

HORSE HILL AREA STRUCTURE PLAN

Office Consolidation February 2018

Prepared by:

***Current Planning Branch
Sustainable Development Department
City of Edmonton***

Bylaw 16353, as amended, was adopted by Council in May 2013. In February 2018, this document was consolidated by virtue of the incorporation of the following bylaws, which were amendments to the original bylaw.

- Bylaw 16353 Approved May 22, 2013 (to adopt the Horse Hill Area Structure Plan)
- Bylaw 17021 Approved April 28, 2015 (to update maps and statistics based upon the approved Neighbourhood Structure Plan for Neighbourhood #2)
- Bylaw 18197 Approved February 13, 2018 (to update the maps and statistics to reflect the associated NSP amendment for the area comprising of the Marquis Town Centre)

Editor's Note:

This is an office consolidation edition for the Horse Hill ASP, Bylaw 16353, as approved by City Council on May 22, 2013. This edition contains all amendments and additions to Bylaw 16353. For the sake of clarity, new maps and a standardized format were utilized in this Plan. All names of City departments have been standardized to reflect their present titles. Private owner's names have been removed in accordance with the Freedom of Information and Protection of Privacy Act. All text changes are noted in the right margin and are italicized where applicable. Furthermore, all reasonable attempts were made to accurately reflect the original Bylaws.

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

City of Edmonton

Sustainable Development Department

HORSE HILL

AREA STRUCTURE PLAN

Prepared for:

Private Developers*

Prepared by:



* Amended by Editor

CONTENTS * AMENDED BY EDITOR

1	Administration	1
1.1	Purpose	1
1.2	Authority	1
1.3	Timeframe	1
1.4	Framework	1
1.4.1	The Way Ahead	1
1.4.2	Capital Region Growth Plan: Growing Forward	3
1.4.3	The Way We Grow	5
1.4.4	The Way We Green	10
1.4.5	Transportation Master Plan: The Way We Move	11
1.4.6	The Way We Live	12
1.5	Interpretation	12
1.6	Amendment	13
2	Plan Context	14
2.1	Location	14
2.2	Background	14
2.3	Land Ownership	15
2.4	Site Context	15
2.4.1	Existing Land Uses	15
2.4.2	Agricultural Soil Capability	16
2.4.3	Existing Vegetation and Water Features	16
2.4.4	Topography	18
2.4.5	Energy and Natural Resources	18
2.4.6	Historical Resources	19
2.4.7	Environmental Assessments	20
2.4.8	Existing Transportation Network	20
2.5	Neighbourhood Units	21
2.6	Public Involvement	21
2.6.1	Stakeholder Advisory Group	21
2.6.2	Public Consultation	22
2.6.3	Website	23
2.6.4	Advanced Notification	23
2.6.5	Public Meeting	24
2.6.6	Public Hearing	24
3	Land Use, Transportation, and Servicing	32
3.1	Land Use Concept and Population Statistics	32
3.2	Vision	33
4	Goals and Objectives	34
4.1	Policy	38
4.1.1	Residential	38
4.1.2	Commercial	41
4.1.3	Mixed Use	43

4.1.4	Urban Design	43
4.1.5	Parkland, Recreation Facilities and Schools.....	48
4.1.6	Institutional / Urban Service.....	51
4.1.7	Historical Resources.....	52
4.1.8	Transportation	53
4.1.9	Infrastructure, Servicing and Staging.....	58
4.1.10	Ecology	60
4.1.11	Environment.....	63
4.1.12	Green Development	64
4.1.13	Agriculture and Food.....	66
5	Implementation	72
5.1	General Staging	72
5.2	Staging Infrastructure and Servicing	72
5.3	Adjacent Land Use Plans	72
5.4	Rezoning and Subdivision.....	72
5.5	Ecological Network.....	72
5.6	Consultation with the Department of the National Defence.....	73
6	Appendix.....	82
6.1	Land Ownership	81
6.2	Pipeline Information	83

FIGURES

Figure 1: Conceptual ASP Process.....	25
Figure 2: Location Plan	26
Figure 3: Land Ownership.....	27
Figure 4: Site Features	28
Figure 5: Site Contours	29
Figure 6: Neighbourhood Units and Staging.....	30
Figure 7: Agricultural Soil Capability.....	31
Figure 8: Land Use Concept	34
Figure 9: Ecological Network	74
Figure 10: Parkland, Recreational Facilities & Schools	75
Figure 11: Active Transportation System.....	76
Figure 12: Transportation Infrastructure.....	77
Figure 13: Storm Drainage Network.....	78
Figure 14: Water Network	79
Figure 15: Sanitary Network.....	80

TABLES

Table 1: Historical Resources Overview.....	19
Table 2: Stakeholder Advisory Group Members.....	21
Table 3: Land Use and Population Statistics	32
Table 4: Land Ownership	81
Table 5: ERCB Pipeline Information.....	83

1 ADMINISTRATION

1.1 PURPOSE

The purpose of this Area Structure Plan (ASP) is to establish a framework for future land use planning, and the provision of municipal infrastructure, services and amenities in conformance with established planning policies, objectives and requirements of the City of Edmonton and based on the characteristics and opportunities contained within the site.

This Area Structure Plan describes:

- the sequence of development proposed for the area;
- the land uses proposed for the area;
- the density of population proposed for the area;
- the general location of major transportation routes and public utilities; and
- other matters considered necessary by City Council.

1.2 AUTHORITY

Preparation of the Horse Hill Area Structure Plan was authorized through the adoption of Bylaw 15100 (*The Municipal Development Plan: The Way We Grow*) on the 26th day of May, 2010. In this plan, the City identified the Horse Hill, Southeast, and Southwest (Riverview) as Urban Growth Areas.

The Horse Hill ASP was adopted by Edmonton City Council in May 2013 as Bylaw 16353, in accordance with Section 633 of the *Municipal Government Act*.

1.3 TIMEFRAME

The City of Edmonton's Sustainable Development Department Growth Analysis Unit estimates that the city's northeast sector contains a remaining potential lot supply of approximately 3,443 single family lots (as of December 2010).¹ Based on average absorption rates, this represents approximately a nine year supply of single detached lots. The Urban Development Institute estimates that 2,615 low density residential lots will be available by 2012, providing a lot supply for between five and seven years.

As this supply decreases, additional land is needed to "ensure a combination of single family and multifamily housing development potential is available for the next 30 years", as indicated in *The Way We Grow*.

While no specific timeframe is forecast within the Horse Hill ASP, it is anticipated that neighbourhoods within the Plan area will be fully developed within 30 to 40 years.

1.4 FRAMEWORK

1.4.1 THE WAY AHEAD

In 2008, the City's Strategic Plan, *The Way Ahead* was approved by Council providing a vision for Edmonton in 2040 and establishing strategic goals to provide a clear focus for the future. The Horse Hill ASP advances the vision of *The Way Ahead* through the directional plans: *The Way We Grow*, *The Way We Move*, *The Way We Live* and *The Way We Green* as well as the four principles which guide the development and implementation of *The Way Ahead*:

¹ City of Edmonton. 2011. Land Supply in Developing and Planning Neighbourhoods 2010.

Integration

- The North Saskatchewan River Valley will be integrated into the Plan area through linkages (greenways, shared use paths, roadways) and recreational opportunities.
- The open space system will be integrated with the natural areas and the river valley and ravine system providing a network for both pedestrians and wildlife habitat.
- Existing country residential developments will have the opportunity to connect to municipal services (water and sanitary) as development occurs.
- Transit service will be provided to the area with potential LRT stations at Alberta Hospital and in the Town Centre as well as bus service throughout the Horse Hill ASP.

Sustainability

- Proposed LRT Stations are located in areas which promote higher density housing, commercial areas, district park site as well as employment areas such as Alberta Hospital.
- The Horse Hill ASP proposes densities which meet the density requirements of the Capital Region Growth Plan.
- The Horse Hill ASP provides opportunities for a variety of housing types to allow individuals to remain in one area as they age.
- Urban agriculture is promoted in the ASP, which supports the local economy and supports a robust local food system.

Livability

- Public spaces will be provided throughout the ASP area to serve both as gathering spaces and centres of activity.
- The Horse Hill area is designed to support a range of housing choices, commercial and recreational amenities.
- The Horse Hill ASP provides sustainable economic employment and lifelong learning opportunities, with business and employment, commercial and educational facilities located within the Horse Hill area. The Horse Hill ASP is also located adjacent to the Edmonton and Energy Technology Park and in close proximity to Alberta's Industrial Heartland. The ASP also promotes local employment opportunities within the Plan area.
- Public participation has been an important component of the Horse Hill ASP with an extensive process which has included a Stakeholder Advisory Group, Visioning Charrette, Meetings, Open Houses, and telephone and email discussions.

Innovation

- The Horse Hill ASP encourages and provides opportunities for innovative approaches to housing, servicing, etc. to be explored as more detailed planning is completed.
- The Horse Hill ASP encourages and provides opportunities for the integration of agricultural uses with urban development.
- The Horse Hill ASP encourages innovative and green servicing infrastructure.

1.4.2 CAPITAL REGION GROWTH PLAN: GROWING FORWARD

The primary purpose of the Capital Region Land Use Plan is to manage sustainable growth in a manner that protects the region's environment and resources, minimizes the regional development footprint, strengthens communities, increases transportation choice and supports economic development. The Capital Region Growth Plan: Growing Forward was approved by the Government of Alberta on March 11, 2010.

Capital Region Land Use Plan	Horse Hill ASP
I. Protect the Environment and Resources	
<p>A. Preserve and Protect the Environment</p> <p>Policy (ii) – Any development which fragments contiguous natural features, functions and habitat, such as water systems, moraines, forests, wetlands and wildlife habitat and corridors shall be discouraged.</p> <p>Policy (vi) – Manage land use distribution patterns to reduce reliance on automobiles.</p>	<p>The Land Use Concept designates a number of Natural Areas as either Environmental Reserve or Municipal Reserve. All Natural Areas identified at the time of the Plan preparation are mapped on Figure 4. The ecological function and sustainability of each feature and its associated connectivity will be further examined at the NSP stage.</p> <p>The Horse Hill ASP encourages the development of a walkable environment with policies supporting the establishment of a mixed use town centre/main street area, recreational trails, and an active transportation network.</p>
II. Minimize Regional Footprint	
<p>A. Identify, Protect and Prioritize Lands for Regional Infrastructure</p> <p>Policy (i) – Ensure that lands identified for regional infrastructure such as energy transmission, highways, municipal infrastructure, transit and related facilities are protected from incompatible development.</p>	<p>The Horse Hill ASP requires compatible development in the vicinity of the Anthony Henday Drive transportation corridor and the Canadian National Railway corridor, or an appropriate buffer between these areas and adjacent development.</p>
<p>B. Concentrate New Growth Within Priority Growth Areas</p> <p>Policy (i) – Most new growth shall occur within priority growth areas.</p> <p>Policy (v) – Priority growth areas shall incorporate intensive forms of development that significantly exceed existing development patterns.</p>	<p>The Horse Hill area is identified in the Capital Region Board Growth Plan as a Priority Growth Area “F” with a target residential density of 30 – 40 units per net residential hectare. The proposed residential density is 31 units per net residential hectare.</p> <p>The Horse Hill ASP includes opportunities for multiple family residential, neighbourhood commercial services, and institutional uses. The Horse Hill ASP incorporates forms of development that exceed existing development patterns in Edmonton.</p>
<p>D. Support Expansion of Medium and Higher Density Residential Housing Forms</p> <p>Policy (i) – New residential development shall provide a greater proportion of higher density residential units.</p> <p>Policy (iii) – Greenfield developments shall make provision for a mixture of uses including a diversity of</p>	<p>The Horse Hill ASP promotes affordable housing opportunities by requiring a mix of housing types to promote affordability and accommodate a mix of family compositions and ages. Housing types include: single detached, semi-detached, street oriented row housing, and low rise apartment buildings. The town centre incorporates higher-density residential development, neighbourhood commercial services, and institutional</p>

Capital Region Land Use Plan	Horse Hill ASP
<p>housing forms, community services, local retail and employment opportunities.</p> <p>Policy (iv) – Transit accessibility must be included in the design of all new developments.</p>	<p>uses.</p> <p>The Horse Hill ASP accommodates a proposed light rail transit corridor with potential stations by Alberta Hospital and the town centre area (i.e. district park site, commercial and higher density residential area) and bus service throughout the neighbourhoods.</p>
<p>III. Strengthen Communities</p>	
<p>B. Support Healthy Communities</p> <p>Policy (ii) – Improve accessibility to community services by providing sidewalks, bicycle trails to encourage walking and cycling and locate these services within proximity to transit, where possible.</p>	<p>The transportation network provides sidewalks in all residential and commercial areas, recreation trails along the Top-of-Bank of the North Saskatchewan River Valley, and an active transportation network throughout the area.</p>
<p>C. Support Public Transit</p> <p>Policy (i) – Provide a mix of higher intensity land uses along transit corridors, at nodes, and employment centres.</p> <p>Policy (iii) – New developments shall be designed for connectivity and accessibility to transit facilities.</p>	<p>The Horse Hill ASP accommodates a proposed light rail corridor through the town centre and bus service throughout the area. Higher density residential development will be encouraged in proximity to the station.</p>
<p>D. Support Innovative and Affordable Housing Options</p> <p>Policy (ii) – All residential developments shall provide a greater variety of housing types.</p>	<p>The Horse Hill ASP requires multiple housing types to accommodate a diverse range of family types and residents of all incomes and ages.</p>
<p>IV. Increase Transportation Choice</p>	
<p>A. Integrate Transportation Systems with Land Use</p> <p>Policy (iii) – Design transportation infrastructure to support multiple modes of transport.</p> <p>Policy (iv) – Support development of inclusive communities to reduce the need for travel.</p>	<p>The Horse Hill ASP encourages higher density residential development in the town centre and other areas integrated with public and active transportation and commercial services.</p>
<p>B. Support the Expansion of Transit Service in Various Forms</p> <p>Policy (i) – Expand and extend the level, quality and range of public transportation options available to serve the Region.</p> <p>Policy (iv) – Support multi-modal transportation options by providing multi-use streets sufficient to accommodate bicyclists, motorists and pedestrians.</p>	<p>The Horse Hill ASP encourages multiple modes of transportation. Detailed design of the transportation network at the NSP level will accommodate multiple modes of transportation, including personal vehicle, bicycle, and public transportation.</p>

Capital Region Land Use Plan Capital Region Growth Plan Addendum		Horse Hill ASP Horse Hill ASP
II. Land Use		
2.3 Land Use Policies		
Density Targets – Priority Growth Area “F”: 30 – 40 dwelling units per net residential hectare		The Horse Hill ASP proposes a land use density of 31 units per net residential hectare.

1.4.3 THE WAY WE GROW

The Municipal Development Plan (MDP), *The Way We Grow*, approved in May 2010, is the City’s strategic growth and development plan. Through its MDP, the City of Edmonton will shape the city’s urban form and direct the development and implementation of more detailed plans. The plan is closely integrated with the Transportation Master Plan (TMP) to achieve more coordinated decision making. The plan also includes a regional component which addresses the coordination of future land use, growth patterns and transportation systems with Edmonton’s neighbouring municipalities.

Municipal Development Plan: The Way We Grow	Horse Hill ASP
3.1.1.8 – Proponents for a new Neighbourhood Structure Plan will seek Council’s authority to prepare the plan. The information supplied by the applicant and administration will allow Council to provide direction and permission in accordance with Council’s Vision.	When requesting Council’s authorization to prepare a Neighbourhood Structure Plan, proponents and Administration shall provide the required information to inform Council’s decision.
3.2.1.1 – Ensure a combination of single family and multi-family housing development potential is available for the next 30 years.	The Horse Hill ASP encourages a combination of single and multiple-family residential units, which are expected to be developed over the next 30 years.
3.2.1.3 – Achieve a balance between residential, industrial, commercial, institutional, natural and recreational land uses in the city through land development policies and decisions.	The Horse Hill ASP land use concept includes a mix of land uses and a range of residential densities. Industrial land uses are located to the northwest of the plan area across Manning Drive which is expected to be a major employment area for the region.
3.2.1.7 – Preparation of Area Structure Plans is authorized for the Horse Hill, Southeast and Southwest Urban Growth Areas, and shall only be approved following Council acceptance of, and adherence with the: <ul style="list-style-type: none"> • Growth Coordination Strategy; • Integrated Infrastructure Management Plan; and • Citywide Food and Agriculture Strategy. 	The Horse Hill ASP will comply with the policies of the Growth Coordination Strategy, Integrated Infrastructure Management Plan; and the City-Wide Food and Agriculture Strategy.

Municipal Development Plan: The Way We Grow	Horse Hill ASP
<p>3.2.1.8 – Area Structure Plans for the Horse Hill, Southeast and Southwest Urban Growth Areas shall include the following:</p> <ul style="list-style-type: none"> • An area vision created with area landowners and other city stakeholder groups; • A peri-urban agricultural section in support of the City-Wide Food and Agricultural Strategy; and • Innovative approaches to food systems, ecological networks, green infrastructure provision, demand reduction strategies and eco-design for future residential, commercial, industrial, business agriculture and natural uses. 	<p>The vision and principles for the Horse Hill ASP was developed with the Stakeholder Advisory Group which consisted of city administration, area landowners and other city stakeholder groups. The group worked together through a visioning charrette as well as on several other occasions to refine the plan. An agricultural section including urban agriculture is included in the plan and where possible innovative approaches to servicing, etc. will be incorporated.</p>
<p>3.2.1.9 – Any Area Structure Plan prepared for the Horse Hill Urban Growth Area shall recognize the value of its agricultural characteristics, including micro climate, soil capabilities and moisture content, to contribute to sustainable food and agriculture systems for Edmonton</p>	<p>The NE ASP recognizes the agricultural presence within the NE Urban Growth Area and will bring forward a plan that encompasses food & agriculture activities subject to the policies and guidelines that will be developed in the City-Wide Food and Agriculture Strategy.</p>
<p>3.2.1.11 – Neighbourhood Structure Plans within the Northeast, Southeast or Southwest Urban Growth Areas shall require Council authorization and comply with the Growth Coordination Strategy, the Integrated Infrastructure Management Plan, and the City-Wide Food and Agriculture Strategy.</p>	<p>Council authorization will be requested at the time of Neighbourhood Structure Plan (NSP) preparation. All NSPs will also be in compliance with the Growth Coordination Strategy, the Integrated Infrastructure Management Plan, and the City-Wide Food and Agriculture Strategy.</p>
<p>3.2.2.3 – Ensure City departments and agencies collaborate to identify all municipal land needs within an Area Structure Plan, Neighbourhood Structure Plan or Area Redevelopment Plan boundary prior to plan approval.</p>	<p>All City departments and agencies have been consulted throughout the preparation of the Horse Hill ASP. All future NSPs will also require consultation prior to Council approval.</p>
<p>3.2.2.4 – Ensure all City departments identify facility development and service delivery needs prior to the approval of new plans and work collaboratively to prepare a comprehensive facility concept that will assist with budget planning.</p>	<p>Through consultation with City departments and agencies facility development and service delivery needs have been identified and incorporated into the Horse Hill ASP. The Growth Coordination Strategy and Integrated Infrastructure Management Plan will help in facility planning and budgeting.</p>
<p>3.6.1.6 – Support contiguous development and infrastructure in order to accommodate growth in an orderly and economical fashion.</p>	<p>The staging concept for the Horse Hill ASP outlines a logical and efficient development pattern in the area.</p>

Municipal Development Plan: The Way We Grow	Horse Hill ASP
<p>4.3.1.1 – The City of Edmonton will take municipal reserve, school reserve or municipal and school reserve, or cash-in-lieu in accordance with the Municipal Government Act and will use the land or money for purposes as defined by the Municipal Government Act.</p>	<p>The Horse Hill ASP dedicates 10% of the Gross Developable Area to Municipal Reserve for parks, open spaces, and schools. The Horse Hill ASP supports the use of parks and open spaces for agricultural uses such as community gardens.</p>
<p>4.3.1.5 – Time the development of parks as closely as possible with the development they are intended to serve.</p>	<p>Parks and open spaces will be identified at the NSP stage and will be timed to coincide with residential development.</p>
<p>4.4.1.1 – Provide a broad and varied housing choice, incorporating housing for various demographic and income groups in all neighbourhoods.</p>	<p>The Horse Hill ASP requires a mix of housing types to accommodate residents of different age, income, and family types.</p>
<p>4.5.1.1 – Work proactively and in partnership with others to meet a wide range of affordable housing needs in all areas of the city with a focus on LRT stations and transit centres.</p>	<p>The Horse Hill ASP includes a range of housing forms to promote affordability in the area. Higher density housing is encouraged in proximity to the proposed light rail station and other public transportation facilities.</p>
<p>4.5.1.2 – Encourage new development and infill redevelopment to incorporate affordable housing that is visually indistinguishable from market housing.</p>	<p>The Horse Hill ASP encourages a range of housing types to encourage affordable, high-quality housing options for all residents.</p>
<p>4.6.1.3 – Ensure active transportation opportunities are included in plans and redevelopment proposals.</p>	<p>The land use concept proposes an active transportation trails along the Canadian National Railway corridor, connecting natural areas and agricultural land in the plan area.</p>
<p>5.5.1.2 – Incorporate sustainable neighbourhood design principles, low impact development and ecological design approaches when planning and building new neighbourhoods.</p>	<p>The Horse Hill ASP promotes natural ecological processes through sustainable development and low impact development strategies. Where possible, the concept proposes preserving agricultural uses, significant natural areas, and environmentally sensitive areas.</p>
<p>5.5.1.3 – Ensure new large scale commercial centres (including big box development and retail power centres) are designed to:</p> <ul style="list-style-type: none"> • Generate and accommodate pedestrian activity. Provide clear on-site pedestrian connections. Include outdoor public amenity spaces for patrons and employees. • Support transit ridership. • Reduce the visual and environmental impact of large hard-surface parking lots. 	<p>The ASP provides for commercial and mixed use sites along major transportation routes, which are accessible to automobiles, active transportation modes, transit and LRT, and they allow for multiple means of access. Within the Major Commercial/Business Employment area and adjacent to the LRT, the Plan provides a pedestrian friendly “main street” area.</p> <p>At the NSP stage, the manner in which MDP Policy 5.5.1.3 will be implemented will be further specified.</p>

Municipal Development Plan: The Way We Grow	Horse Hill ASP
<p>5.6.1.4 – Design density, land uses and buildings to benefit from local transit service by minimizing walking distances to transit service and by providing safe and comfortable pedestrian streetscapes and high quality transit amenities.</p>	<p>Density is encouraged in the town centre area, to be serviced by light rail. Higher density residential and commercial uses are encouraged in proximity to public transportation.</p>
<p>5.6.1.7 – Identify and preserve public views and vistas of the North Saskatchewan River Valley and Ravine System as new development occurs and require public access in accordance with the Top-of-bank Policy.</p>	<p>The ASP acknowledges the City’s Top-of-Bank Policy, and has identified an approximate top-of bank line. Subsequent stages of planning will establish an urban development line and will specify the location of public roadways, shared use paths, viewpoint parks and other features according to approved policy to preserve views and public access.</p>
<p>5.7.1.1 – Design streets, sidewalks and boulevards to provide safe, accessible, attractive, interesting and comfortable spaces for pedestrians, cyclists, automobiles and transit and to accommodate utilities, landscaping and access requirements for emergency response services.</p>	<p>The Horse Hill ASP proposes a vibrant public realm with high quality urban design and a creative transportation network.</p>
<p>6.2.1.2 – Plan for new commercial sites within Area Structure Plans around LRT stations and transit centres to increase accessibility by a variety of transportation modes and improve connections to surrounding neighbourhoods.</p>	<p>The ASP anticipates two LRT stations. One station is intended to support the potential future redevelopment of the Provincial Government lands, while the other is located adjacent to the area’s major commercial and employment area. Other adjacent land uses include education, recreation, civic and residential uses. The Plan provides multiple means of access for all modes of transport.</p>
<p>6.1.1.3 – Include retail space as a key component of planned mixed-use centres that focus on LRT stations and transit centres.</p>	<p>The Horse Hill ASP allows for mixed use development in the town centre. Retail space will be a key component of these mixed-use developments.</p>
<p>6.2.1.11 – Accommodate home-based businesses and services.</p>	<p>The Horse Hill ASP allows for minor home-based businesses in the plan area.</p>
<p>7.1.1.5 – Acquire critical natural linkages and buffer zones to ensure natural areas of ecological value remain sustainable within the urban context.</p>	<p>The Horse Hill ASP recognizes the importance of the Ecological Network and will ensure ecological linkages will be maintained and enhanced.</p>
<p>7.1.1.7 – Public projects, new neighbourhoods and developments will protect and integrate ecological networks, as identified in the Natural Connections Strategic Plan, by adopting an ecological network approach to land use planning and design.</p>	<p>The Horse Hill ASP promotes natural ecological processes through sustainable development and low impact development strategies. The concept proposes preserving agricultural uses, significant natural areas, and environmentally sensitive areas.</p>
<p>7.1.1.10 – Utilize the full legislative entitlements of environmental reserve, in accordance with the <i>Municipal Government Act</i>, during the land development process.</p>	<p>The Horse Hill ASP identifies potential environmental reserve which will be dedicated at the subdivision stage.</p>

Municipal Development Plan: The Way We Grow	Horse Hill ASP
7.1.1.12 – Lands and features that meet the definition of environmental reserve, but are not claimed by the Province, should be taken by the City as environmental reserve and protected.	The Horse Hill ASP acknowledges that lands and features which meet the definition and intent of environmental reserve as per the MGA should be taken by the City.
7.1.1.13 – Utilize urban agricultural lands to complement and enhance biodiversity, linkages, habitat and the overall health of Edmonton’s ecological network, its air and water quality, and its people.	The Horse Hill ASP supports the integration of urban agriculture which contributes to ecological connectivity.
7.3.3.2 – Maintain adequate separation between new urban developments and the North Saskatchewan River Valley and Ravine System through the City’s Top-of-bank Policy, with viewsapes and public access to the River Valley preserved.	The Horse Hill ASP contains policies to protect the River Valley and Ravine System. A top-of-bank walkway will be identified at the NSP stage in accordance with City policy.
7.4.1 – Utilize parks and open spaces to complement and enhance biodiversity, linkages, habitat and the overall health of Edmonton’s ecological network.	The Horse Hill ASP aims to link schools, parks and open spaces to create a well-functioning ecological network that enhances biodiversity, linkages, and protects habitats.
7.4.1.1 – Link parks and open spaces with natural systems through development and design to strengthen the connectivity of Edmonton’s ecological network, where feasible.	The land use concept proposes a network of parks, open spaces, and agriculture areas connected to natural areas and the North Saskatchewan River Valley.
7.5.1.1 – Require new development to demonstrate that it has incorporated ecological design best-practices into the design of neighbourhoods and buildings to reduce stormwater run-off.	The Plan encourages the use of Low Impact Development principles in neighbourhood land use and servicing plans.
7.5.3.3 – Integrate indigenous vegetation, specifically low-maintenance drought tolerant species, and where feasible include edible plant species into City and private landscaping.	The Horse Hill ASP encourages the use of native, naturalized and edible plant species in both private and public spaces.
8.1.7.3 – Upon provincial approval of the Capital Region Plan Addendum, Edmonton’s new Area Structure and Neighbourhood Structure Plans in the Capital Region Plan’s priority growth area B, F, Cw or Ce will be required to meet or exceed the Capital Region’s minimum density targets.	The Horse Hill area is identified in the Capital Region Board Growth Plan as Priority Growth Area “F” with a target residential density of 30 – 40 units per net residential hectare. The proposed residential density for the Horse Hill ASP is 31 units per net residential hectare.
9.2.1.1 – Apply City of Edmonton Policy C515 Oil and Gas Facilities regarding setbacks, risk management and urban development.	City Policy C515 is acknowledged in the Horse Hill ASP. Neighbourhood Structure Plans and subdivision plans will confirm setback requirements.
9.3.1.4 – In consultation with the Energy and Resources Conservation Board (ERCB), ensure development setbacks from oil and gas pipelines are achieved through the subdivision approval process.	The Horse Hill ASP identifies active and abandoned oil and gas wells in the plan area. The subdivision process will ensure appropriate development setbacks are achieved.

