

Charter Bylaw 19774

A Bylaw to amend Bylaw 16353,
being the Horse Hill Area Structure Plan by adopting
the Horse Hill Neighbourhood 1A Neighbourhood Structure Plan

WHEREAS pursuant to the authority granted to it by the Municipal Government Act, on May 22, 2013, the Municipal Council of the City of Edmonton passed Bylaw 16353, being the Horse Hill Area Structure Plan; and

WHEREAS Council considers it desirable to amend Bylaw 16353, the Horse Hill Area Structure Plan;

WHEREAS Council desirable to amend Bylaw 16353, being Horse Hill Area Structure Plan by adding new neighbourhoods; and

NOW THEREFORE after due compliance with the relevant provisions of the Municipal Government Act RSA 2000, ch. M-26, as amended, the Municipal Council of the City of Edmonton duly assembled enacts as follows:

1. Bylaw 16353, the Horse Hill Area Structure Plan, is hereby further amended by adding as Appendix “B” the Horse Hill Neighbourhood 1A Neighbourhood Structure Plan being:
 - a) the map entitled “Charter Bylaw 19774 – Horse Hill Neighbourhood 1A Neighbourhood Structure Plan” attached hereto as Schedule “A”;
 - b) the land use and population statistics entitled “Horse Hill Neighbourhood 1A Neighbourhood Structure Plan - Land Use and Population Statistics - Bylaw 19774” attached hereto as Schedule “B”, and

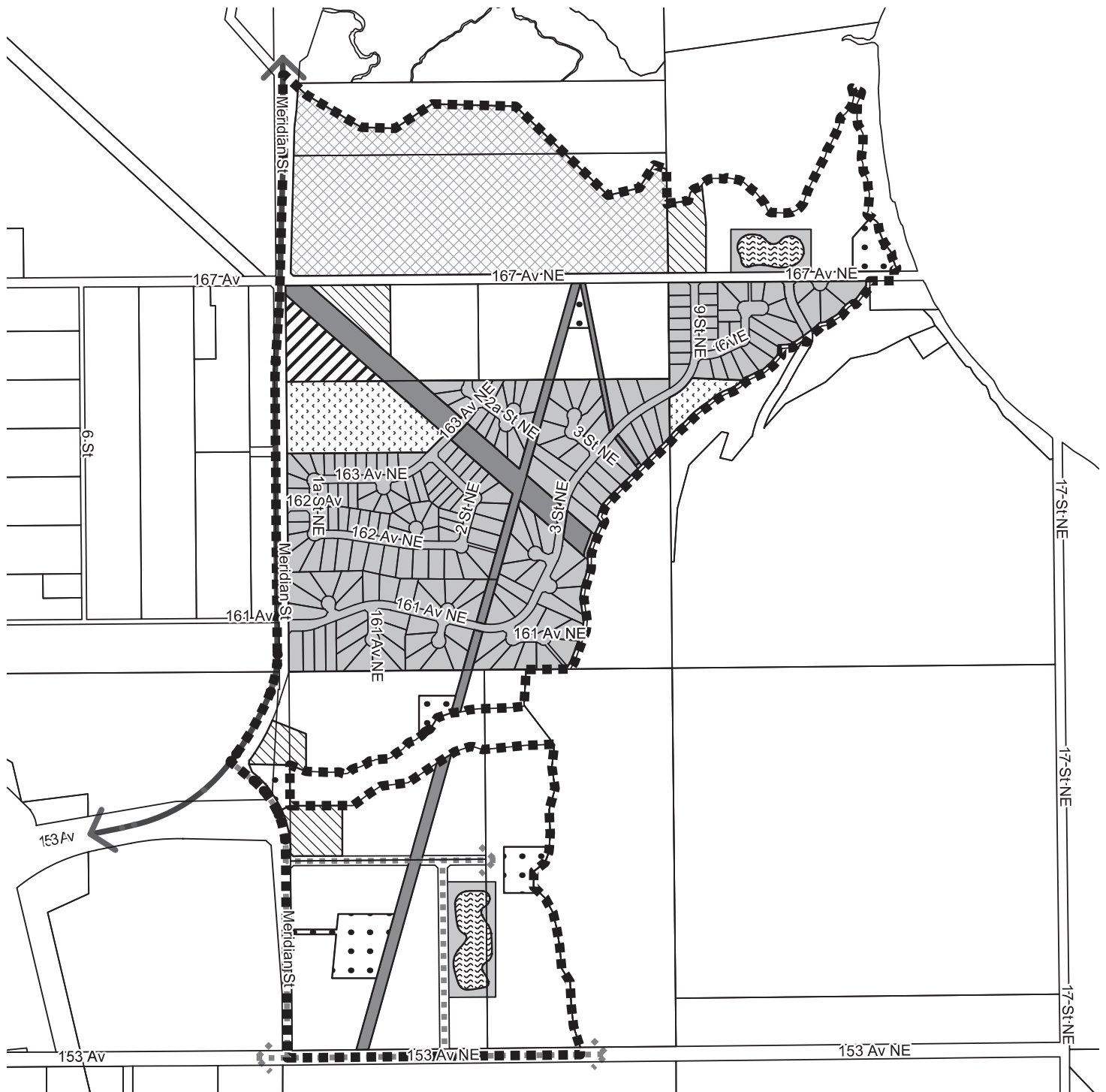
- c) the report entitled “Horse Hill Neighbourhood 1A Neighbourhood Structure Plan” attached hereto as Schedule “C”.

READ a first time this	day of	, A. D. 2021;
READ a second time this	day of	, A. D. 2021;
READ a third time this	day of	, A. D. 2021;
SIGNED and PASSED this	day of	, A. D. 2021.













THE CITY OF EDMONTON

MAYOR

CITY CLERK



CHARTER BYLAW 19774
HORSE HILL NEIGHBOURHOOD 1A
 Neighbourhood Structure Plan

	Single/Semi-Detached Residential		Private Agriculture
	Low Rise/Medium Density Housing		Existing Municipal Reserve
	Neighbourhood Business/Commercial		Existing Residential
	Stormwater Management Facility		Arterial Roadway
	Park Space		Collector Roadway
	Public Utility		NSP Boundary

Note: Location of collector roads and configuration of stormwater management facilities are subject to minor revisions during subdivision and rezoning of the neighbourhood and may not be developed exactly as illustrated.

**HORSE HILL NEIGHBOURHOOD 1A
PROPOSED LAND USE AND POPULATION STATISTICS
BYLAW 19774**

Table 2: LAND USE CONCEPT AND POPULATION

	Area (ha.)	% of GDA
GROSS AREA	145.1	100.0%
Arterial Roadway	3.6	2.5%
Pipeline ROW (PUL)	7.3	5.0%
Existing Residential	40.8	28.1%
Existing Park Space	4.8	11.8%
Existing Agriculture	22.6	15.6%
Total Non-Developable Area	79.1	63.0%
GROSS DEVELOPABLE AREA	66.0	37.0%
Parkland, Recreation, School (Municipal Reserve)**		
<i>Park/Open Space</i>	4.8	7.3%
Circulation	13.2	20.0%
Stormwater Management Facilities	3.9	5.9%
Commercial	1.8	2.7%
Total Non-Residential Area	23.7	35.9%
Net Residential Area (NRA)	42.3	64.1%

Residential Land Use, Dwelling Unit Count and Population

	Area (ha)	Units/ha.	Units	% of Total	People/ Units	Population	%of NRA
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Single/Semi-Detached	38.1	25	953	72%	2.8	2,667	90.1%
Low-Rise/Multi-/Medium Units	4.2	90	378	28%	1.8	680	9.9%
Total Residential	42.3		1,331	100%		3,347	100%

Sustainability Measures

Population Density (ppnrha.)					79.1	
Unit Density (upnrha.)					31.0	
Single/Semi-Detached// Row-housing, Low Rise/Multi-/Medium Units and High Rise					72%	28%
Population (%) within 500m of Parkland					97%	
Population (%) within 400m of Transit					95%	
Population (%) within 600m of Commercial Service					89%	
Presence/Loss of Natural Area Features			Land	Water		
Protected as Environmental Reserve (ha)			n/a	n/a		
Conserved as Naturalized Municipal Reserve (ha)			n/a	n/a		
Protected through other means (ha)			n/a	n/a		
Lost to Development (ha)			n/a	n/a		

Student Generation

Public School Board		264
Elementary	132	
Junior High	66	
Senior High	66	
Separate School Board		132
Elementary	66	
Junior High	33	
Senior High	33	
Total Student Population	396	

For Public School student generation is based on GDA x 2 for Elementary, 1x Junior High and Senior High School. For Separate School student generation is based on 1x for elementary and 0.5 for junior/senior High.



Horse Hill Neighbourhood 1A

Neighbourhood Structure Plan



Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan
Avillia Developments

Project No.: 20M-01536-00
Date: July 7, 2021

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Plan Overview 1



1.1 Planning Framework and Plan Area

The purpose of the Horse Hill Neighbourhood 1A Neighbourhood Structure Plan (NSP) is to establish a framework for future land use planning and the provision of municipal infrastructure, services and amenities. These will conform with the Horse Hill Area Structure Plan and City of Edmonton policies, objectives and requirements based on the characteristics and opportunities within the site.

This NSP outlines the following:

- The general pattern of development and subdivision;
- The location, configuration, and area of land uses including residential, commercial, parks and open spaces, agriculture, and public utility land uses;
- The anticipated density of residential development;
- The pattern and alignment of the arterial and collector roadways and pedestrian network;
- The utility infrastructure concept; and
- The implementation and phasing of development.



1.2 Authority

The Municipal Government Act (MGA) allows municipalities to establish a Municipal Development Plan (MDP) and to plan a framework for neighbourhoods through an Area Structure Plan (ASP). The City Plan, Edmonton's MDP, designates the Horse Hill Neighbourhood 1A NSP area as a Residential Developing Area, which is planned to accommodate much of the City's residential growth in the north-east. The Horse Hill ASP (Bylaw 16353) was adopted by Council in May 2013. In February 2018, the document was consolidated to incorporate amendments containing updated maps and statistics from 2015 and 2018. The plan identifies five neighbourhood units, acknowledging that the number and/or configuration of neighbourhoods may change, requiring an ASP amendment. The ASP shows Neighbourhood 1 comprising the south-east portion of the plan area, bounded by Horsehills Creek to the north, 153 Avenue NE to the south, Anthony Henday Drive to the south-west, the rail line to the north-west, Meridian Street to the west, and The Quarry Golf Course to the east.

The Horse Hill Neighbourhood 1A NSP was directed by City Council following an application for rezoning in the area. Due to these circumstances, the standard process as outlined in the Terms of Reference has been adjusted. The Horse Hill Neighbourhood 1A NSP has been prepared to respond to current and anticipated market demands in the Horse Hill area as well as the aspirations of key landowners in the plan area. The preparation of the NSP has been guided by existing City of Edmonton statutory plans and policy documents, see **Figure 1: Relevant Planning Documents**. The plan area is a logical planning unit that is suitable for an NSP and represents a logical extension of infrastructure and services related to currently planned neighbourhoods.

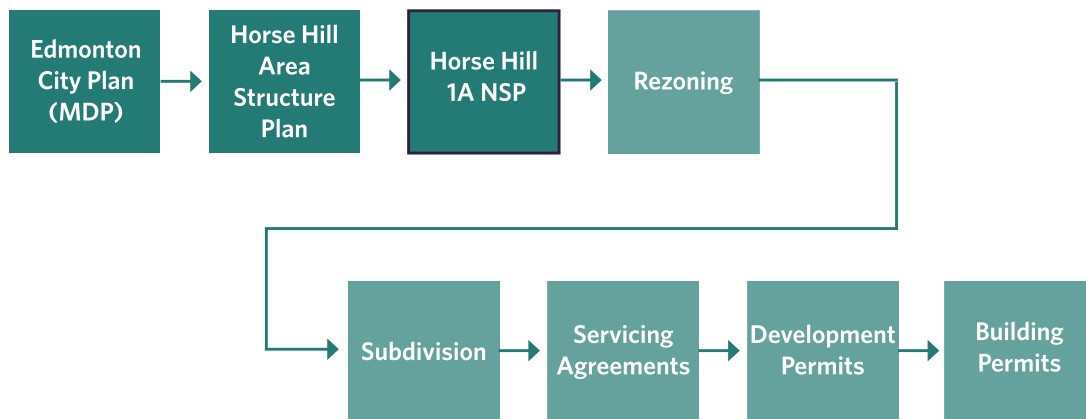


Figure 1: Relevant Planning Documents

Figure 2: Horse Hill Neighbourhood 1A NSP Boundaries defines the following boundaries for Neighbourhood 1A:

- Horsehills Creek to the north;
- Raven Crest Golf and Country Club to the south;
- Meridian Street to the west; and
- The North Saskatchewan River Valley ARP / The Quarry Golf Course to the east.

1.3 Interpretation

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

Policy statements containing “shall” are mandatory and must be implemented. Where a policy proves impractical or impossible, an applicant may apply to amend the plan. Policy statements containing “may” or “should” are advisory statements, indicating the preferred objective, policy and/or implementation strategy.

1.4 Stakeholder Consultation

PRE-APPLICATION CONSULTATION

Several pre-application meetings and correspondences occurred with key civic departments between the period of October 2020 and January 2021. The purpose of the initial dialogue was to present neighbourhood information, identify technical constraints, discuss application process, and to receive general comments from the reviewing agencies. The feedback received during these sessions helped guide the preparation of the NSP.

In order to prepare a practical NSP based on time, cost, and participation, discussions with the City were based on a reduced-scope NSP. The proponent had discussions with the owners or representatives of the other developable lands in the NSP about advancing this plan and sharing in the cost; however, there was limited to no interest in any financial contribution towards the cost of preparing the NSP and technical studies. The proponent kept in contact with these non-participating owners through the course of this NSP process.

During pre-submission discussions with the City of Edmonton, pre-submission consultation was not suggested. Comments provided by residents living within the existing and nearby residential during the proponent's prior rezoning (AG to RF1) application were considered in preparation of the NSP. A number of the residents were opposed to any development in this area, while others wanted a very low-density residential development similar to Existing Residential development. This was not possible to address in this NSP as it must comply with the density requirements mandated by the Horse Hill ASP. Horse Hill Neighbourhood 1A is a highly constrained NSP with very limited land use options. The NSP maintains the Existing Residential uses through an appropriate designation and provides low density residential uses to provide an appropriate land use transition. Existing access points on Meridian Street utilized by Existing Residential will remain unaffected. In addition, 167 Avenue NE will be upgraded to a Complete Streets cross-section, including a Shared Use Path along the north side of the roadway.

OPEN HOUSE

An online engagement session through the Engage Edmonton platform was held between April 6 and April 27, 2021. The engagement session was an online format where attendees were able to view a website with information about the Neighbourhood 1A NSP and planning process. Applicable comments from this engagement period were incorporated into the NSP. Many of the comments received were in regard to the lands that are currently being used for agriculture but are designated in the City Plan, the Horse Hill ASP, and the current NSP, for residential development. Maintaining these lands for agricultural uses would not allow this area to achieve the required density and would run contrary to the direction of higher-level plans.

