

MELTWATER NSP



Prepared for:

Hasco Development Corporation
Southview Hasco Estates General Partner Regards
Terranova Developments Ltd.
1645827 Alberta Ltd.
Lamba Financial Corporation

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SECTION 1

INTRODUCTION

1 INTRODUCTION

1.1 PURPOSE

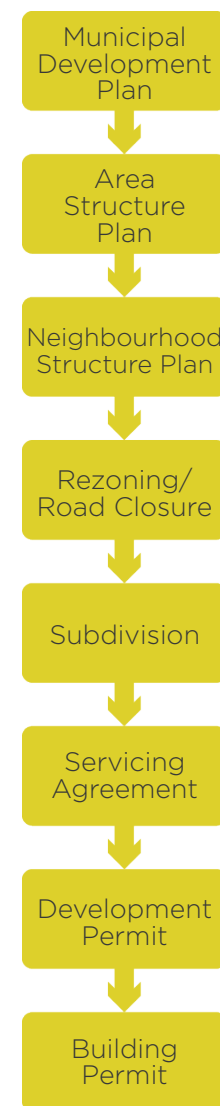
The purpose of this Neighbourhood Structure Plan (NSP) is to describe the land use concept, development policies, and objectives for the Meltwater area, while refining the planning policies, objectives, and requirements from statutory plans on a neighbourhood level. Applicable statutory plans include the Edmonton Metropolitan Region Growth Plan, Edmonton's City Plan (combined Municipal Development Plan and Transportation Master Plan), and the Decoteau Area Structure Plan. The NSP intends to guide the future development of a complete community that is well connected, respects the natural ecological features, supports transit, and promotes healthy lifestyles.

1.2 AUTHORITY AND FRAMEWORK

The Decoteau Area Structure Plan was adopted by Council as Bylaw 17011 on July 7, 2015, in accordance with Section 633 of the Municipal Government Act (MGA). The MGA allows municipalities to establish a Municipal Development Plan (MDP) and to plan a framework for new neighbourhoods through an Area Structure Plan (ASP). The ASP outlined five neighbourhood units in the Decoteau area. The Alces NSP was the first neighbourhood that was approved by Council that is largely residential, but also contains a major business employment area. Meanwhile, Meltwater is primarily residential that is located around the area's town centre, and contains a large regionally significant wetland.

At the time of preparation, Council's authorization to prepare the neighbourhood structure plan was required. A report was prepared for Council's consideration on January 26, 2016, and authorization to prepare the Meltwater NSP was provided by Council on June 21, 2016.

Under the City Plan, the Meltwater NSP is identified as a developing area located within the Ellerslie District. The neighbourhood is part of a District Node and a Major Recreation Park, while it is also connected by both Citywide and District transit routes, and a District Connector Bike Route.



1.3 INTERPRETATION

The figures, locations, symbols, and boundaries indicated within the Meltwater NSP shall be interpreted as approximate unless otherwise identified in the plan, or if recognizable physical features or legal boundaries are indicated.

Policy statements containing “shall” are mandatory and must be implemented. Where a “shall” policy proves impractical or impossible, an applicant may apply to amend the NSP. A policy statement containing “should” is advisory and indicates the preferred objective, policy, and/or implementation strategy. Where a “should” policy proves impractical or impossible, the intent of the policy may be met through other agreed-upon means, without a formal plan amendment.

1.4 REZONING AND SUBDIVISION

Approval of this Plan will allow zoning and subdivision applications to proceed as necessary and shall correspond with the land use designations specified in this NSP. Zoning and subdivision applications shall be guided by City policies and statutes, such as the City of Edmonton’s City Plan, Zoning Bylaw, the Decoteau ASP, and any requirements necessary for each application.

1.5 NSP AMENDMENT PROCESS

Policies, texts, and mapping information found within this plan may be amended from time to time, in order to respond to broader or more specific issues affecting the plan area. Any amendments made shall be in accordance with the MGA, Decoteau ASP, and all other applicable City bylaws, policies, and procedures.