1.4.4 THE WAY WE GREEN

The Horse Hill ASP recognizes the 12 goals of The Way We Green:

Goal	Horse Hill ASP
<p>Healthy Ecosystems – Land</p> <p>Edmonton’s communities are full of nature – a place where in the course of everyday life, residents experience a strong connection with nature.</p>	<p>The Horse Hill ASP meets the goal of Healthy Ecosystems – Land by ensuring preservation of Natural Areas, Wetlands and the North Saskatchewan River Valley and Ravine system and by providing linkages, buffers and open space for residents to enjoy these areas.</p>
<p>Healthy Ecosystems – Water</p>	<p>The Horse Hill ASP contributes to the Healthy Ecosystem – Water goal by ensuring that stormwater is stored and treated naturally prior to release into the river. The Horse Hill ASP also encourages the exploration of Low Impact Development techniques.</p>
<p>Healthy Ecosystems – Air</p>	<p>The Horse Hill ASP meets the goal of Healthy Ecosystems – Air by including walkable neighbourhoods, LRT Stations and transit service to reduce the use of the personal automobile as well as preserving Natural Areas where possible or encouraging the planting of additional trees.</p>
<p>Energy and Climate Change</p>	<p>The Horse Hill ASP encourages further studies to be completed to determine the feasibility of District Energy facilities.</p>
<p>Food</p>	<p>The Horse Hill ASP provides opportunities for the retention of private agricultural lands and incorporation and education of urban agriculture and peri-urban agriculture.</p>
<p>Solid Waste</p>	<p>The Horse Hill ASP area will continue promoting and adhering to the City of Edmonton Waste Management policies and regulations in reducing the amount of waste generated in our City.</p>
<p>Foundation for Success</p>	<p>The Horse Hill ASP strives to create a sustainable area within our City.</p>

1.4.5 TRANSPORTATION MASTER PLAN: THE WAY WE MOVE

The Transportation Master Plan (TMP), *The Way We Move*, is the framework that responds to the City of Edmonton’s future transportation needs. The TMP directs policies and gives guidance for funding projects and programs that work towards an integrated transportation network. The TMP strives to ensure transit sustainability and increase transit ridership, improve travel options to reduce barriers between different modes of transportation, increase traffic safety and manage traffic congestion to facilitate travel through and around the city.

TMP Strategic Goal	ASP Compliance with Strategic Goal
<p>Transportation and Land Use Integration</p> <p>The transportation system and land use/urban design complement and support each other so that the use of transit and transportation infrastructure is optimized and supports best practices for land use.</p>	<p>The land use concept incorporates a town centre with a mix of medium and high density residential development, commercial and institutional services, and public transportation. The town centre is connected with the neighbourhood by bus transit and with the rest of the city by the proposed extension to the light rail network.</p> <p>Higher density residential is encouraged around transit stations and the town centre.</p>
<p>Access and Mobility</p> <p>The transportation system is interconnected and integrated to allow people and goods to move efficiently throughout the city and to provide reasonable access with a variety of modes for people across demographic, geographic, socio-economic and mobility spectrums.</p>	<p>The transportation network encourages multiple modes of transportation, including personal vehicle, public transportation, and active transportation to connect residents with local commercial uses and recreational amenities within the Horse Hill, to employment sectors such as the Edmonton and Energy Technology Park, as well as those across Edmonton.</p>
<p>Transportation Mode Shift</p> <p>Public transportation and active transportation are the preferred choice for more people making it possible for the transportation system to move more people more efficiently in fewer vehicles.</p>	<p>The transportation network accommodates multiple modes of transportation including public and active transportation options. The proposed light rail station in the town centre connects Horse Hill to the rest of Edmonton and bus service connects all areas of the community. Active transportation corridors provide linkages between the Top-of-Bank of the North Saskatchewan River, residential areas, parks and open spaces, agriculture spaces, commercial and business employment areas.</p>
<p>Health and Safety</p> <p>The transportation system supports healthy, active lifestyles, and addresses user safety and security including access for emergency response services, contributing to Edmonton’s liveability.</p>	<p>The Horse Hill ASP supports a healthy and active lifestyle by promoting access to healthy food options and active transportation choices.</p>

1.4.6 THE WAY WE LIVE

Edmonton’s People Plan, *The Way We Live*, will provide residents, community stakeholders and the City with a blue print for the co-ordination and delivery of people services in order to advance and support the 10-year goal of improving Edmonton’s Livability. Edmonton is one of Canada’s most livable cities because it is welcoming to all, safe and clean, fosters its heritage and supports its arts and multicultural communities, encourages active lifestyles through recreation opportunities and engages its citizens in the city vision and direction. The Horse Hill ASP recognizes the six goals of The Way We Live:

Goal	Horse Hill ASP
Edmonton is a Vibrant, Connected, Engaged and Welcoming Community	The Horse Hill ASP provides opportunities in neighbourhoods, communities and public spaces to connect people and build vibrant communities. The Horse Hill ASP also integrates public transit, both LRT and bus service with employment centres such as the town centre and Alberta Hospital, areas of higher density as well as near the recreation centre.
Edmonton Celebrates Life	The Horse Hill ASP celebrates and promotes healthy living by providing for a variety of active and passive park space, the preservation of natural areas and connections to the North Saskatchewan River Valley System. The Horse Hill ASP also celebrates and promotes both the agricultural and historical heritage of the area.
Edmonton is a Caring, Inclusive, Affordable Community	The Horse Hill ASP provides the opportunity for a variety of housing options for people throughout their life cycle and offers complete neighbourhoods with commercial, business employment, recreational and educational facilities.
Edmonton is a Safe City	The design of neighbourhoods and buildings within the Horse Hill ASP are to include Crime Prevention Through Environmental Design (CPTED) Principles to ensure safety. The Horse Hill ASP supports the development of facilities for emergency response services as identified by Fire and Police Services.
Edmonton is an Attractive City	The Horse Hill ASP takes pride in and showcases its green spaces and natural areas by providing linkages and connections to the North Saskatchewan River Valley and Ravine System, preserving and enhancing natural areas, as well as introducing additional linkages and open space. The Horse Hill ASP also supports the agricultural and historical heritage of the area.
Edmonton is a Sustainable City	The Horse Hill ASP supports sustainable development by providing opportunities for green infrastructure, complete communities, innovation in servicing, and a variety of housing and transportation options.

1.5 INTERPRETATION

All map symbols, locations, and boundaries contained within the Horse Hill ASP shall be interpreted as approximate unless otherwise specified in the plan, or coincide with clearly recognizable physical features or fixed (i.e. legal) boundaries.

1.6 AMENDMENT

Policies, text and mapping information contained within the Horse Hill ASP may be amended from time to time in order to remain current and up-to-date in response to broader or more specific issues affecting the plan area.

Any change to policy, text or mapping information contained within the Horse Hill ASP shall be in accordance with the *Municipal Government Act* and the terms of reference for the preparation and amendment of residential area structure plans.

2 PLAN CONTEXT

2.1 LOCATION

The Horse Hill ASP encompasses nearly 2,800 hectares (ha) of land located in northeast Edmonton. The area is situated north/west of the North Saskatchewan River.

The Plan area is defined by the following general boundaries:

- Northern boundary: Manning Drive
- Eastern boundary: 33 Street NE and the North Saskatchewan River
- Southern boundary: North Saskatchewan River and Anthony Henday Drive
- Western boundary: Anthony Henday Drive (Transportation Utility Corridor) and Manning Drive

These boundaries are shown in Figure 2: Location.

2.2 BACKGROUND

Preparation of the Horse Hill ASP was granted by City Council on May 26, 2010 with the approval of *The Way We Grow*, the City of Edmonton's Municipal Development Plan (MDP). The MDP identified the Northeast, Southeast and Southwest as Urban Growth Areas and authorized the preparation of ASPs for these areas. Contingent upon their approval, each ASP is required to comply with the *Growth Coordination Strategy, Integrated Infrastructure Management, and City-Wide Food and Agriculture Strategy*. MDP Policy 3.2.1.9 states that any "Area Structure Plan prepared for the Northeast Urban Growth Area shall recognize the value of its agricultural characteristics, including micro climate, soil capabilities and moisture content, to contribute to sustainable food and agriculture systems for Edmonton".

In addition, each ASP is directed to incorporate the following elements:

- An area vision created with area landowners and other city stakeholder groups;
- A peri-urban agricultural section in support of the City-Wide Food and Agriculture Strategy; and
- Innovative approaches to food systems, ecological networks, green infrastructure provision, demand reduction strategies and eco-design for future residential, commercial, industrial, business, agricultural and natural uses.

The Horse Hill ASP area encompasses those lands located north and east of the Anthony Henday Drive Transportation Utility Corridor and south of Manning Drive. The Plan area makes up a portion of the nearly 37,000 hectares of land annexed by the City of Edmonton in 1982, and represents some of the last of the lands from the annexation to be planned.²

Growing Forward, the Capital Region Board's Growth Plan, identifies the area as a Priority Growth Area for the region. The Horse Hill ASP is located within priority growth area "F", mandating a target density between 30 and 40 units per net residential hectare (upnrha).

² As a result of O.C. 538/81.

The preparation of the Horse Hill ASP follows the adoption of the Edmonton Energy and Technology Park (EETP) ASP (north of Manning Drive) and plans from the various municipalities of the Alberta Industrial Heartland (AIT). The EETP and AIT areas represent a major source of future economic activity and employment.

2.3 LAND OWNERSHIP

As of 2011, approximately 1033 ha of land in the ASP area are owned by the Plan proponents and other participating landowners. This ownership pattern demonstrates the feasibility of developing large portions of the Plan area in a timely manner.

The Government of Alberta owns a large parcel of land located within the southwest portion of the Horse Hill plan area. Meetings and discussions have been held with Alberta Infrastructure which owns all of the land, as well as the users, Capital Health and Agriculture and Rural Development. Alberta Infrastructure has advised that at this time no major plans are in place for the lands and therefore have requested their lands be identified as Institutional. The Department of Agriculture and Rural Development has also advised that at this time they would like to retain their existing agricultural activities which include crop research and beekeeping. There is recognition that the lands are currently underutilized and ongoing discussions in regards to the potential for urban agriculture and/or educational facilities are currently underway.

The Department of National Defence (DND) owns approximately 61.70 ha of land in the northern portion of the Horse Hill plan area. Meetings and discussions have been held with DND in regards to the future use of these lands. DND has advised that they have no plans to redevelop these lands or change the current use of these lands. Therefore the lands have been designated as Government/Institutional.

Ownership of the lands within the Plan boundaries is shown in Figure 3: Land Ownership and in Table 4: Land Ownership (Appendix).

2.4 SITE CONTEXT

2.4.1 EXISTING LAND USES

Existing land uses within the Plan area include:

- Alberta Hospital Edmonton. This facility is a psychiatric hospital operated by Alberta Health Services. Opened in 1923, the facility has grown to occupy approximately 111 ha of land. Alberta Hospital is located in the western portion of the Plan area, west of Fort Road/18 Street.
- Evergreen Community. This development is a land lease manufactured home park located at the northwest corner of Meridian Street and 167 Avenue. Evergreen Community contains approximately 700 units.
- The Quarry Ridge residential development is located in the southern portion of the Plan area, east of Meridian Street.
- A Department of National Defence installation, located in the north-eastern portion of the Plan area, near the intersection of 211 Avenue and 17 Street.
- Private agricultural operations, including Kuhlmann's Market Gardens and Greenhouses, and Sunstar Nurseries, both located in the south-central portion of the Plan area, as well as Visser Farms and Greenhouses, and Riverbend Gardens, located in the north-east.
- Raven Crest Golf and Country Club, located just north of the river.
- Rural residential uses, located in the central and northern portions of the Plan area, clustered mainly around Fort Road.
- Edmonton Croatia Soccer Club,

- Horse Hill School, a public elementary school, is located at the intersection of 195 Avenue and Meridian Street.
- St. Stephen's Cemetery, situated south of Manning Drive along Meridian Street.
- Government of Alberta agricultural operations, situated in the west of the ASP area.

Existing land uses adjacent to the Plan area include:

- A gravel extraction operation, located in the south-east, below the valley ridge.
- The Nanaksar Gurdwara Sikh temple, located north-west of the Plan area.
- The Edmonton Institution, a maximum security federal penitentiary, is located north of the Plan area.
- The Edmonton Energy and Technology Park ASP covers the lands located to the north of Manning Drive.
- Moran Lake, located within Section 6-54-23-W4M, is identified as a regional environmentally sensitive area and is characterized as a relatively shallow lake including two adjacent wetlands surrounded by emergent aquatic vegetation, dense willow, balsam poplar and aspen communities, and spruce and pine plantations.

2.4.2 AGRICULTURAL SOIL CAPABILITY

The Horse Hill ASP area consists mainly of three different soil types as indicated by the Canada Land Inventory (CLI) – Soil Capability for Agriculture.³ These soil types are illustrated in Figure 7: Agricultural soil Capability. The CLI agriculture classification provides the varying potential of a specific area for agricultural production. The classes provide the degree of limitation imposed by the soil in its use for agriculture.

The soil class types within the NE ASP 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 areas within the Horse Hill ASP which have been identified as Private Agriculture are due to the desire of landowners to continue the agricultural use, rather than develop as urban uses.

2.4.3 EXISTING VEGETATION AND WATER FEATURES

The Inventory of Environmentally Sensitive and Significant Areas, City of Edmonton was completed by Geowest Environmental Consultants Ltd. in 1993. The Inventory identified the sensitive and significant natural areas within the City of Edmonton. The Inventory identified one Environmentally Sensitive Area (NE8002) and five Significant Natural Areas (NE8011, NE133, NE8010, NE8005 and NE221). The North Saskatchewan River Valley and Ravine System is located along the eastern boundary of the Horse Hill ASP and contains four Environmentally Sensitive Areas (North Saskatchewan River Valley, Moran Lake, Riverbend and Horsehills Creek).

NE8002 – Manning Freeway – Fort Road Woodland

NE8002 is identified as an environmentally sensitive area, located within NW-16-54-23-4. The area is characterized as a complex area composed mainly of upland deciduous forest with several small permanent wetlands. The upland vegetation communities consisted of balsam poplar/re-osier dogwood, aspen-balsam poplar/red osier and dogwood-saskatoon berry/wild sasparrilla. The wetlands consist of willow/sedge vegetation communities with

³ Government of Canada, Canadian Land Inventory, <http://sis.agr.gc.ca/cansis/nsdb/cli/classdesc.html>

cattails and willows along the fringes. The area is important due to the vegetation and habitat diversity which provides wildlife habitat for mammals, waterfowl, raptor and songbird species.

NE8005 – Meridian Street Creek Woodland

NE8005 is identified as a significant natural area, located within NE-32-53-23-W4M. The area is characterized as a headwater area that travels east towards the North Saskatchewan River. The diverse vegetation communities consist of pioneer shrublands, as well as aspen and aspen-balsam poplar stands. This area is important due to the diverse vegetation community which provides habitat for local wildlife species and works as a linkage between adjacent natural areas and the North Saskatchewan River Valley.

NE8010 – 167 Avenue – Meridian Street Woodland

NE8010 is identified as a significant natural area. NE8010 is located within NW-33-53-23-W4M and is characterized as a relatively healthy balsam poplar / saskatoon berry stand with a well-developed shrub layer. The area is important due to the mature balsam poplar community which provides habitat for local wildlife species and as a possible linkage between adjacent natural areas and the North Saskatchewan River Valley.

NE8011 – Horsehills Woodland

NE8011 is identified as a significant natural area. NE8011 is located within NE-9-54-23-W4M and is characterized as a diverse area consisting of a mature balsam poplar/aspen stand, a small willow/sedge wetland, improved pasture, and a small area of native grass. The area is an important natural feature which provides habitat for bird and mammal species and acts as a wildlife linkage between adjacent natural areas and the North Saskatchewan River Valley.

NE133 – CNR – 17th Street Woodland

NE133 is identified as a significant natural area. NE133 is located within SE-9-54-23-W4M and is characterized as a mature balsam poplar / aspen stand with a well-developed understory. The area is important for providing habitat for bird and mammal species due to the age of the stand and the vegetation diversity, while functioning as a linkage between other natural areas and the North Saskatchewan River Valley.

NE221 – 153 Avenue – Meridian Street Woodland

NE221 is identified as a significant natural area. NE221 is located within SE-9-54-23-W4M and is characterized as an upland deciduous forest and wet meadow complex. The area is important for providing habitat for bird and mammal species due to the vegetation diversity, as well as serving as a linkage between other natural areas and the North Saskatchewan River Valley.

The North Saskatchewan River Valley and Ravine System

The North Saskatchewan River Valley borders the Horse Hill ASP. 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 ASP, the North Saskatchewan River Valley is an integral part of the greater ecological network of the area. The North Saskatchewan River Valley contains four environmentally sensitive areas, one of national significance, two of regional significance and one of local significance.

The North Saskatchewan River Valley is identified as a national environmentally sensitive area. The North Saskatchewan River Valley is an important natural feature 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.

Riverbend

Riverbend is identified as a regional environmentally sensitive area on a river terrace of the North Saskatchewan River. Riverbend is located within Sections 14, 15–22-54-23-W4M and is characterized as a major tract of mature woodland, the largest stand of riparian forest within the North Saskatchewan River Valley's restricted development area. The area is critical for providing habitat and vegetation diversity, supporting a wide range of wildlife species and functions as a link between the North Saskatchewan River Valley and surrounding table lands.

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 Horsehills 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.

2.4.3.1 CROWN CLAIMS

As identified in the Ecological Network Report (submitted under separate cover) for the Horse Hill ASP, the Crown claims the bed and shore of the following:

- Unnamed water bodies located within SW-9-54-23-4;
- Unnamed water body located in the north half of NW-16-54-23-4;
- Unnamed water body in the southwest corner of SE-16-54-23-4; and
- Unnamed water body in the northeast corner of SE-20-54-23-4.

In addition, the Crown claims ownership of any and all watercourses that exhibit evidence of bed, banks and that form a distinct channel on the ground. The Horse Hill ASP includes numerous ephemeral, temporary and seasonal wetlands that have no claimable beds. Although the province does not press a claim to their beds, any development, alteration or drainage of those wetlands will be subject to the regulatory approval under the *Water Act*.

2.4.4 TOPOGRAPHY

The area is generally flat with isolated low hills, depressions, shallow creek and drainage courses, as shown in Figure 5: Site Contours. Elevations for the area range from 670 m in the central-west portion to 635 m along the eastern boundary of the plan area. The majority of surface water and shallow groundwater flow easterly to the North Saskatchewan River from these creeks and drainage courses.

2.4.5 ENERGY AND NATURAL RESOURCES

A review of the Alberta Energy and Resource Board (ERCB) found numerous oil and gas features in the Horse Hill plan area. This section describes the location and nature of these features, which are shown on Figure 4: Site Features, and listed in Table 5: ERCB Pipeline Information

2.4.5.1 OIL AND GAS WELL SITES AND PIPELINES

A search of Alberta Energy Resources Conservation Board (ERCB) pipeline and oil well information, using the Abacus Datagraphics website (Abadata), indicated that there are 6 well sites and 10 pipelines within the Plan area. The locations are shown in Figure 4: Site Features.

Future development surrounding abandoned well sites will adhere to the policies and requirements established by the Energy Resources Conservation Board (ERCB) and the City of Edmonton.

2.4.6 ELECTRICAL TRANSMISSION FACILITIES

An electrical transmission facility runs through the site southwest to northeast adjacent to the Canadian National Railway corridor. The future approved Heartland transmission route runs north-south in the western portion of the Plan area.

2.4.7 HISTORICAL RESOURCES

Horse Hill has a few tangible but important historical resources that tie it to the area's original trail system, agricultural development and government institutional uses. If retained or incorporated into future development, they will enable future generations to better understand how the area was originally developed and settled over time. The preservation, conservation and integration of cultural, historical and/or archaeological resources within Horse Hill are important to retaining local history and character that may also be of regional or provincial significance.

A Statement of Justification (SoJ) for *Historical Resources Act* Requirements in support of the Horse Hill ASP has been completed for parcels under the ownership of the plan proponents. Other landowners will be required to submit SoJ of their respective parcels prior to rezoning. The preservation, conservation and integration of cultural, historical and/or archaeological resources within Horse Hill is important to retaining local history and character that may also be of regional or provincial significance.

Participating landowners that have not obtained *Historical Resources Act* clearance will be required to do so at the NSP stage.

Table 1: Historical Resources Overview presents a summary of the parcels that were included in the study. At the direction of Alberta Culture and Community Spirit (ACCS), Historical Resources Impact Assessments (HRIA) will be required for three of the nine parcels prior to the rezoning stage of development.

Participating landowners that have not obtained *Historical Resources Act* clearance will be required to do so at the NSP stage.

TABLE 1: HISTORICAL RESOURCES OVERVIEW

	Land Owner	Location	SoJ Completed	Recommendations
1		27-53-23-W4M	Yes	No further work
2		28-53-23-W4	Yes	No further work
3		NE-29-53-23-W4	Yes	No further work
4		NE-31-53-23-W4	Yes	No further work
5		32-53-23-W4	Yes	No further work
6	Proponent(s)	33-53-23-W4	Yes	Shovel testing for site FjPh 165
7		34-53-23-W4	Yes	No further work
8		NW-2-54-23-W4	Yes	No further work
9		N½-3-54-23-W4	Yes	No further work
10		4-54-23-W4	Yes	HRIA for the treed area above the slope and structures; Shovel testing for site FjPh 134
11	Proponent(s)	5-54-23-W4	Yes	No further work
12		6-54-23-W4	Yes	No further work
13		7-54-23-W4	Yes	No further work
14	Proponent(s)	8-54-23-W4	Yes	HRIA for structures

	Land Owner	Location	SoJ Completed	Recommendations
15	Proponent(s)	9-54-23-W4M	Yes	HRIA for structures
16	Proponent(s)	10-54-23-W4	Yes	No further work
17	Proponent(s)	W½-11-54-23-W4	Yes	HRIA for the treed area above the slope
18		14-54-23-W4	Yes	No further work
19		15-54-23-W4	Yes	No further work
20	Proponent(s)	16-54-23-W4	Yes	No further work
21	Proponent(s)	17-54-23-W4	Yes	HRIA for structures
22		21-54-23-W4	Yes	No further work
23	Proponent(s)	22-54-23-W4	Yes	No further work
24	Proponent(s)	27-54-23-W4	Yes	No further work

2.4.8 ENVIRONMENTAL ASSESSMENTS

An environmental overview was completed for the parcels legally described as 5-54-23-W4M, 9-54-23-W4M, 10-54-23-W4M, 15-54-23-W4M and portions of; 2-54-23-W4M, 3-54-23-W4M, 4-54-23-W4M, 6-54-23-W4M, 7-54-23-W4M, 8-54-23-W4M, 11-54-23-W4M, 14-54-23-W4M, 16-54-23-W4M, 21-54-23-W4M, 22-54-23-W4M, 27-54-23-W4M, 27-53-23-W4M, 28-53-23-W4M, 29-53-23-W4M, 32-53-23-W4M, 33-53-23-W4M, and 34-53-23-W4M.

The objective of this document is to identify areas of potential concern that may require further studies at the Neighbourhood Structure Plan (NSP) level of study. The scope of this study includes:

1. Review online databases for:
 - a. Pipelines
 - b. Oil wells
 - c. Spills/releases
 - d. Coal mines
 - e. Water wells
 - f. Publicly available reports/information (ESAR Database)
 - g. Reclamation certificates
2. Review maps for background information pertaining to groundwater, soils, topography
3. Review of current aerial photograph to identify farmyards, buildings, active oil wells, industrial/commercial facilities
4. Prepare a report summarizing the areas of potential concern including a map showing the locations of farmyards, pipelines, oil wells, and spills

Full Phase I Environmental Site Assessments (ESA) will be required at the Neighbourhood Structure Plan stage for all participating landowners. All properties within the Horse Hill ASP area will require Environmental Site Assessments to be completed and signed off prior to rezoning approval.

2.4.9 EXISTING TRANSPORTATION NETWORK

The existing road network in the area is arranged in a typical rural grid pattern. The north south roads are spaced at one mile increments, such as 17 Street NW, 17 Street NE and 33 Street NE. Meridian Street—on the alignment of Zero Street—is the dividing line between the East and West quadrants of the City. The east west roads are spaced at two mile increments and include 153 Avenue, 167 Avenue, 195 Avenue, 211 Avenue and 227 Avenue NW. All of these local roadways are generally rural in nature with ditches, gravel or cold mix asphalt surfaces, a 20 metre right of way, and an 80 km/hr operating speed. The plan area also includes historic Fort Road that runs

along the entire length of the plan area, generally parallel to and on the west side of the *Private Rail Corporation* tracks. Amended by Editor

The plan area is served by the following highways:

- Manning Drive (Highway 15), which forms the north-western boundary of the plan area
- Anthony Henday Drive (Highway 216), which forms the southern boundary of the plan area

2.5 NEIGHBOURHOOD UNITS

Figure 6: Neighbourhood Units shows the general configuration of neighbourhood units within the ASP area. At the time the ASP was written, five neighbourhoods were proposed. As NSP-level plans are developed, the number and/or configuration of neighbourhoods may change, which will also require amending this ASP. The numbering of neighbourhoods as shown in Figure 6: Neighbourhood Units and Staging may not reflect the sequence of development. As further studies are completed to service the area, the order of neighbourhood development may change. The size of neighbourhoods, differ widely in the Horse Hill ASP. The largest neighbourhood, Neighbourhood 2, is over 700 ha due to a number of constraints including existing residential, Provincial lands, private agricultural lands, the town centre which encompasses commercial, business employment and mixed uses, two school sites plus the district park, numerous natural areas as well as the railway, pipelines and an AltaLink corridor. This results in approximately 300 ha remaining for residential development which provides the necessary population base to support the services and amenities listed above. Proponents for new Neighbourhood Structure Plans will seek Council’s authority to prepare the plan per Policy 3.1.1.8 of *The Way We Grow*, Edmonton’s Municipal Development Plan.

2.6 PUBLIC INVOLVEMENT

The preparation of the Horse Hill ASP included extensive stakeholder consultation and public involvement throughout the process. Figure 1: Conceptual ASP Process illustrates the public involvement process for the Horse Hill ASP and contrasts this with the standard public involvement process for other ASP’s in Edmonton. The public involvement process for the Horse Hill ASP was completed in consultation with the City of Edmonton’s Sustainable Development Department. From crafting a vision to refining the concepts, stakeholders contributed their ideas and vision for the future of the Horse Hill area.