1.5 Amendments

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

Amendments to the Horse Hill Neighbourhood 1A NSP document involving policies, text or mapping shall be completed in accordance with the Municipal Government Act, Edmonton's MDP The City Plan, the Horse Hill ASP and all other applicable bylaws, policies, and procedures.



Neighbourhood Concept



2.1 General Plan Context

Horse Hill Neighbourhood 1 is one of the five neighbourhoods outlined in the Horse Hill ASP. An ASP amendment will divide Neighbourhood 1 into two portions: East (Neighbourhood 1A) and West (Neighbourhood 1B). The Horse Hill Neighbourhood 1A NSP has been prepared in response to current and anticipated residential market demands in the Edmonton Region and the aspirations of a key landowner in the plan area.

The NSP area is designated as a Residential Developing Area within The City Plan and will be served by the Horse Hill Centre District Node. The plan area is comprised of mainly existing and planned single/semi-detached residential, with pockets of medium density housing conveniently located adjacent to collector and arterial roadways. An area for convenience neighbourhood commercial/business use is also located adjacent to the arterial roadway. In the north, the current private agricultural area is maintained. Municipal reserve lands are distributed throughout the plan area for convenient access.



2.1.1 | Technical Review

In support of this NSP, technical reports have been submitted to the City of Edmonton for lands owned by the plan proponents. During the preparation of this plan, the applicant did not have access to non-participating lands for survey or study. Should the non-participating lands become available for development in the future, a technical review will be needed to determine the development capability of the lands and must be prepared at the rezoning stage. The following technical studies may be required prior to rezoning of non-participating lands:

- Environmental Site Assessment
- Top-of-Bank Study
- Geotechnical Investigation and Slope Stability Assessment
- Historic Resource Clearance
- Risk Assessment

In addition, an update or amendment may be required to the following studies that were completed in support of the NSP:

- Parkland Impact Assessment (PIA)
- Phase II Ecological Network Report (ENR II)
- Transportation Impact Assessment (TIA)
- Hydraulic Network Analysis (HNA)
- Neighbourhood Design Report (NDR)

Requirements for new technical studies and/or amendments to existing technical studies should be determined by landowners through pre-application discussions with the City of Edmonton.

2.1.2 | Land Ownership

This NSP was prepared on behalf of a private corporation with ownership within the northern portion of the plan area at the time of plan preparation. The remaining parcels are held by non-participating landowners and although not directly participating in the NSP process, have been consulted through the plan preparation process.

2.1.3 | Existing Land Uses

A majority of the lands within the plan area are currently being used for agricultural purposes, with pockets of natural areas throughout the plan area. There is also a large area of existing residential south of 167 Avenue NE and east of Meridian Street, as well as several pipeline right-of-ways which have been incorporated into the neighbourhood. These existing land uses have been illustrated in **Figure 3: Site Features and Constraints**.

2.1.4 | Pipelines, Wells and Utility Corridors

No wells or utility corridors exist in the plan area. Pipe(s) within decommissioned pipeline ROW will be removed as development proceeds.

Table 1: Wells and Pipeline Corridors

COMPANY	LIC/LINE	STATUS	H ₂ S (mol/kmol)	Max Oper. Pressure (kPa)	Outer Diameter (mm)	Content
Pembina Pipeline Corporation	8262-3	Discontinued	0	7210	406.4	Crude Oil
Pembina Pipeline Corporation	52568-2	Operating	0	8000	323.9	LVP Prod.
Imperial Oil Resources Limited	9420-3	Operating	0	9460	168.3	HVP Prod.
Pembina Pipeline Corporation	37742-77	Operating	0	5250	559	Crude Oil
Pembina Pipeline Corporation	6929-16	Operating	0	5650	508	Crude Oil
Plains Midstream Canada ULC	6001-1	Operating	8	5380	610	Crude Oil

2.1.5 | Waterbody Delineation and Legal Survey

Delineation of all wetlands will be required at the Natural Area Management Plan (NAMP) level. Landowners will be required to contact Alberta Environment and Sustainable Resource Development (AESRD) to provide notice, intent, assessment, and necessary information as per the Water Act. Legal survey of identified water features within the plan area shall be the responsibility of the landowner.

2.1.6 | Topography

The topography of the land within Horse Hill Neighbourhood 1A is gently undulating, with isolated low hills, depressions, shallow creek and drainage courses, and slopes south-east towards the North Saskatchewan River Valley, see **Figure 4: Site Contours**. Elevations throughout the plan area vary between 670 m in the northern portion to 630 m along the eastern boundary. Surface drainage generally flows towards the south-east to the North Saskatchewan River through creeks and drainage courses.

2.1.7 | Soil and Groundwater Conditions

The Horse Hill area consists mainly of three different soil types as indicated by the Canada Land Inventory (CLI) – Soil Capability for Agriculture. The soil class types within the Neighbourhood 1A NSP include:

- **Class 1** - Soils in this class have no significant limitations in use for crops.
- **Class 2** - Soils in this class have moderate limitations that restrict the range of crops or require special conservation practices.
- **Class 6** - Soils in this class are capable only of producing perennial forage crops, and improvement practices are not feasible.

The groundwater flow direction is generally to the south-east, running towards Horsehills Creek and then towards the North Saskatchewan River. A geotechnical investigation was conducted for the participating landowner's parcel and has been approved by the City of Edmonton.

2.1.8 | Natural Areas and Ecological Resources

Horse Hill Neighbourhood 1A is located in the Central Parkland Natural Subregion of Alberta, which is a transition zone between grasslands to the south and closed aspen forests to the north. This entire subregion has been intensively cultivated due to the fertile nature of the soils. The plan area is located in the North Saskatchewan River Basin, which is comprised of 12 tertiary watersheds; Neighbourhood 1A is located in the western portion of the Beaverhill tertiary watershed. This watershed is characterized by wetlands, lakes, and forests that support a diverse range of plants and animals.

The following provides descriptions of the significant natural areas in the NSP area:

THE NORTH SASKATCHEWAN RIVER VALLEY AND RAVINE SYSTEM

The North Saskatchewan River Valley borders the Horse Hill Neighbourhood 1A NSP. The North Saskatchewan River Valley falls under the North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188) which provides the tools to protect the river valley and any natural areas which fall within its boundaries. Although outside the boundaries of the Horse Hill Neighbourhood 1A NSP, the North Saskatchewan River Valley is an integral part of the Horse Hill Neighbourhood 1A NSP ecological network. Future plans for the land east of the neighbourhood boundary are unknown at this time, however existing access via 153 Avenue NE must be maintained. The North Saskatchewan River Valley contains the Horsehills Creek environmentally sensitive area and is identified as a national environmentally sensitive area. It is an important natural area as it provides a unique combination of vegetation and landform features which act as critical habitat for a diverse range of wildlife species and also provides corridors and linkages to adjacent table lands within the City of Edmonton.

HORSEHILLS CREEK

Horsehills Creek is identified as a local environmentally sensitive area with actively eroding banks. The creek is an extensive drainage system originating in the Horse Hill area and entering the North Saskatchewan River Valley within Sec 4-54-23-W4M. Horsehills Creek consists of diverse plant communities that provide habitat for a wide range of wildlife species and acts as a critical linkage to the North Saskatchewan River Valley. Stormwater outfall structures will not be located within Horsehills Creek or its tributaries.

2.1.9 | Wetlands

For the participating landowner's portion of NW 1/4 33-53-23-4, a Desktop Wetland Review (August 19, 2019) and Water Act Approval (June 22, 2020) has been completed and approved by the City of Edmonton and Alberta Environment and Parks respectively.

Wetlands assessment for all the non-participating parcels will be required at the rezoning stage.

2.1.10 | Geotechnical Report

For the participating landowner's portion of NW 1/4 33-53-23-4, a geotechnical investigation has been completed (February 2020) and approved by the City of Edmonton.

At the rezoning stage, a geotechnical assessment will be required for all non-participating landowner parcels.

2.1.11 | Environmental Site Assessment

For the participating landowner's portion of NW 1/4 33-53-23-4, a Phase I Environment Site Assessment (ESA) (November 2019) and Phase II ESA (February 2020) have been completed and approved by the City of Edmonton.

An Environmental Site Assessment will be required for each parcel prior to the rezoning stage.

2.1.12 | Historic Resources

For the participating landowner's portion of NW 1/4 33-53-23-4, Historical Resource Act (HRA) approval has been completed (May 2020) and approved by the City of Edmonton.

A Historic Resources Assessment will be required for each parcel prior to the rezoning stage.





Neighbourhood Vision Statement

3

Horse Hill Neighbourhood 1A is characterized by its top-of-bank frontage to the North Saskatchewan River Valley and Horsehills Creek ravine. This Complete Community offers a choice of housing, ranging from the existing Country Residential lots to medium density parcels, conveniently located adjacent to commercial areas and easily accessible via Anthony Henday Drive. New parks and open space are woven throughout the neighbourhood, encouraging ecological and pedestrian connectivity.

3.1 Neighbourhood Concept

The following section outlines the development concept for the Horse Hill Neighbourhood 1A NSP. The NSP has been developed in consideration of sound urban planning principles, the City of Edmonton's Designing New Neighbourhoods Policy C572, and in response to current and anticipated commercial and residential market demand in north-east Edmonton, based upon historical and contemporary growth trends and aspirations of the various land owners in the plan area. The development concept for the Horse Hill Neighbourhood 1A neighbourhood is shown in **Figure 5: Development Concept**. The Development Concept designates land as: single/semi-detached residential, low rise/medium density housing, neighbourhood business/commercial, existing residential, environmental reserve, municipal reserve, and private agriculture. For more detailed information please refer to **Table 2: Land Use & Population Statistics**.

Table 2: Land Use & Population Statistics

	Area (ha.)	% of GDA
GROSS AREA	145.1	100.0%
Arterial Roadway	3.6	2.5%
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Population (%) within 600m of Commercial Service	89%	
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Student Generation

Public School Board	264
Elementary	132
Junior High	66
Senior High	66
Separate School Board	132
Elementary	66
Junior High	33
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Total Student Population	396

For Public School student generation is based on GDA x 2 for Elementary, 1x Junior High and Senior High School. For Separate School student generation is based on 1x for elementary and 0.5 for junior/senior High.



3.2 Neighbourhood Goals

The Horse Hill Neighbourhood 1A NSP was prepared in accordance with the policies and principles identified in The City Plan, the Horse Hill ASP, Designing New Neighbourhoods: Guidelines for Edmonton's Future Residential Communities and other relevant municipal and statutory documents. To fulfill the vision for Horse Hill Neighbourhood 1A, the NSP identifies the following goals:

1. Provide a complete community with a diversity of land uses in which to live, work and play.
2. Retain existing residential and agricultural uses through appropriate urban design (i.e. transitional land use, site planning and design).
3. Establish a variety of housing and residential densities to meet consumer needs, encourage diversity and support aging in place.
4. Promote connectivity and accessibility within the community and encourage a pedestrian-oriented environment through the development of an integrated network of diverse public parks, open spaces, natural areas, and stormwater management facilities, with connections to the North Saskatchewan River Valley and Ravine System.
5. Preserve high-priority natural areas and integrate them into the neighbourhood.
6. Establish safe and complete neighbourhood streets that are walkable, attractive, and comfortable for residents and designed to support winter transportation.
7. Provide a balanced transportation system that connects major inter- and intra neighbourhood focal points.
8. Provide efficient, contiguous and staged infrastructure and urban development.



Public
Realm

4



4.1 Context and Approach

Designing attractive streetscapes by using compatible uses, forms and zoning designations provides a comfortable physical environment and creates a consistent mass and scale. Orientation of buildings towards public spaces (i.e. streets, parks, constructed wetlands) also plays an important role in creating interesting and varied streetscapes and increases a sense of awareness of neighbourhood activities and safety.

4.2 Urban Design

OBJECTIVE	POLICY	IMPLEMENTATION
1. . Employ sustainable planning principles such as LEED ND or other comparable measurable sustainable development standards in the design of the Horse Hill Neighbourhood 1A Development Concept.	4.2.1 Development should strive to achieve sustainable planning principles as promoted through such programs as LEED ND.	The Horse Hill Neighbourhood 1A NSP encourages the incorporation of sustainable planning principles into the design of the neighbourhood.
2. Use natural areas and notable locations to create focal points and gathering places.	4.2.2 Focal points in the form of the commercial area, park spaces, community gardens, and natural areas shall be created to bring the community together.	Focal points are located throughout the neighbourhood providing opportunities for gathering places within close proximity to residents.
3. Ensure transition is provided between higher and lower intensity uses.	4.2.3 Ensure a proper transition between higher and lower intensity uses, as well as between existing country residential and new development. Transitional elements shall include, but are not limited to, building setbacks, landscaped buffers, and variations in architectural design techniques to minimize building massing. Where new development directly abuts existing country residential, low density residential shall be required.	Proposed residential and commercial uses will be designed with attention to compatibility with adjacent planned uses. The Subdivision Officer and Development Officer will have regard for lot and site design ensuring proper separation distances and landscape buffers as set out in the Zoning Bylaw.

<p>4. Develop public spaces and stormwater management facilities which are physically accessible and aesthetically pleasing.</p>	<p>4.2.4 Public spaces such as parks (MR) and stormwater management facilities (SWMFs) shall be designed to encourage both passive and active recreational opportunities by providing minimum 50% Shared Use Path frontage to ensure access, sightlines and natural surveillance.</p>	<p>The location and configuration of parks and SWMFs are conceptually illustrated in Figure 5: Development Concept and may be refined at the rezoning and subdivision stage. Consideration shall be given to ensure connectivity through the provision of Shared Use Paths and a variety of activities are accommodated through park and SWMF design.</p>
	<p>4.2.5 The neighbourhood shall provide appropriate roadway frontage for stormwater management facilities and multiple points of pedestrian access to public open space.</p>	<p>At the subdivision stage, parks and SWMFs will be designed with frontage onto public streets and in safe proximity to residential uses.</p>
	<p>4.2.6 SWMFs should include naturalized shoreline plantings intended to provide habitat opportunities for wildlife and improve water quality.</p>	<p>SWMF landscaping will be determined by the Developer and City Administration at the time of review of landscaping plans as part of the engineering drawing review process.</p>
<p>5. Promote the use of Crime Prevention Through Environmental Design (CPTED) principles to create a safe and secure neighbourhood.</p>	<p>4.2.7 At the subdivision stage, the design shall ensure parks and SWMFs have a combination of frontage onto public streets as well as residential development with unobstructed views.</p>	<p>The Subdivision Officer shall have regard for the provision of a combination of street frontage and residential development abutting parks and SWMFs. This will ensure the open space network provides 24/7 surveillance and activity in these areas.</p>
<p>6. Minimize light pollution into natural areas to reduce the impact of development on wildlife.</p>	<p>4.2.8 Explore lighting design and placement solutions that minimize projection into natural areas.</p>	<p>Development adjacent to natural areas should strive to incorporate wildlife-friendly lighting solutions, such as strategically placed fixtures, downward lighting, and appropriate wavelengths.</p>

4.3 Historical and Cultural Resources

Historical characteristics should be conserved to maintain a neighbourhood's unique ties to its past and to foster a sense of place. In review of development within Horse Hill Neighbourhood 1A, a Statement of Justification and/or Historic Resource Impact Assessment must be submitted to Alberta Culture and Tourism (ACT). Considering the majority of the Horse Hill Neighbourhood 1A area has been cleared for agricultural purposes, it is unlikely to contain any structures or settlements of historical significance. As a result, the likelihood that the planned development will impact any significant historical resources is low.