1.6 SUMMARY OF CONSULTATION

Stakeholder consultation is an important step in understanding the unique and desirable aspects of the Meltwater Neighbourhood. Stakeholders, including local landowners and community leagues, were notified in accordance with the City of Edmonton’s policies and application requirements for new NSPs. The following is a summary of the consultations that occurred.

1.6.1 Pre-Application Consultation

A Technical Advisory Group meeting was held on September 23, 2015. This meeting involved relevant review agencies and civic departments. The purpose of this session was to determine the technical requirements, identify technical constraints, the level of report detail for a complete NSP submission, and to receive general comments from the review agencies. On July 12, 2016, a collaborative visioning session was held with civic departments and participating land owners. The purpose of this session was to generate discussion on what design features and approaches would be best suited for the plan area, and the integration of the 12 outcomes of Designing New Neighbourhoods: Guidelines for Edmonton's Future Residential Communities.

The discussions focused on the following:

- The Town Centre
 - o How density could be dispersed throughout the TCMU area
 - o How mixed use would be achieved
 - o How the Town Centre would be incorporated into the Transit Centre
 - o What kinds of Urban Design regulations should be prioritized
- Active Transportation Corridor
 - o What Complete Streets in the Town Centre would look like
 - o How Complete Street designs would be dispersed throughout the neighbourhood
- Natural Area
 - o How development should be incorporated into the existing Natural Area
 - o How parks and open spaces be dispersed throughout the plan area

These sessions guided the development of the vision and goals of the Meltwater NSP.

1.6.2 Notification Letters

Notification letters sent out to property owners and residents in the Plan Area in late 2016/early 2017 to notify them of the NSP process. Invistec received emails from owners and residents looking to stay informed with the NSP process, while none of the communication received was in opposition.

1.6.2 Virtual Open House

Due to COVID-19, an in-person open house was not recommended in order to comply with provincial health regulations. As a result, a virtual open house was held by the City to review the draft Neighbourhood Structure Plan and land use concept. The public was able to participate in a discussion and ask questions from August 11, 2020 to August 28, 2020 on the City's website. Mailed notification letters were sent to landowners in and surrounding the NSP area advising them of the virtual open house. All feedback received at the virtual open house was summarized in the City's report to City Council.

SECTION 2

SITE CONTEXT



2.1 LOCATION

The Meltwater neighbourhood is located within the City of Edmonton and is comprised of approximately 311 hectares. The plan area consists of the majority of Section 24-51-24-W4M, and portions of NW/NE 13-51-24-W4M, and is located south of the Charlesworth NSP, east of the Walker NSP, north of the future Snowberry Neighbourhood, and west of the future Decoteau Neighbourhood (see Figure 1).

The NSP boundaries are defined by the following:

- Northern Boundary - Ellerslie Road (9 Avenue SW)
- Western Boundary - 50 Street SW
- Eastern Boundary - 34 Street SW
- Southern Boundary - 25 Avenue SW

2.2 OWNERSHIP

The Plan Area consists of 23 privately owned parcels, 3 publicly owned parcels, and 1 Public Reserve (see Figure 2). The NSP was prepared on behalf of four private corporations who own approximately 125 hectares of land within the plan area. The remaining lands are owned by the City of Edmonton and non-participating land owners. A listing of the legal parcels is provided in Table 1.

2.3 EXISTING CONDITIONS

2.3.1 Existing and Adjacent Land Uses

The majority of the lands in Meltwater are currently being used for agricultural purposes. However, other existing land uses include country residential developments and an urban reserve land. The neighbourhood also contains the Koroluk-Kozub Natural Area, which is currently not delineated. The country residential developments consist of the four lots located at the southwest corner of Ellerslie Road and 34th Street intersection, while urban reserve land is located directly west of them.