2.6.1 STAKEHOLDER ADVISORY GROUP

At the beginning of the ASP process, a Stakeholder Advisory Group (SAG) was formed through discussions with the City of Edmonton. This group consisted of local landowners and residents, developer landowners, and other interested stakeholders and group representatives. The SAG was chaired by a senior member of the City of Edmonton’s Sustainable Development Department. The role of the SAG was to participate in a series of facilitated consultation sessions and provide feedback in the preparation of the Horse Hill ASP. Specifically, the SAG provided advice in the development of the vision, principles, objectives, and design concept alternatives, which served as the foundation for the draft Horse Hill ASP.

The following individuals were invited to be members of the Horse Hill SAG:

TABLE 2: STAKEHOLDER ADVISORY GROUP MEMBERS*

Name	Affiliation
Tim Ford (Chair)	Senior Planner, Sustainable Development, City of Edmonton
<i>Private owner</i>	Property owner / local resident
<i>Private owner</i>	Property owner / local resident
<i>Private owner</i>	Property owner / local resident

Name	Affiliation
<i>Private owner</i>	Property owner / local resident
<i>Private owner</i>	Property owner / local resident
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)
Sol Rolingher	River Valley Alliance
Barry Anderson	River Valley Alliance
Monique Nutter	Greater Edmonton Alliance
Debbie Hubbard	Greater Edmonton Alliance
Renita Falkenstern	Greater Edmonton Alliance
Jim Visser	Sierra Club
Ross Wein	Sierra Club
Charlie Richmond	Sierra Club
Jackie Clark	Northeast Edmonton Agriculture Producers
Gord Visser	Northeast Edmonton Agriculture Producers
Lisa Jimmo	Horse Hill Community League
Sheri Karpinski	Evergreen Community Association
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)
<i>Private owner</i>	Property Owner (<i>Private Corporation</i>)

***Amended by Editor**

In addition to the SAG, the following organizations were identified as those that may be interested in being kept informed about the planning process in the Horse Hill ASP area. Representatives from these organizations were invited to attend the SAG sessions:

- City of Edmonton Councillors: Ed Gibbons, Tony Caterina;
- Edmonton Catholic School Board;
- Edmonton Public School Board;
- Government of Alberta;
- Department of National Defence;
- University of Alberta;
- Edmonton Federation of Community Leagues;
- Edmonton and Area Land Trust;
- Paragon Soil;
- Members of the Sikh community; and
- Representatives from various City of Edmonton departments.

2.6.2 PUBLIC CONSULTATION

Open House #1

The first public open house was held on March 24, 2011, introducing local stakeholders and the public to the purpose of the project, the ASP process, and solicited their ideas for the future of the area. The project team

invited more than 1100 land owners, elected officials, and members from the City of Edmonton's Sustainable Development Department.

The purpose of the open house was also to identify individuals interested in actively participating in the planning process as SAG members.

Visioning Charrette

Following the open house, on September 7, 8 and 10, 2011, a visioning charrette was organized. The purpose of the visioning charrette was to develop a collaborative vision for the future orderly and sustainable development of Edmonton's Horse Hill area. The visioning charrette brought together members of the SAG and observers to participate in a visioning process with the intent to provide a clear design framework for the major elements of the Horse Hill ASP.

The stakeholders were engaged in a series of highly interactive visioning sessions to arrive at a design concept. The design concept incorporated the range of values and visions among the participants as well as reflected the desires of the landowners.

A second meeting was held with the SAG once comments were reviewed and the concept refined. The meeting provided the SAG with an opportunity to review the concept and ensure the vision and principles which were developed in the visioning charrette were incorporated.

Open House #2

The second open house was held on November 7, 2011. The open house was organized to share with attendees the land use concept, vision statement, and guiding principles that came out of the visioning charrette. Members of the project team were available to answer any questions and record comments about the concept to be incorporated into future revisions.

Stakeholder Advisory Group Workshop

Prior to the submission of the Horse Hill ASP to the City of Edmonton's Sustainable Development Department, a third meeting was held with the SAG to review the draft ASP.

This workshop focused on refining the objectives to ensure the draft reflects the vision and principles which were developed in the visioning charrette and subsequent meeting.

The Horse Hill ASP draft was revised based on the comments provided and formally submitted to the City of Edmonton's Sustainable Development Department for review and recommendation of approval to Council.

2.6.3 WEBSITE

A website – www.planhorsehill.com – was set up to provide information regarding the project, including proceedings from SAG meetings, background documents, design proposals, contact information and information on the planning process.

2.6.4 ADVANCED NOTIFICATION

Consistent with Policy C513, the City of Edmonton's Public Involvement Policy, advance notification was sent to approximately 6699 property owners and residents on May 8, 2012 advising them of the application and

encouraging them to contact either the Sustainable Development Department or the applicant (Stantec Consulting Ltd.) for further questions or to communicate any possible concerns.

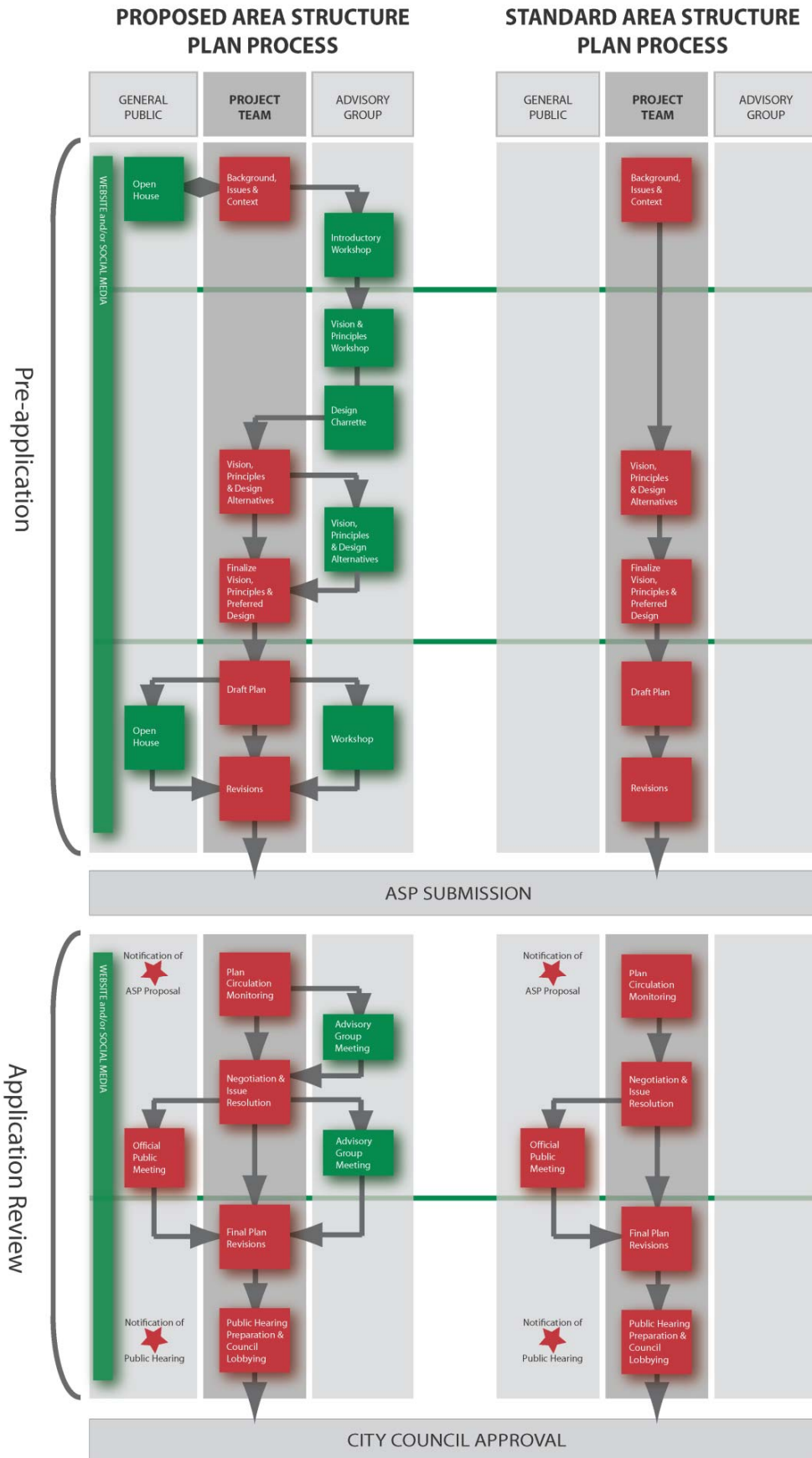
2.6.5 PUBLIC MEETING

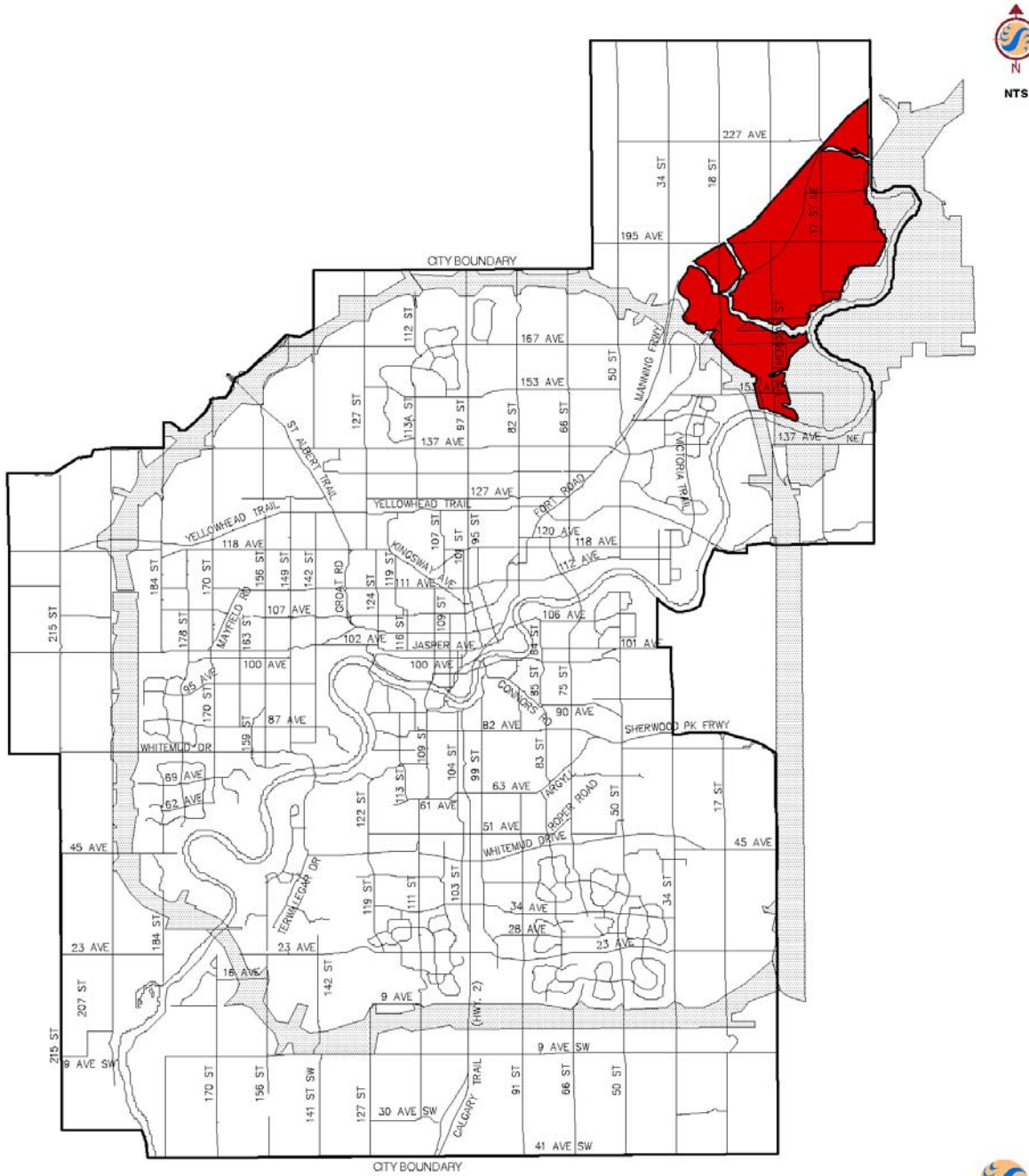
A public meeting hosted by the Sustainable Development Department was held to review the draft Plan on November 29, 2012. Mailed notification letters were sent to landowners in and surrounding the Horse Hill ASP area advising of this meeting. The purpose of the meeting was to provide an update on the proposed Plan and the planning process followed to date, and to hear from attendees regarding their questions, comments and concerns. All feedback received at the public meeting will be summarized in the Sustainable Development Department's report to City Council.

2.6.6 PUBLIC HEARING

Landowners will also be notified when Public Hearing is scheduled and will have the opportunity to provide written comments or register to speak at Council. In accordance with the MGA, a public hearing was held in order to hear representations made by parties affected by the proposed bylaw and to receive approval by Council.

FIGURE 1: CONCEPTUAL ASP PROCESS





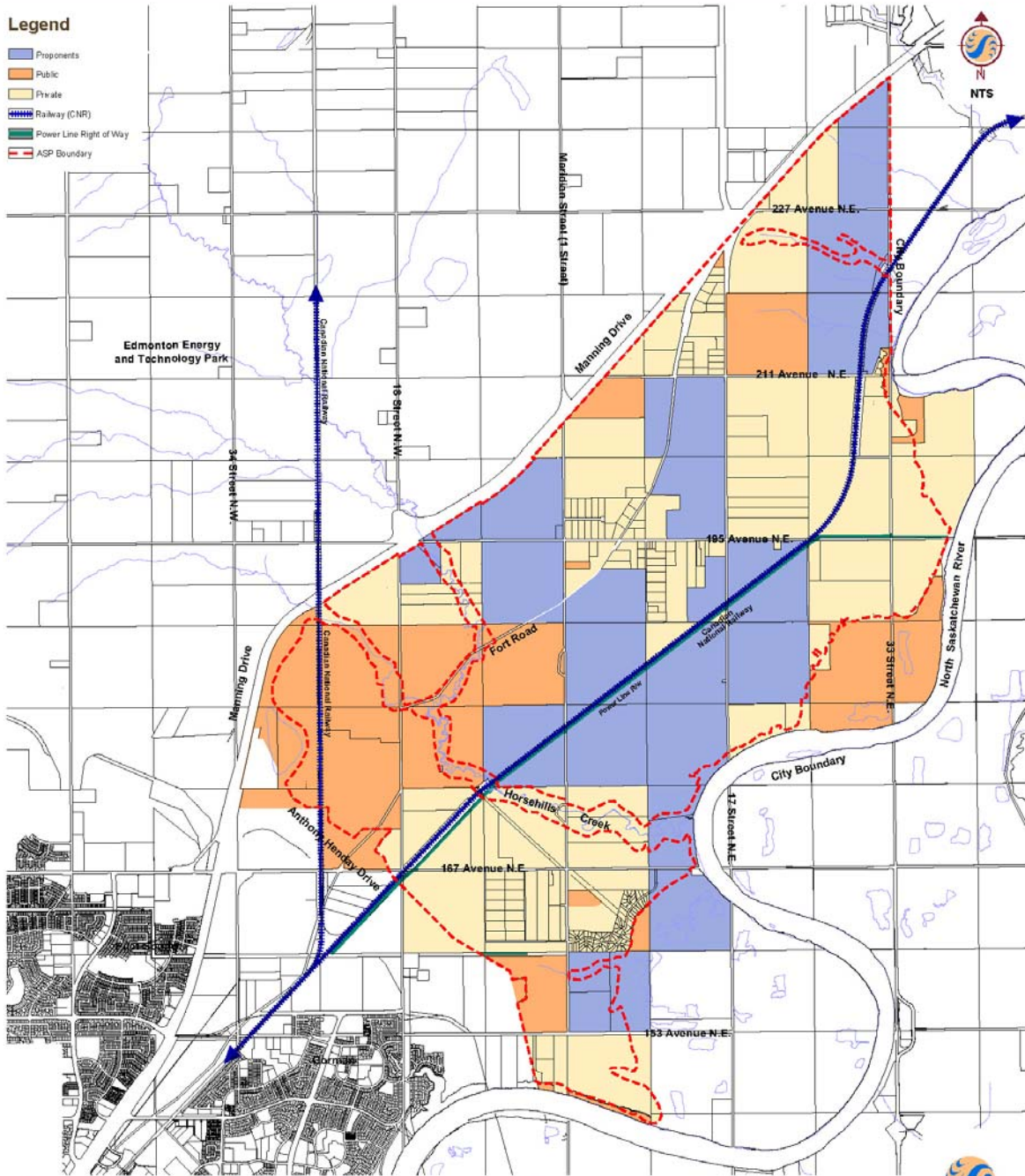
Northeast Area Structure Plan



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Land Ownership

Figure 3



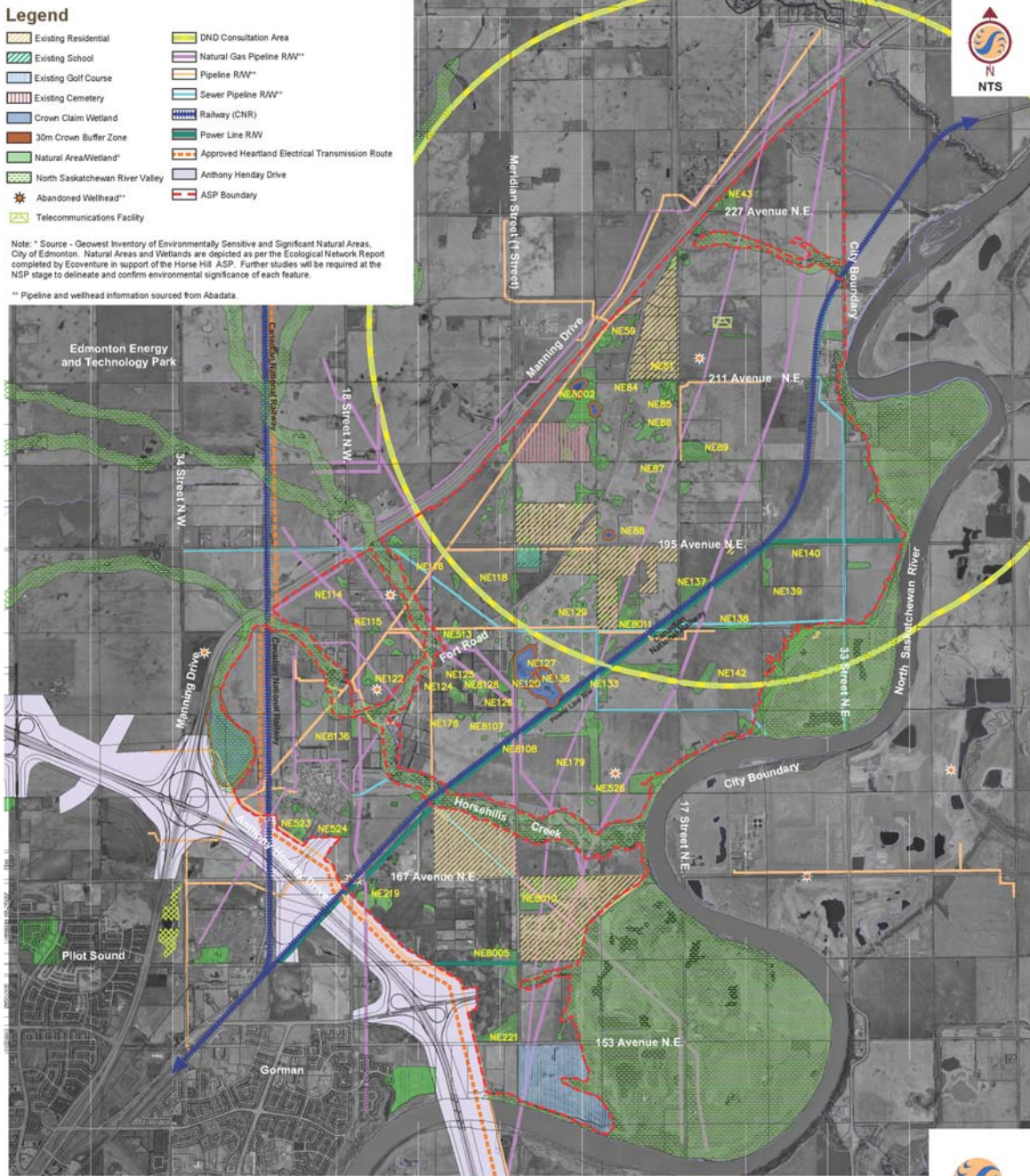
Horse Hill Area Structure Plan



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Site Features

Figure 4



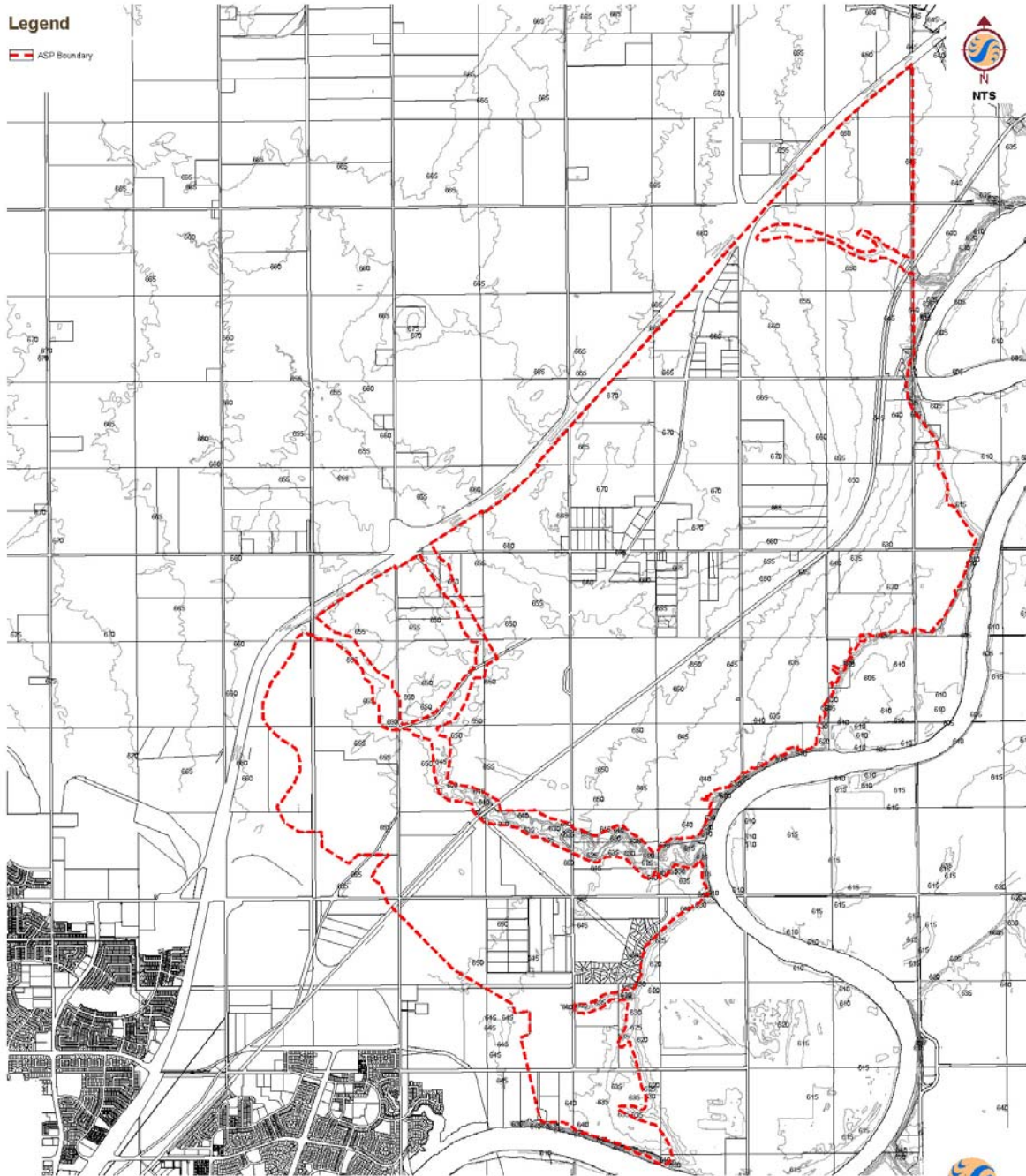
Horse Hill Area Structure Plan



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Site Contours

Figure 5



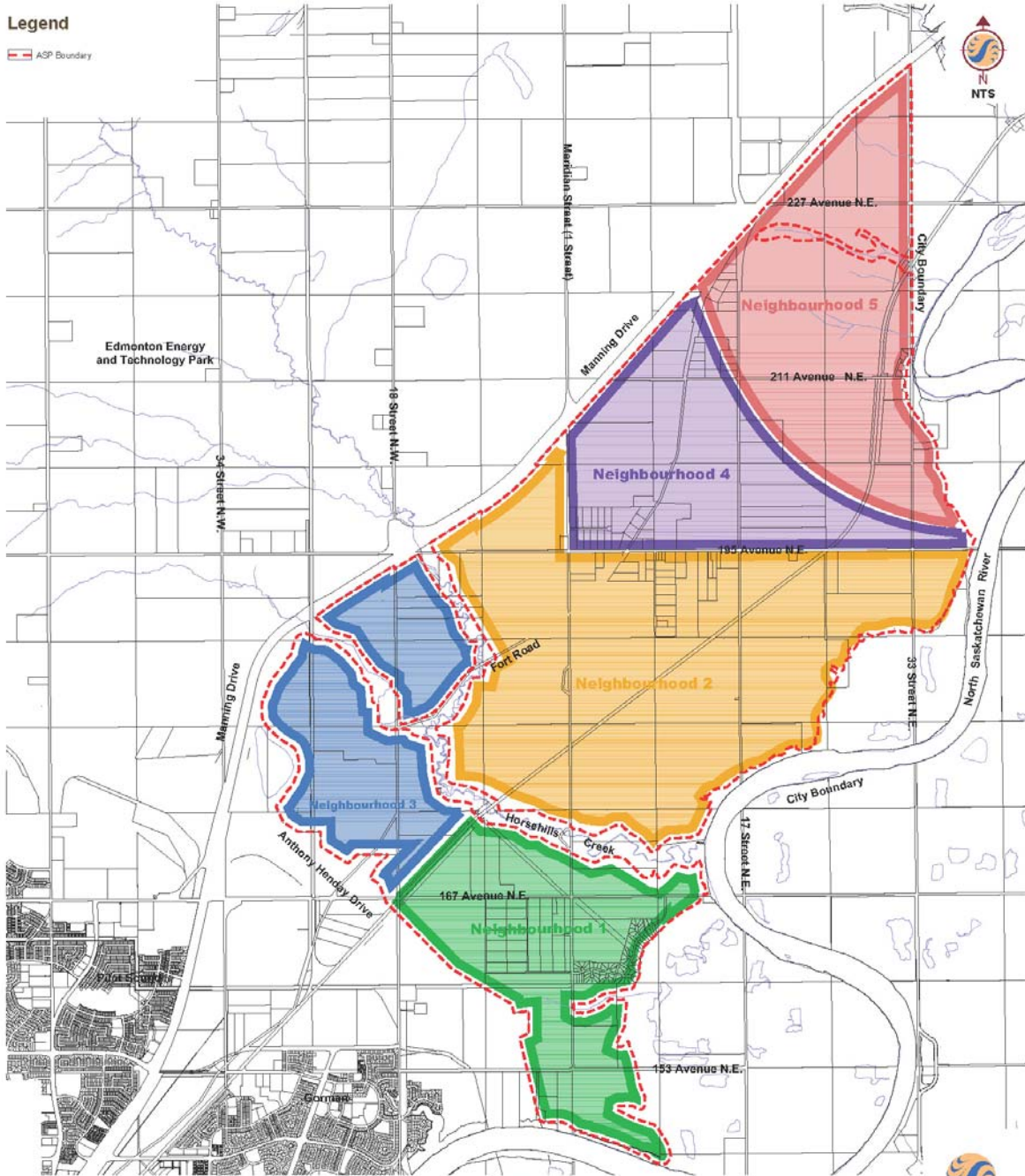
Horse Hill Area Structure Plan



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Neighbourhood Units and Staging