OBJECTIVE	POLICY	IMPLEMENTATION
7. Ensure that historical, archaeological and paleontological resources are identified and conserved, where applicable.	4.3.1 Participating landowners within the plan area shall submit a Statement of Justification (SoJ) for Historical Resources Act requirements (formerly Historical Resources Overview) and, if necessary, a Historical Resources Impact Assessment (HRIA).	SoJs and HRIAs have been completed for the participating landowner's portion of NW 1/4 33-53-23-4. These SoJs and HRIAs were submitted to Alberta Culture and the lands were subsequently provided clearance. Those lands in the plan area that have not received clearance on SoJ/HRIA studies will be required to submit and receive sign off prior to rezoning.

4.4 All Weather Design

Neighbourhoods designed in consideration of year-round weather conditions will provide opportunities for residents to enjoy and experience all the amenities their neighbourhood has to offer, in all seasons. Winter is the dominant season in Edmonton and utilizing winter design initiatives will help to make outdoor public spaces enjoyable throughout the winter months. The City embraces our winters and, through the Winter Design Guidelines, encourages us to celebrate the winter months. Using a variety of methods such as effective sun capture and wind control measures, as well as landscaping in parks and other outdoor spaces we can enliven these spaces in all seasons.

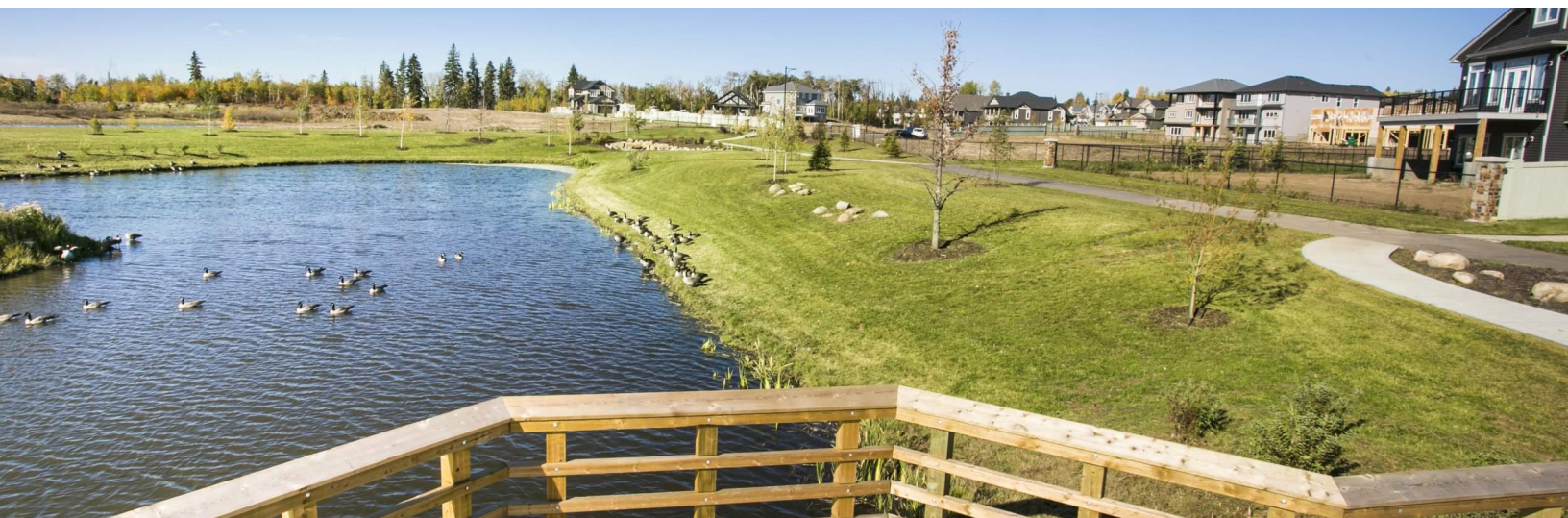
OBJECTIVE	POLICY	IMPLEMENTATION
8. Ensure neighbourhood infrastructure and design elements address year-round weather conditions.	4.4.1 The neighbourhood shall be designed to accommodate infrastructure programming requirements in the public realm including snow clearing and landscaping maintenance, with preference to boulevards over monowalks.	Where boulevards are provided they shall be used to accommodate snow removal and year-round service vehicles. Alternative development standards shall meet infrastructure programming needs for all seasons.
	4.4.2 The design of streetscapes will take into account opportunities to capture sunlight and reduce potential high winds.	Commercial sites and higher density residential areas shall be designed with consideration given to building orientation and variations in façade treatment that reduce the amount of sun shadowing in the winter and to prevent wind tunneling.
9. Incorporate urban design elements to maximize the benefits of the winter season.	4.4.3 Incorporate design elements into buildings, parks and public spaces that protect users from the wind and maximize access to sunlight.	Developers shall include winter design considerations and elements within architectural controls. The City of Edmonton shall encourage winter design consideration and elements in public buildings, parks, and public spaces.
	4.4.4 Encourage the integration of vibrant colours and warm materials in residential, institutional and commercial buildings.	Developers shall include winter design considerations and elements within architectural controls. The City of Edmonton shall encourage winter design consideration and elements in public buildings.

<p>10. Consider the winter season in the landscaping and design of public parks, open spaces, plazas, and boulevards.</p>	<p>4.4.5 The landscaping and design of public parks, open spaces, plazas, and boulevards shall consider the incorporation of design elements that respond to all seasons, through such measures as the creative use of light, colour, and ways to provide breaks from wind and extreme temperatures.</p>	<p>Landscape design for public land will be developed in conjunction with relevant City Departments and incorporate design elements from the City of Edmonton's Winter City Strategy.</p>
	<p>4.4.6 Hardy tree species shall be included in the detailed landscape design of public parks, plazas, and open spaces such that they provide wind shelter and enable solar penetration.</p>	<p>Landscape design for public land will be developed in conjunction with the corresponding City Departments and incorporate design elements from the City of Edmonton's Winter City Strategy.</p>
	<p>4.4.7 Programming for parks and public plazas should consider incorporating gas hook-ups for large portable fire pits to provide warm gathering spaces for park users during winter.</p>	<p>Design and development of future parks and public plazas will consider programming needs of the community with implementation based on the requirements of the corresponding City Departments.</p>
	<p>4.4.8 Neighbourhood entrances and outdoor gathering spaces / focal points shall be designed to accommodate year-round activity.</p>	<p>The location and design of outdoor spaces for neighbourhood activities shall consider the incorporation of design elements that respond to all seasons, through such measures as the creative use of light, colour, landscaping and built form to provide protection from extreme climate conditions.</p>
	<p>4.4.9 A grid or modified grid road network is preferred over cul-de-sacs to facilitate efficient pedestrian connections throughout the neighbourhood.</p>	<p>Subdivision planning should avoid the use of cul-de-sacs and instead employ a grid or modified grid network to support efficient access to nearby transit stops, commercial areas, parks, and the river valley.</p> <p>Cul-de-sacs shall be permitted within neighbourhood areas that are constrained by existing geometric/physical features such as pipeline ROWs, TOB, and/or road ROWs.</p>

4.5 Landscaping

Neighbourhood landscaping will enhance the character of Horse Hill Neighbourhood 1A and reinforce the neighbourhood's connection to nature. Utilizing native plant species generally requires less maintenance and irrigation than many non-native, ornamental species, which minimizes costs associated with development and maintenance. Native landscaping within open spaces provides opportunities to enhance wildlife habitats and strengthens the local ecological network.

OBJECTIVE	POLICY	IMPLEMENTATION
11. Promote the use of natural landscaping using native tree and plant species.	4.5.1 Landscaping of parks, open spaces, and stormwater management facilities should incorporate native and adapted plant species where appropriate. Habitat restoration of natural areas should also be undertaken where appropriate.	Develop parks, open spaces, and stormwater management facilities using native and adapted species, and carry out restoration where appropriate. Specific species for landscaping on public properties shall be determined between the Developer and City Administration at the time of review of landscaping plans and as part of the engineering drawing review.
12. Promote the use of edible landscaping in suitable locations within the NSP area.	4.5.2 Landscaping of parks, open spaces, and stormwater management facilities should incorporate edible landscaping elements, where appropriate.	The development of parks, open spaces, and stormwater management facilities should incorporate edible landscaping, where appropriate. Specific species used shall be determined between the developer and City Administration at the time of review of landscaping plans as part of the engineering drawing review.



Land Use

5



5.1 Context and Approach

The Horse Hill Neighbourhood 1A NSP area is shaped by the flanking golf courses to the east and south, Horsehills Creek to the north, and proximity to Anthony Henday Drive. Thus, it will attract residents seeking easy access to these amenities from a quiet neighbourhood.

The primary characteristics of the development concept are:

- **Agriculture:** Agriculture is supported within the plan area, maintaining the existing Sunstar Nurseries site along the northern edge of the plan area.
- **Neighbourhood Commercial:** Convenience commercial uses will provide opportunities for residents to access daily needs within their neighbourhood. The location of the commercial site is along an arterial roadway, and within walking distance of residential development, allowing for ease of access by residents through vehicular or active transportation methods.
- **Low Density Residential:** A low-density residential pattern is consistent with existing development and as per the density target specified within the Horse Hill ASP.
- **Medium Density Residential:** Medium density multi-family residential sites are located adjacent to arterial and collector roadways, to promote transit use, and allowing for a complete and diverse neighbourhood which can accommodate a range of incomes and household types, allowing individuals and families to stay within the community throughout their lifecycle.
- **Parks and Open Space:** Parkland is integrated throughout the plan area, allowing for convenient multi-modal access from current and future residential developments.



5.2 Agriculture

Located near Edmonton's City Limits and surrounded by agricultural land uses, designated private agricultural lands are included in the Horse Hill Neighbourhood 1A NSP and encapsulate the existing Sunstar Nurseries site along the northern edge of the plan. Urban agricultural opportunities are encouraged within the Plan area, and should adhere to FRESH, Edmonton's Food and Urban Agriculture Strategy. Agricultural lands are identified in **Figure 5: Development Concept**.

OBJECTIVE	POLICY	IMPLEMENTATION
13. Retain land for private agriculture in the NSP area.	5.2.1 Land may be retained for permanent private agricultural uses. Intensive livestock operations or other high-impact operations are not considered appropriate and are not permitted.	Land has been designated for private agriculture as shown in Figure 5: Development Concept . Lands may be preserved as permanent agriculture through the creation of an Agricultural Land Reserve (ALR) designation which may be applied for by landowners of privately owned farmland who self-declare their intent to retain agricultural uses within the NSP area.
14. Provide buffers between agricultural and non-agricultural uses.	5.2.2 Provide appropriate buffers or compatible land uses adjacent to retained private agricultural parcels. Where agricultural operations predate new developments, the responsibility for buffering shall fall to new land uses	Agricultural uses may or can produce noise and dust. For agricultural uses and future residential uses to coexist, appropriate transitional elements will be required. The private agricultural parcel within the neighbourhood will be buffered from adjacent residential land uses by appropriate transitional elements. Examples of transitional elements include, but are not limited to, retention of existing hedgerows, roadways, pathways, public utility lots, SWMFs, municipal reserves, berms and fences. The buffer shall include a vegetated component and is in addition to the Zoning Bylaws required building setbacks. The details of the buffer, including distance and composition, will be site specific and determined at the rezoning and subdivision stage. The buffer in this area will comply to any approved policies developed by the City of Edmonton on agricultural buffers.

15. Provide opportunities to promote urban agriculture in Horse Hill Neighbourhood 1A.	5.2.3 Opportunities for community garden plots within public lands shall be explored.	Community gardening is considered both a recreational and community building activity. Community gardens should be incorporated into the programming for community parks in balance with other park programming needs. Community gardens could also be integrated into other public utility spaces, such as stormwater management facilities and public utility lots.
	5.2.4 Opportunities to utilize harvested rainwater for irrigation of parks and community gardens shall be explored.	Detailed design of community gardens should incorporate low impact development strategies.
	5.2.5 Opportunities for urban agriculture such as community gardens, community orchards, food forests, berry patches and beekeeping in the NSP area should be considered, where appropriate.	Edible landscaping will utilize native species. Orchards will only be placed in areas that have been impacted by agriculture, and no clearing of natural vegetation will occur to accommodate such features.
	5.2.6 Multifamily developments are encouraged to provide growing space per multi-family dwelling unit within the amenity area.	Implementation of growing space requirements will be explored at the detailed landscape design stage. Amendments to the Zoning Bylaw may be required to determine requirements.

5.3 Neighbourhood Business/Commercial

Neighbourhood Business/Commercial uses within the plan are intended to provide low intensity commercial, office and service uses to meet the needs of the neighbourhood and commuting traffic along Meridian Street. A Neighbourhood Business/Commercial site has been identified in the south-east corner of the Meridian Street and 167 Avenue NE intersection, shown in Figure 5: Development Concept.

OBJECTIVE	POLICY	IMPLEMENTATION
<p>16. Locate and orient commercial sites along arterial and/or collector roadways to ensure high visibility and accessibility by multiple modes of transport, such as vehicular, transit and walking.</p>	<p>5.3.1 Commercial sites shall be placed along arterial and/or collector roadways, transit route and along pedestrian corridors to ensure high visibility and accessibility.</p> <p>5.3.2 Access to the Neighbourhood Commercial/Business site shall be permitted via a right-in/right-out vehicular access on Meridian Street.</p> <p>Additional all-directional access opportunity on 167 Avenue NE may be provided to the site via a cross-lot access easement registered on the Low Rise/Medium Density Housing parcel to the east. If this form of access is desired, additional assessment may be required prior to rezoning stage, subject to the satisfaction of Subdivision and Development Coordination (Transportation).</p>	<p>Figure 5: Development Concept illustrates the location and conceptual configuration of the Neighbourhood Business/Commercial designation. This designation shall be implemented through application of CB1 Zone or CNC Zone of the Edmonton Zoning Bylaw.</p>
<p>17. Minimize the impact of commercial development on adjacent land uses.</p>	<p>5.3.3 Activity areas associated with commercial development should be oriented towards the abutting, arterial, and/or collector roadways.</p> <p>Parking should be oriented away from pedestrian connections.</p>	<p>The Development Officer should have regard for building placement and activity areas in assessing and conditioning development applications for commercial development under the applicable zone.</p>
	<p>5.3.4 Consideration should be given for the separation distance between residential development and abutting commercial development.</p>	<p>The Subdivision Authority should ensure that appropriate transitional elements (i.e. landscaping, setbacks, lot orientation, etc.) are implemented so that residential uses are appropriately interfaced with commercial development.</p>
<p>18. Provide residents with convenient pedestrian access to commercial development so that residents have the opportunity to walk to commercial services.</p>	<p>5.3.5 Commercial development should be designed in consideration of pedestrian circulation to Meridian Street and 167 Avenue NE, and interconnect building entrances, parking, and adjacent sidewalks/Shared Use Paths.</p> <p>Pedestrian routes should be direct and minimize potential conflicts with vehicles.</p>	<p>The Development Officer should have regard for building placement, pedestrian accessibility and activity areas assessing and conditioning development applications for commercial development under the applicable zone.</p>

5.4 Residential

The majority of the plan area is intended for residential development, encompassing the existing low density residential community and future low and medium density residential areas. This will allow for a range of housing densities, types, and choices. Residential land uses are identified in **Figure 5: Development Concept**. Land use and population statistics are described in **Table 2**.

