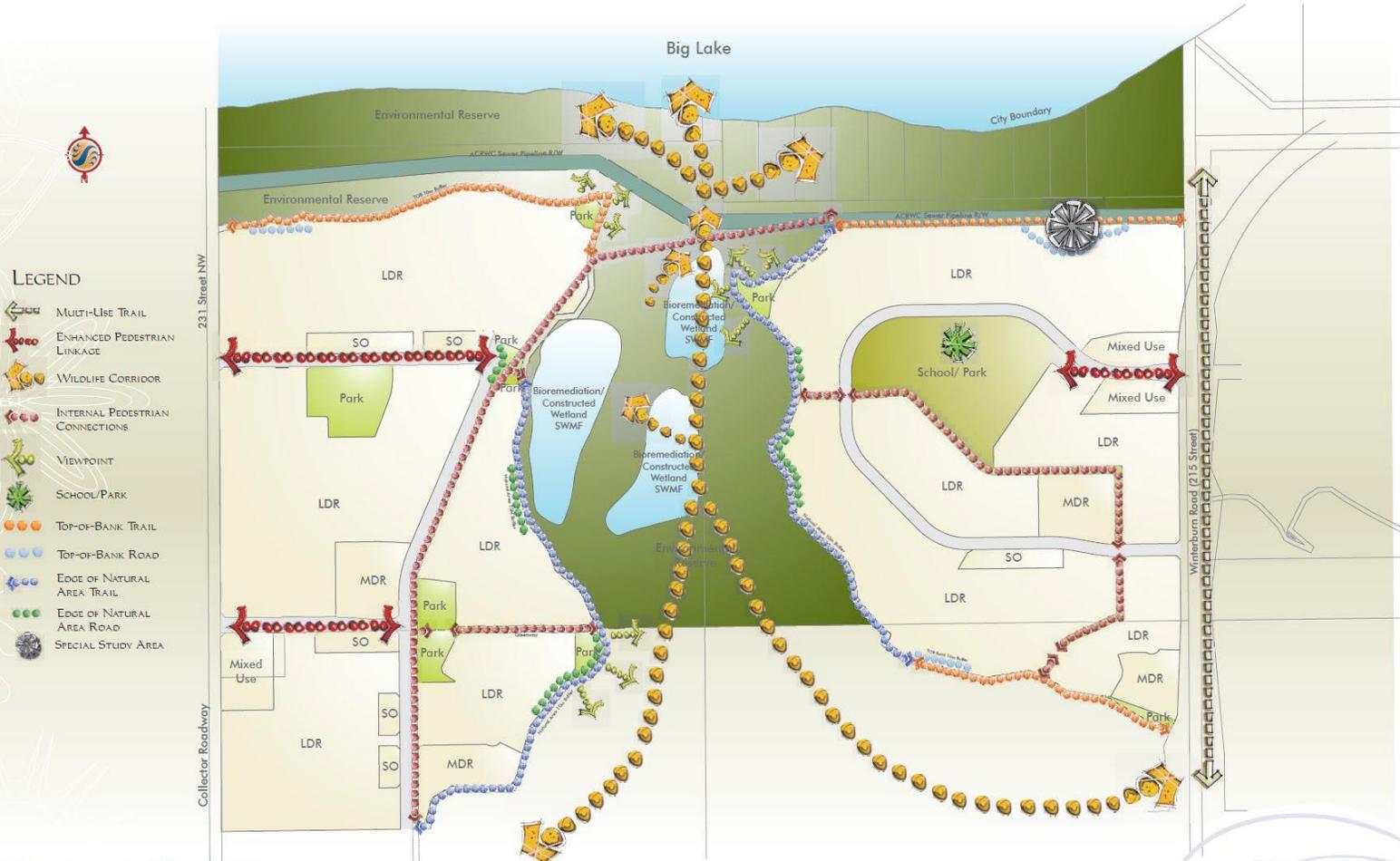


Bylaw 16736
Approved
May 26,
2014

HAWKS RIDGE
NEIGHBOURHOOD STRUCTURE PLAN

FIGURE II
LAND USE CONCEPT

SCHEDULE "D"