Figure 6



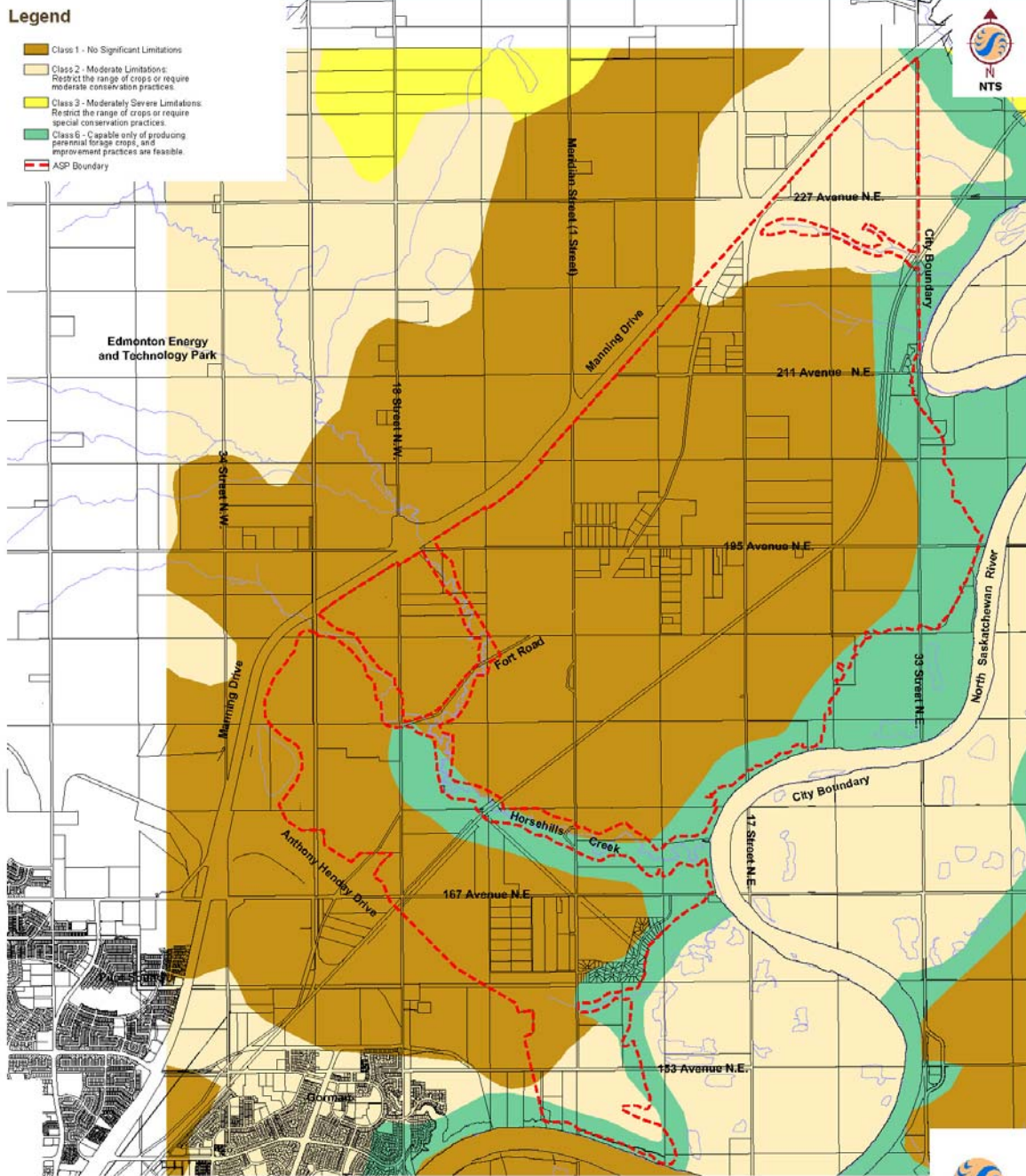
Horse Hill Area Structure Plan



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Agricultural Soil Capability

Figure 7



Horse Hill Area Structure Plan



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3 LAND USE, TRANSPORTATION, AND SERVICING

3.1 LAND USE CONCEPT AND POPULATION STATISTICS

Bylaw 18197

Approved February 13, 2018

TABLE 3: LAND USE AND POPULATION STATISTICS

	Area (ha)	% GA	Nbhd 1	Nbhd 2	Nbhd 3	Nbhd 4	Nbhd 5
GROSS AREA	2,792.6	100%	443.9	1004.7	374.5	367.6	601.9
Natural Area (Environmental Reserve)*	63.9	2.3%	0.0	55.6	5.7	0.0	1.8
Railway	34.7	1.2%	5.1	11.8	5.9	0.9	11.0
Pipeline & Utility Right-of-Way	59.2	2.1%	4.2	49.0	0.0	5.6	0.0
Express Highway	168.3	6.0%	0.0	15.1	6.5	72.2	74.4
Arterial Road Right-of-Way	97.2	3.3%	6.7	52.7	14.2	8.5	15.0
Existing Land Uses							
Existing Residential	198.5	7.1%	107.4	36.6	0.0	30.0	24.5
Existing Cemetery	25.4	0.9%	0.0	0.0	0.0	25.4	0.0
Existing Golf Course	48.6	1.8%	48.6	0.0	0.0	0.0	0.0
Institutional/ Government	366.1	13.1%	0.0	79.7	221.2	0.0	64.4
Existing School/Municipal Reserve	11.0	0.2%	4.7	6.3	0.0	0.0	0.0
Agricultural				1.6	0.0	0.0	0.0
College of Agriculture	21.9	0.8%	0.0	0.0	21.9	0.0	0.0
Private Agricultural	180.6	6.5%	49.2	56.6	0.0	0.0	74.8
GROSS DEVELOPABLE AREA	1,517.4	54%	218.0	641.6	99.2	224.9	336.0
	Area (ha)	% GDA	Nbhd 1	Nbhd 2	Nbhd 3	Nbhd 4	Nbhd 5
Commercial							
Major Commercial /Business Employment	65.3	4.3%	0.0	58.6	0.0	0.0	0.0
Commercial/Retail/Mixed Use	24.7	1.6%	7.2	16.6	0.0	2.6	0.0
Main Street Commercial/Retail	2.4	0.2%	0.0	1.8	0.0	0.0	0.0
Parkland, Recreation, School (Municipal Reserve)**							
School/Park	109.0	7.2%	13.0	54.2	7.5	15.0	19.0
Natural Area (Municipal Reserve)	44.0	2.9%	10.4	33.6	0.0	0.0	0.0
Natural Area (Other)	19.9	1.3%	0.0	0.0	0.0	18.6	1.3
Institutional							
Fire Station	0.8	0.1%	0.0	0.0	0.0	0.0	0.0
Transportation							
Circulation	304.9	20.1%	43.6	128.3	21.1	45.0	67.2
Transit Centre / Park & Ride/LRT	5.0	0.3%	0.0	3.2	1.2	1.2	0.0
Infrastructure & Servicing							
Stormwater Management	107.4	7.1%	14.3	54.0	10.6	12.0	16.4
Total Non-Residential Area	677.5	45%	88.5	350.4	40.4	94.3	103.9
Net Residential Area	842.2	55%	129.5	291.2	58.8	130.6	232.1

*Additional ER may be identified within the ASP area at the NSP stage and dedicated at the time of subdivision for wetland protection/preservation and/or to address creek stability.

**Additional MR requirements may be identified at the NSP stage.

RESIDENTIAL LAND USE AREA, DWELLING UNIT & POPULATION COUNT

Land Use		ASP	Nbhd 1	Nbhd 2	Nbhd 3	Nbhd 4	Nbhd 5
Single/Semi-detached	Area (ha)	700.5	114.0	214.8	51.7	114.9	204.2
25 du/nrha	Units	17,514	2,849	5,369	1,293	2,873	5,105
2.8 p/du	Population	49,038	7,977	15,033	3,620	8,044	14,295
Row Housing	Area (ha)	67.1	9.1	28.6	4.1	9.1	16.2
45 du/nrha	Units	3,020	408	1,285	185	411	731
2.8 p/du	Population	8,456	1,142	3,597	518	1,152	2,047
Low-rise/Medium Housing	Density						
90 du/nrha	Area (ha)	56.4	5.2	35.3	2.4	5.2	9.3
1.8 p/du	Units	5,075	466	3,173	212	470	835
1.8 p/du	Population	9,135	839	5,712	381	846	1,504
Medium to High Rise Housing	Area (ha)	10.1	1.3	12.7	0.6	1.3	2.3
225 du/nrha	Units	2,272	291	2,851	132	294	522
1.5 p/du	Population	3,408	437	4,276	198	441	783
Total Residential							
	Area (ha)	834.1	129.5	291.2	58.8	130.6	232.1
	Units	27,881	4,015	12,678	1,822	4,048	7,194
	Population	70,038	10,396	28,619	4,718	10,483	18,629

SUSTAINABILITY MEASURES

	ASP	Nbhd 1	Nbhd 2	Nbhd 3	Nbhd 4	Nbhd 5
Population Per Net Hectare (p/nha)	84.0	80.3	98.3	80.3	80.3	80.3
Dwelling Units Per Net Residential Hectare du/nrha)	33.4	31.0	43.5	31.0	31.0	31.0
Population (%) within 500m of Parkland*	87%					
Population (%) within 400m of Transit Service*	100%					
Population (%) within 600m of Commercial Service*	43%					
Presence/Loss of Natural Areas						
Protected as Environmental Reserve	64.1	0.0	56.6	5.7	0.0	1.8
Conserved as Naturalized Municipal Reserve (ha)	42.7	10.4	32.3	0.0	0.0	0.0
Protected though other means (ha)	19.9	0.0	0.0	0.0	18.6	1.3
Lost to Development (ha)**	56.0		31.9			

STUDENT GENERATION COUNT

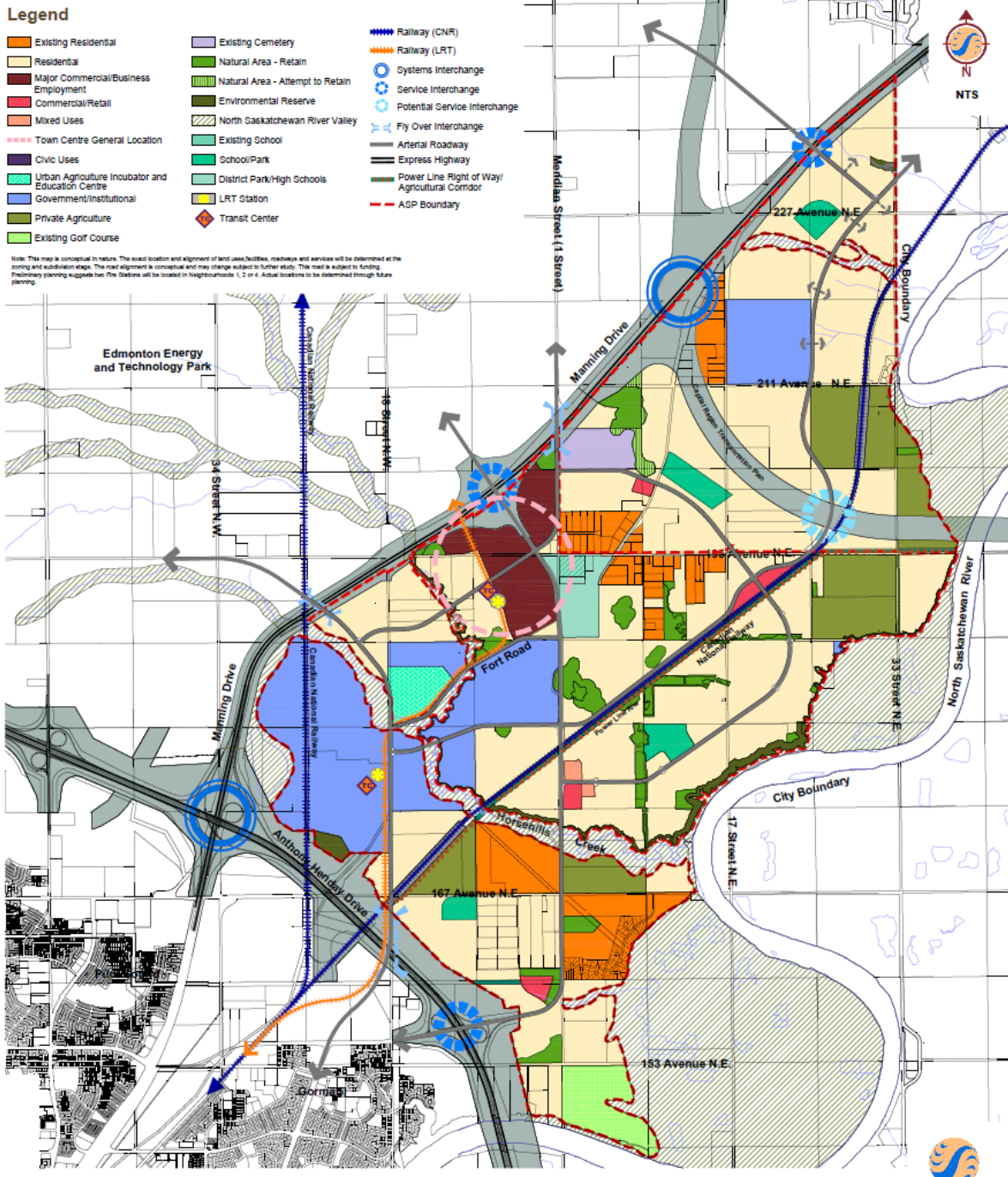
	ASP	Nbhd 1	Nbhd 2	Nbhd 3	Nbhd 4	Nbhd 5
Public School Board						
Elementary School	3,035	436	1,283	198	450	672
Junior High	1,517	218	642	102	225	336
Senior High	1,517	218	642	99	225	336
Separate School Board						
Elementary School	1,517	218	642	99	225	336
Junior High	759	109	321	50	112	168
Senior High	759	109	321	50	112	168
Total Student Population	9,104	1,308	3,850	595	1,350	2,016

*Calculated at ASP level. Does not include neighbourhood parks or neighbourhood commercial.

**Estimate based on City of Edmonton Natural Areas database. Area to be determined at NSP level.

Land Use Concept

Figure 8



Horse Hill Area Structure Plan



3.2 VISION

A vision statement and a number of planning principles were developed through consultation with the Stakeholder Advisory Group. The vision that emerged is printed below:

Horse Hill is a complete community with a vibrant town centre, quality public open spaces, and a unique natural landscape. Horse Hill celebrates its agricultural heritage while serving as an innovative model for integrating sustainable food systems with residential development. Residents enjoy a high quality of life with access to outdoor recreational opportunities including linkages to the North Saskatchewan River Valley, diverse housing options, peri-urban agricultural uses, local food choices, and active transportation options.

A number of planning principles were also developed through input and feedback from the Stakeholder Advisory Group:

TRANSPORTATION

- Establish safe and complete neighbourhood streets designed to accommodate winter transportation issues.
- Develop a transportation network that supports neighbourhood circulation and regional accessibility.

CULTURE

- Preserve and enhance historic Fort Road as an interpretive roadway.
- Develop a culture of community festivals celebrating Horse Hill's agricultural heritage.
- Incorporate historical resources as much as possible into future development.

SCHOOLS, PARKS AND OPEN SPACE

- Preserve and enhance wildlife corridors and habitats.
- Develop an integrated network of diverse public parks and open spaces connected to the river valley, ravines, and other natural areas.

Agriculture

- Provide buffers between agricultural and residential uses.
- Preserve contiguous agricultural space while respecting landowners and the City as a whole.

COMMUNITY

- Build a complete community with a vibrant and diverse Town Centre in which to live, work, and play.
- Provide a diversity of housing types and forms for all ages and income groups.
- Create an innovative, sustainable, and resilient community with a diverse economic base.

4 GOALS AND OBJECTIVES

RESIDENTIAL

- Establish an overall residential density that meets or exceeds the minimum density target set out by the Capital Region Growth Plan.
- Provide a range of housing choices to meet the needs of a diverse population.
- Ensure an adequate supply of affordable housing is available in the Horse Hill ASP area.
- Develop a walkable residential community with a mix of neighbourhood uses.
- Accommodate the continued operation of existing agricultural uses within the Plan area until such time as the owners choose to develop the affected lands in accordance with the approved development concept.
- Accommodate cluster developments.

COMMERCIAL

- Provide opportunity for commercial development to meet the needs of the Horse Hill ASP area.
- Provide opportunity for integration of commercial, residential and office uses.
- Locate and orient commercial sites to ensure high visibility and convenient pedestrian, transit and automobile access opportunities.

MIXED USE

- Encourage mixed use development in appropriate locations.
- Encourage a variety of different types of mixed use developments.

URBAN DESIGN

- Create distinct neighbourhoods as the basic building blocks of the Horse Hill area.
- Promote human scale within the public realm.
- Provide a range of transportation options.
- Use natural features and notable locations to create focal points.
- Integrate existing residential uses.
- Incorporate elements of the existing built form in new developments.
- Enhance connectivity between the River Valley, residential areas, key focal points, open spaces, agriculture land, and natural areas through active transportation links.
- Incorporate urban design elements that maximize the benefits of the winter season.

PARKLAND, RECREATION FACILITIES AND SCHOOLS

- Accommodate a variety of active and passive recreational activities in the parks, schools and open spaces and entertainment uses in public gathering places.
- Ensure that schools, parks and other open spaces are interconnected and easily accessible to pedestrians, bicyclists and other users.
- Ensure public access to the North Saskatchewan River Valley is promoted and maintained.
- Accommodate City of Edmonton's requirements for school and parks sites within neighbourhoods.
- Consider winter issues in the landscaping of schools, public parks, open spaces, plazas, and boulevards.

INSTITUTIONAL / URBAN SERVICE

- Accommodate future development of institutional uses.
- Accommodate existing government and institutional uses.

HISTORICAL RESOURCES

- Ensure that historical, archaeological, and palaeontological resources are identified, conserved, and integrated within neighbourhoods where applicable.

TRANSPORTATION

- Provide a simple, understandable roadway network with a high degree of connectivity.
- Prioritize cyclists and pedestrians.
- Emphasize pedestrian-friendly environments in key locations.
- Ensure that cost of arterial roadways is shared throughout the catchment area.
- Ensure integrated access is provided to the North Saskatchewan River Valley and Ravine System.
- Plan for Transit Oriented Development around LRT stations.
- Encourage innovation in transportation systems design.
- Encourage transit and active modes as alternatives to single-occupant vehicle travel.
- Encourage the use of removed snow and the implementation of best practices for snow removal and storage.

INFRASTRUCTURE, SERVICING AND STAGING

- Ensure that the Horse Hill ASP area is serviced to a full urban standard, using contemporary and emerging sustainable infrastructure solutions and that “soft” services are provided.
- Explore innovative and alternative servicing options.
- Protect wetlands within the Plan area.

ECOLOGY

- Preserve and enhance natural systems through the location and design of open spaces and the preservation of natural areas.
- Protect the North Saskatchewan River valley and ravine system, including Horsehills Creek.
- Maintain ecological linkages to support the presence of wildlife in neighbourhoods.

ENVIRONMENT

- Ensure that the environmental status of the lands within the Plan area is suitable for development.
- Mitigate oil and gas well sites’ potential environmental hazards and disruption of future residential areas.
- Integrate existing high pressure pipelines with future development.
- Mitigate noise and vibration effects and risk from potential incidents along *Private Corporation* Rail tracks.

GREEN DEVELOPMENT

- Utilize low impact development principles for the design of the stormwater management system, including bioswales and naturalized wetlands.
- Employ sustainable planning principles in the design of neighbourhoods.
- Explore alternative energy options in the Horse Hill ASP area
- Encourage natural landscaping using native tree and plant species.
-

- Retain land for urban agriculture.
- Buffer urban agriculture uses and non-agriculture uses.
- Promote urban agriculture in Horse Hill.
- Support the development of local food infrastructure.

4.1 POLICY

4.1.1 RESIDENTIAL

The Horse Hill ASP will provide opportunities for a wide range of residential densities, innovative housing types, alternative site designs and unique building sites that will contribute to a sustainable residential land use pattern and form. Innovative housing may include but is not limited to the following, new or modified zoning requirements, changes to the configuration of lots, and the mixing of housing types within a block. The variety in housing types will contribute to the health of the community by providing housing for different income levels, family composition and life stages.

Residential developments should be located in close proximity to commercial and business employment areas, parks and open space, public transit, and other public services to ensure access to amenities in and around the area as well as allow residents to work and play in the neighbourhoods in which they live.

Approximately 30% of the gross plan area is designated for new residential land uses, with approximately 6% as existing residential. Residential densities within the Horse Hill ASP range from 25 units per net residential hectare (upnrh) to 225 upnrh. The lower range of 25 upnrh will be developed as low density residential, also referred to as single / semi-detached units. The middle range will be developed as medium density residential in the form of rowhousing, stacked rowhousing and low rise units. The higher range of 225 upnrh will be developed as high density residential, also referred to as medium to high rise units. The wide range in densities will provide a variety of choices in the housing mix of the area.

Existing Residential

The Horse Hill ASP acknowledges the existing residential developments within the plan boundaries. Existing residential uses include the Evergreen Manufactured Home Community, Quarry Ridge which is developed with estate residential, country residential developments and rural residential (approximately 5-10 acres in area per lot). The existing residential housing may remain in perpetuity, unless it is desire of the landowner to redevelop. The City's policies do not support the development of new country residential or larger rural residential subdivisions within the boundaries of the City of Edmonton. Any redevelopment within the plan area must meet the City of Edmonton and Capital Region Board's residential density targets.

Opportunities for larger lot residential housing may also be considered to provide a transitional land use adjacent to larger country residential developments.

Low Density Residential (LDR)

The Horse Hill ASP provides opportunities for low density residential housing throughout the plan area. Low density residential housing forms will be predominantly single and semi-detached housing in a variety of lot sizes to accommodate different types of households and income levels.

Medium Density Residential (MDR)

There are opportunities for a variety of medium density residential housing within the Horse Hill ASP. Medium density housing forms include rowhousing, stacked rowhousing and low rise units. Medium density housing also serves as an appropriate transition between low and high density residential developments.

High Density Residential (HDR)

Opportunities for high density residential housing, exists within the Horse Hill ASP. High density housing forms include medium and high rise units. It is encouraged that high density residential be located at or around major transit nodes/facilities, in particular near LRT Stations, community focal points, employment areas and in areas with excellent accessibility and visibility.

Please see Table 3: Land Use and Population Statistics for up to date land use areas, density and population information.

Rationale

The Horse Hill ASP has been planned to include a range of housing densities, types and choices. The specific land uses will be implemented based on market conditions and consumer preferences at the Zoning stage. More detailed residential and unit densities will be established at the Neighbourhood Structure Plan (NSP) stage.

Providing a variety of housing types and tenures can contribute to the creation of a more complete and diverse community. By providing greater housing choices, the neighbourhood will support a range of demographic and income groups, and can better accommodate lifecycle changes. A varied built form also adds to the visual interest and sense of vitality of a neighbourhood.

Cluster Residential

Cluster developments are a way to retain or add open space (in this case for agriculture) by clustering or grouping residential or other urban land uses, typically at higher densities. Examples include residential development clustered around a community-supported agriculture (CSA) operation, small commercial farm, or orchard.

A cluster development could be operated in a manner similar to a golf course community, in that shared space is administered and maintained by residents through a condominium corporation, residents association, or housing co-operative. Similarly, toward the outer edges of neighbourhoods, residences could be grouped around small parcels of existing farmland as the land transitions into a more urban agriculturally-dominated landscape. The “Agri-Hood” concept being developed for the City Centre Area Redevelopment Plan is another example.

Technical Summary

No technical studies associated with this topic have been submitted.

Objective	ASP Policy	Implementation
4.1.1.1		
Establish overall residential density that meets the minimum density target set out by the Capital Region Growth Plan.	Each neighbourhood shall establish minimum residential densities of 30 dwelling units per net residential hectare, per the Capital Region Growth Plan.	Appropriate residential land use allocation at the Neighbourhood Structure Plan (NSP) level will be used to achieve the density target. The Horse Hill ASP density meets the Capital Region Board’s density target.

4.1.1.2		
Provide a range of housing choices to meet the needs of a diverse population.	(A) NSPs shall provide a range of housing types and densities, including: single/semi-detached, row housing, low rise/medium density housing, and medium/high rise housing.	The Horse Hill ASP designates areas for Residential use. NSPs will specify the location, area and anticipated density of each type of residential use (e.g. single/semi-detached housing, low-rise/medium density housing).
	(B) Alternative housing forms should be encouraged.	Alternative housing forms to be considered as development proceeds.
	(C) Different housing types should be developed to be a compatible scale and density to adjacent residential developments.	
4.1.1.3		
Ensure an adequate supply of affordable housing is available in the Horse Hill ASP area.	(A) Developments shall comply with City of Edmonton’s affordable housing policies and guidelines.	City of Edmonton’s affordable housing policies and guidelines shall be applied prior to approval of NSPs.
	(B) Provide a wide variety of housing types with a range of price points.	<p>Planning at the NSP level will determine the location of various residential land uses.</p> <p>Figure 8: Land Use Concept illustrates the general location of residential land use designations in the Horse Hill ASP.</p> <p>The range of densities and housing forms will be applied at the Neighbourhood Structure Plan and rezoning Stages.</p> <p>Secondary suites, garden suites and</p>

		garage suites will be implemented through the Edmonton Zoning Bylaw.
4.1.1.4		
Develop a walkable residential community with a mix of neighbourhood uses.	(A) Neighbourhood commercial, institutional, and recreational uses may be included in residential areas where determined appropriate.	Figure 8: Land Use Concept illustrates the general location of residential, commercial, institutional and recreational uses.
	(B) Multi-family residential should be located near commercial uses and Transit Centres / LRT Stations.	The range of densities, location of multi-family residential uses as well as neighbourhood commercial uses will be applied at the Neighbourhood Structure Plan and rezoning stages.
4.1.1.5		
Accommodate the continued operation of existing agricultural uses within the Plan area until such time as the owners choose to develop the affected lands in accordance with the approved development concept.	(A) Developments shall take into consideration existing rural uses and ensure compatible uses are provided.	Figure 8: Land Use Concept illustrates the general location of residential, commercial, institutional and recreational uses. Buffering, housing types and other uses will be applied at the NSP and rezoning stages.
4.1.1.6		
Accommodate cluster developments.	(A) Allow the development of cluster developments which integrate residential or mixed uses with urban agriculture.	Neighbourhood-level plans shall determine the location, characteristics and performance requirements of any cluster developments.
	(B) Ensure that such cluster development meets minimum required residential densities.	