The provision of a variety of housing types promotes a more complete and diverse neighbourhood which can accommodate a range of incomes and household types, allowing individuals and families to stay within the community throughout their lifecycle.

OBJECTIVE	POLICY	IMPLEMENTATION
19. Provide a variety of residential housing types in different built forms, for a range of household types, income levels, ages and needs.	5.4.1 A mixture of residential dwelling types and densities including single/semi-detached, and low/medium rise density housing shall be provided, allowing consumer choice, a range of affordability options.	Figure 5: Development Concept illustrates the general location of residential land use designations. Sections 100 and 200 of the City of Edmonton Zoning Bylaw provide for a range of densities and housing forms that shall be applied at the rezoning stage.
	5.4.2 The NSP shall support a greater mix of housing types and allow for intensive and/or innovative housing forms through the use of various development regulations (i.e. smaller minimum site area and depth, reduced lot width, reduced yard requirements, higher site coverage, etc.).	The City of Edmonton Zoning Bylaw, through conventional zones, Direct Control Provisions, and Special Areas, provides for a range of densities and housing forms that shall be applied at the rezoning stage.
20. Establish an overall residential density that meets or exceeds the minimum density target set out by the Edmonton Metropolitan Region Growth Plan.	5.4.3 The Horse Hill Nbhd 1A NSP shall meet or exceed the density target set out by the Edmonton Metropolitan Region Growth Plan.	Figure 5: Development Concept and Table 2: Land Use and Population Statistics shall guide development within this neighbourhood.

<p>21. Develop Low-Rise/Medium Density Housing sites to a higher urban design standard.</p>	<p>5.4.4 Low-rise/multi-/medium and high rise residential uses shall be designed to have a strong street presence, with parking areas located underground or internal to the site.</p>	<p>The Development Officer should have regard for site design, landscaping, parking areas, building articulation and transitioning with other land uses.</p>
<p>22. Provide affordable housing opportunities within the NSP.</p>	<p>5.4.5 The NSP shall incorporate a variety of housing types to promote affordable housing that cater to different market segments.</p>	<p>Figure 5: Development Concept shows the different residential land use designations.</p>
	<p>5.4.6 Encourage builders to develop secondary suites, garage suites or garden suites in suitable locations.</p>	<p>Secondary suites, garage suites or garden suites shall be implemented through the Edmonton Zoning Bylaw.</p>
<p>23. Residential development shall take into consideration existing rural and agricultural uses and ensure compatible uses are provided.</p>	<p>5.4.7 Ensure that compatible land uses are developed in proximity to existing rural and agricultural uses and that appropriate transitions are provided between existing and future land uses.</p>	<p>Figure 5: Development Concept illustrates the general location of land uses. The rezoning and subdivision processes should ensure that appropriate transitional elements (i.e. landscaping, setbacks, lot orientation, etc.) are implemented so that existing rural and agricultural uses are separated or properly integrated with future development.</p>
<p>24. Integrate existing residential uses into the NSP area and ensure compatible uses in proximity to existing residential uses.</p>	<p>5.4.8 Consideration should be given to the orientation of future residential development which abuts existing residential development.</p>	<p>Figure 5: Development Concept illustrates the general location of land uses. The rezoning and subdivision processes should ensure that appropriate transitional elements (i.e. landscaping, setbacks, lot orientation, etc.) are implemented so that existing residential uses are separated from future residential development. New residential development should be oriented such that is backs on to existing residential to allow for a larger separation distances between existing and future development.</p>

<p>25. Provide a transition between residential uses of significantly different densities.</p>	<p>5.4.9 Encourage appropriate transitions between low rise or medium/high rise units and single or semi-detached housing.</p>	<p>Figure 5: Development Concept illustrates the general location of land uses. The Development Officer shall have regard for the placement of low rise or medium rise units when adjacent to single or semi-detached housing.</p>
<p>26. Accommodate Reverse Housing development where appropriate. "Reverse Housing" is a housing concept in which homes front onto an open space area, such as a park or pipeline corridor. Vehicular access is provided through the rear alley.</p>	<p>5.4.10 Ensure that residential units fronting onto pipeline corridors and/or public open spaces have pedestrian and emergency access, and that vehicular access is provided from a rear alley.</p>	<p>Reverse Housing shall be regulated through conventional zones or Direct Control provision of the Zoning Bylaw. Where residential lots front onto the pipeline corridor or public open space, walkway/emergency access shall be provided at a minimum of every 120m. The location and design of the alleys and walkways shall be identified at the time of subdivision.</p>



Ecology, Parks and Open Space

6



Parks and open spaces are integrated throughout the plan area, accessible from current and future residential areas by both pedestrian and vehicle traffic from current and future residential developments. With a neighbourhood character of natural and open spaces influenced by the adjacent North Saskatchewan River Valley, Horsehills Creek and private golf courses, a natural feel will be integrated throughout the neighbourhood through the strategic use of parks, open spaces, and their plantings to provide a seamless transition with the surrounding areas. Parks and open spaces are identified in **Figure 5: Development Concept** and **Figure 6: Ecological Network and Parks**.

6.1 Natural Areas

The North Saskatchewan River Valley and Ravine System is an important ecological system adjacent to the plan area. The NSP ensures that the River Valley and Ravine System is preserved and protected through the establishment of an Urban Development Line (UDL) demarcating the boundary between developable upland area (urban development) and non-developable area (Environmental Reserve). Public access to the River Valley and Ravine System shall be provided via a combination of Top-of-Bank (TOB) roadway and park, totaling a minimum of 30% of the length of the UDL, and a TOB Shared Use Path (SUP) along the entire length of the Public Upland Area. The TOB roadway shall be determined prior to rezoning and subdivision of parcels with TOB frontage. The TOB roadway and SUP will maximize access for local residents and the general public. This access is provided for circulation and amenity purposes, connecting to the parks and open space system in the NSP area and beyond, slope repair and geotechnical monitoring, firefighting, emergency and public safety, drainage control and for dealing with encroachment issues.

OBJECTIVE	POLICY	IMPLEMENTATION
<p>27. Establish an Urban Development Line, based upon geotechnical recommendations and current City Policy, to ensure enjoyment, preservation and protection of the North Saskatchewan Valley and Ravine System, including Horsehills Creek.</p>	<p>6.1.1 The Urban Development Line shall separate developable from non-developable areas to preserve and protect the North Saskatchewan River Valley and Ravine System (including Horsehills Creek), 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 top-of-bank study will be required at the rezoning stage for all parcels adjacent to the North Saskatchewan River Valley.</p> <p>At the rezoning stage, a geotechnical report and slope stability analysis will be required for all parcels abutting the North Saskatchewan River Valley to establish the UDL.</p> <p>Once a UDL is established, an amendment will be required to the NSP to appropriately show the following information in the NSP:</p> <ul style="list-style-type: none"> • TOB line • UDL line with ER designation • TOB roadway totalling a minimum 30% of the length of the UDL
	<p>6.1.2 Environmental Reserve shall be dedicated to the City of Edmonton at the time of first subdivision.</p>	<p>Lands that meet the criteria for Environmental Reserve (ER) shall be dedicated to the City of Edmonton at the time of first subdivision. Policy C531 which provides guidelines on the determination of ER as directed by the MGA shall also be followed.</p>
	<p>6.1.3 A minimum setback of 10 m, or the setback recommendation of the approved Geotechnical and Slope Stability Analysis – whichever is greater – shall be provided between the Top-of-Bank and the Urban Development Line, in accordance with Policy C542. This area shall provide for public access circulation, and civic purposes including geotechnical monitoring and repair, firefighting, emergency and public safety, drainage control, and dealing with private property encroachment issues.</p>	<p>The Urban Development Line shall be demarcated at the time of rezoning and/or subdivision of lands adjacent to the North Saskatchewan River Valley and Ravine System (including Horsehills Creek). At that stage, amendments may be required to this NSP and the North Saskatchewan River Valley Area Redevelopment Plan to reflect the surveyed top-of-bank.</p>
	<p>6.1.4 A restrictive covenant to enforce the requirements of the geotechnical review shall be registered on the land titles of the respective properties abutting the Urban Development Line.</p>	<p>The Subdivision Authority shall ensure all subdivisions abutting the Urban Development Line provide restrictive covenants.</p>

	6.1.5 The stormwater outfall location(s) shall be further evaluated from a geotechnical and/or environmental perspective prior to the subdivision stage.	At the rezoning stage of parcels abutting the North Saskatchewan River Valley, additional geotechnical and/or environmental analysis will be completed concurrently with the required Environmental Screening Report for the stormwater outfall prior to subdivision.
	6.1.6 Consider the impacts of outfall location on the NSRV.	The development parcels that require an outfall for drainage shall be required to complete an Outfall Location Study at the rezoning stage, to identify appropriate location(s) and number of outfall structures.
28. Strengthen Edmonton's ecological network and maintain ecological linkages to support the presence of wildlife in the NSP area.	6.1.7 Developments within the Horse Hill Neighbourhood 1A shall integrate and link land use components (i.e. North Saskatchewan River Valley and Ravines System, Horsehills Creek, parks, SWMF, and utility and pipeline rights-of-way) to provide habitat and encourage connectivity.	Figure 5: Development Concept guides the development of the NSP.
	6.1.8 Plantings of native species should be utilized to add habitat value of the green network within the neighbourhood.	Relevant City of Edmonton conservation planning and policy shall be adhered to (e.g. Policy C531). The policies and regulations of the City and Provincial environmental agencies shall be followed.



<p>29. Conserve natural areas within the plan area.</p>	<p>6.1.9 Ecologically significant natural areas shall be retained within the NSP.</p>	<p>Figure 5: Development Concept illustrates the natural areas that will be retained within the NSP, as directed by City policy and the MGA. Rezoning and Subdivision applications within 250m of a retained natural area will not be accepted without an approved Natural Area Management Plan (NAMP). Exceptions to this requirement must be approved by the Urban Ecology Unit. Wetlands on non-participating lands will be evaluated prior to development, and final delineation will be required prior to rezoning within 250m of these wetlands. Water body buffers will be based on the guidelines provided in City of Edmonton Policy C531 regarding Environmental Reserve dedication. Upland buffers are set to 10m unless otherwise indicated as per the Phase I ENR. Efforts will be made to minimize ground disturbance outside of the Critical Root Zone and within 10 m of retained natural areas. Such efforts may include matching pre-development grading, restrictive covenants, and/or other low impact development techniques, as determined during the development of NAMPs. Details on conservation and specific setbacks are provided in the ENR.</p>
<p>30. Encourage habitat restoration of natural areas and the naturalization of public parks, greenways, and existing pipeline and utility corridors where possible.</p>	<p>6.1.10 The restoration of natural areas and the naturalization of public spaces shall be considered where possible.</p> <p>6.1.11 The southern Stormwater Management Facility (SWMF), as noted on Figure 5: Development Concept, shall be developed as a constructed wetland to encourage biodiversity through retention and attraction of local wildlife and native species.</p>	<p>Figure 5: Development Concept illustrates the natural areas that will be retained within the NSP, as directed by City policy and the MGA as well as public open space in the form of parks, stormwater management facilities and utility corridors. Further information on the restoration and naturalization of these areas are provided in the ENR.</p>



6.2 Parks and Open Space

The Horse Hill Neighbourhood 1A NSP provides a variety of parks and open spaces throughout the plan area to meet the recreational needs of residents. In addition, the NSP preserves the North Saskatchewan River Valley where it abuts the plan area and ensures that compatible natural areas are carefully integrated as prescribed by Breathe, Edmonton's Green Network Strategy. All parks have been configured to provide opportunities for active and passive recreation and have been located such that the majority of residential areas are within 500m of a park space.

OBJECTIVE	POLICY	IMPLEMENTATION
31. Accommodate park sites in the NSP area.	6.2.1 The NSP shall follow the guidelines for the hierarchy and distribution of park spaces as prescribed by Breathe.	The parks and open spaces identified in Figure 5: Development Concept will be dedicated to the City of Edmonton through Municipal Reserve (MR) at the time of subdivision.
	6.2.2 The Horse Hill Neighbourhood 1A NSP shall provide Municipal Reserve as a combination of land, cash-in-lieu, or a combination thereof as per the Municipal Government Act.	The Subdivision Authority will determine 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.
	6.2.3 The location of utilities on park sites shall not be permitted, with the exception of those that uniquely serve a park space.	Installation of utilities within the NSP area will follow the guidelines set out in the UPMP (Principle 1 (f.)(ii)) regarding the presence of utilities on park sites.
32. Provide parks, open spaces, and stormwater management facilities along arterial, collector or local roadways, and ensure accessibility.	6.2.4 Parks, open spaces, and stormwater management facilities shall have frontage along public roadways to ensure sightlines, natural surveillance, and adequate lighting. Lighting, frontage, and design of spaces shall take into consideration basic CPTED principles and design principles included in the Design Guide for a Safer City and Urban Parks Management Plan.	The Subdivision Authority shall have regard for the subdivision design to ensure adequate public roadway frontage on all parks illustrated in Figure 5: Development Concept .