Bylaw 16736
Approved
May 26,
2014

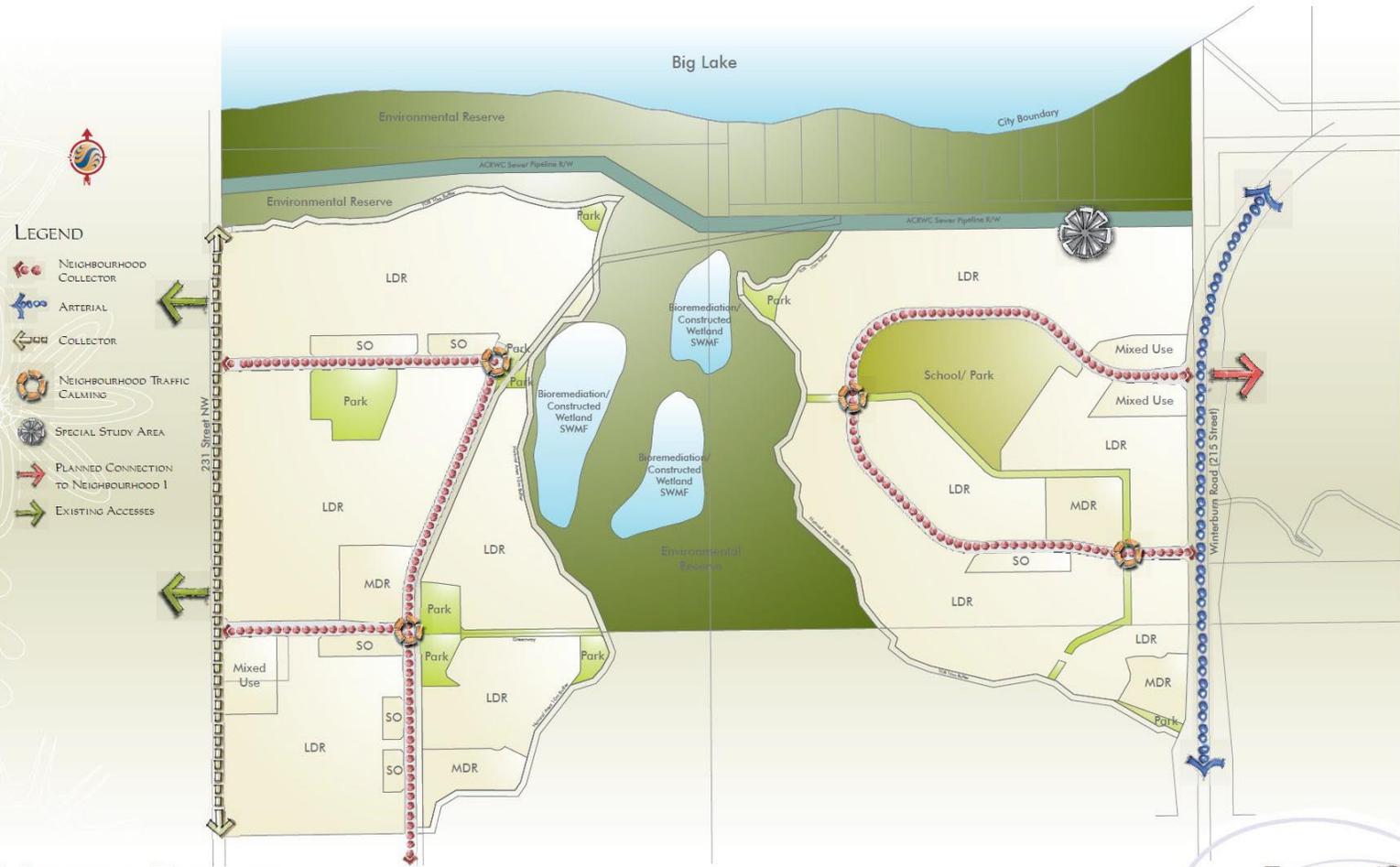
HAWKS RIDGE
NEIGHBOURHOOD STRUCTURE PLAN

FIGURE 12
TRAIL NETWORK

Hawks Ridge

Neighbourhood Structure Plan

SCHEDULE "E"



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May 26,
2014

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Neighbourhood Structure Plan