4.1.2 COMMERCIAL

The land use concept provides a major commercial node and additional commercial/retail sites within the plan area. Commercial uses provide local employment opportunities for residents to live and work in the same neighbourhood, reducing the dependency on commuting outside of the community and offering the appeal of being closer to home.

Prominent frontage along Manning Drive is a significant factor influencing the location of the commercial site. The site provides opportunity for access from arterial and/or collector roadways, minimizing traffic shortcutting

through residential areas, and maintaining appropriate traffic patterns and volumes within the neighbourhood core. No direct access to Manning Drive can be provided.

The locations of the commercial sites are within walking distance of residential areas and accessible by internal neighbourhood linkages. Walkability to the commercial site reduces the number of vehicle trips required to meet the commercial needs of residents within NE. Additional Neighbourhood Commercial sites will be identified at the NSP stage to provide other opportunities for walkability to commercial uses.

The land use concept provides one major commercial / business employment site and four commercial sites within the Plan area. Commercial uses provide local employment opportunities for some residents to live and work in the same neighbourhood, reducing the dependency on commuting outside of the community and offering the appeal of being closer to home.

Technical Summary

A Commercial Needs Assessment was prepared and submitted under separate cover.

Objective	ASP Policy	Implementation
4.1.2.1		
Provide opportunity for commercial development to meet the needs of the Horse Hill ASP area.	(A) Commercial/business employment uses shall be provided within the ASP area. (B) Neighbourhood and convenience commercial uses shall be provided at the NSP stage.	Figure 8: Land Use Concept illustrates the location of Major Commercial/Business Employment, Commercial/Retail, and Commercial/Retail with Main Street uses. Land Use Concepts of future NSPs shall illustrate the location of neighbourhood and convenience commercial uses.
4.1.2.2		
Provide opportunity for integration of commercial, residential and office uses.	The Commercial/Retail with Main Street designation shall permit development of apartment housing above ground level retail/commercial and office uses.	Figure 8: Land Use Concept indicates the location of Commercial/Retail with Main Street.
4.1.2.3		
Locate and orient commercial sites to ensure high visibility and convenient pedestrian, transit and automobile access opportunities.	Commercial sites shall be located along highway, arterial and/or collector roadways and be accessible by multiple modes of transport, including car, transit, walking.	Figure 8: Land Use Concept illustrates the location of commercial sites. Figure 11: Active Transportation and Figure 12 Transportation Infrastructure show the various types of access to the commercial types.

4.1.3 MIXED USE

Opportunities for Mixed Use development are provided within the Horse Hill ASP in several locations. Mixed Use sites are to be located in prominent locations along arterial or collector roadways. There are a variety of options for the composition of Mixed Use sites. Potential uses might include, but are not limited to:

- Rowhousing (including stacked or cluster)
- Low, Medium and High Rise Apartments
- Commercial Retail
- Restaurants
- Specialty Foods and Cafes
- Seniors Housing
- Child / Adult Day Care Facility
- Private Education
- Religious Assembly
- Recreational Uses
- Professional, Financial and Office Support Services
- Extended Medical Treatment Services

Mixed use areas may be developed under a Direct Control Provision to ensure developments are transit supportive, uses are compatible, and a high level of urban design guidelines are followed to ensure a distinct and unique area.

Rationale

Mixed Use sites promote compact, walkable areas which also promote independence of movement, especially for the young and elderly who have convenient access to transit or can easily walk or cycle to the various amenities nearby. Mixed use sites also often include higher densities as well as assisted living opportunities which allow individuals to remain in the same neighbourhood as they age.

Technical Summary

No technical studies associated with this topic have been submitted.

Objective	ASP Policy	Implementation
4.1.3.1		
Encourage mixed use development in appropriate locations.	Mixed use developments may be included at the NSP level integrated with Commercial/Retail with Main Street, LRT station, and along arterial and collector roadways.	Location of Mixed Use sites shall be identified at the NSP stage.
4.1.3.2		
Encourage a variety of different types of mixed use developments.	Mixed use developments may include a variety of uses including different housing forms, residential and institutional uses, residential and commercial uses or a combination of the above.	The composition of mixed use sites will be identified at the Neighbourhood Structure Plan and rezoning stages.

4.1.4 URBAN DESIGN

To create distinct, walkable neighbourhoods as the basic building blocks of the Horse Hill ASP

A vibrant, walkable neighbourhood is the basic building block of a community. Horse Hill should therefore be comprised of several neighbourhoods that are pedestrian friendly, and include a wide mix of land uses that allow people to live, work, shop, and play within their own community.

Edmonton is a winter city and paying close attention to winter design issues will help us embrace our winter environment and live vibrantly within it. Effective sun capture and wind control measures (such as natural and constructed wind barriers and orientation of buildings and open spaces) in parks, plazas and other gathering places as well as appropriate consideration of the colour of buildings will enliven public and private spaces even on the coldest days.

Promote human scale within the public realm

Human scale is created by the manner in which buildings interact with open spaces and the street. Designing attractive streetscapes, enclosed by buildings creates a comfortable environment for pedestrians. Active building frontages with doors, windows, and porches promote social interaction and encourage informal surveillance.

At the detailed design stage, the function of the roadway will dictate the appropriate cross-sections to be used. To ensure comfortable pedestrian movement and safety, sidewalks should be separated from carriageways by treed boulevards and front drive access should be minimized to reduce pedestrian-vehicle conflict.

Provide a range of transportation options

Considering a range of transportation options while planning for an area is critical. A street pattern that provides multiple route options helps relieve congestion and provides people with realistic choices for alternate modes such as walking, biking, transit, etc.

Create a sense of place

The Horse Hill area’s setting along the North Saskatchewan River and its environmental and historic characteristics make it unique. These characteristics must be reflected in its urban form to maintain its unique identity and character, and to foster a sense of belonging.

Integrate existing residential uses

Proper transitioning based on height and density or buffering can reduce conflicts between land uses of different intensities. It is important to maintain the character of the existing country residential parcels within the Horse Hill area, by providing appropriate lower intensity uses before transitioning out to urban density land uses. Hedgerows and trees on existing residential land may be retained where feasible and appropriate.

Technical Summary

No technical studies associated with this topic have been submitted.

Objective	ASP Policy	Implementation
4.1.4.1		
To create distinct neighbourhoods as the basic building blocks of the Horse Hill area.	(A) Create a distinct human-scale town centre defined by main street commercial and located adjacent to supporting commercial uses, the district park site, residential opportunities and with convenient access to public transit, including the LRT.	Figure 8: Land Use Concept illustrates the location of the town centre, with Commercial Retail (with Main Street) at its centre.
	(B) Neighbourhoods shall be designed to include a mix of uses	Future NSPs shall provide an appropriate variety of residential

	such as residential, commercial, institutional, parks and open spaces.	densities and ensure institutional, commercial, open space and park uses are well situated to maximize accessibility to services and amenities.
4.1.4.2		
Promote human scale within the public realm and within private developments.	(A) Development within the Horse Hill ASP shall incorporate a compact urban form.	Table 3: Land Use and Population Statistics illustrates the planned overall density for the ASP that meets the Council-approved Suburban Housing Mix Guidelines and minimum density target for Priority Growth Area “F” of the Capital Region Growth Plan.
	(B) Provide smaller setbacks, street orientation, and active frontages for buildings along collector roadways to create a pedestrian friendly built form.	The type and location of street oriented uses for both residential and commercial uses will be determined at the NSP stage.
	(C) Where appropriate, locate and orient buildings such that they define and reinforce public places such as parks and amenity areas.	
	(D) A pedestrian-friendly main street integrated with LRT shall be created along the historic Fort Road.	A pedestrian-friendly main street integrated with the proposed LRT shall be created in both the Town Center area and along the historic Fort Road.
4.1.4.3		
Provide a range of transportation options.	(A) Create a network of streets that allow for multiple route options.	Figure 11: Active Transportation and Figure 12: Transportation Infrastructure illustrates the arterial and collector roadways within the ASP. The location and alignment of collector roadways may be altered at the NSP stage after further study. Future NSPs will ensure that collector roadways are appropriately spaced and designed to provide direct routes, optimize transit, and minimize shortcutting.
	(B) Streets shall be designed to allow for multiple modes of transport including pedestrians, bicycles, transit users, automobiles,	NSPs will ensure that pedestrian movement is considered at all levels of the roadway hierarchy.

	etc.	<p>Primary pedestrian streets will be identified at the NSP stage. Such streets shall be designed as a pedestrian-friendly cross section.</p> <p>Bicycle routes will be identified at the NSP stage.</p>
	(C) Provide greenways and walkways linking major focal points within the plan area and the River Valley.	Figure 11: Active Transportation illustrates the approximate location of active transportation trails and greenways in the plan area. Details of the network will be refined at the NSP and subdivision stages.
	(D) Provide trails and shared-use paths (SUP) that accommodate both winter and summer modes of transport.	At the detailed design stage, shared-use paths and trails shall be designed to allow cross country skiing, and snowshoeing in winter in addition to a bicycle network / facilities, walking, and in-line skating in the summer.
4.1.4.4		
Use natural features and notable locations to create focal points.	(A) Conserve and integrate the Environmentally Sensitive Areas and Significant Natural areas within development.	Figure 8: Land Use Concept provides the general direction for the retention of natural areas. All Natural Areas identified at the time of the Plan preparation are mapped on Figure 4. The ecological function and sustainability of each feature and its associated connectivity will be further examined at the NSP stage.
	(B) Provide access to the River Valley at several points within the plan area.	At the NSP stage the location of top-of-bank roadways, greenways and pocket parks shall be identified. A top-of-bank roadway or walkway will be required as per City of Edmonton policy.
	(C) Where feasible, retain existing road rights-of-way.	<p>Figure 12: Transportation Infrastructure shows portions of Fort Road being retained within the ASP.</p> <p>The NSP Land Use Concepts will identify specific road ROWs to be retained.</p>
	(D) Provide civic buildings in	Figure 8: Land Use Concept shows

	prominent locations within neighbourhoods to create landmarks.	the location of the future District Park Site and additional school sites. NSPs shall have regard to the placement of civic buildings such as library, church, school, or community league in prominent neighbourhood locations, with good access to transit and pedestrian networks.
4.1.4.5		
Integrate existing residential uses.	Provide appropriate buffers or compatible residential uses adjacent to existing country residential parcels.	NSP Land Use Concepts shall provide appropriate buffers or compatible residential uses adjacent to existing country residential parcels.
4.1.4.6		
Incorporate elements of the existing built form in new developments.	(A) Existing hedgerows and roadway-adjacent trees should be retained and integrated into the urban fabric where feasible and appropriate.	NSPs shall identify areas to be retained into neighbourhoods.
	(B) Encourage retaining the existing historic character and alignment of Fort Road / the Edmonton-Fort Saskatchewan trail.	Roadway alignments are broadly shown in Figure 12: Transportation Infrastructure shows portions of Fort Road being retained within the ASP. Specific road ROWs to be retained will be further refined at the NSP planning stages, subject to review and approval by Transportation Services.
4.1.4.7		
Enhance connectivity between the River Valley, residential areas, key focal points, open spaces, agriculture land, and natural areas through active transportation links.	In addition to typical roadway and sidewalk connections, connections that link residential areas to destinations points shall be provided. Linkages may include, but are not limited to, shared-use paths, greenways, and top-of-bank walkways.	Figure 11: Active Transportation illustrates potential locations for additional linkages between designation points and other transportation routes. The location and type of linkages will be determined at the NSP stage.
4.1.4.8		
To incorporate urban design elements that maximize the benefits of the winter season.	(A) Incorporate design elements into buildings, parks and public spaces that protect users from the wind and maximize access to sunlight.	Guidelines shall be prepared at the NSP stage to guide the implementation of winter design principles.
	(B) Encourage engaging lighting, vibrant colours, and “warm”	Developers shall include winter design consideration and elements

	materials in the main street commercial area and park spaces.	within architectural controls.
	(C) Encourage the integration of vibrant colours and the use of colours that contrast well with snow in residential, institutional and commercial buildings.	
	(D) Encourage the strategic use of lighting to enliven gathering spaces while minimizing light pollution.	
	(E) Small commercial uses which are complementary to recreation uses—such as restaurants and cafes—should be encouraged in proximity to natural areas/parks and the North Saskatchewan River Valley and Ravine System.	Neighbourhood and convenience commercial uses shall be identified in proximity to natural areas/parks and the North Saskatchewan River Valley at the NSP and rezoning stages.

4.1.5 PARKLAND, RECREATION FACILITIES AND SCHOOLS

The Horse Hill ASP provides a variety of parks and open spaces throughout the Plan area. In addition, the Horse Hill ASP abuts the North Saskatchewan River Valley. Figure 10: Parkland, Recreational Facilities & Schools shows the distribution and types of parkland within the neighbourhoods.

District Activity Park

The district activity park is intended to accommodate a wide range of recreation programming. The district activity park offers the opportunity for active and passive outdoor recreation uses, including sports fields, playgrounds, and community gardening spaces. In addition to outdoor recreation, the park is intended to accommodate a recreation centre, public high school, a catholic high school, and associated parking for these uses. The recreation site is intended to accommodate both indoor and outdoor recreation uses, such as skating rinks, swimming pools, gymnasiums, etc. The existing Horse Hill School is located within the proposed district activity park site. Further planning will be required to determine if the school will remain in its current location or be relocated to a new school/park site.

School and Community Parks

Five school areas are provided in the Horse Hill ASP. Three of these sites also provide community park areas. These areas are intended to accommodate public and catholic elementary and junior high schools, community leagues, community park space, and associated parking for these uses. School park sites have been sized based on the requirements provided by the public and catholic school boards. The type and location of schools as depicted on Figure 10: Parkland, Recreational Facilities & Schools is conceptual. The exact location and figuration of the school sites will be determined at a later date by the School Boards and the City of Edmonton. In addition, the location of the school/park site in Neighbourhood 5 must have consideration for the ravine, road access and surrounding land uses. These details will be determined at the NSP stage in consultation with the Public School

Board and Sustainable Development Parks Planning and Current Planning Branches, and may necessitate an amendment to this ASP.

There is an existing school site, the Horse Hill Public Elementary School, located within the plan area. The Edmonton Public School Board has advised that the school will continue to operate in its current location, however should the decision be made to close or relocate the school, the site may be consolidated with the district park site.

Urban Village Parks and Pocket Parks

Six Urban Village Parks are provided in the Horse Hill ASP. The approximate locations of these parks are shown in Figure 10: Parkland, Recreational Facilities & Schools. Neighbourhood Structure Plans will identify the exact location of Urban Village Parks, as well as Pocket Parks.

All parks are located adjacent to roadways, and are connected through a network of shared-use paths, walkways and sidewalks to ensure that they are accessible and dispersed with the residential uses in the plan area.

Partnerships

There are opportunities for partnerships between school boards and other institutions such as religious assemblies or health organizations to be located either on the same site or adjacent to each other. Any structure(s) or accessory uses required by the partnering organization are not to be located on lands receiving MR credit.

Community Gardens

There are opportunities for the development of Community Gardens and events such as winter markets within park sites.

Technical Summary

A Community Knowledge Campus Needs Assessment was completed to determine the requirement for school sites within Horse Hill.

A Parkland Impact Assessment (PIA) was completed to provide information on the provision of open space within the plan area as per the requirements of the Urban Parks Management Plan.

Objective	ASP Policy	Implementation
4.1.5.1		
Accommodate a variety of active and passive recreational activities in the schools, parks and open spaces and entertainment uses in public gathering places.	(A) The size, location and configuration of parks and opens spaces shall be provided in accordance with the Urban Parks Management Plan (UPMP).	Figure 10: Parkland, Recreational Facilities & Schools illustrates the location and configuration of the Parks, and Natural Areas within the neighbourhood. The approximate locations of Urban Village Parks are identified in Figure 10: Parkland, Recreational Facilities & Schools. The exact location of Urban Village Parks shall be identified at the NSP stage. Further refinement of Municipal Reserve

		dedication will be completed at the NSP stage.
	(B) The ASP shall provide Municipal Reserves as land, cash-in-lieu, or a combination thereof, up to 10% of the Gross Developable Area.	As approved by City Council, the Subdivision Authority shall facilitate the allocation of Municipal Reserve owing for the ASP, which shall be dedicated in full as land, cash-in-lieu, or an acceptable combination thereof, at the time of subdivision.
	(C) The Town Centre / Main Street Commercial area shall incorporate a plaza (an urban style public open space) or other such space to provide a gathering space for residents and visitors.	The exact location and configuration is to be determined at the NSP stage.
4.1.5.2		
Ensure that schools, parks and other open spaces are interconnected and easily accessible to pedestrians, bicyclists and other users.	Greenways and walkway connections shall be provided to complement on-street sidewalk routes and connections to link school, park sites and open spaces.	Greenway connections shall be specified at the NSP stage. The Subdivision Authority shall ensure that walkways or other connections are added where roadway connections are inadequate.
4.1.5.3		
Ensure public access to the North Saskatchewan River Valley is promoted and maintained.	Access to the North Saskatchewan River Valley shall be provided via top-of-bank shared-use paths, and a combination of Top-of-Bank parks and roadways.	Future NSP Land Use Concepts shall guide the development of top-of-bank parks and roadways.
4.1.5.4		
Accommodate City of Edmonton's requirements for school and parks sites within neighbourhoods.	(A) The ASP should follow the guidelines for the hierarchy of park spaces as prescribed within the Urban Parks Management Plan (UPMP), while considering the natural and geographic characteristics of the neighbourhood.	Figure 10: Parkland, Recreational Facilities & Schools illustrates the location and configuration of the School and Community Parks, District Activity Park, and various natural areas within the plan area. Additional pocket parks shall be provided in each neighbourhood at the NSP Stage.
	(B) The ASP shall provide Municipal Reserves as land, cash-in-lieu, or a combination thereof, up to 10% of the gross developable area.	The Subdivision Authority shall facilitate the allocation of Municipal Reserve owing for the ASP, which shall be dedicated in full as land, cash-in-lieu, or an acceptable

		combination thereof, at the time of subdivision.
	(C) With the exception of park areas adjacent to Top-of-Bank where grade changes and topography pose design difficulties, all park space within the neighbourhood should be universally accessible.	Design and development of future parks and open spaces shall consider safety needs of all community and be implemented based on requirements of Sustainable Development.
	(D) School and park spaces shall have frontage along public roadways to ensure sightlines, natural surveillance, and adequate lighting. Landscaping and design of school and park spaces shall take into consideration basic CPTED principles and design principles included in the Design Guide for a Safer City and UPMP.	Frontages along school and park spaces shall be determined at the NSP stage.
4.1.5.5		
Consider winter issues in the landscaping of schools, public parks, open spaces, plazas, and boulevards.	(A) Tree species shall be included in the detailed landscape design of schools, public parks, plazas and open spaces such that they provide wind shelter and enable solar penetration.	Selection of species shall take place at the detailed design and/or subdivision stage. Landscape design for public land will be developed in conjunction with relevant City departments, and in accordance with the Urban Forestry Management Strategy.
	(B) Tree species which are salt tolerant shall be included in the detailed landscape design of boulevards and street areas.	
	(C) Programming for parks and public plazas should incorporate gas hook-ups for large portable fire pits to provide for warm gathering spaces for park users during the winter.	

4.1.6 INSTITUTIONAL / URBAN SERVICE

Whether provided by the City of Edmonton or by other agencies and organizations, institutional and urban service uses add to a complete community. By identifying and anticipating future community needs, land may be set aside for emergency services, health providers, cultural institutions and other needs.

Objective	ASP Policy	Implementation
4.1.6.1		
Accommodate future development of institutional uses.	The ASP shall accommodate the development of institutional and urban services uses based on	The applicant, in coordination with the Sustainable Development Department, shall consult with

	assessed requirements.	potential service providers. The identification and general location of identified uses is indicated in Figure 8: Land Use Concept. Land requirements will be for institutional / urban services will be further assessed at the NSP stage.
4.1.6.2		
Accommodate existing government and institutional uses.	The ASP shall incorporate and respect the operations of the existing government and institutional uses within the land use concept.	Figure 8: Land Use Concept shows Government/Institutional land uses. Consultation with the Department of National Defence (DND) is required prior to preparing each Neighbourhood Structure Plan (NSP) and rezoning within the DND Consultation Area identified area on Figure 4. Development in the area identified may be impacted by and/or have an impact on the Riverbend Receiver Site. As a result of these considerations, amendment(s) to this ASP may be necessary. Proposed urban development within the DND Consultation Area may have an adverse effect on existing DND operations. This may require the adoption of mitigation measures in the future NSP, and/or amendments to this ASP.

4.1.7 HISTORICAL RESOURCES

Development within the Horse Hill ASP should have regard for the preservation of historical, archaeological and paleontological resources.

Pursuant to Section 31 of the Historical Resources Act, development proponents and/or their representatives are required to report the discovery of any archaeological, historic period or paleontological resources, which may be encountered during construction.

Technical Summary

Project proponents have submitted a Statement of Justification (SoJ) for Historical Resources Act Requirements of the plan area for consideration by Alberta Culture and Community Spirit (ACCS). Lands included in the study are those held by the plan proponents. The SoJ included the following recommendations:

- An HRIA is recommended for the treed areas above the break-in-slope for the North Saskatchewan River valley, particularly within NE-4 and NW-11-54-23-W4M.
- If the project crosses the valley slope or terraces, construction monitoring by a professional palaeontologist is recommended.
- Several sites identified in the study should be shovel tested and/or backhoe tested to determine the archaeological potential for the sites during the NSP or zoning stage.
- It is recommended the structures within SE-4, NW-4, SE-9, NW-8, and SE-17-54-23-W4M be photographed and mapped in detail prior to impact.
- If any construction activity occurs within the valleys for Horsehills Creek in SE-4 and NE-5-54-23-W4M, any of the treed ravines in SW-33-53-23-W4M or NE-22-53-23-W4M, or the North Saskatchewan River valley, it is recommended that a HRIA for archaeology be conducted within these areas.

Objective	ASP Policy	Implementation
4.1.7.1		
Ensure that historical, archaeological, and palaeontological resources are identified, conserved, and integrated within neighbourhoods where applicable.	(A) Participating landowners shall submit a Statement of Justification for <i>Historical Resources Act</i> Requirements and, if necessary, a Historical Resources Impact Assessment (HRIA).	Participating landowners shall submit statements of justification to Alberta Culture and Community Spirit for consideration. Those lands which have not received Historical Resources Act clearance shall be required to submit and receive sign-off prior to rezoning.
	(B) All historical, archaeological, and palaeontological discoveries made during construction shall be reported.	Section 31 of the <i>Historical Resources Act</i> requires all historical, archaeological, and palaeontological discoveries made during the course of an excavation to be reported to Alberta Culture and Community Spirit. Those discoveries that are notable or deemed significant enough, should be incorporated or interpreted within the development scheme/proposal in a manner that ensures its historical significance is appropriately interpreted and/or displayed. Proposals should be submitted to the City's heritage planners in consultation with Alberta Culture and Community Spirit.

4.1.8 TRANSPORTATION

Roadway 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 (see Figure 12: Transportation Infrastructure).

Capital Region Transportation Study Area

The Capital Region Transportation Study Area as identified in represents the potential location of the Province's proposed outer ring road as per current information. The alignment of the roadway is subject to change with further study by the Province.

Arterial Roadway Assessment

Lands within the Horse Hill ASP shall be subject to an Arterial Road Assessment (ARA) to cost-share the arterial roadway facilities needed to service the area.

In general terms, the ARA outlines the developer's responsibility for roadway construction within a catchment area and is based on the costs of constructing arterial roads required for access to a catchment area. The configuration (number of lanes) and other specific criteria (such as channelization) required for access to the Horse Hill ASP are defined in detail by the associated Transportation Impact Assessment.

Parking

Parking for vehicles will generally be provided off-street in conjunction with development. Reduced parking requirements may be considered when near a LRT Station.

Public Transit

Public transit services will be extended into the ASP area in accordance with City of Edmonton Transit System Guidelines and demands. The neighbourhood has been designed to a human scale whereby a majority of the residential areas will be within 400 m walking distance from transit service. This service will be accommodated within the neighbourhood as demand warrants. Internal collector roadways will be developed to a suitable standard to accommodate transit service and provide readily accessible service to all areas of the neighbourhood.

The Horse Hill ASP provides a potential alignment of the LRT. Extension of LRT service will be subject to LRT system planning and design, as well as the availability of funding. The LRT alignments are proposed to be grade-separated at Anthony Henday Drive and at Manning Drive. The alignment as shown in Figure 8, Land Use Concept is preliminary and subject to change.

Opportunities for developer funded transit in the first two years of development will be included at the NSP stage.

Pedestrian and Bicycle Network

The Horse Hill area will benefit from a high level of pedestrian connectivity. All local and collector roadways within the ASP shall be developed with sidewalks, providing a general level of access throughout the neighbourhood. Bicycle traffic within the ASP is designed to follow collector and local roadways. Bicycle routes will be integrated with shared-use path (SUP) corridors and walkways connecting internal and adjacent residential areas and amenities. Routes will be clearly marked using appropriate signage and markings in order to minimize potential conflicts between vehicles, cyclists, and pedestrians in the neighbourhood.

The provision of pedestrian access to the Transportation Utility Corridor (TUC) and a shared-use path within the TUC will be explored by the developer(s) with the Province and the City of Edmonton Transportation Services at the NSP stage. If permission for a path and walkways is granted by the Province, a shared-use path and the associated walkways will be built by the developer at their expense with adjacent subdivisions.

Greenways

Subsequent NSPs will provide a number of greenways linking key locations within the Horse Hill area and will provide pedestrian and active transportation routes that are separate from vehicle routes (see Figure 12: Transportation Infrastructure). Greenways function as shared-use path corridors and are intended to be

approximately 10 m wide with a 3 m wide paved path, and will also feature grassed and/or naturalized planting, park furniture (e.g. benches, waste receptacles), trees and shrubs, as well as interpretive and directional signage.

Top-of-Bank Walkway

A top-of-bank (TOB) walkway will provide a continuous linkage along the top-of-bank, where feasible. The TOB walkway is proposed to feature a 3m wide paved shared-use path, unless topographic limitations necessitate an alternative design. There will be multiple access points from residential areas by way of walkways and from several points along the roadway system. The TOB walkway will accommodate pedestrian and bicycle access along portions of the North Saskatchewan River valley and ravine system.