	<p>6.2.5 Park space shall be designed to accommodate active and passive recreation activities for different age groups. With the exception of park areas adjacent to the Urban Development Line where grade changes and topography may pose design difficulties, all park space within the neighbourhood should be universally accessible.</p>	<p>Design and development of future parks and open spaces shall consider programming needs of the community and be implemented based on requirements of relevant City Departments.</p>
<p>33. Design a connected and integrated open space system that encourages active transportation.</p>	<p>6.2.6 Developments within the NSP shall incorporate an array of connected pedestrian linkages along sidewalks, walkways and Shared Use Path corridors (within pipeline ROWs) that link park spaces, natural areas, storm water management facilities, the North Saskatchewan River Valley and Ravine System and various other focal points.</p> <p>SWMFs shall have 50% Shared Use Path frontage ensuring public access, sightlines and natural surveillance.</p>	<p>Figure 5: Development Concept and Figure 7: Ecological Network and Parks conceptually guide the location neighbourhood parks, open spaces, pedestrian connections and stormwater management facilities which will connect residents to focal points.</p>
	<p>6.2.7 A variety of parks and open spaces shall be included to serve diverse community needs, including a Community Park, Ecological Park, Pocket Parks, and Greenways.</p>	<p>Figure 6: Ecological Network and Parks outlines the various types of parks and open spaces in the neighbourhood. Community Parks are intended to be flexible in programming to meet the social and recreational needs of most people in their catchment area.</p> <p>An Ecological Park—which is a MR dedication within the existing Country Residential—is intended to protect the existing tree stand, where human activities are primarily passive and should not compromise the primary purpose of protection.</p> <p>Pocket Parks are to be small open spaces meant to serve the nearby neighbourhood and may contain only one amenity or serve one of the functions of open space (e.g. a playground, adult fitness, or seating area).</p> <p>The Greenways provide linear open spaces that provide opportunities for active transportation.</p>

<p>34. Ensure the North Saskatchewan River Valley is publicly accessible.</p>	<p>6.2.8 Pedestrian linkages will connect the NSP area with the River Valley and Ravine System. Public access to the River Valley and Ravine System shall be provided via a combination of Top-of-Bank (TOB) roadway and park, totaling a minimum of 30% of the length of the UDL, and a TOB Shared Use Path along the entire length of the Public Upland Area. Public and emergency access to the TOB will be provided through the provision of walkway connections that are spaced at regular intervals of approximately 120m as per City Policy C542A, Development Setbacks from River Valley/Ravine Crests. The TOB roadways and Shared Use Paths shown in the Plan are illustrative in nature - the actual location of roadways and paths will be determined at the rezoning and subdivision stages. Should the locations of roadways and paths differ from the Plan, amendments to the NSP may be required. Amendments to the NSRV ARP and the North Saskatchewan River Valley and Ravine System Protection Overlay may be required when the top-of-bank is determined at the zoning and subdivision stages.</p>	<p>Figure 6: Ecological Network & Parks Walkway connections providing public and emergency access to the TOB shall be determine at the subdivision stage.</p>
	<p>6.2.9 Vehicular roadways access shall be provided to the TOB and the North Saskatchewan River Valley and Ravine System.</p>	<p>Existing 153 Avenue NE provides access to the North Saskatchewan River Valley and Ravine System.</p> <p>In addition, TOB roadways totalling minimum 30% of the length of the UDL shall be confirmed at the rezoning stage of parcels abutting the NSRV.</p>
<p>35. Create identifiable focal points that are integrated with the open space system of the neighbourhood.</p>	<p>6.2.10 Convenient, safe and efficient pedestrian connections from the neighbourhood into and through open spaces/focal points shall be located approximately 120m apart (as per TOB Policy C542A), in general accordance with Figure 5: Development Concept.</p>	<p>Neighbourhood focal points in the form of existing parks, parks, and SWMFs are shown on Figure 5: Development Concept.</p> <p>Details regarding the placement of pedestrian connections and crossings shall be determined at the subdivision approval stage in partnership with the City of Edmonton.</p>

<p>36. Encourage naturalized and/or edible landscaping on public and private lands and low impact development principles in public spaces.</p>	<p>6.2.11 Landscaping of parks and open spaces should incorporate native and/or edible plant species where appropriate.</p>	<p>Plant, shrub, and tree species for landscaping on public properties shall be determined between the Developer and City Administration at the time of review of landscaping plans and as part of the engineering drawing review.</p>
	<p>6.2.12 Stormwater management facilities should be designed to include naturalized planting intended to provide habitat opportunities for wildlife and improve water quality.</p>	<p>Stormwater management landscaping shall be determined between the Developer and City Administration at the time of review of landscaping plans and as part of engineering drawing review as part of the subdivision process.</p>
	<p>6.2.13 Where appropriate and in order to minimize the amount of impervious surfaces, permeable trails should be considered for pedestrian linkages.</p>	<p>It is anticipated that alternative surface treatments, such as permeable pavements or gravel trails, will be investigated for pedestrian linkages within natural areas and along public utility lots as part of the overall low impact development strategy for the neighbourhood. Details of the pedestrian linkages will be designed at zoning or subdivision. Proposed alternative standards will require approval from Subdivision and Development Coordination (Transportation).</p>
	<p>6.2.14 Constructed wetland stormwater management facilities shall restore natural vegetation to provide additional natural animal habitat and promote natural water filtration.</p>	<p>Detailed design of constructed wetland stormwater management facilities will be reviewed by Drainage Services and Parks + Biodiversity.</p>
<p>37. Provide opportunities for appropriate wildlife crossings within the NSP.</p>	<p>6.2.15 As shown Figure 6: Ecological Network and Parks, a wildlife passage shall be provided in the southern portion of the plan area to provide opportunity for avian crossing.</p>	<p>This wildlife passage shall be implemented through strategic plantings within the adjacent pocket park to facilitate avian flow across the collector roadway.</p> <p>No additional roadway infrastructure is required for this crossing.</p>



Infrastructure and Servicing

7





7.1 Context and Approach

The Horse Hill Neighbourhood 1A NSP area will require the installation of infrastructure to provide servicing in accordance with City of Edmonton standards. The neighbourhood servicing plan will be designed to facilitate efficient staging of infrastructure while also taking into consideration the potential environmental and ecological impacts. Further details on the sanitary and stormwater collection services will be supplied in the Horse Hill Neighbourhood 1A Neighbourhood Design Report (NDR), under separate cover. Details on the water distribution system will be provided in a Hydraulic Network Analysis (HNA), submitted under separate cover.

7.2 Environment and Energy Infrastructure

In order to ensure that the lands with the NSP area are suitable for development, the environmental status of the land must be evaluated. The City requires that Phase I Environmental Site Assessments (ESA) be submitted, reviewed and endorsed prior to the rezoning stage of development.

OBJECTIVE	POLICY	IMPLEMENTATION
38. Ensure the environmental status of lands in the Horse Hill Neighbourhood 1A NSP is suitable for development and that Environmental Site Assessments are complete and up to date at the time of rezoning.	7.2.1 The likelihood, types, and location of environmental concerns that may be present on the lands, shall be determined prior to rezoning.	ESAs and any follow-up shall receive sign-off by City Administration prior to the rezoning stage of development.

OBJECTIVE	POLICY	IMPLEMENTATION
	7.2.2 Phase I ESA reports older than 1 year from the date of rezoning application shall be updated, and any Phase I ESA report older than 5 years from the date of rezoning application shall be redone. If this policy is in contradiction with City policy, the latter shall be considered correct.	ESAs and any follow-up shall receive sign-off by City Administration prior to the rezoning stage of development.
	7.2.3 Where necessary, contaminated material shall be removed and disposed of in an environmentally sensitive manner, in accordance with Federal, Provincial and Municipal regulations.	Site remediation, where necessary, shall be conducted prior to rezoning. An environmental site assessment report verifying the need for remediation shall be submitted for approval to City Administration prior to the rezoning of the subject lands.
39. Minimize potential environmental hazards and disruption for future residential areas caused by oil and gas wells through careful neighbourhood design and ensuring urban development around resource operations and abandoned well sites adheres to the requirements of the Alberta Energy Regulator (AER), City of Edmonton Policy C515 – Oil and Gas Facilities, Abandoned Well Sites and Policy Guidelines for the Integration of Resource Operations and Urban Development (1985).	7.2.4 Where development is proposed around an abandoned well site, establish appropriate setbacks to provide for work space and access to the well.	Setback requirements will be confirmed at time of subdivision approval. Current standards call for a 10m x 15m work area around the well and an 8m access corridor for service vehicles. A minimum 5m setback is required from the abandoned well head to the edge of the work area.
	7.2.5 Abandoned well areas should only assume land uses that will allow for immediate maintenance should the well ever require servicing. Roadways, parking lots, or public utility lots (i.e. open spaces) are preferred land uses that will allow for access and the maximum movement for repair requirements on the abandoned well site.	Figure 3: Site Features and Constraints illustrates the location of abandoned well sites. Figure 5: Development Concept illustrates land use designations. Abandoned well sites should be incorporated into land uses such as roadways, parking lots, or public utility lots at the time of zoning.
	7.2.6 Prior to development, a temporary identification marker shall be placed as precisely as possible on the abandoned well site to prevent damage both to the well site and to the construction or excavation equipment.	Appropriate temporary identification markers shall be placed on site prior to rezoning approval.
40. Ensure that development respects the ongoing operation and integrity of existing pipeline infrastructure.	7.2.7 Integrate existing utility and pipeline rights-of-way 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.	Figure 3: Site Features and Constraints illustrates the location of existing rights-of-way. The Subdivision Authority shall have regard for lots and site design ensuring that appropriate setback distances between rights-of-way and residential uses. Figure 5: Development Concept illustrates how the rights-of-way have been incorporated into the overall land use concept.

<p>41. Ensure public safety near oil and gas facilities and railway facilities through the use of appropriate risk mitigation measures to mitigate the risk to an acceptable level in line with the recommendations of the risk assessment.</p>	<p>7.2.8 Ensure public safety near oil and gas facilities, through the use of risk mitigation measures.</p>	<p>The method of risk mitigation may include, but is not limited to, the use of Direct Control zoning at the time of rezoning. Special care will be taken to mitigate safety of Low Rise/Medium Density residential development and sensitive uses near oil and gas facilities risk and ensure safety of Low Rise/Medium Density, and Mixed Uses residential development and Sensitive Uses near oil, gas and railway facilities.</p> <p>Various Risk Assessment reports have been completed within the Horse Hill area at the time of preparation of Horse Hill ASP and Marquis NSP. The pipelines within the NSP area were included in the previous risk assessment reports. This NSP will comply with the applicable recommendations pertaining to each pipeline. These may include setbacks, barriers, building design and materials, or other mitigation measures.</p>
	<p>7.2.9 Prior to zoning of land adjacent to a pipeline corridor, development shall adhere to relevant policies and regulations.</p>	<p>Pipeline operators will be contacted at the time of rezoning regarding pipeline corridors adjacent to development.</p>

7.3 Sanitary and Stormwater Drainage

Sanitary flows will be directed into the existing Clareview Sanitary Trunkline (CST) by a combination gravity lateral, forcemain sewer, and gravity trunkline to tie-in at multiple locations, as seen in **Figure 8: Sanitary Servicing**. The proposed sanitary laterals and trunkline will also convey flows from the Horse Hills Neighbourhood 1 to the west. The CST then transports flows under the North Saskatchewan River to the Alberta Capital Regional Wastewater Commission (ACRWC) Wastewater Treatment Plant (WWTP). Stormwater flows will be transported to Stormwater Management Facilities (SWMF) via the onsite stormwater collection system shown in **Figure 9: Stormwater Servicing**. All SWMFs will be designed as a wetpond, which provides water quality treatment in addition to runoff detention. The SWMF's will outlet to a proposed trunkline and ultimately outfall to the North Saskatchewan River. The proposed SWMFs and trunkline will convey flows from Horse Hills Neighbourhood 1 to the west. The existing residential storm basin outlets to The Quarry Golf Club's system of ponds.

OBJECTIVE	POLICY	IMPLEMENTATION
42. Ensure that the sanitary and stormwater drainage systems within the Horse Hill Neighbourhood 1A NSP area are provided at a full urban standard and in an efficient, contiguous and staged manner using contemporary and emerging sustainable infrastructure solutions.	7.3.1 Sanitary and stormwater servicing shall be provided in accordance with the associated Neighbourhood Design Report for the Horse Hill Neighbourhood 1A NSP. Stormwater Management Facilities shall have 50% Shared Use Path frontage to ensure public access, sightlines and natural surveillance.	Approval of engineering drawings and servicing agreements shall be required for installation of sanitary and stormwater servicing.
43. Low Impact Development principles should be utilized for the design of the stormwater management system, including bioswales and naturalized wetlands	7.3.2 Where possible, incorporate Low Impact Development principles that promote stormwater infiltration, filtering, storage, evaporation, in addition to the detention of runoff close to the surface.	Principles of Low Impact Development such as bioswales and naturalized stormwater management facilities shall be integrated, where feasible, through consultation with City Administration.

7.4 Water Distribution

Water services will be extended into the plan area from the existing water mains within 167 Avenue NE, Meridian Street, and 153 Avenue NE, see **Figure 10: Water Servicing**. Water servicing within the neighbourhood will be designed to provide peak hour flows and fire flows for low, medium and high-density residential land uses as well as commercial land uses. The water distribution network will be designed to provide looping in accordance with EPCOR Water requirements. The existing residential area is looped between the existing watermains from 167 Avenue NE and Meridian Street. A hydraulic network analysis (HNA) was submitted to EPCOR Water detailing the modeling and design of the distribution system.

OBJECTIVE	POLICY	IMPLEMENTATION
44. Ensure that the water distribution system within the NSP area is provided at a full urban standard and in an efficient, contiguous and staged manner.	7.4.1 Water servicing in the NSP area shall be provided in accordance with the Hydraulic Network Analysis.	Approval of engineering drawings and servicing agreements shall be required for installation of water servicing.

7.5 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.

OBJECTIVE	POLICY	IMPLEMENTATION
45. Ensure that shallow utilities are provided at a full urban standard in an efficient and contiguous manner.	7.5.1 Shallow utilities shall be extended into the plan area by the Proponent as required.	Installation of shallow utilities shall be executed through servicing agreements.

7.6 Staging

The anticipated sequence of development for the Horse Hill Neighbourhood 1A NSP is shown in **Figure 11: Staging Concept**. Initial development is expected to proceed from the west of the plan area with the general direction of development to the east. 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 the aspirations of the respective landowners. Should sufficient demand warrant or engineering design be made more efficient, portions of separate phases may be developed concurrently. More detailed staging of development around natural areas will be provided within the Natural Area Management Plan.

Transportation



8



8.1 Context and Approach

This neighbourhood has been designed as per the principles of Complete Streets. It incorporates a comprehensive, well-connected street network, providing efficient and safe movement for vehicles, pedestrians and cyclists. Roadways are expected to respond to differing needs, according to location, context and anticipated uses, while accommodating a diverse group of users. Collector roadways will incorporate bicycle and pedestrian movements, while local roads will facilitate pedestrian movement. Traffic calming features such as raised crosswalks, sidewalk extensions, and textured crosswalks will be utilized to calm traffic along key active mode routes. All streets have been designed with traffic calming and pedestrian safety in mind, following the Complete Streets guidelines. In addition, the NSP complements the street network with off-street Shared Use Paths within pipeline ROWs and along the TOB.

Public transit services will be provided to this area in accordance with City of Edmonton Transit System Guidelines and demands. The neighbourhood has been designed to a scale whereby a majority of the residential areas will be within Standard Walking Distance from transit service. As required, collector roadways will accommodate transit service and provide readily accessible service to all areas of the neighbourhood.



8.2 Modal Types

The Horse Hill Neighbourhood 1A neighbourhood will accommodate multiple modes of travel, including automobiles, buses, walking and bicycles. The transportation system has been designed to balance efficiency, safety and comfort for all types of users and modes.