FIGURE 13
TRANSPORTATION NETWORK



- LEGEND**
- BIOSWALES (PLIL)
 - STORMWATER (UNDERGROUND)
 - ACRWC SEWER ROW
 - BIOREMEDIATION/ CONSTRUCTED WETLAND SWMF
 - EXISTING DRAINAGE COURSE
 - PROPOSED REALIGNED DRAINAGE COURSE
 - POND INLETS (PLIL)
 - POND OUTLETS (PLIL)
 - STORM/ SANITARY PLIL
 - STORM PLIL
 - SPECIAL STUDY AREA

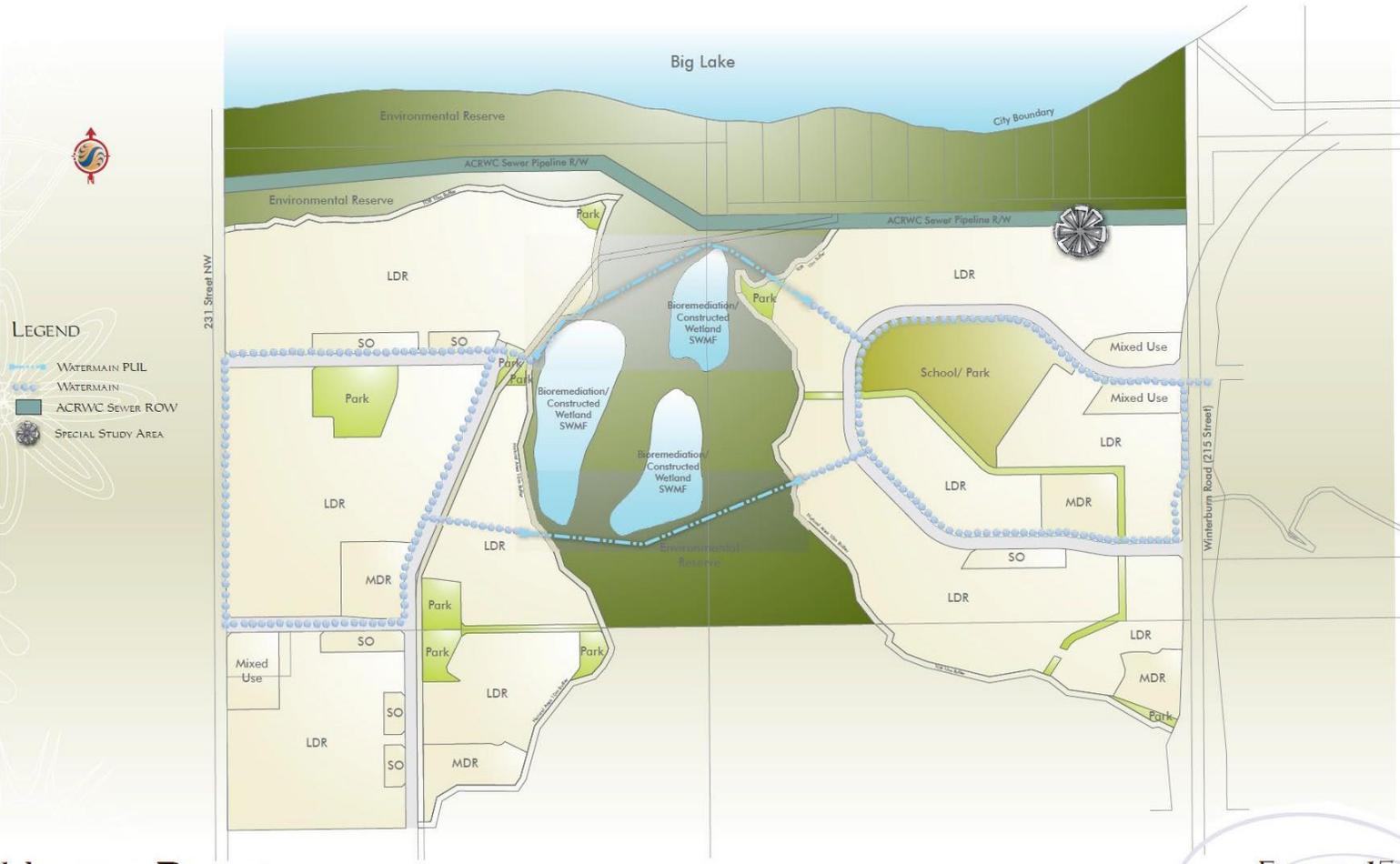
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HAWKS RIDGE
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FIGURE 15
WATER SERVICING