A TOB roadway will be established along portions of the North Saskatchewan River valley and ravine system to facilitate automobile access, environmental protection and to establish the ravine as public realm. Per City of Edmonton policy, at least 30% of the top-of-bank will feature roadway or park frontage. In consideration of geotechnical setbacks, engineering information and providing public access and vistas, TOB roadway shall be strategically located to make efficient use of developable land adjacent to the North Saskatchewan River valley.

Truck Routes

Manning Drive is currently identified as a dangerous goods route and truck route and it is anticipated that the northeast leg of Anthony Henday Drive will also be identified as a dangerous goods route and truck route upon its completion in the fall of 2016 to be consistent with the completed portions of Anthony Henday Drive. With two major truck routes bounding the Horse Hill ASP, all existing truck routes within the plan area will be phased out as development progresses in the area. Heavy vehicles shall use the shortest path from either Anthony Henday Drive or Manning Drive to access their destination within the Horse Hill area.

Noise Attenuation

Noise attenuation will be provided in accordance with the Urban Traffic Noise Policy.

Transit Oriented Development

Transit Oriented Development (TOD) concentrates housing, shopping and employment along a network of walkable and bikeable streets within a five-minute walk in any direction of a transit station (or 400 metres). The City's TOD Policy and Guidelines for development adjacent to LRT Stations and Transit Centres will be followed and rationally integrated at the NSP stage.

Transportation Mode Shift

As an alternative to expanding roadway cross-sections to accommodate passenger vehicle traffic, opportunities to promote a mode shift to transit and active modes will be explored. These opportunities included the recommended use of premium bus/LRT transit options in the short and medium terms, the implementation of Traffic Demand Management (TDM) programs, and the integration of residential, employment, commercial, and recreational land uses at the NSP stage. There is a significant opportunity to reduce passenger vehicle traffic within and external to the plan area with the successful implementation of transit, TDM, and active mode strategies.

Technical Summary

The transportation network for the ASP will be provided in accordance with the requirements of the City of Edmonton's Transportation Services. A Transportation Impact Assessment (TIA) has been submitted under separate cover for review and approval by Transportation Services.

Objective	ASP Policy	Implementation
4.1.8.1		
<p>Provide a simple, understandable roadway network with a high degree of connectivity.</p>	<p>(A) The transportation concept shall incorporate a modified grid network of streets which provides multiple access points by a variety of modes, and multiple routes between two points.</p>	<p>Figure 12: Transportation Infrastructure illustrates the potential arterial and collector roadway network.</p> <p>Prior to advancing NSPs to Council, functional plans must be approved by the Province for Manning Drive and the Capital Regional Ring Road or a traffic impact assessment must be approved by Transportation Services which supports area traffic being accommodated on the network without the construction of the Capital Regional Ring Road.</p> <p>Prior to the approval of any NSP, an amendment to the Edmonton Energy and Technology Park (EETP) ASP must be submitted to Sustainable Development and approved by Council subject to Provincial direction on the Provincial road alignments.</p> <p>The local road network shall be addressed at the NSP level.</p>
	<p>(B) NSP transportation concepts shall incorporate a pattern of streets to create a network with a high degree of connectivity and access. Connection to key employment areas such as the Edmonton and Energy Technology Park as well as Alberta’s Industrial Heartland should also be considered.</p>	<p>Neighbourhood design at the NSP level shall have regard for the alignment of local roadways.</p>
4.1.8.2		
<p>Prioritize cyclists and pedestrians.</p>	<p>(A) Roadways should accommodate pedestrians and cyclists. Trails, paths and walkways should supplement, not replace, shared use roadway facilities.</p>	<p>Planning at the NSP level shall show pedestrian and bicycle connections.</p>
	<p>(B) NSP transportation concepts shall include a system of greenways, TOB shared use path, and walkways to facilitate pedestrian and bicycle movements across the</p>	<p>Neighbourhood design at the NSP level shall have regard for pedestrian and bicycle movement. Suggested pedestrian/bicycle linkages have been shown in Figure</p>

	neighbourhoods.	11: Active Transportation System, and may be developed as shared use paths, walkways, sidewalks, or some combination thereof.
	(C) The stormwater management facilities shall accommodate paved shared use path.	Neighbourhood design at the NSP level shall have regard for pedestrian and bicycle movement.
	(D) No front drive access will be permitted to residential units along arterial or collector roadways, or directly across from the school/park site.	Conformance with these policies shall be reviewed at the subdivision stage.
4.1.8.3		
Emphasize pedestrian-friendly environments in key locations.	Streets within the Commercial / Retail with Main Street area shall be designed as pedestrian-oriented streets and is encouraged to incorporate elements/techniques such as human-scale design; traffic calming measures; weather protection, wide sidewalks, pedestrian oriented furnishings, etc.	Transportation Services, in conjunction with the Sustainable Development Department, shall review proposed roadway designs.
4.1.8.4		
Ensure that cost of arterial roadways is shared throughout the catchment area.	Lands within the Horse Hill ASP shall be subject to an Arterial Road Assessment (ARA) to cost-share the roadway facilities needed to service the area.	City Administration shall prepare an Arterial Road Assessment Bylaw for the Horse Hill ASP area.
4.1.8.5		
Ensure integrated access is provided to the North Saskatchewan River Valley and Ravine System.	Public access to the North Saskatchewan River Valley and ravine system shall be provided through a combination of top-of-bank roadway and park along a minimum of 30% of the length of the Urban Development Line. A continuous top-of-bank shared-use path shall be provided along the length of the Urban Development Line, within the Public Upland Area. The design of the neighbourhood shall comply with City Policy C542 Development Setbacks from River Valley/Ravine Crests.	A combination of TOB roadway and park will be provided for a minimum of 30% of the entire length of the Urban Development Line and shall be implemented through the subdivision process. TOB roadway and park areas shall be shown at the NSP stage. Geotechnical/slope stability assessment and City policy shall determine the final alignment of the TOB roadway, TOB walkway and parks. TOB roadway, TOB walkway and parks shall be dedicated to the City of Edmonton at the time of subdivision. Compensation for the development of TOB roadway shall adhere to City Policy C542.
4.1.8.6		

Plan for Transit Oriented Development around LRT stations.	Development surrounding LRT stations shall be developed in accordance with the City’s Transit Oriented Development Guidelines.	NSPs shall plan for Transit Oriented Development in areas adjacent to LRT stations. LRT station location is subject to further study and shall be determined at a later date. LRT alignment and LRT stations may be subject to change.
4.1.8.7		
Encourage innovation in transportation systems design.	New and innovative roadway cross-sections should be explored to improve cost-effectiveness and to ensure that form follows intended function.	Roadway proposals shall be reviewed and approved by Transportation Services in consultation with Sustainable Development.
4.1.8.8		
Encourage transit and active modes as alternatives to single occupant vehicle travel.	Developers shall work with City Administration to encourage alternative modes of travel, such as incentive programs to increase transit ridership, expediting the extension of LRT into the area, development of bus rapid transit, transportation demand management programs, and providing appropriate infrastructure within the roadway network to prioritize active modes of transportation.	Developers shall work with City Administration at the NSP stage to develop a transportation strategy including infrastructure and programming needs, timing, cost sharing or funding.
4.1.8.9		
Encourage the use of removed snow and the implementation of best practices for snow removal and storage.	(A) Wherever feasible, incorporate boulevards or other areas capable of accommodating snow storage (such as bioswales) into the design of roadways.	Detailed roadway cross sections shall be developed at the subdivision stage.
	(B) Encourage practical uses for cleared snow, such as building wind breaks and climbing hills in parks.	Snow removal strategies shall be developed in consultation with applicable City Departments at subdivision stage.
	(C) Encourage design solutions and practices that make use of (or manage) snow on-site or nearby rather than hauling it to off-site snow storage sites.	

4.1.9 INFRASTRUCTURE, SERVICING AND STAGING

The Horse Hill ASP will be a fully serviced neighbourhood designed and constructed in accordance with City servicing standards. Innovative and alternative servicing options are encouraged to provide efficient and sustainable neighbourhoods.

Water Servicing

The population projections, land use designations and roadway network will provide the basis for the development of a concept for the ultimate water supply network in the Horse Hill ASP. An ASP level Hydraulic Network Analysis (HNA) was completed with the Edmonton Energy and Technology Park which included an analysis for the lands within the Horse Hill ASP. Option 2B from the HNA has been modified to reflect the current roadway layout for the Horse Hill ASP, without altering the fundamental layout of the network. The water supply for this option will be from the Clareview Reservoir, and a new feeder main to the proposed reservoir in Horse Hill will be constructed. An area of high pressure is identified under this option, and will require Pressure Reducing Valves (PRV) to allow servicing.

Stormwater Servicing

The drainage requirements for lands designated as Government Institutional and Private Agriculture have not been accommodated in the overall Area Master Plan (AMP) for the Horse Hill ASP. Any drainage requirements for the lands will be accommodated on site. Should this change in the future, an update to the AMP will be required.

Several stormwater management facilities are integrated into the open space system of the Horse Hill ASP. These naturalized stormwater facilities are considered an amenity area and part of the open space system. Besides the function of these facilities as part of the storm servicing network, the SWMFs provide additional open space around these facilities. All SWMFs are linked with the neighbourhood pedestrian trail network and complement the open space system by providing additional areas for passive recreation.

Sanitary Servicing

The sanitary system will be designed in accordance with City of Edmonton standards

Shallow Utilities

Power, gas and telecommunication services are located in close proximity to the Horse Hill ASP and will be extended as required.

Municipal Services

As development occurs, municipal services such as fire and police will be required to serve the area. Location, type and number of facilities will be determined by City departments and agencies.

Rationale

The ASP will be designed in accordance with City of Edmonton servicing standards. Development staging and extension of infrastructure will be contiguous, efficient, and economical while mitigating potential environmental and ecological impacts. Opportunities for research and innovation should be supported in order to discover efficient, low cost or low environmental impact servicing options.

Technical Summary

An AMP was completed in conjunction with the Edmonton and Energy Technology Park ASP.

An ASP level HNA was completed in conjunction with the Edmonton and Energy Technology Park ASP.

An update to the AMP has been prepared by Stantec Consulting Ltd. in support of the Horse Hill ASP.

Objective	ASP Policy	Implementation
4.1.9.1		
Ensure that the Horse Hill ASP area is serviced to a full urban standard, using contemporary and emerging sustainable infrastructure solutions, and that “soft” services are provided.	(A) Water servicing to the Horse Hill area should be provided in accordance with the approved Hydraulic Network Analysis.	Approval of engineering drawings and servicing agreements shall be required prior to installation of water servicing
	(B) Shallow utilities will be extended into the plan area as required.	Installation of shallow utilities shall be executed through servicing agreements
	(C) Ensure that development within the Horse Hill ASP is within acceptable response times as determined by emergency services.	City Administration and agencies should work with Council to ensure planning and funding is in place to provide for the timely delivery of municipal services.
4.1.9.2		
Explore innovative and alternative servicing options.	Support innovative and alternative service delivery, if feasible and practical.	Opportunities for innovative and alternative servicing options shall be explored at the NSP stage. The City of Edmonton will consider supporting projects which meet all identified requirements.

4.1.10 ECOLOGY

The Plan promotes the conservation and restoration of the local ecological network. Using the information derived from the draft Ecological Network Report and interpretation of aerial photos, valuable habitat and corridors were mapped (see Figure 9: Ecological Network).

The Plan identifies two categories of natural area – Retain and Attempt to Retain – based on recommendations provided in the associated Ecological Network Report. In consultation with Sustainable Development, Parks Planning and Office of Biodiversity, approximately 2 percent of Gross Developable Area for each Neighbourhood will be used to retain natural areas using Municipal Reserve. The balance of natural areas may be retained using a variety of mechanisms, including but not limited to, purchase at market value or land exchange (by the City or through a land trust), or ecological gifting.

The plan also identifies the approximate area of three Crown claimed wetlands as shown on Figure 4: Site Features. Additional review and study will be required at the NSP stage to confirm the delineation of the wetland area and size of buffer. Additional wetlands are present within the plan area. Further studies at the NSP stage will confirm the classification of each wetland and determine whether retention or compensation is required.

The function and the integrity of the ecological network in the ASP area are important. The Ecological Network Report (ENR) for the Horse Hill ASP identifies a number of natural features within the plan area, such as the North Saskatchewan River Valley, and Horsehills Creek. Based on the recommendations of the ENR, the ASP conserves and integrates areas of high ecological significance within the land use concept. Figure 9: Ecological Network shows natural and semi-natural linkages which facilitate movement of key species between natural areas, the

North Saskatchewan River Valley and Ravine System, numerous naturalized stormwater management facilities, parks, and potential wildlife crossings.

The North Saskatchewan River Valley and its tributaries are part of an important ecological system within the Plan area. Horse Hill Creek shall be protected and preserved as per the MGA, MDP, Development Setbacks from River Valley/Ravine Crests Policy (C542), other strategic policies and guidelines.

The Top-of-Bank (TOB) and Urban Development Line (UDL) have been established through aerial photography and topographic mapping. Further definition of the TOB and UDL will be done through site visits, geotechnical analysis and slope-stability analysis at the NSP level.

Due to the general conceptual nature of the ASP, there may be substantial changes or modifications to the natural area requirements at the time subsequent planning occurs in the Horse Hill area.

Technical Summary

A draft Ecological Network Report (ENR) was prepared for the ASP area, and was submitted under separate cover.

Objective	ASP Policy	Implementation
<p>4.1.10.1</p> <p>Preserve and enhance natural systems through the location and design of open spaces and the preservation of natural areas.</p>	<p>A range of habitat will be provided in the plan area through the retention of Natural Areas, an interconnected park system, retained agricultural areas and the utilization of naturalized landscaping, including engineered wetlands.</p>	<p>The Ecological Network Report (ENR) must be finalized upon submission of the first NSP. Additional ER may be dedicated at the NSP stage for wetland protection/preservation and/or to address creek stability within the ASP area.</p> <p>Provide Natural Areas through a combination of purchase and dedication of land, using ER and MR where appropriate.</p> <p>The Plan area contains Crown-claimed wetlands that are identified on Figure 4: Site Features. Further studies to delineate the wetlands will be required at the NSP stage.</p> <p>Encourage the use of native plant materials through landscaping design review.</p> <p>Encourage the design of stormwater management facilities to function as engineered wetlands.</p> <p>Connectivity shall be maintained and enhanced using natural and semi-natural components of the</p>

		<p>ecological network.</p> <p>Exact limits of management zones (i.e. ecological buffers) shall be determined at the NSP stage.</p> <p>Natural Area Management Plans may be required at the NSP stage in consultation with the Office of Biodiversity.</p>
4.1.10.2		
<p>Protect the North Saskatchewan River Valley and Ravine System, including Horsehills Creek.</p>	<p>(A) An Urban Development Line (UDL) shall be established to separate developable from non-developable areas. This will help to preserve the river valley and ravine system, ensure that urban development is reasonably safe from environmental hazard risk and that public access, visual amenities and recreational opportunities are maximized.</p>	<p>General identification of top-of-bank has been determined through aerial photography and contour mapping.</p> <p>The top-of-bank setback requirements shall be determined at the time of NSP approval. Setbacks shall be determined based on a top-of-bank walk and subsequent approved geotechnical investigation.</p> <p>The impacts of development upon the natural functions and character of the North Saskatchewan River Valley and Ravine System shall be mitigated.</p> <p>Ground truthing, geotechnical reports and slope stability analysis shall be submitted at the NSP stage, demarcating the UDL.</p> <p>At the time of subdivision, a minimum setback of 10m shall be provided in accordance with Policy C542 to provide for river valley public access circulation, and civic purposes including geotechnical monitoring and repair, firefighting, emergency access and public safety.</p>
	<p>(B) Lands below the Urban Development Line shall be protected from urban development.</p>	<p>Lands that meet the criteria for Environmental Reserve (ER) under Section 664(1) of the MGA shall be dedicated to the City of Edmonton at the time of subdivision.</p>
4.1.10.3		
<p>Maintain ecological linkages to support the presence of wildlife in</p>	<p>Where possible, design open space areas and greenways with</p>	<p>At the NSP stage, the size and type of wildlife passages shall be</p>

neighbourhoods.	consideration for the movement needs of wildlife.	determined based on wildlife movement patterns.
4.1.10.4		
Protect wetlands within the plan area.	Natural wetlands will be integrated into the area through a variety of mechanisms.	Wetlands to be retained shall be further defined at the NSP stage. Opportunities for compensation for wetlands not retained within the Plan area shall be explored at the NSP stage.

4.1.11 ENVIRONMENT

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

Policies relating to existing and abandoned oil and gas uses will ensure conscientious residential development around oil and gas well sites and pipelines at all stages of the plan implementation and construction process while minimizing potential disturbances to the area’s future residents. Urban development in the vicinity of all resource well sites will be planned in accordance with the City policy document entitled “Policy Guidelines for the Integration of Resource Operations and Urban Development” (1985) and Policy C515 “Oil and Gas Facilities” (2007) and other relevant City procedures. Development of lands involving abandoned wells shall comply with ERCB guidelines for development around abandoned wells. An assessment of risk and nuisance shall be conducted on operating or suspended oil and gas wells, as directed by existing or future City policy for the integration of oil and gas facilities prior to any rezoning of the parcel where the facility is located.

Technical Summary

A Risk Assessment in regards to the CN Railway, proximity to industry in the Edmonton and Energy Technology Park as well as existing pipelines was prepared for the ASP area, and was submitted under separate cover. Additional risk assessments may be required at the NSP stage.

Objective	ASP Policy	Implementation
4.1.11.1		
Ensure that the environmental status of the lands within the Plan area is suitable for development.	(A) The likelihood, types, and location of any environmental concerns present on the lands shall be determined prior to rezoning.	Phase I Environmental Site Assessments (ESA) shall be required for participating landowners at the NSP stage. ESAs shall be submitted and any follow-up will receive sign-off by City Administration prior to the rezoning stage of development. 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.
	(B) 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 remediation shall be submitted for approval by the City administration prior to the rezoning of the subject lands.
4.1.11.2		
Mitigate oil and gas well sites' potential environmental hazards and disruption of future residential areas.	The Horse Hill ASP and future NSP's shall be designed to comply with relevant requirements of the ERCB regulations and City of Edmonton Policies.	Setback requirements shall be confirmed at time of subdivision approval. Subdivision planning must adhere to all relevant ERCB regulations and City of Edmonton Policy C515. Risk assessments may be required at the NSP stage.
4.1.11.3		
Integrate existing high pressure pipelines with future development.	Existing high pressure pipelines shall be accommodated and incorporated into the development concept.	Figure 4: Site Features shows facilities and Figure 8: Land Use Concept shows the integration of pipelines and urban development. Risk assessments may be required at the NSP stage.
4.1.11.4		
Mitigate noise and vibration effects and risk from potential incidents along CN Rail tracks.	Building setbacks, safety berms and fencing shall be built in accordance with City of Edmonton regulations or based on the Proximity Guidelines and Best Practices for rail/municipal interface. ⁴	Policies shall be developed at the NSP level to address railway proximity issues.

4.1.12 GREEN DEVELOPMENT

Low Impact Development (LID) refers to a collection of alternative engineering and landscape architecture strategies to manage and improve the quality of stormwater runoff in an urban environment. Low Impact Development principles replace conventional stormwater management strategies with natural processes. Some LID strategies include constructed wetlands, bioswales, and rain gardens. Some of the benefits of LID include improved groundwater quality and quantity, reduction of river bed erosion and peak flows, reduced costs, and habitat protection.

⁴ Earth Tech Canada Inc. 2007. Final Report: Proximity Guidelines and Best Practices. Prepared for the Railway Association of Canada and The Federation of Canadian Municipalities.

Native species or (non-invasive) naturalized species should be used in landscaping. The use of plant species which are native or adapted to the local climate generally require less irrigation and maintenance than non-native species, which serves to minimize costs associated with development and maintenance. Appropriate landscaping within open spaces provides opportunities to create wildlife habitat, and strengthens the ecological network within the neighbourhood.

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ for Neighbourhood Development (ND) offers an evaluation system that incorporates principles of smart growth, urbanism and green building. Regardless of whether certification under the system is pursued, the required and optional program components offer a comprehensive set of development considerations that can guide neighbourhood design.

A number of alternative energy options may be applicable to the Horse Hill ASP area. A geoexchange heating and cooling system, for example, is a renewable alternative to conventional heating systems using gas, oil or electricity. Geoexchange systems take advantage of the heat energy stored in the ground to heat or to cool buildings. Another example would be photovoltaic (PV) systems which are used to convert sunlight into electricity. These systems produce no pollution or emissions, have low operating costs, and are fairly easy to install. PV systems are increasingly being incorporated into buildings that are also connected to utility systems.

Another option to efficiently cool and heat a series or cluster of buildings would be a district energy system. Benefits of district energy systems can include increased energy efficiency, reduced air pollution and emissions, greater fuel flexibility, facilitation of the use of renewable energy and helping manage the demand for electricity. District energy systems can make use of waste heat generated from other processes, such as the generation of electricity – which is known as combined heat and power (CHP) or co-generation. Similarly, they can be fuelled by industrial by-products like wood chips, biomass or hydrocarbon products or even from municipal refuse. Energy from other renewable sources can be integrated into the systems, including photovoltaic cells, or geoexchange systems.

Technical Summary

No technical studies associated with this topic have been submitted.

Objective	ASP Policy	Implementation
4.1.12.1		
Utilize Low Impact Development principles for the design of the stormwater management system, including bioswales and naturalized wetlands.	Where possible, neighbourhoods should incorporate Low Impact Development principles that promote stormwater infiltration, filtering, storage, evaporating, in addition to the detention of runoff close to its source.	Land use and servicing plans dealing with stormwater at the NSP level shall employ the City of Edmonton’s Low Impact Development Guidelines, or development best practices.
4.1.12.2		
Employ sustainable planning principles in the design of the neighbourhood.	Each NSP should incorporate LEED ND principles or other comparable measurable sustainable development standards.	A narrative describing compliance with the chosen standard (or aspects thereof) should be provided to the Sustainable Development Department at the time of NSP submission.
4.1.12.3		
Explore alternative energy options	Neighbourhood plans which feature	Evaluate the potential for

in the Horse Hill area.	higher density land uses (e.g. transit-oriented developments, employment hubs, or education campuses) may consider alternative energy options, such as district heating, combined heat and power systems, geothermal or solar power, where possible.	alternative energy options such as district heating, combined heat and power systems, geothermal or solar power at the NSP level.
4.1.12.4		
Encourage natural landscaping using native tree and plant species.	(A) Where possible, parks, open spaces, and boulevards should incorporate tree and plant species native to central Alberta (B) Edible landscaping, such as cherry and apples trees and saskatoon bushes, should be incorporated into public parks and boulevards.	Selection of species shall take place at the detailed design and/or subdivision stage. Landscape design for public land shall be developed in conjunction with relevant City departments, such as Transportation Services and Sustainable Development.

4.1.13 AGRICULTURE AND FOOD

The Horse Hill ASP supports the intent of Edmonton’s City-Wide Food and Agriculture Strategy, and proposes a number of land uses, policies and approaches to support local food production in the area, to grow the local food market, as well as to promote education and sustainable food practices.

Rationale

Intensive and Extensive Urban Agriculture

Intensive agriculture refers to high-input, high-output production such as horticulture, greenhouses, specialty crops and fresh vegetable and fruit production. This is a suitable use for peri-urban agricultural land and, at a smaller scale, for urban agricultural land. Extensive agriculture includes such activities as pasture, grazing, and to some extent large scale field crops that are typically grown in dry land situations (without irrigation). Extensive agriculture is not considered ideal for urban or peri-urban agriculture.

Local Food Economy

While Edmonton’s climate cannot support year-round outdoor growing, developing innovative urban food production, processing and storage strategies can be appropriate for the climate and context. Supporting local food production and processing in the Capital Region helps contribute to the development of the local economy, and can encourage a healthy and sustainable food system.

Value-Added Food Production

Value added agriculture refers to the processes that increase the value of raw agricultural products such as pickling, curing, canning and/or preparing industrial or consumer ready food products. Value-added industries can occur on different scales, from the home-based business selling jams and pies to national brand consumer foods. While much of Edmonton’s food processing occurs in industrial areas, there are ways to promote the use and production of local foods in Horse Hill.

Community kitchens, for instance, are an important component of building strong, healthy, and sustainable communities. As economic development incubators, community kitchens provide food entrepreneurs with access to the tools and resources to add value to local produce and distribute their products in the community, city, and region. These spaces have been key starting points for many small-scale food entrepreneurs to generate revenue and transition to larger-scale production. Community kitchens provide space for residents preparing large quantities of food for home catering businesses and religious services. Community kitchens serve as a space to promote literacy in healthy eating and food preparation for community courses, and should be included in community centres or recreation facilities to benefit from other education and recreation programming.

Home gardens

Home gardening is both an exceedingly popular pastime and a means of producing vegetables and fruit throughout the summer months. One of the simplest and most apparent examples of small scale local food production is the traditional back yard garden. The amount of land that is available for gardening in low density residential areas is considerable, and even apartment housing on private amenity spaces such as balconies or shared open space could be used for garden plots.

Community gardens

Community gardens are features that are found in many neighbourhoods throughout the city. Community gardens are generally divided into individual plots which are made available to the public or members of the community, often for a nominal fee or for no cost. These spaces serve multiple purposes – from social gathering spaces, to vegetable gardens, to ornamental flower gardens – and are often popular in locations with higher density housing where private open space is limited. As Community Services recognizes gardening as a legitimate recreational pursuit, some Municipal Reserve land within neighbourhood parks can be dedicated for community gardens throughout the Horse Hill area. Organizations such as Community Leagues, non-profit societies, residents associations or faith groups are often willing to administer community gardens, likely with minimal support from Community Services.

Edible landscaping

In addition to private gardens, public spaces can provide attractive and productive land. Public lands such as parks and open spaces, or even road and utility rights of way, can be planted with a broad variety of edible species. These might include fruit trees, berries like saskatoons, high-bush cranberries, raspberries, nuts, or other plants like rhubarb. Expanding the variety of plants in public spaces beyond ornamental species is a fairly easy way to increase the range of potential uses, and to provide a source of local food.

Community-Supported Agriculture

Community-Supported Agriculture (CSA) connects agriculture producers with the consumers in a food distribution network. A typical CSA arrangement is a shared-risk agreement that sees a farmer offer memberships to consumers who then receive a regular delivery of seasonal produce directly from the farmer. This arrangement removes the middle-person from the supply chain and connects the consumer with the farmer. In turn, farmers benefit from the regular and increased cash flow, and consumers benefit from access to health, locally growth food.

Urban Agriculture and Beekeeping

Ways of promoting healthy eating and sustainable food practices are re-emerging in urban areas. Urban agriculture, for example community gardens, community orchards, food forests and berry patches, allow food to be grown locally and contribute to sense of community. Several cities now allow the keeping of a limited number of hens for the purposes of laying eggs, as well as the keeping of bees. Beekeeping, whether located on farms,

backyards or urban rooftops, can contribute to a healthy urban landscape by contributing to the pollination of plant species. Should the City of Edmonton pursue changes to current bylaws and regulations to allow beekeeping and backyard hens, the Horse Hill ASP would be supportive of those, as well as opportunities for community orchards, food forests, berry patches, hydroponics, SPIN farming, aquaponics, container gardens, and vertical growing systems, among other methods for urban agriculture.