OBJECTIVE	POLICY	IMPLEMENTATION
<p>46. Provide opportunities for a variety of modes of transportation within the NSP area.</p>	<p>8.2.1 Streets should accommodate pedestrians and cyclists as well as automobiles. Trails, paths and walkways shall supplement, not replace, shared roadway facilities. The active modes network should be designed to accommodate all types of users of varying ages, abilities, and destinations.</p>	<p>Figure 12: Transportation Network shows the proposed roadway network.</p> <p>Figure 13: Active Modes Transportation Network shows the network plans for active modes including the Primary and Secondary Bike Network, Shared Use Paths, and various pedestrian connections.</p> <p>A Primary Bike Network is characterized by separated bike facilities such as protected bike lanes or Shared Use Paths that are used for regional travel between neighbourhoods. A Secondary Bike Network includes lower order facilities that provide internal connections within a neighbourhood and to the Primary Bike Network. Bikes will generally be accommodated within Shared Roadways.</p> <p>The improvements, upgrades and completion of missing links within the existing residential may be completed through the area redevelopment or City initiated programs, or through logical extensions of infrastructure conditioned with new developments.</p>
	<p>8.2.2 167 Avenue NE should be developed as a Complete Street in conjunction with development of parcels on its north side.</p>	<p>A Complete Street application will be required in support of rezoning and subdivision of parcels abutting the north side of 167 Avenue NE ROW.</p> <p>The affected parcels may be required to dedicate additional road ROW in order to incorporate a Shared Use Path on the north side of 167 Avenue.</p>
	<p>8.2.3 A majority of residential land uses shall be within Standard Walking Distance of a transit route or transit centre.</p>	<p>Arterial and collector roadways have been identified as future transit routes. Edmonton Transit will determine the routing for bus service through the plan area.</p>
	<p>8.2.4 Developers are encouraged to implement Transportation Demand Management measures to reduce the use of automobiles.</p>	<p>A majority of the neighbourhood falls within Standard Walking Distance of Transit service. To encourage transit use, developers of commercial and Low Rise/Medium Density Housing sites, are encouraged to enter into discussions with the City of Edmonton to review and implement appropriate Transportation Demand Management (TDM) measures in collaboration with the City. These measures may include pedestrian friendly site design, provision of bicycle friendly infrastructure, and incentive programs to promote transit use.</p>

8.3 Road Network

The transportation network has been designed to meet both the internal and external traffic flow requirements generated by the neighbourhood. A hierarchy of collector and local roadways is intended to facilitate the efficient movement of vehicular traffic and other modes of travel (see **Figure 12: Transportation Network**). Three major roads are included within the plan area: 153 Avenue NE, 167 Avenue NE, and Meridian Street. 153 Avenue NE is currently a rural roadway. It will be developed as an urban collector roadway in conjunction with development in the neighbourhood and transition to a rural cross section beyond the NSP boundary. 167 Avenue NE is an existing collector roadway that was built to serve the Existing Residential, Private Agriculture, and the Quarry Ridge Golf Course. Upgrades to 167 Avenue NE including the addition of Shared Use Path and drainage infrastructure may present the opportunity to ensure the roadway meets the Complete Streets Design and Construction Standards. Meridian Street is adjacent to the plan area, running north-south along the west boundary of the NSP.

OBJECTIVE	POLICY	IMPLEMENTATION
47. Implement the City of Edmonton's road hierarchy system of an integrated arterial, collector, and local roadway network.	8.3.1 Where possible, given the existing constraints posed by pipeline ROWs, existing Government Road Allowances, alignment of Arterial Roadways, and the North Saskatchewan River Valley, the street layout should follow a grid-like network to enable efficient distribution of traffic and allow multiple route choices.	Road right of way will be dedicated to the City of Edmonton at the subdivision stage. Alternate roadway design will be considered in accordance with the Complete Streets Policy.
	8.3.2 Front drive access shall not be permitted to residential units along arterials or directly across from the park site. Furthermore, front driveways must not conflict with future bus stop locations. Notwithstanding the foregoing, in exceptional circumstances, the Subdivision Officer may allow front drive access. The number of lots having direct driveway access onto a collector roadway shall be determined at the subdivision stage and shall not exceed 30% of the total length of the collector roadway.	Conformance with these policies shall be reviewed at the rezoning and subdivision stages.

	8.3.3 Traffic calming features will be provided where Shared Use Paths cross roadways within the plan area, and considered along all collector roadways within the NSP. 161 Avenue NE and 3 St NE may also provide an opportunity to implement traffic calming measures and add sidewalks in the future.	<p>Traffic calming strategies such as raised crosswalks, sidewalk extensions, speed humps, textured crosswalks, raised median islands, traffic circles and buttons may be used to calm traffic along key active mode routes.</p> <p>Specific traffic calming design treatment will be determined at the subdivision or development permit stage.</p>
	8.3.4 Lands within the plan area shall be subject to an Arterial Road Assessment (ARA) to share the cost of roadway facilities needed to service the area.	

8.4 Complete Streets

In May 2013, City Council approved the Edmonton Complete Streets Policy and accompanying guidelines. The intent of the guidelines is to provide a network of streets that are safe, welcoming, attractive, comfortable and functional for all users. The guidelines provide flexibility of design, allowing certain modes of transport to be prioritized over others, depending on location and context.

OBJECTIVE	POLICY	IMPLEMENTATION
48. Design multi-use streets that support various modes of transport such as by foot, bicycles, transit, cars, and service vehicles, utilizing the City's Complete Streets Guidelines.	8.4.1 Use the City of Edmonton Complete Streets Design and Construction Standards (2018) in the design of streets.	Certain roadways may require designs that differ from current design standards. The Complete Streets Guidelines should be consulted to provide design guidance and to ensure that complete streets principles are followed.
	8.4.2 A neighbourhood-wide network for pedestrians and cyclists shall be provided and incorporated into development.	Figure 13: Active Modes Transportation Network shows the pedestrian and bicycle network within the neighbourhood. This network provides connectivity to adjacent areas and to key destinations within the plan area (e.g. parks, River Valley, SWMFs and commercial area).

	8.4.3 Key roadway crossings for pedestrians and cyclists shall be identified and prioritized.	Figure 13: Active Modes Transportation Network shows the location of intersections and mid-block crossings that are anticipated to act as key roadway crossings for pedestrians and bicycle users. Roadway design in these locations shall consider the movement and interaction of all modes of transport, with the goal of providing a high degree of safety and comfort for pedestrians and bicycle users.
	8.4.4 A Shared Use Path shall be provided within the upland setback area above the top-of-bank line of the River Valley and Ravines.	The exact location of the Shared Use Path will be determined at the time of subdivision.
	8.4.5 Traffic calming strategies shall be implemented to reduce vehicle speeding and shortcutting, and to increase pedestrian safety and enhance the neighbourhood streetscape.	Traffic calming strategies such as raised crosswalks, sidewalk extensions, speed humps, textured crosswalks, raised median islands, traffic circles and buttons may be used to calm traffic along key active mode routes.

8.5 Streetscapes

The design of streets and adjacent developments plays an important role in creating an environment that is aesthetically pleasing, safe, and comfortable.

OBJECTIVE	POLICY	IMPLEMENTATION
49. Provide attractive, safe, and functional streets through roadway design.	8.5.1 Pedestrian-friendly environments shall be emphasized in key locations such as streets near park sites and near commercial sites.	Where possible, block size should generally be limited to 200m, to allow for efficient pedestrian movement. Block size and street design will be reviewed at the subdivision stage. Street design should follow the City of Edmonton's Complete Streets Design Standards and require sidewalk on both sides of roadways, with a preference to boulevards over monowalks. Street design should follow a grid or modified-grid road network and avoid cul-de-sacs where possible.
	8.5.2 A neighbourhood-wide network for pedestrians and cyclists shall be provided and incorporated into developments.	Figure 13: Active Modes Transportation Network shows the pedestrian and bicycle network within the neighbourhood. This network provides connectivity to adjacent areas and to key destinations within the plan area (e.g. parks, River Valley, SWMFs and commercial area).

	8.5.3 Local residential streets shall generally incorporate boulevards. Alternate roadway cross sections may be allowed if it can be demonstrated that site conditions or other circumstances make boulevards infeasible.	Boulevards will be used to offer several uses, including snow storage in the winter, planting space for street trees, and separation between pedestrians and automobiles.
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8.6 Noise Attenuation

The NSP area is adjacent to several major roadways. The NSP attempts to locate compatible land uses to avoid the impact of nuisance noise and vibration where possible, or to use design and building techniques to mitigate noise where needed.

OBJECTIVE	POLICY	IMPLEMENTATION
50. Mitigate the effects of noise and vibration caused by vehicle traffic along Meridian Street.	8.6.1 Appropriate noise attenuation shall be provided by the Developer and home builder where low density residential uses abut Meridian Street.	A noise attenuation assessment is required for residential development prior to the subdivision stage of development, in accordance with the City of Edmonton Urban Traffic Noise Policy.



Appendix A: Figures



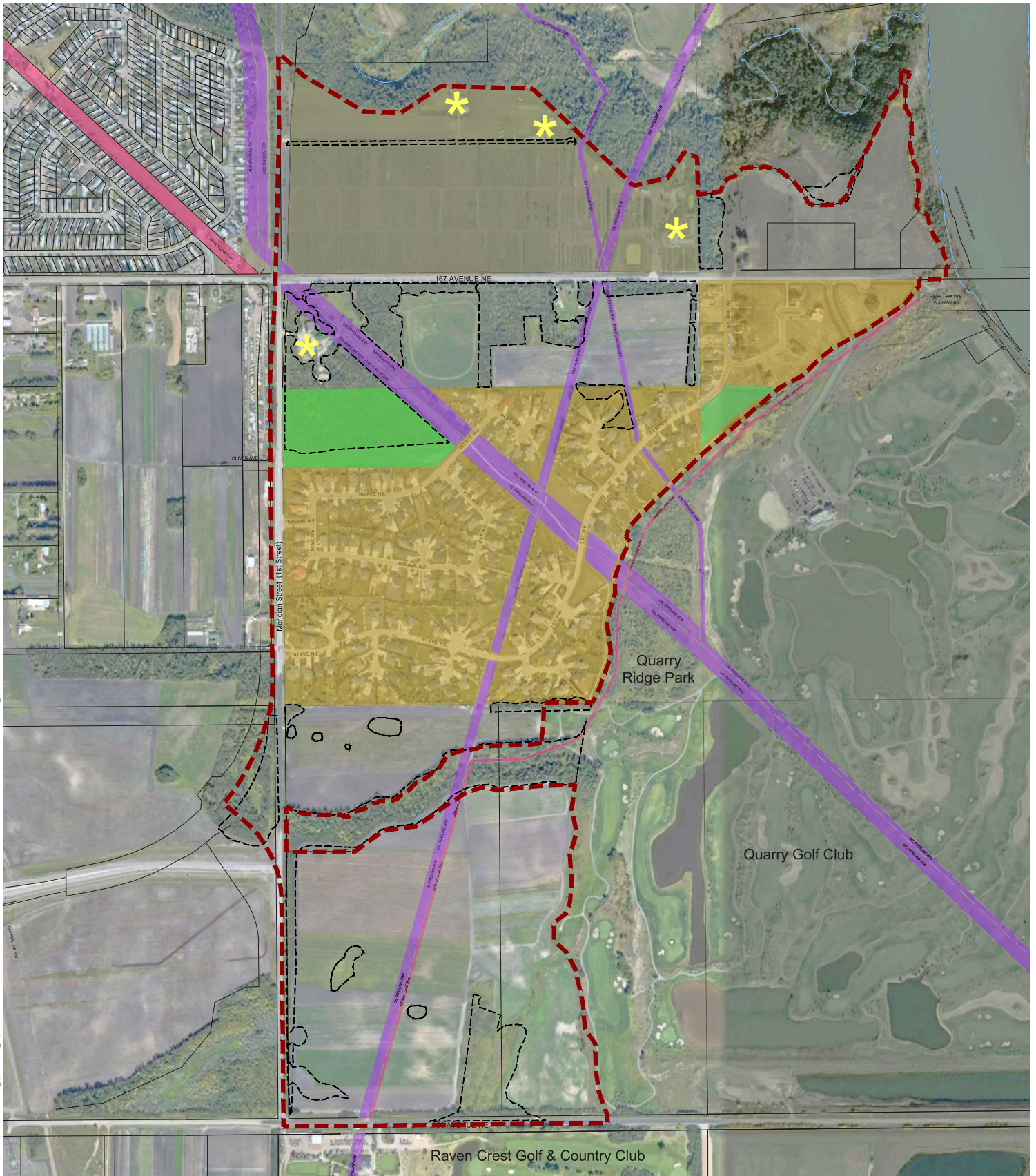


Legend

- Horse Hill Neighbourhood 1A Boundary
- Adjacent Neighbourhood Boundary

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 2.0
NSP Boundaries

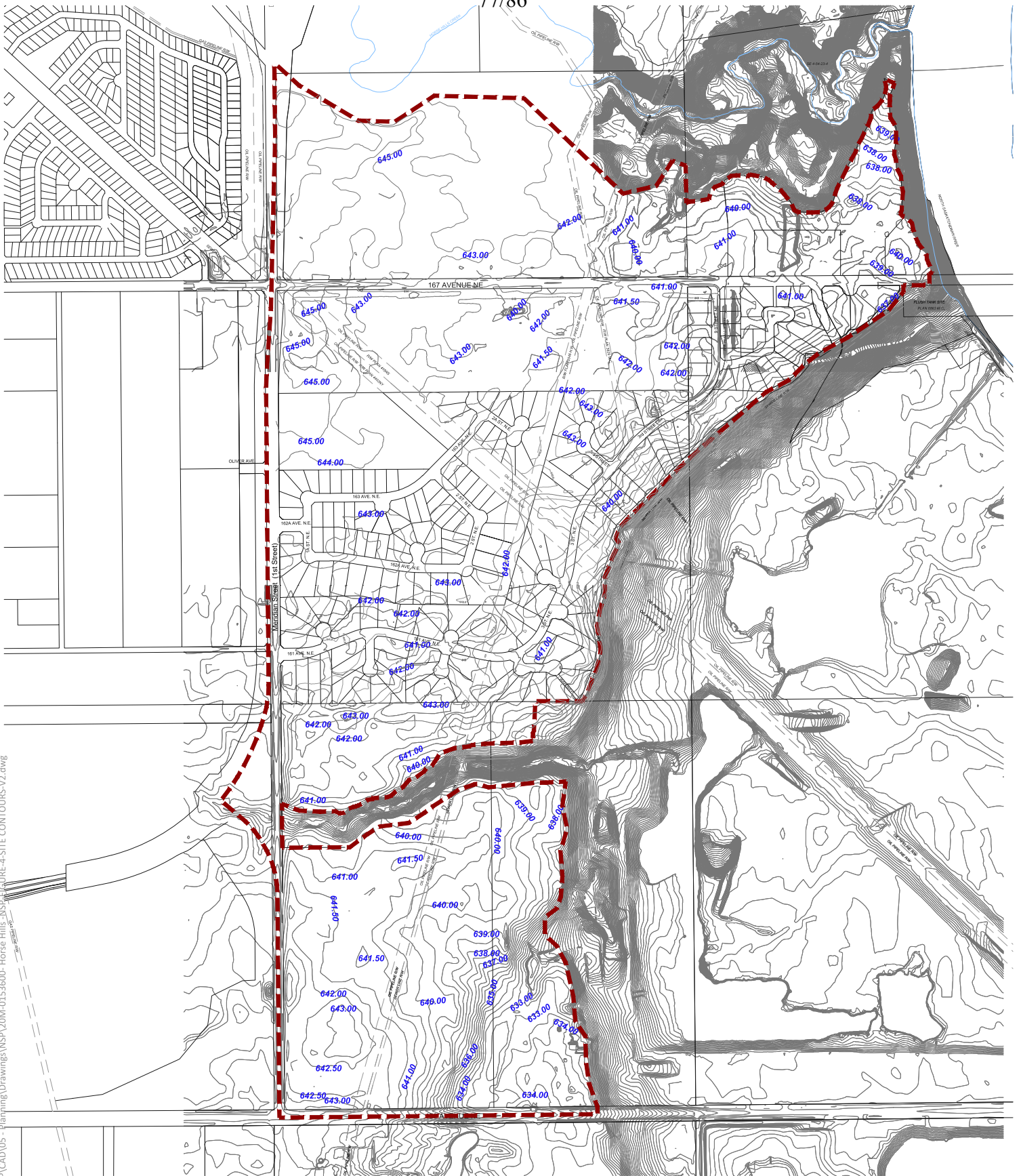


Legend

- Horse Hill Neighbourhood 1A Boundary
- Existing Residential
- Existing Agriculture
- Existing Park Site
- Existing Natural Features
- Sewer Line Right-of-Way
- Pipeline Right-of-Way
- ★ Existing Buildings