SCHEDULE "H"



- LEGEND**
- SANITARY FORCEMAIN
 - SANITARY TRUNK (GRAVITY LINE)
 - ACRWC SEWER ROW
 - SPECIAL STUDY AREA
 - SANITARY PUMP STATION
 - STORM/ SANITARY PLIL

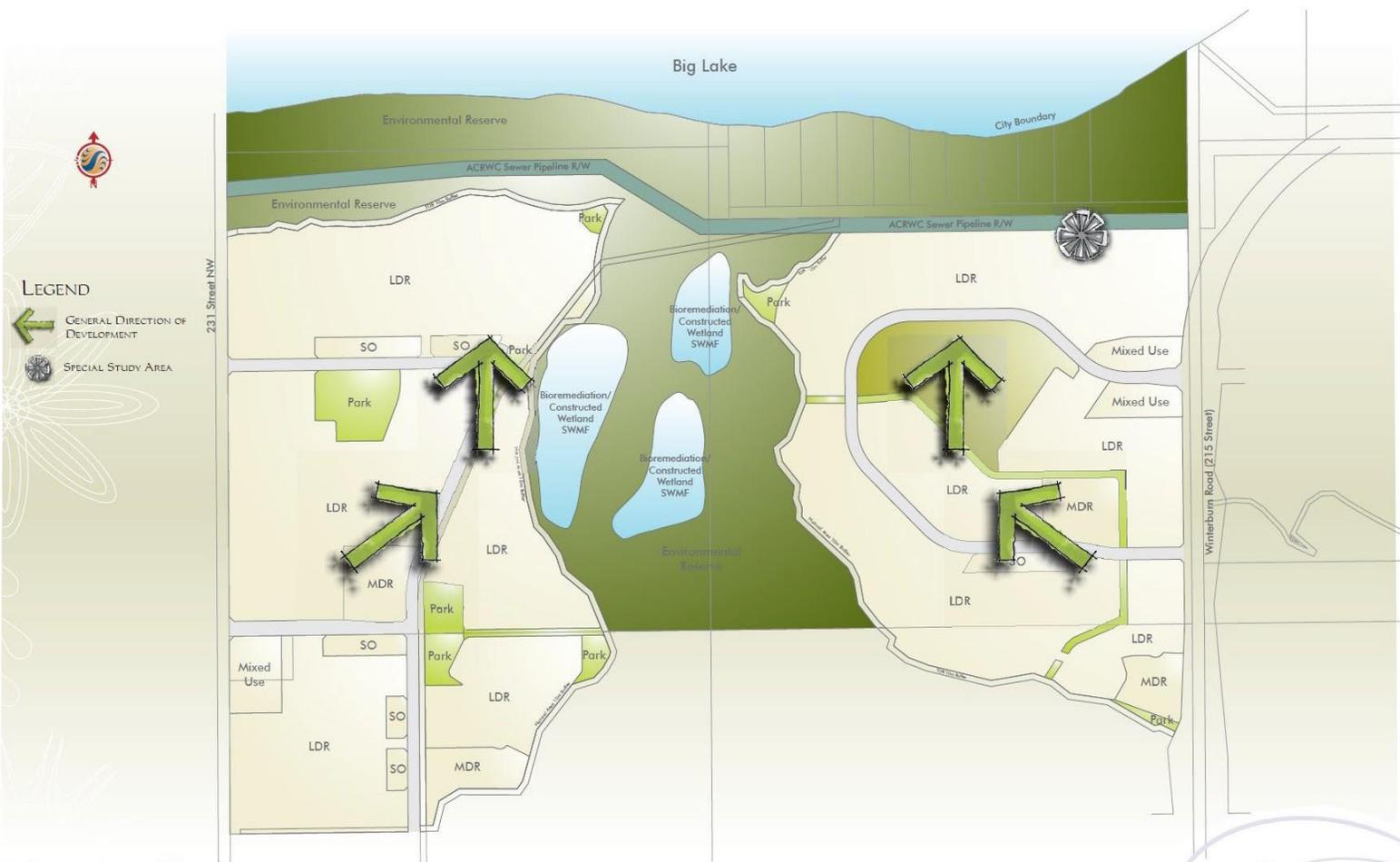
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FIGURE 17
STAGING