Commercial farms

Several parcels of urban agricultural land are retained in the Horse Hill ASP. These areas are currently being farmed, a use which will carry over into the future. The Horse Hill ASP designates land as Agriculture based on the wishes of current landowners. Should a landowner wish to redesignate their lands from urban uses to a permanent urban agriculture use, an amendment to the Plan would be required. Similarly, should a private party, the City of Edmonton, or a third party such as a land trust, wish to obtain land for the purposes of farm land retention, an amendment could redesignate land as urban agricultural. As many smaller parcels of land have been created through subdivision over the years, assembling land to create contiguous 2 to 8 hectare parcels is a distinct possibility.

Land use compatibility

As more detailed planning occurs, methods to mitigate potential nuisance factors (e.g. noise and dust from farming, traffic and encroachment from residential development) created by intensive agricultural operations will be investigated. Possible solutions include setbacks, shelterbelts, multi-use trails, park space, or roadways. In addition to buffering, the integration of compatible land uses should be considered.

Food hubs

A food hub is an agglomeration of food and agriculture activities meant to promote local food systems in an urban area. Typical activities might include retail or wholesale, food processing, distribution, office space as well as educational or community spaces. The Horse Hill area could be suitable for the development of a food hub by virtue of its proximity to existing farming operations, an extensive transportation network, and the potential to develop varied urban agriculture infrastructure.

Objective	ASP Policy	Implementation
4.1.13.1		
Retain land for urban agriculture.	<p>(A) Land may be retained for permanent urban agricultural use.</p> <p>(B) Where lands are designated urban agriculture through future amendment of this ASP, farming activities shall be limited to intensive agriculture operations, and will not include intensive livestock operations, extensive agriculture operations, or other high-impact operations.</p>	<p>Land designated for urban agriculture is shown in Figure 8: Land Use Concept.</p> <p>The urban agriculture designation in the ASP may be applied for, at the discretion of the landowner.</p> <p>Creation of a new Agricultural Land Reserve (ALR) designation may be applied for landowners of privately owned farmland who self- declare their intent to retain urban agricultural use within the ASP area.</p>
4.1.13.2		

<p>Buffer urban agriculture uses and non-agriculture uses.</p>	<p>(A) Provide appropriate buffers or compatible land uses adjacent to retained urban agricultural parcels.</p> <p>(B) Where agricultural operations predate new developments, the responsibility for buffering shall fall to new land uses.</p>	<p>NSPs shall provide guidelines for appropriate buffers, setbacks or compatible uses adjacent to retained urban agricultural parcels.</p>
<p>4.1.13.3</p>		
<p>Promote urban agriculture in Horse Hill.</p>	<p>(A) Opportunities for community garden plots on such lands as those owned by the Province, the City of Edmonton and public utility operators are encouraged.</p>	<p>The location, number and size of community gardens shall be further developed at the NSP level. The land requirements for public community gardens shall be reviewed and determined at the NSP stage.</p>
	<p>(B) Community gardening should in large part be considered recreational and a community building activity and included in programming for community parks in balance with other park programming needs.</p>	<p>Community leagues and other voluntary organizations, such as Sustainable Food Edmonton, should be encouraged to be the stewards of community gardens and develop best practices for urban agriculture.</p>
	<p>(C) Explore opportunities to utilize harvested rainwater for irrigation of parks and community gardens.</p>	<p>Specific implementation strategies pertaining to sustainable practices shall be determined at the NSP stage, and in conjunction with the appropriate City Departments.</p>
	<p>(D) Landscaping of public parks and open spaces should consider planting of edible fruit and vegetable plants where appropriate.</p>	<p>Edmonton’s edible landscaping guidelines (to be developed) should be adhered to at the neighbourhood planning level and during the design of parks and open spaces.</p>
	<p>(E) Opportunities for urban agriculture, for example community gardens, community orchards, food forests, berry patches and beekeeping in the Horse Hill area may be explored in NSPs and through City bylaws and policies.</p>	<p>Opportunities for urban agriculture such as keeping bees, raising backyard laying hens, community orchards, food forests, berry patches, hydroponics, SPIN farming, aquaponics, container gardens, and vertical growing systems, among other methods for urban agriculture shall be explored and implemented in accordance with <i>fresh</i>.</p>

	(F) Investigate urban agriculture opportunities on utility rights-of-way.	Developers and/or City Administration shall investigate the feasibility of using utility corridors (e.g. electrical transmission lines or transportation corridors) for urban agriculture.
	(G) Explore opportunities for additional urban agricultural land.	The City and partners shall explore opportunities to identify and secure new urban agricultural lands. Examples include using an Agricultural Land Reserve (ALR), Transfer of Development Credit (TDC), Land Trust, Conservation Covenant, Land Swap, Community Investment, Cluster Development, zoning and land use designations, and land/financial contributions by developers.
4.1.13.4		
Support the development of local food infrastructure.	(A) The town centre should include a public space for a community farmers market.	Planning at the NSP level shall provide guidance for the development of the town centre area, including the public market space.
	(B) Explore the opportunities for establishing an urban agriculture incubator and education centre.	Specific implementation strategies pertaining to the development of an urban agriculture incubator and education centre shall be determined at the NSP stage.
	(C) Support the development of year round pocket markets, mobile markets and mobile food vendors.	Public and quasi-public spaces (plazas, recreation centres, shopping centre parking lots, or streets) can accommodate mobile operations. Policies supporting these and other food system assets shall be provided at the NSP stage.
	(D) Support the development of community and agri-food hubs.	A food hub may be integrated with the community recreation centre, urban agriculture education centre, or business employment area. Pursue partnerships with private business and other economic agencies and examine establishing a

		<p>commercial / private sector food hub (such as commercial kitchens, permanent farmers market location, incubator kitchens, community kitchens).</p> <p>Policies supporting these uses shall be provided at the NSP stage.</p>
	(E) Value-added food / urban agriculture businesses are permitted in the business/employment area of the Horse Hill ASP.	Appropriate land use zones shall be applied or developed at the NSP and rezoning stage.
	(F) Support the improvement of neighbourhood-scale food infrastructure.	The City and Developers, working closely with community organizations, Community Leagues, and the Edmonton Food Council, shall identify and improve existing facilities and programs with appropriately scaled infrastructure.
	(G) The City and Developers will support the creation of vibrant, attractive and unique places that celebrate food and enhance the local food culture.	The City of Edmonton shall work with local groups to design public and private spaces to use food as a way to enhance the local food culture and animate and enliven shared spaces. Food growing, processing, buying, selling, and eating places shall be considered at the NSP stage.

5 IMPLEMENTATION

It is anticipated that the Horse Hill ASP will develop over a period of 30 to 40 years. Within this time period, it is important to provide guidance that will ensure that development occurs in a way that maximizes efficiency while minimizing disturbance to surrounding communities.

5.1 GENERAL STAGING

Development staging is intended to provide a recommended direction for the development of the plan area. It is not intended to act as regulation, but instead provides a preferred direction for development to take place given the location of existing services, market conditions, demographics, and other factors relevant to growth patterns.

The Horse Hill ASP will be developed in five neighbourhoods as shown on Figure 6 – Neighbourhood Units and Staging. Development is recommended to commence in the southern and western portion of the plan area and extend north. Further details in regards to the ultimate staging of each of the neighbourhoods will be provided at the neighbourhood structure plan stage through detailed review and modification of the preliminary conceptual plan design in consideration of contemporary market demand.

5.2 STAGING INFRASTRUCTURE AND SERVICING

Each development phase will include stormwater management facilities in addition to necessary off-site water and sewer mains appropriately located within and adjacent to the Horse Hill ASP area.

Extending existing utilities from the south and west will provide shallow utility servicing including electric, telephone, cable television and gas.

5.3 ADJACENT LAND USE PLANS

To ensure consistency between the Horse Hill ASP and the Edmonton Energy and Technology Park (EETP) ASP, an application to amend the EETP ASP will be made following approval of the Horse Hill ASP. Where feasible, roadway and railway alignments established by the EETP were accommodated in the Horse Hill ASP. However, due to constraints, certain alignments set by Horse Hill area necessitate changes to the EETP ASP.

5.4 REZONING AND SUBDIVISION

A variety of zones currently exist within the Horse Hill ASP area. Existing zoning includes but is not limited to lands zoned Agricultural (AG), existing residential subdivisions such as Quarry Ridge are zoned Direct Development Control Provision (DC2) and Single Detached Residential (RF1), Provincial Government lands including Alberta Hospital are zoned (DC) Direct Development Control Provision and (US) Urban Services and the Evergreen Mobile Home Park is zoned Mobile Home Zone (RMH). Rezoning and subdivision of lands to conform to the land uses designated in the Horse Hill ASP and subsequent NSPs will be undertaken when necessary.

5.5 ECOLOGICAL NETWORK

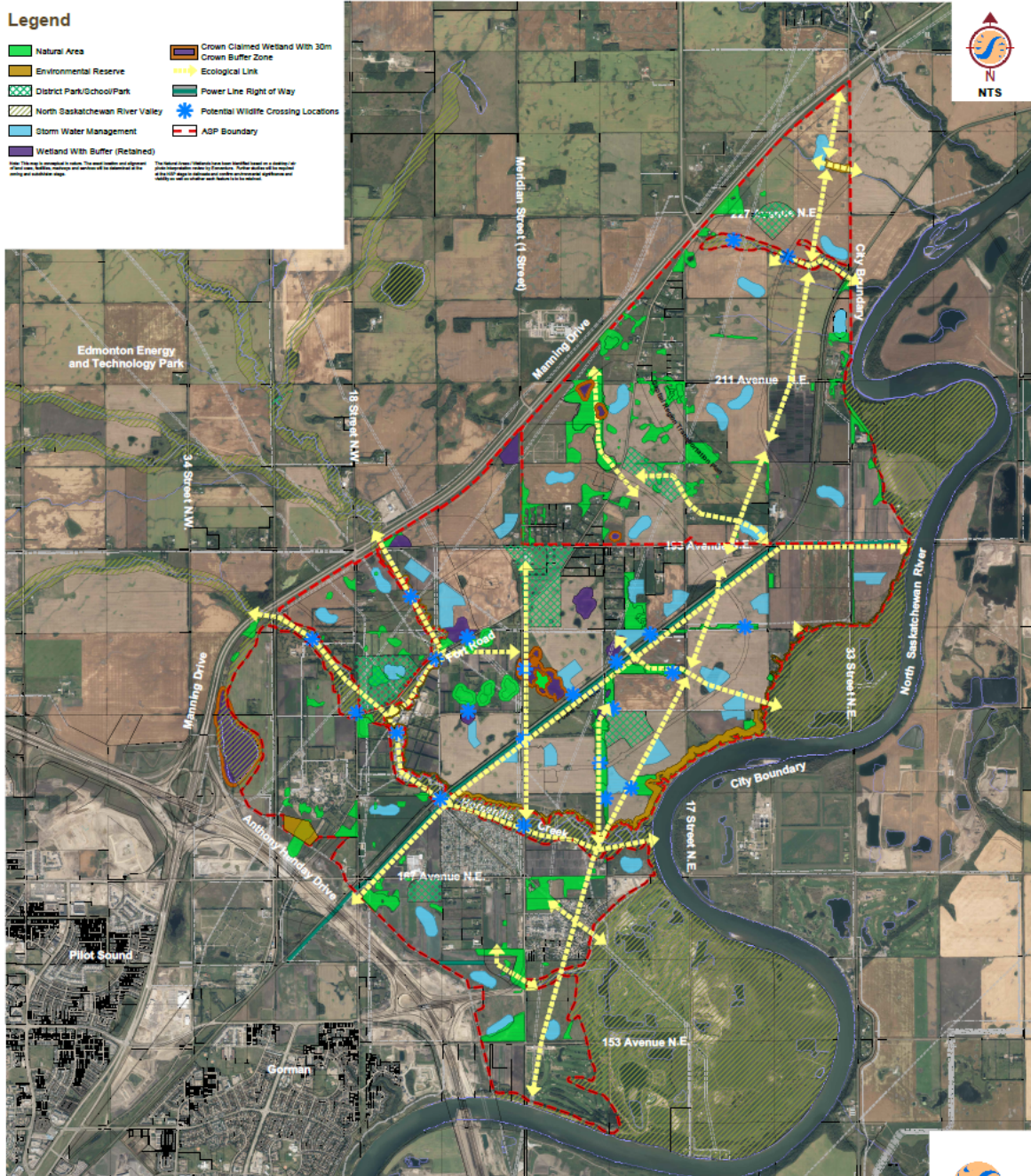
To support the preparation of the Horse Hill ASP, a draft Ecological Network Report was submitted. The finalized Ecological Network Report must be submitted as part of the first Neighbourhood Structure Plan application.

5.6 CONSULTATION WITH THE DEPARTMENT OF THE NATIONAL DEFENCE

The Department of National Defence must be contacted during the preparation of any Neighbourhood Structure Plan (NSP) within the Horse Hill ASP area to determine whether or not proposed land uses and associated infrastructure shown on Figure 4: Site Features will impact the Riverbend Receiver installation. Should changes be requested by the DND, an amendment to the Horse Hill ASP may be required.

Ecological Network

Figure 9

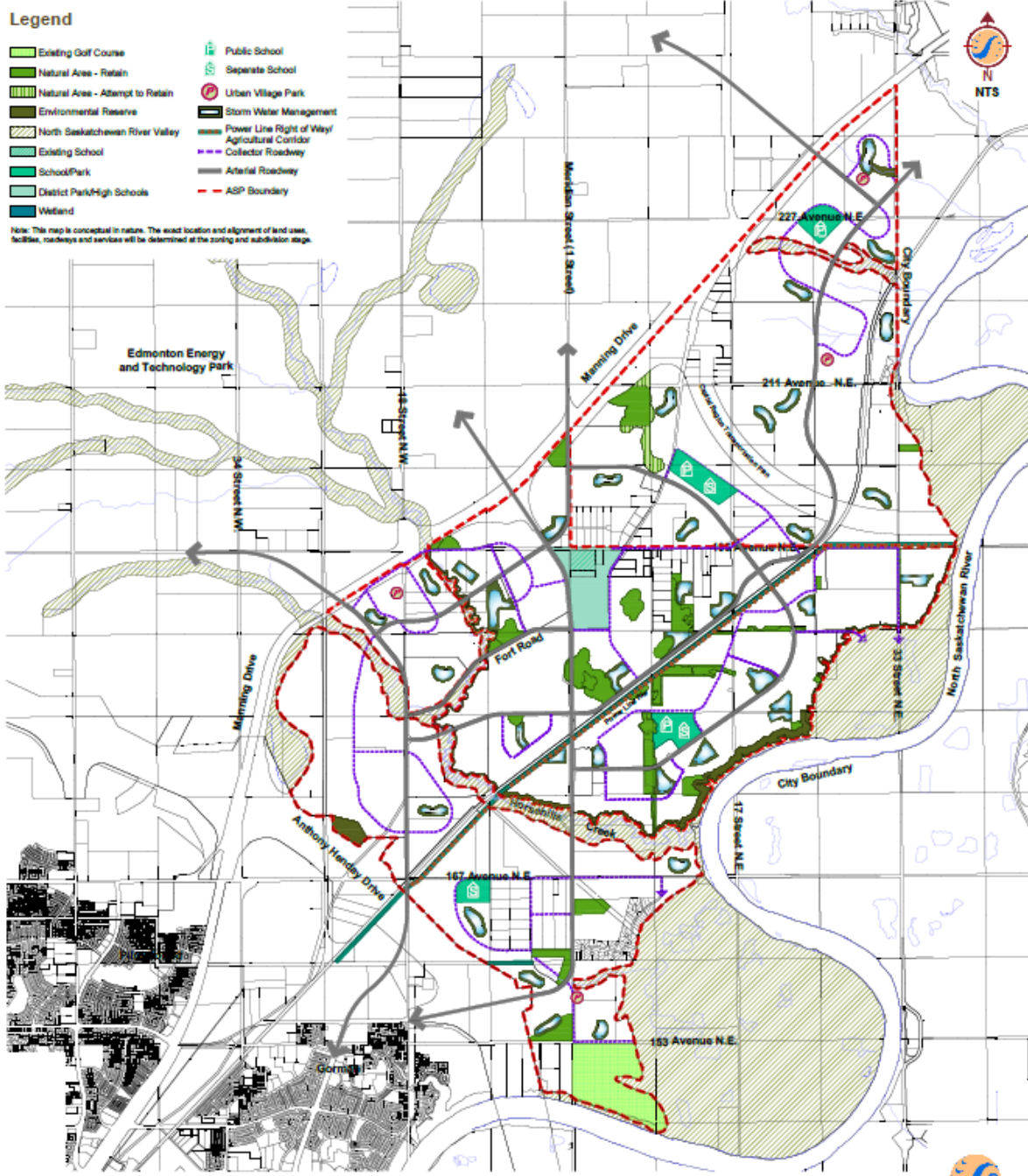


Horse Hill Area Structure Plan



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Parkland, Recreational Facilities & Schools Figure 10