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 3.0
Site Features & Constraints



Legend

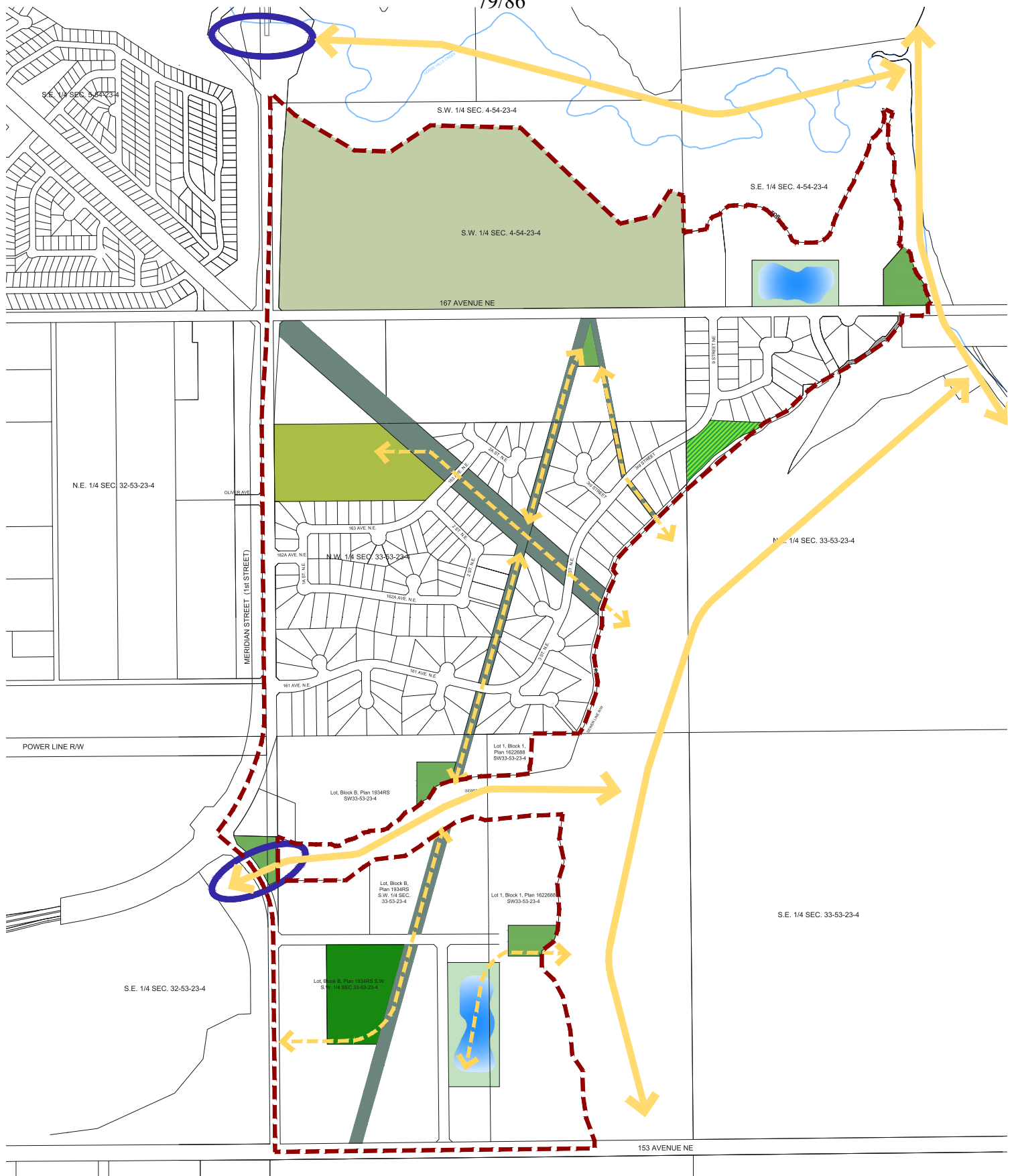
- Horse Hill Neighbourhood 1A Boundary
- 640.00 Elevation In Metres

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 4.0
Site Contours



Figure 5.0 Development Concept



Legend

- Horse Hill Neighbourhood 1A Boundary
- Public Utility
- Private Agriculture
- Pocket Park
- Community Park
- ▨ Existing Municipal Reserve
- Existing Municipal Reserve - Ecological Park Public
- Stormwater Management Facility
- Regional Ecological Link
- Local Ecological Link
- Proposed Wildlife Passage
- Existing Top of Bank Shared Use Path
- Proposed Top of Bank Shared Use Path

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 6.0
Ecological Network and Parks





Legend

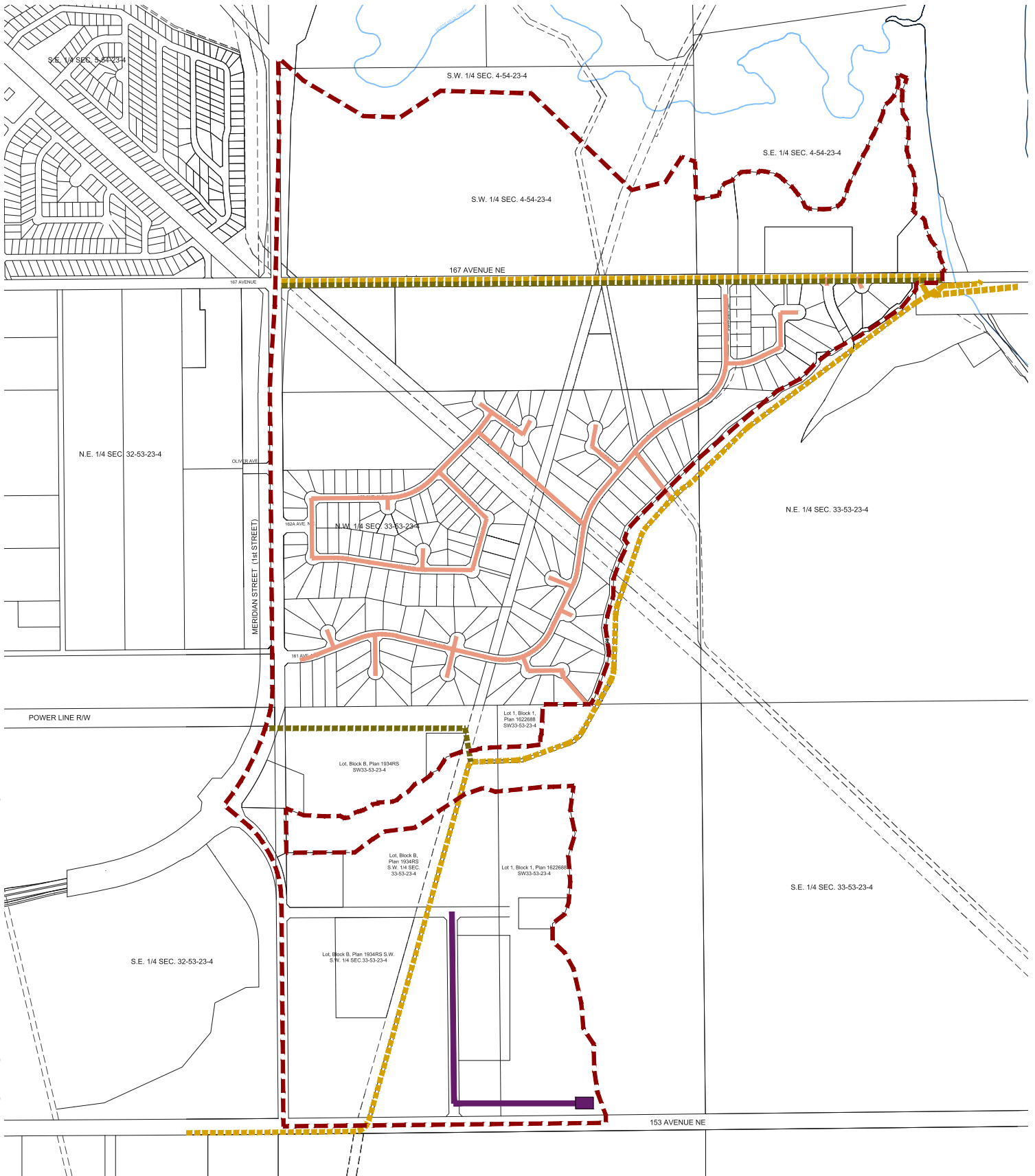
- Neighbourhood Boundary Potential
- Potential Community Garden
- Potential Orchard Location
- Potential Naturalized Edible Landscaping

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 7.0 Agriculture and Food



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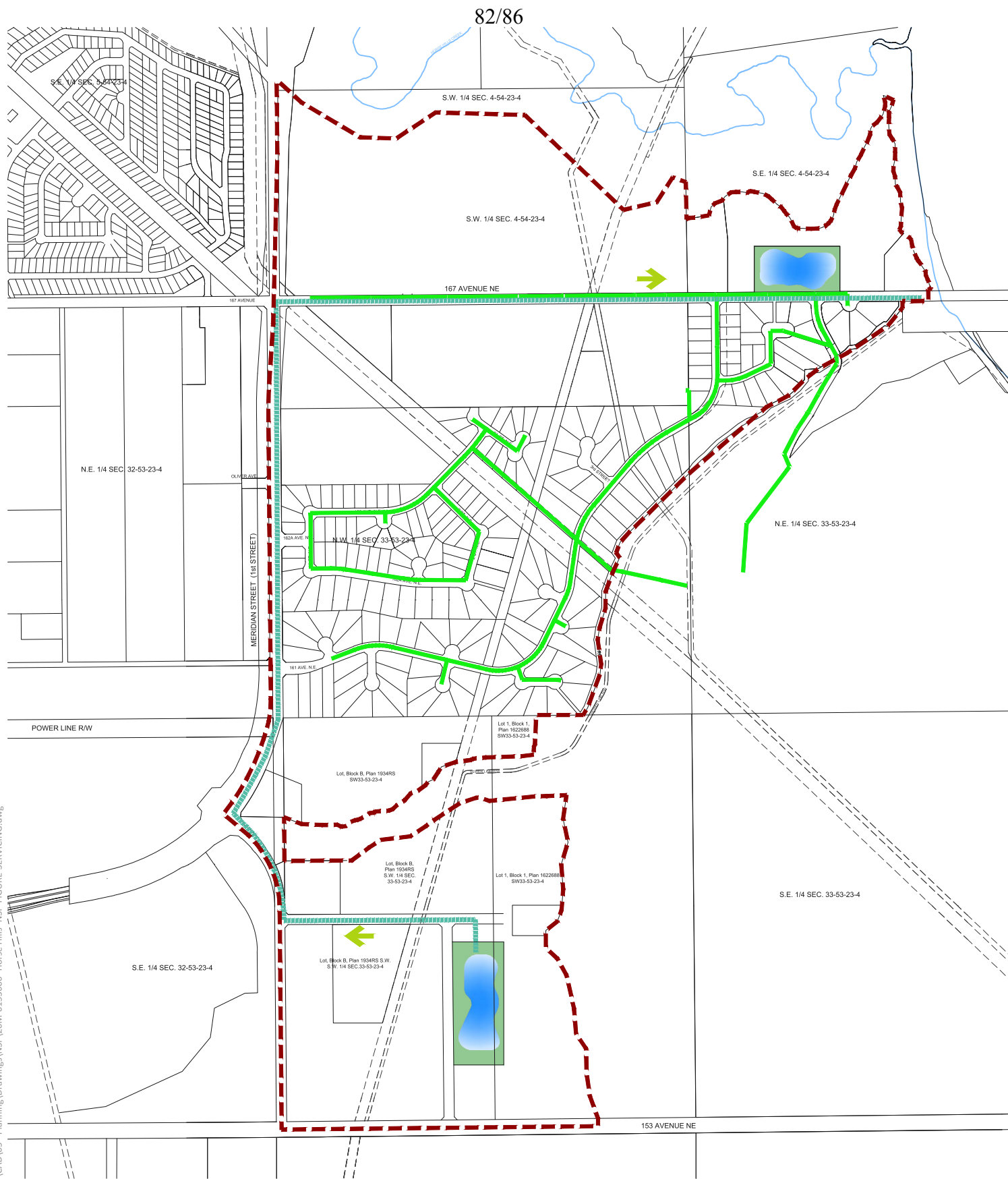
Legend

- Neighbourhood Boundary
- Existing Sanitary Laterals
- Existing Sanitary Trunk
- Proposed Sanitary Trunk
- Forcemain
- Lift Station