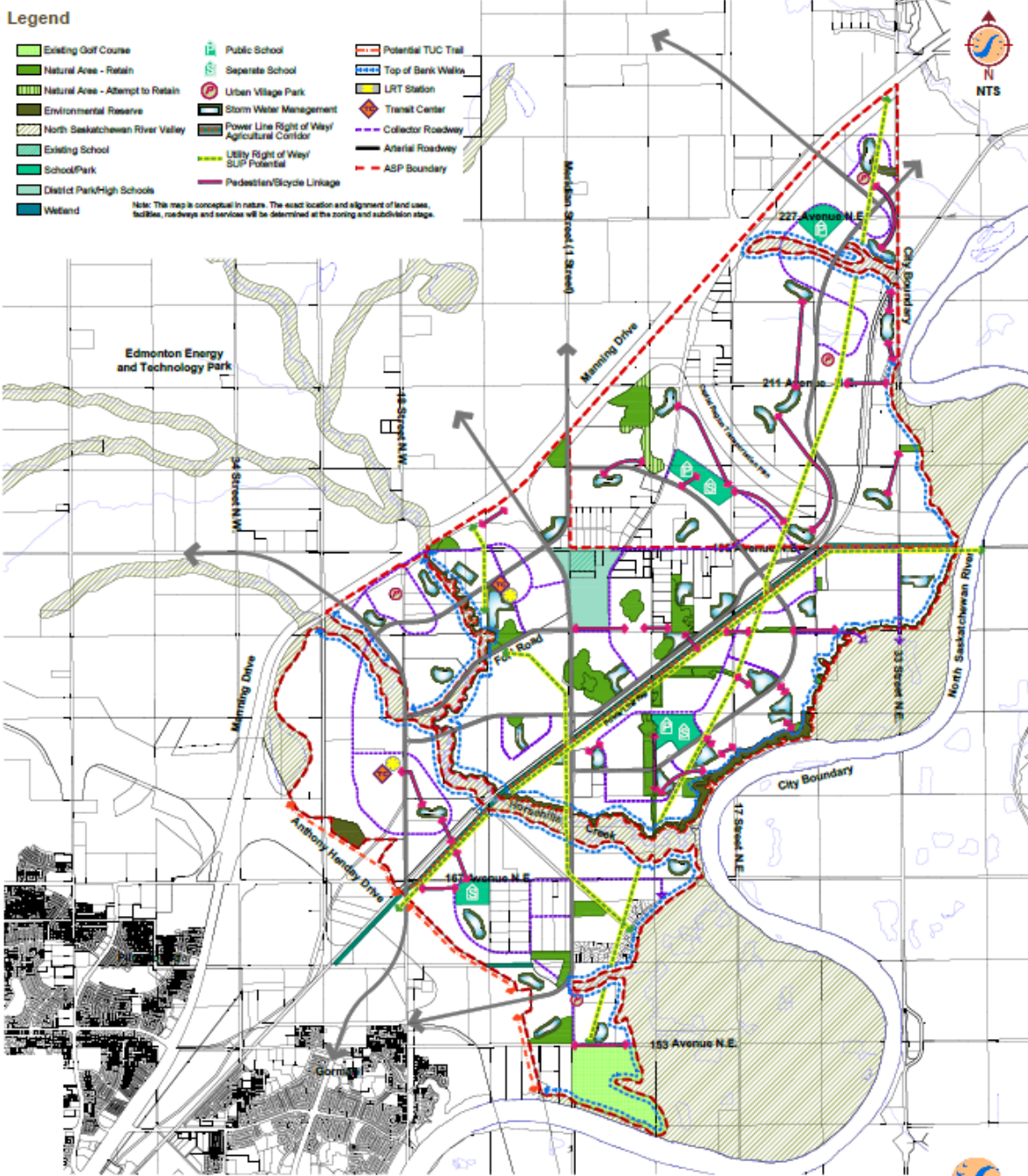


Horse Hill Area Structure Plan



Active Transportation System

Figure 11

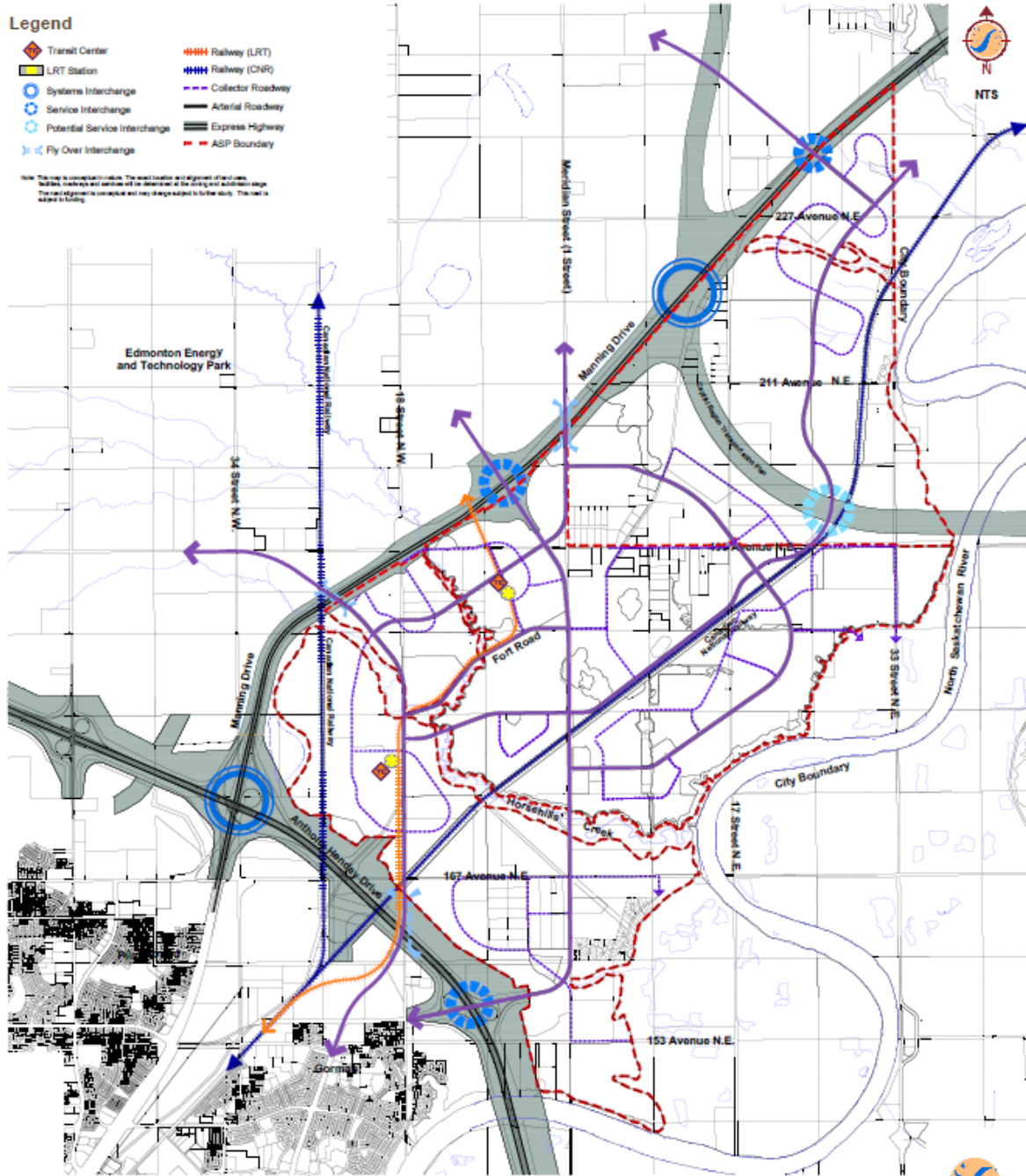


Horse Hill Area Structure Plan



Transportation Infrastructure

Figure 12

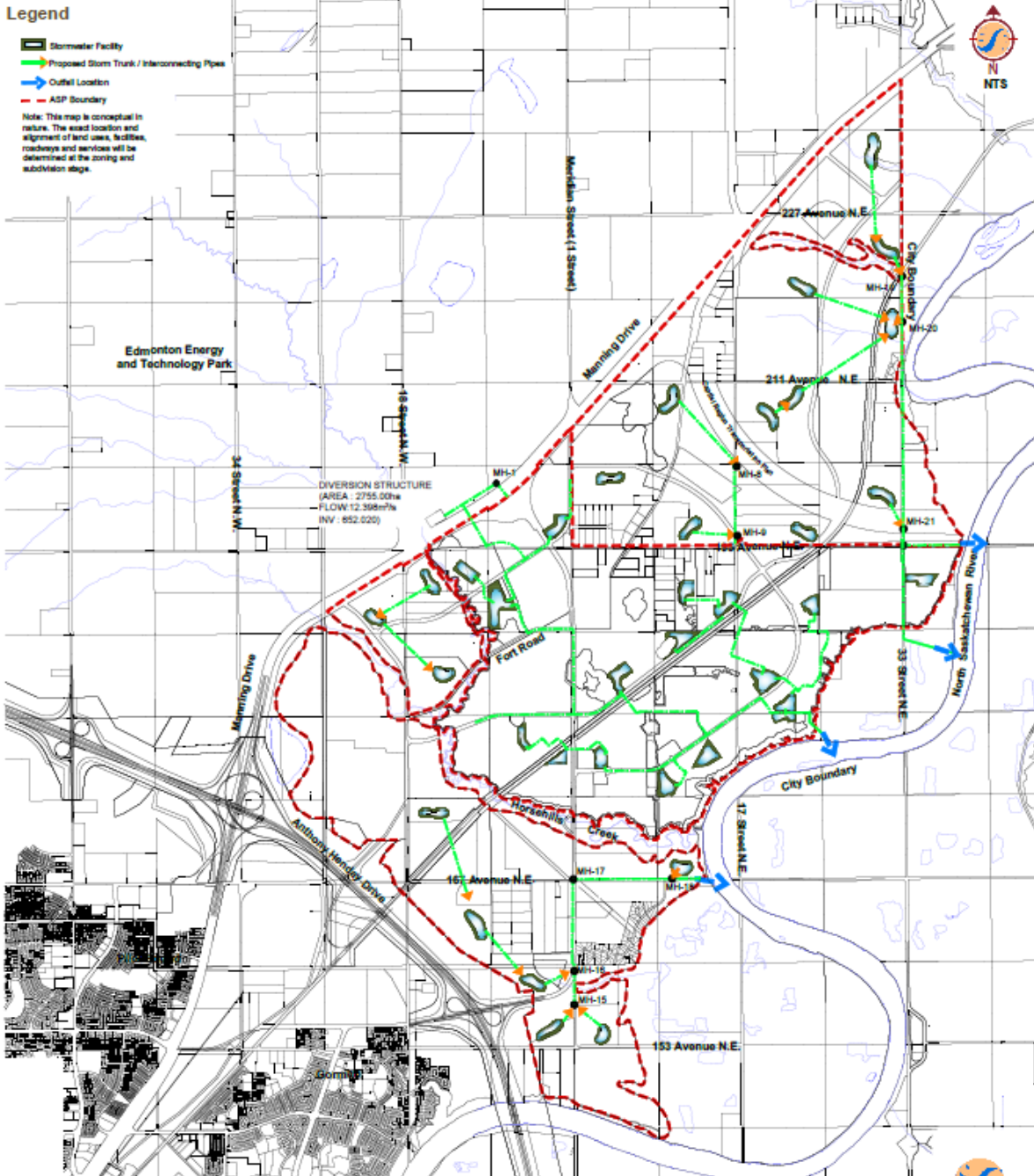


Horse Hill Area Structure Plan



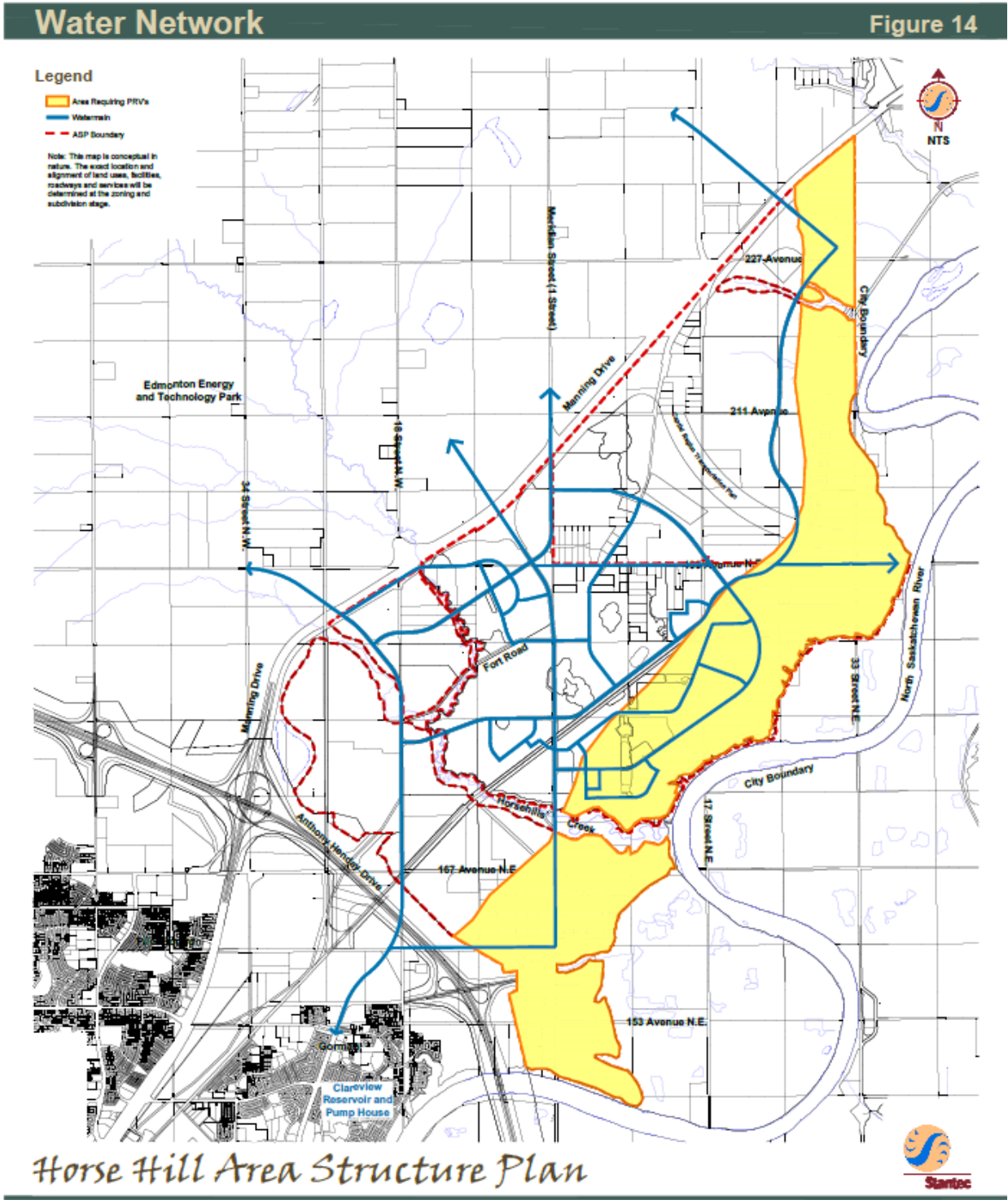
Storm Drainage Network

Figure 13



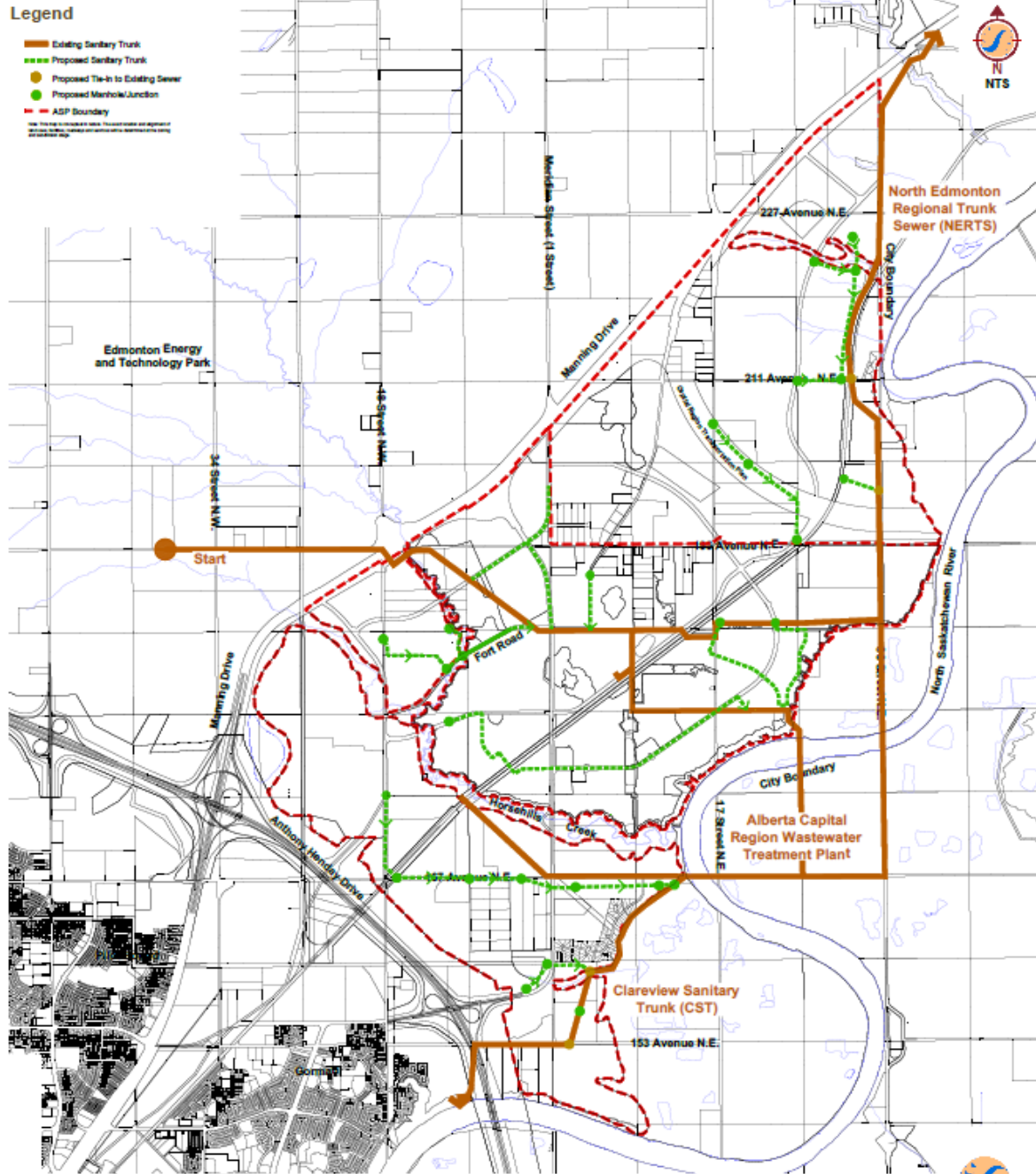
Horse Hill Area Structure Plan





Sanitary Network

Figure 15



Horse Hill Area Structure Plan



6 APPENDIX

6.1 LAND OWNERSHIP

The following table shows the short legal description of parcels over 2 ha in size, and is categorized by the type of owner (private, public, or plan proponent).

TABLE 4: LAND OWNERSHIP

	Land Owner	Legal Description
1	Private	Lot D1, Plan 8822930
2	Private	Lot D2, Plan 8822930
3	Private	NE-29-53-23-4
4	Private	Lot 2, Plan 9520335
5	Public	SE-32-53-23-4
6	Proponent	Block C, Plan 1923RS
7	Proponent	Block B, Plan 1923RS
8	Proponent	Block A, Plan 1923RS
9	Private	NW-32-53-23-4
10	Private	NE-32-53-23-4
11	Private	Block 4, Plan 3514AA
12	Private	Block 3, Plan 3514AA
13	Private	S ½ Block 2, Plan 3514 AA
14	Private	N ½ Block 2, Plan 3514 AA
15	Public	Lot 88MR, Block 1, Plan 0021877
16	Private	NW-33-53-23-4
17	Private	NW-33-53-23-4
18	Proponent	SE-4-54-23-4
19	Private	SW-4-54-23-4
20	Private	SW-4-54-23-4
21	Private	SW-4-54-23-4
22	Private	SW-4-54-23-4
23	Private	SE-5-54-23-4
24	Private	Lot B, Plan 915TR
25	Private	Lot A, Plan 915TR
26	Private	Lot 1, Plan 8222500
27	Private	SW-5-54-23-4
28	Private	Lot B, Plan 7820973
29	Private	Lot A, Plan 7820973
30	Private	SE-6-54-23-4
31	Public	Block 2, Plan 8620880
32	Public	Block 1, Plan 8620880
33	Public	SW-6-54-23-4
34	Public	NW-6-54-23-4
35	Public	NW-6-54-23-4
36	Public	NE¼-6-54-23-4 & N½ SE-6-54-23-4
37	Public	NW-5-54-23-4
38	Proponent	NE-5-54-23-4
39	Proponent	NW-4-54-23-4

40	Proponent	NE & SE-4-54-23-4
41	Private	NW-3-54-23-4
42	Private	Lot 1, Plan 9221617
43	Private	Block A, Plan 120TR
44	Proponent	SW-10-54-23-4
45	Proponent	SE-9-54-23-4
46	Private	SE-9-54-23-4
47	Proponent	SW-9-54-23-4
48	Public	SE & SW-8-54-23-4
49	Public	NE & SE-7-54-23-4
50	Public	NW & SW-7-54-23-4
51	Private	NE-7-54-23-4
52	Private	NW-8-54-23-4
53	Private	Lot 6, Plan 9521823
54	Private	Lot 5, Plan 9521823
55	Proponent	NW-8-54-23-4
56	Private	Lot 3, Plan 5278RS
57	Private	Lot 2, Plan 5278RS
58	Private	Lot 1, Plan 5278RS
59	Proponent	NE-8-54-23-4
60	Private	NE-8-54-23-4
61	School District	Lot B, Plan 1878RS
62	Private	NW-9-54-23-4
63	Proponent	NW-9-54-23-4
64	Private	Block X, Plan 6974BG
65	Private	NE-9-54-23-4
66	Private	Lot E, Plan 7821084
67	Private	Lot B, Plan 5233KS
68	Private	Lot 2, Plan 9721057
69	Private	Lot 1, Plan 9721057
70	Proponent	NE-9-54-23-4
71	Proponent	NW-10-54-23-4
72	Private	NE-10-54-23-4
73	Private	NE-10-54-23-4
74	Private	Lot 1, Plan 9421861
75	Proponent	NW-11-54-23-4
76	Private	SW-14-54-23-4
77	Private	SE-15-54-23-4
78	Private	Lot 4, Plan 3892NY
79	Private	Lot 3, Plan 3892NY
80	Private	Lot 2B, Plan 3892NY
81	Private	Lot 2A, Plan 3892NY
82	Private	Lot 1, Plan 3892NY
83	Proponent	SE-16-54-23-4
84	Private	Lot 12, Plan 0023103
85	Private	SE-16-54-23-4
86	Private	SW-16-54-23-4
87	Private	Lot 8, Block 2, Plan 9122057
88	Proponent	SE-17-54-23-4
89	Proponent	SW-17-54-23-4
90	Proponent	NE-17-54-23-4

91	Private	NW-16-54-23-4
92	Private	NW-16-54-23-4
93	Proponent	NE-16-54-23-4
94	Private	Lot A, Plan 2305RS
95	Private	Lot B, Plan 2305RS
96	Private	NW-15-54-23-4
97	Private	NE-15-54-23-4
98	Private	Lot 1, Block 1, Plan 0122225
99	Proponent	SE-22-54-23-4
100	Public	SW-22-54-23-4
101	Private	Lot B, Plan 1194MC
102	Private	Lot 11, Plan 9925026
103	Private	Lot F, Plan 662NY
104	Private	SW-21-54-23-4
105	Private	Lot E, Plan 662NY
106	Private	Lot D, Plan 5794MC
107	Private	NW-22-54-23-4
108	Proponent	NE-22-54-23-4
109	Proponent	NE & SE-27-54-23-4
110	Private	NE, SW & SE 27-54-23-4

6.2 PIPELINE INFORMATION

The following table provides information regarding ERCB pipeline licences within the Horse Hill ASP area and in adjacent parcels.

TABLE 5: ERCB PIPELINE INFORMATION *

Company	Lic/Line	Status	H2S (mol/kmol)	Max Oper. Pressure (kPa)	Outer Diameter (mm)	Content
NE-31-053-23W4M						
<i>Private Gas Corporation</i>	866-1	Operating	0	3450	42	Nat. Gas
<i>Private Gas Corporation</i>	866-2	Operating	0	3450	60	Nat. Gas
<i>Private Gas Corporation</i>	866-3	Operating	0	3450	60	Nat. Gas
<i>Private Gas Corporation</i>	866-4	Abandon.	0	0	42	Nat. Gas
<i>Private Gas Corporation</i>	30475-26	Operating	0	8480	324	Nat. Gas
NE-29-053-23W4M						
<i>Private Corporation</i>	9420-4	Operating	0	9460	168.3	HVP Products
<i>Private Gas Corporation</i>	30475-3	Operating	0	8480	323.9	Nat. Gas
<i>Private Gas Corporation</i>	30475-26	Operating	0	8480	323.9	Nat. Gas
SW-33-053-23W4M, NE-33-053-23W4M, NW-33-053-23W4M, SE-33-053-23W4M						
<i>Private Corporation</i>	6001 - 1	Operating	8	5380	610	Crude Oil
<i>Private Pipeline Corporation</i>	6926 - 16	Operating	0	5650	508	Crude Oil
<i>Private Pipeline Corporation</i>	8262 - 3	Operating	0	7210	406.4	Crude Oil
<i>Private Oil Corporation</i>	9420 - 3	Operating	0	9460	168.3	HVP Products

<i>Private Pipeline Corporation</i>	37742 - 76	Operating	0	5320	559	Crude Oil
<i>Private Pipeline Corporation</i>	37742 - 77	Operating	0	5320	559	Crude Oil
<i>Private Pipeline Corporation</i>	52568 - 2	Operating	0	8000	323.9	LVP Products
<i>Private Pipeline Corporation</i>	114 - 27	Discont'd	0	0	508	Crude Oil
<i>Private Pipeline Corporation</i>	114 - 28	Discont'd	0	0	273.1	Crude Oil
<i>Private Pipeline Corporation</i>	5169 - 1	Operating	0	7140	406.4	LVP Prod.
<i>Private Pipeline Corporation</i>	5169 - 5	Discont'd	0	0	323.9	LVP Prod.
<i>Private Pipeline Corporation</i>	30475 - 26	Operating	0	8480	323.9	Nat. Gas
SE-28-053-23W4M, NW-28-053-23W4M, NE-28-053-23W4M, SW-28-053-23W4M						
<i>Private Corporation</i>	6001 - 1	Operating	8	5380	610	Crude Oil
<i>Private Pipeline Corporation</i>	6926 - 16	Operating	0	5650	508	Crude Oil
<i>Private Pipeline Corporation</i>	8262 - 3	Operating	0	7210	406.4	Crude Oil
<i>Private Pipeline Corporation</i>	8262 - 4	Operating	0	7210	406.4	Crude Oil
<i>Private Pipeline Corporation</i>	9420 - 3	Operating	0	9460	168.3	HVP Prod.
<i>Private Pipeline Corporation</i>	9420 - 4	Operating	0	9460	168.3	HVP Prod.
<i>Private Pipeline Corporation</i>	37742 - 77	Operating	0	5320	559	Crude Oil
<i>Private Pipeline Corporation</i>	37742 - 78	Operating	0	5320	559	Crude Oil
<i>Private Pipeline Corporation</i>	37742 - 79	Operating	0	5320	559	Crude Oil
<i>Private Pipeline Corporation</i>	37742 - 80	Operating	0	5320	559	Crude Oil
<i>Private Pipeline Corporation</i>	52568 - 1	Operating	0	8000	323.9	LVP Prod.
<i>Private Pipeline Corporation</i>	52568 - 2	Operating	0	8000	323.9	LVP Prod.
NW-27-053-23W4M, NE-27-053-23W4M, SE-27-053-23W4M, SW-27-053-23W4M						
<i>Private Gas Corporation</i>	2594 - 7	Operating	0	3450	168.3	Nat. Gas

<i>Private Gas Corporation</i>	2594 - 66	Operating	0	3450	168.3	Nat. Gas
<i>Private Pipeline Corporation</i>	8262 - 3	Operating	0	7210	406.4	Crude Oil
<i>Private Corporation</i>	9420 - 3	Operating	0	9460	168.3	HVP Prod.
<i>Private Pipeline Corporation</i>	37742 - 76	Operating	0	5320	559	Crude Oil
NE-22-054-23W4M, NW-22-054-23W4M, SE-22-054-23W4M, SW-22-054-23W4M						
<i>Private Pipeline Corporation</i>	8262 - 3	Operating	0	7210	406.4	Crude Oil
<i>Private Pipeline Corporation</i>	9420 - 3	Operating	0	9460	168.3	HVP Prod.
<i>Private Pipeline Corporation</i>	37742 - 76	Operating	0	5320	559	Crude Oil
SE-21-054-23W4M, NW-21-054-23W4M, NE-21-054-23W4M, SW-21-054-23W4M						
<i>Private Gas Corporation</i>	2234 - 1	Operating	0	3450	60.3	Nat. Gas
<i>Private Gas Corporation</i>	2234 - 2	Operating	0	3450	60.3	Nat. Gas
<i>Private Gas Corporation</i>	2234 - 3	Operating	0	3450	60.3	Nat. Gas
<i>Private Gas Corporation</i>	2234 - 7	Operating	0	3450	42.2	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 5	Operating	0	3450	168.3	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 66	Operating	0	3450	168.3	Nat. Gas
NW-17-054-23W4M, SW-17-054-23W4M, NE-17-054-23W4M, SE-17-054-23W4M						
<i>Private Gas Corporation</i>	2594 - 5	Operating	0	3450	168.3	Nat. Gas
<i>Private Corporation</i>	6001 - 1	Operating	8	5380	610	Crude Oil
<i>Private Pipeline Corporation</i>	6926 - 16	Operating	0	5650	508	Crude Oil
<i>Private Pipeline Corporation</i>	52568 - 2	Operating	0	8000	323.9	LVP Prod.
NW-16-054-23W4M, SW-16-054-23W4M, NE-16-054-23W4M, SE-16-054-23W4M						
<i>Private Gas Corporation</i>	2594 - 5	Operating	0	3450	168.3	Nat. Gas
NW-15-054-23W4M, NE-15-054-23W4M, SE-15-054-23W4M, SW-15-054-23W4M						
<i>Private Pipeline Corporation</i>	8262 - 3	Operating	0	7210	406.4	Crude Oil
<i>Private Pipeline Corporation</i>	9420 - 3	Operating	0	9460	168.3	HVP Prod.
<i>Private Pipeline Corporation.</i>	37742 - 76	Operating	0	5320	559	Crude Oil
SE-10-054-23W4M, SW-10-054-23W4M, NE-10-054-23W4M, NW-10-054-23W4M						
<i>Private Pipeline Corporation</i>	8262 - 3	Operating	0	7210	406.4	Crude Oil
<i>Private Gas Corporation</i>	8908 - 1	Operating	0	3450	114.3	Nat. Gas
<i>Private Pipeline Corporation</i>	8908 - 2	Abandon.	0	0	114.3	Nat. Gas

<i>Private Pipeline Corporation</i>	9420 - 3	Operating	0	9460	168.3	HVP Prod.
<i>Private Pipeline Corporation</i>	37742 - 76	Operating	0	5320	559	Crude Oil
SE-09-054-23W4M, NW-09-054-23W4M, SW-09-054-23W4M, NE-09-054-23W4M						
<i>Private Gas Corporation</i>	3361 - 1	Operating	0	3450	60.3	Nat. Gas
<i>Private Pipeline Corporation</i>	8262 - 3	Operating	0	7210	406.4	Crude Oil
<i>Private Gas Corporation</i>	8908 - 1	Operating	0	3450	114.3	Nat. Gas
<i>Private Oil Corporation</i>	9420 - 3	Operating	0	9460	168.3	HVP Prod.
<i>Private Pipeline Corporation</i>	37742 - 76	Operating	0	5320	559	Crude Oil
<i>Private Pipeline Corporation</i>	52568 - 2	Operating	0	8000	323.9	LVP Prod.
NE-08-054-23W4M, SW-08-054-23W4M, SE-08-054-23W4M, NW-08-054-23W4M						
<i>Private Pipeline Corporation</i>	114 - 28	Discont'd	0	0	273.1	Crude Oil
<i>Private Pipeline Corporation</i>	1675 - 7	Operating	0	6900	406.4	LVP Prod.
<i>Private Gas Corporation</i>	2594 - 5	Operating	0	3450	168.3	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 49	Operating	0	3450	42.2	Nat. Gas
<i>Private Gas Corporation</i>	3361 - 1	Operating	0	3450	60.3	Nat. Gas
<i>Private Corporation</i>	6001 - 1	Operating	8	5380	610	Crude Oil
<i>Private Gas Corporation</i>	6926 - 16	Operating	0	5650	508	Crude Oil
<i>Private Gas Corporation</i>	7574 - 2	Discont'd	0	0	406.4	Crude Oil
<i>Private Gas Corporation</i>	8738 - 1	Operating	0	3450	88.9	Nat. Gas
<i>Private Gas Corporation</i>	8908 - 1	Operating	0	3450	114.3	Nat. Gas
<i>Private Pipeline Corporation</i>	52568 - 2	Operating	0	8000	323.9	LVP Prod.
SE-07-054-23W4M, SW-07-054-23W4M, NW-07-054-23W4M, NE-07-054-23W4M						
<i>Private Pipeline Corporation</i>	114 - 28	Discont'd	0	0	273.1	Crude Oil
<i>Private Pipeline Corporation</i>	1675 - 7	Operating	0	6900	406.4	LVP Prod.
<i>Private Pipeline Corporation</i>	2594 - 5	Operating	0	3450	168.3	Nat. Gas
<i>Private Pipeline Corporation</i>	5436 - 1	Operating	0	3450	42.2	Nat. Gas
<i>Private Pipeline Corporation</i>	7574 - 2	Discont'd	0	0	406.4	Crude Oil

<i>Private Gas Corporation</i>	2594 - 5	Operating	0	3450	168.3	Nat. Gas
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<i>Private Gas Corporation</i>	2594 - 17	Operating	0	3450	114.3	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 90	Operating	0	3450	406.4	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 175	Operating	0	3450	219.1	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 176	Operating	0	3450	219.1	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 179	Operating	0	3450	219.1	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 183	Operating	0	3450	323.9	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 184	Operating	0	3450	323.9	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 193	Operating	0	3450	406.4	Nat. Gas
<i>Private Gas Corporation</i>	30475 - 22	Operating	0	8480	323.9	Nat. Gas
<i>Private Gas Corporation</i>	30475 - 24	Operating	0	8480	323.9	Nat. Gas
<i>Private Gas Corporation</i>	30475 - 26	Operating	0	8480	323.9	Nat. Gas
<i>Private Gas Corporation</i>	30475 - 27	Operating	0	8480	323.9	Nat. Gas
<i>Private Gas Corporation</i>	30475 - 28	Operating	0	8480	323.9	Nat. Gas
SW-05-054-23W4M, SE-05-054-23W4M, NW-05-054-23W4M, NE-05-054-23W4M						
<i>Private Pipeline Corporation</i>	114 - 28	Discont'd	0	0	273.1	Crude Oil
<i>Private Pipeline Corporation</i>	1675 - 7	Operating	0	6900	406.4	LVP Prod.
<i>Private Gas Corporation</i>	2594 - 49	Operating	0	3450	42.2	Nat. Gas
<i>Private Gas Corporation</i>	2594 - 51	Operating	0	3450	42.2	Nat. Gas
<i>Private Pipeline Corporation</i>	5169 - 1	Operating	0	7140	406.4	LVP Prod.
<i>Private Pipeline Corporation</i>	5169 - 5	Discont'd	0	0	323.9	LVP Prod.
<i>Private Corporation</i>	6001 - 1	Operating	8	5380	610	Crude Oil
<i>Private Pipeline Corporation</i>	6926 - 16	Operating	0	5650	508	Crude Oil
<i>Private Pipeline Corporation</i>	7574 - 2	Discont'd	0	0	406.4	Crude Oil
<i>Private Gas Corporation</i>	8738 - 1	Operating	0	3450	88.9	Nat. Gas
<i>Private Gas Corporation</i>	8738 - 2	Abandon.	0	0	88.9	Nat. Gas
<i>Private Gas Corporation</i>	8738 - 3	Operating	0	3450	88.9	Nat. Gas
SW-04-054-23W4M, SE-04-054-23W4M, NW-04-054-23W4M, NE-04-054-23W4M						
<i>Private Corporation</i>	6001 - 1	Operating	8	5380	610	Crude Oil
<i>Private Pipeline Corporation</i>	6926 - 16	Operating	0	5650	508	Crude Oil
<i>Private Pipeline Corporation</i>	8262 - 3	Operating	0	7210	406.4	Crude Oil
<i>Private Oil Corporation</i>	9420 - 3	Operating	0	9460	168.3	HVP Prod.
<i>Private Pipeline Corporation</i>	37742 - 76	Operating	0	5320	559	Crude Oil
<i>Private Pipeline Corporation</i>	52568 - 2	Operating	0	8000	323.9	LVP Prod.

***Amended by Editor**