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 8.0
Sanitary Service





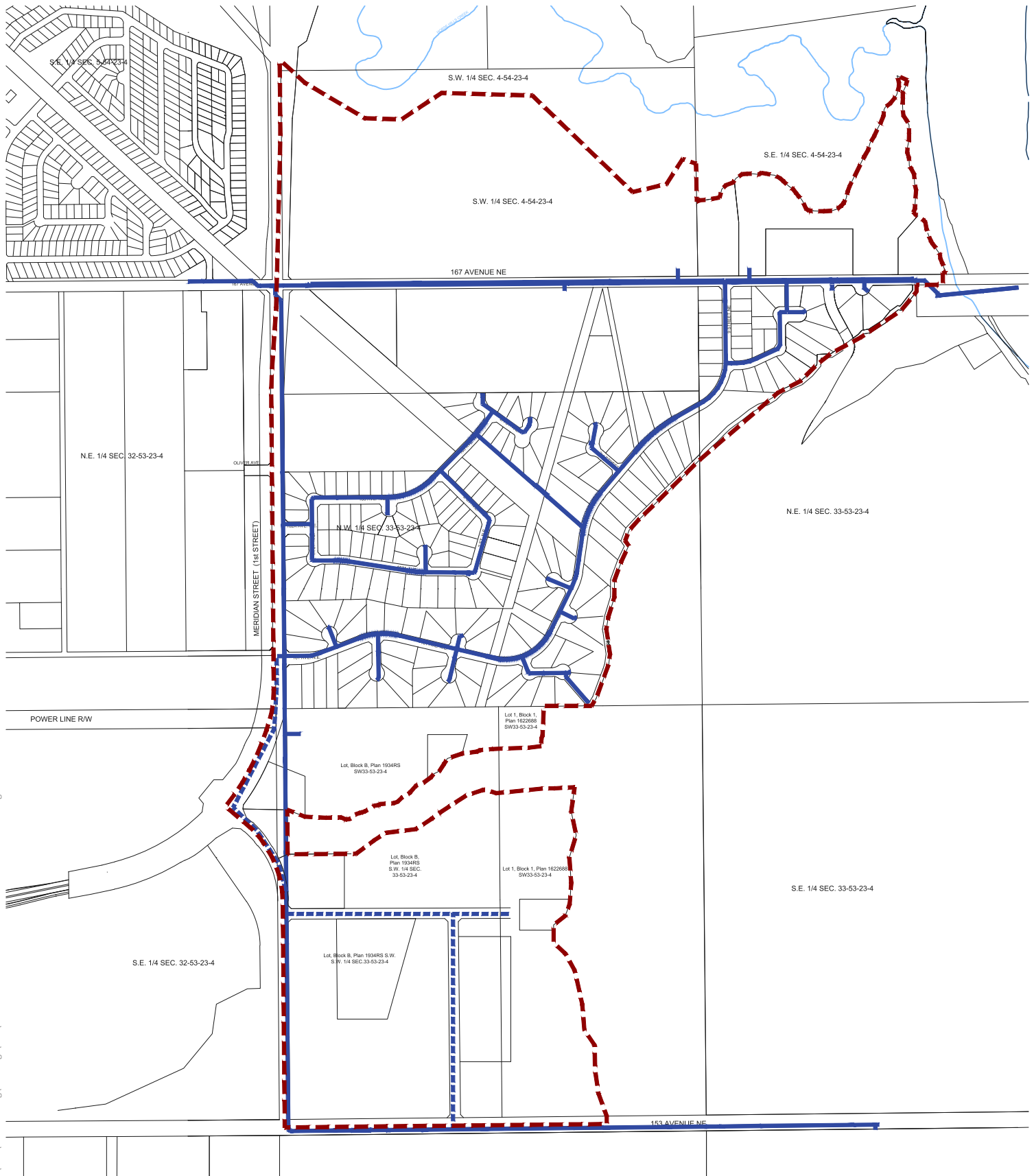
Legend

- Horse Hill Neighbourhood 1A Boundary
- Existing Storm Lateral
- Proposed Storm Trunk
- Direction of Flow

Horse Hill Neighbourhood 1A
 Neighbourhood Structure Plan

Figure 9.0
Storm Service



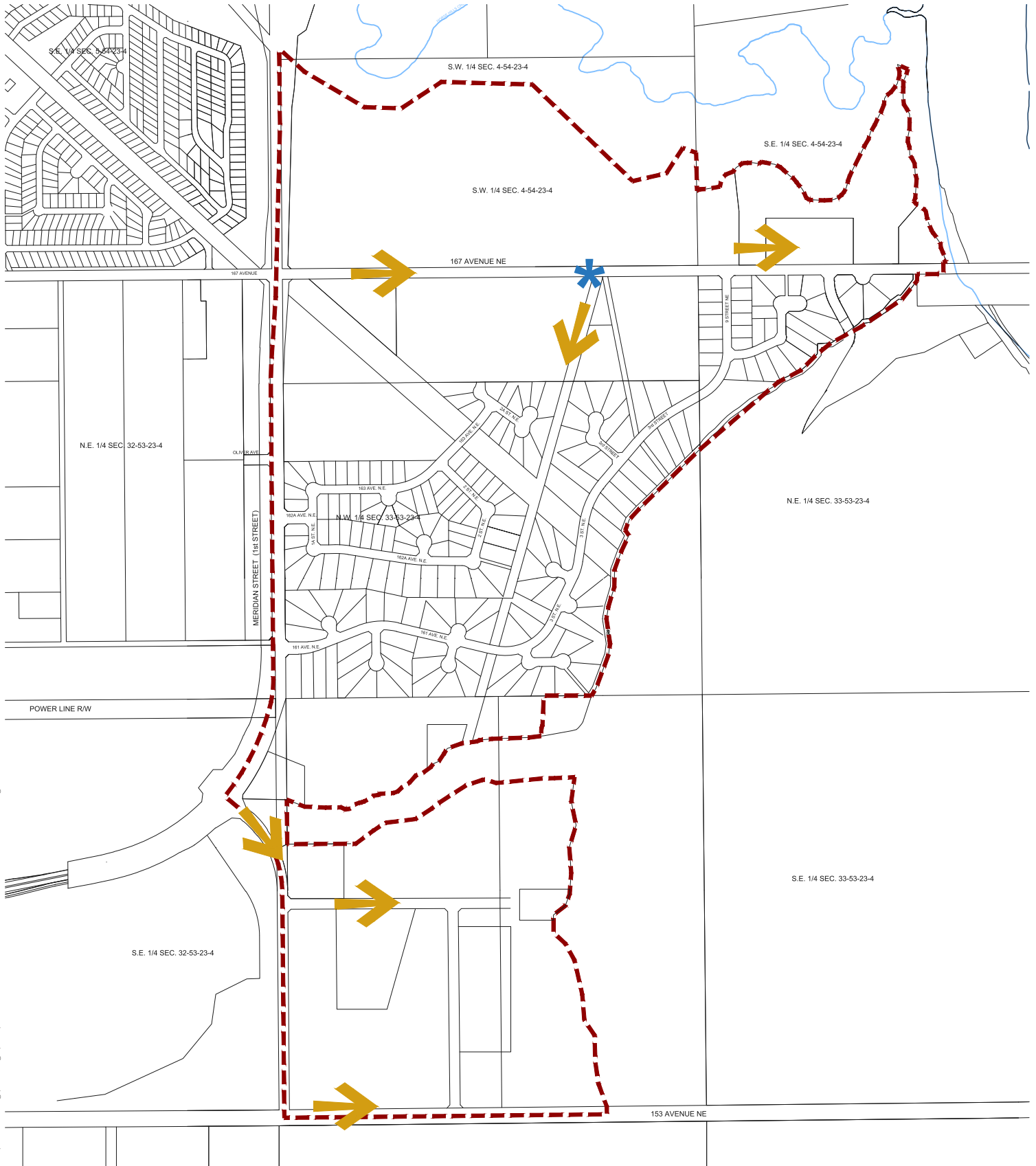


Legend

- Neighbourhood Boundary
- Existing Watermain
- Proposed Watermain

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 10.0
Water Service



Legend

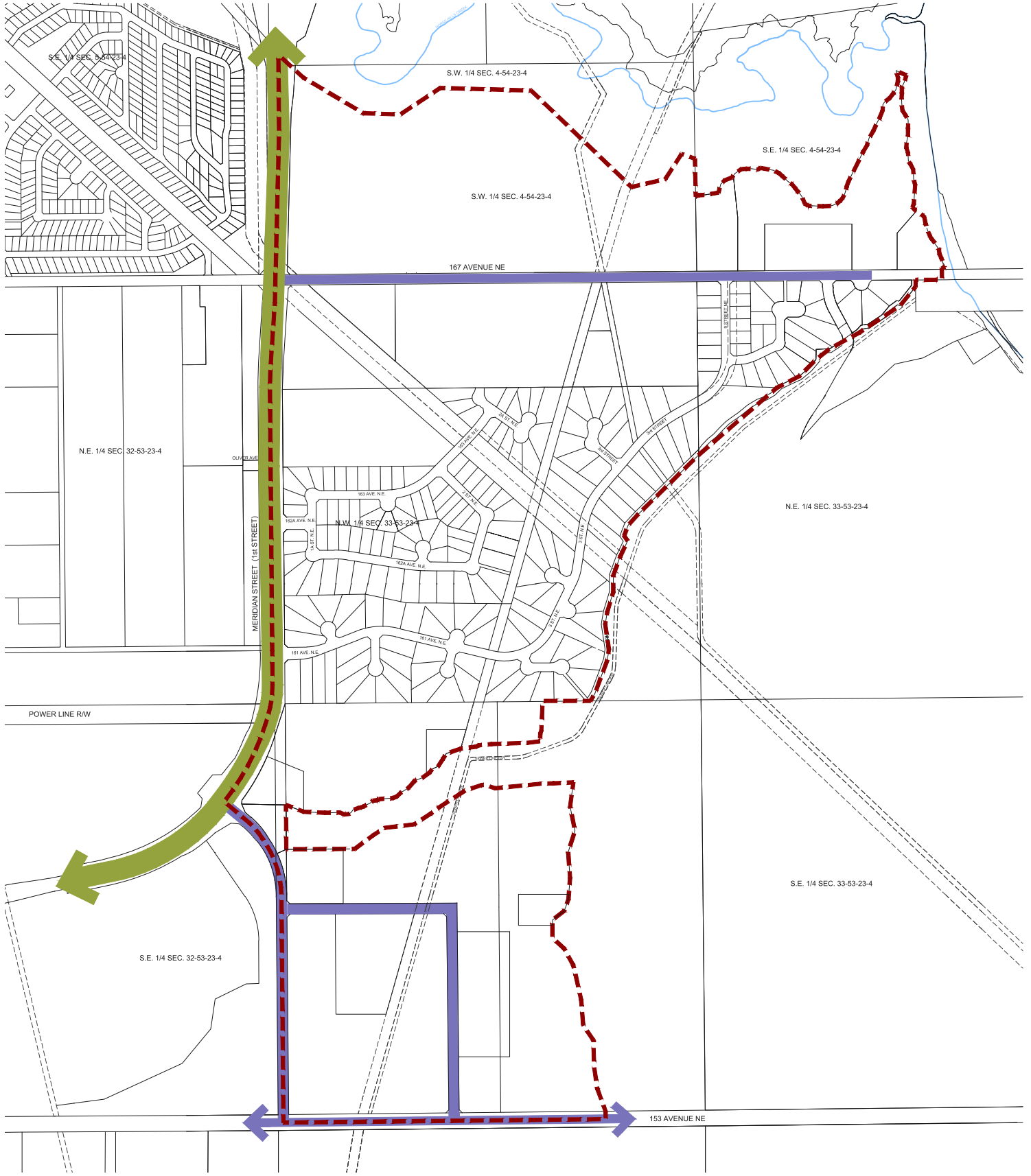
- Neighbourhood Boundary
- ➔ General Direction & Sequence of Development
- ✱ Development Starting Point

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 11.0
Staging Plan



85/86



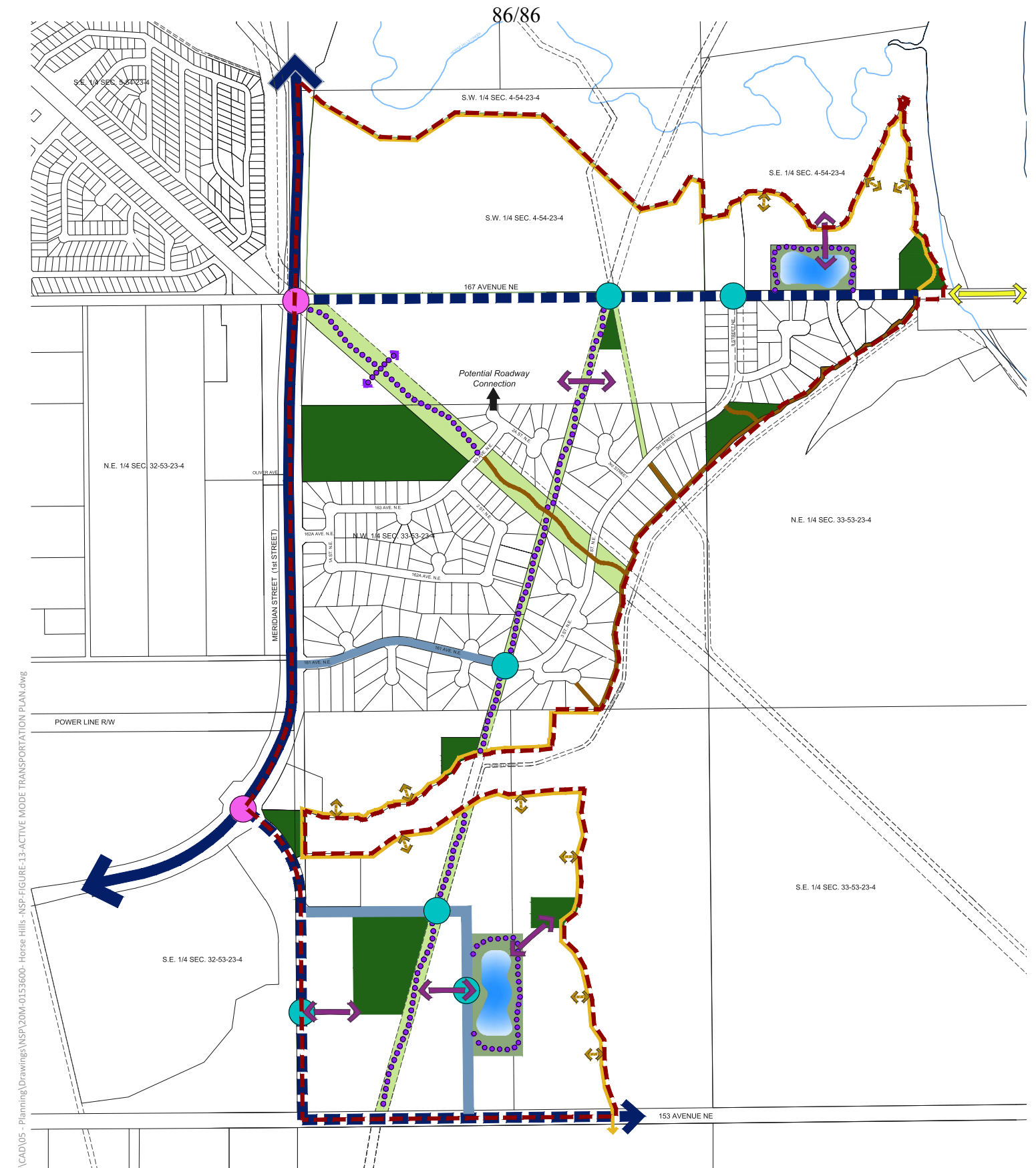
Legend

- Neighbourhood Boundary
- Arterial Roadway
- Collector Roadway

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 12.0
Transportation Network





Legend

- Neighbourhood Boundary
- Primary Bike Network (Shared Use Path Both Sides)
- Primary Bike Network (Shared Use Path One Side)
- Secondary Bike Network
- Pedestrian Connection*
- Minor Pedestrian Connection*
- Edmonton-Strathcona County Footbridge
- Shared Use Path*
- Top of Bank Shared Use Path*
- Existing Trail
- Arterial Pedestrian Crossing
- Traffic Calming
- Utility ROW
- Park and Open Space
- Stormwater Facility

* These are conceptual in nature and the exact location and configuration will be determined at the rezoning and subdivision stage.

Horse Hill Neighbourhood 1A
Neighbourhood Structure Plan

Figure 13.0
Active Mode Transportation Network