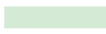
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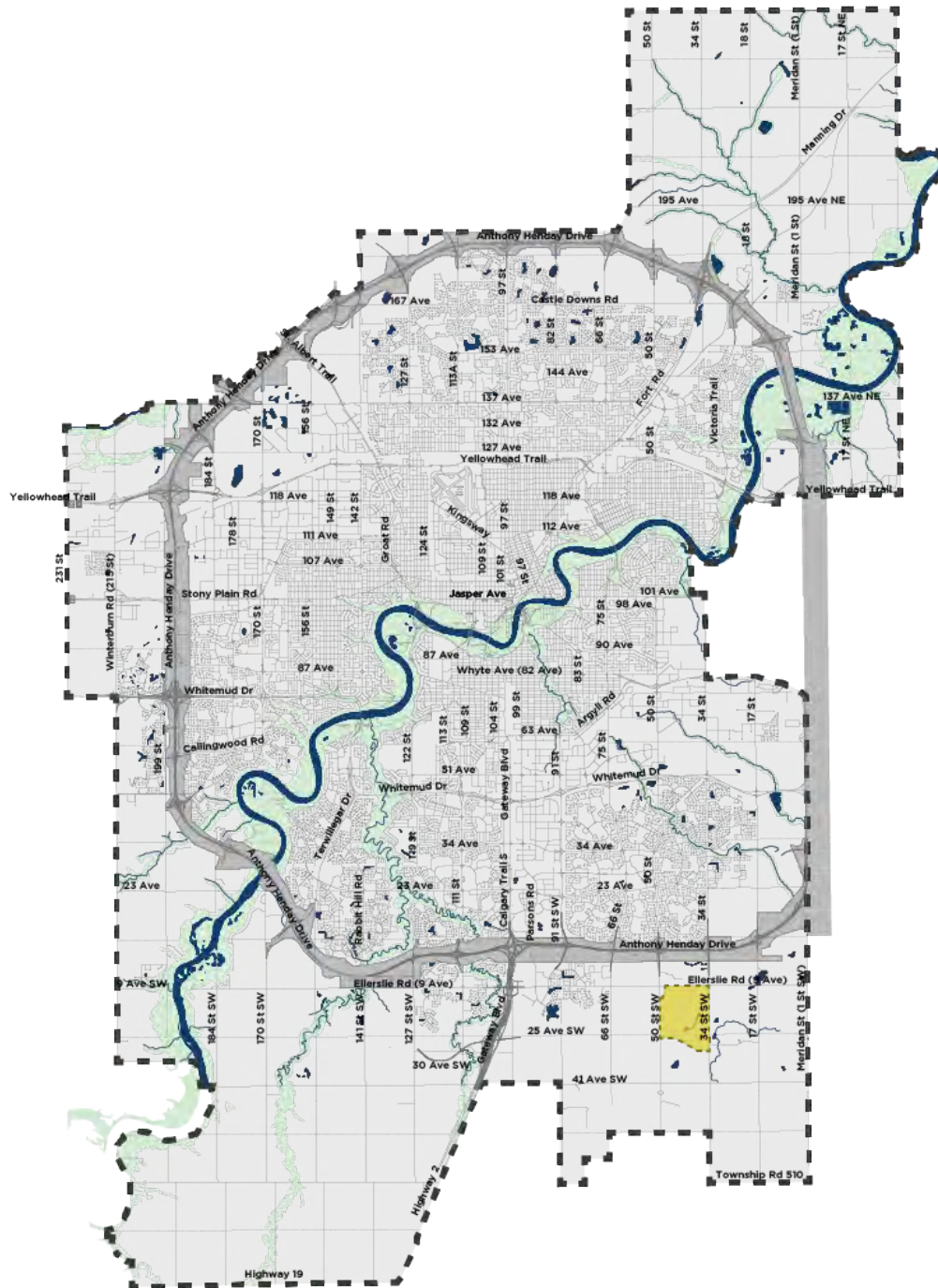
FIGURE LOCATION

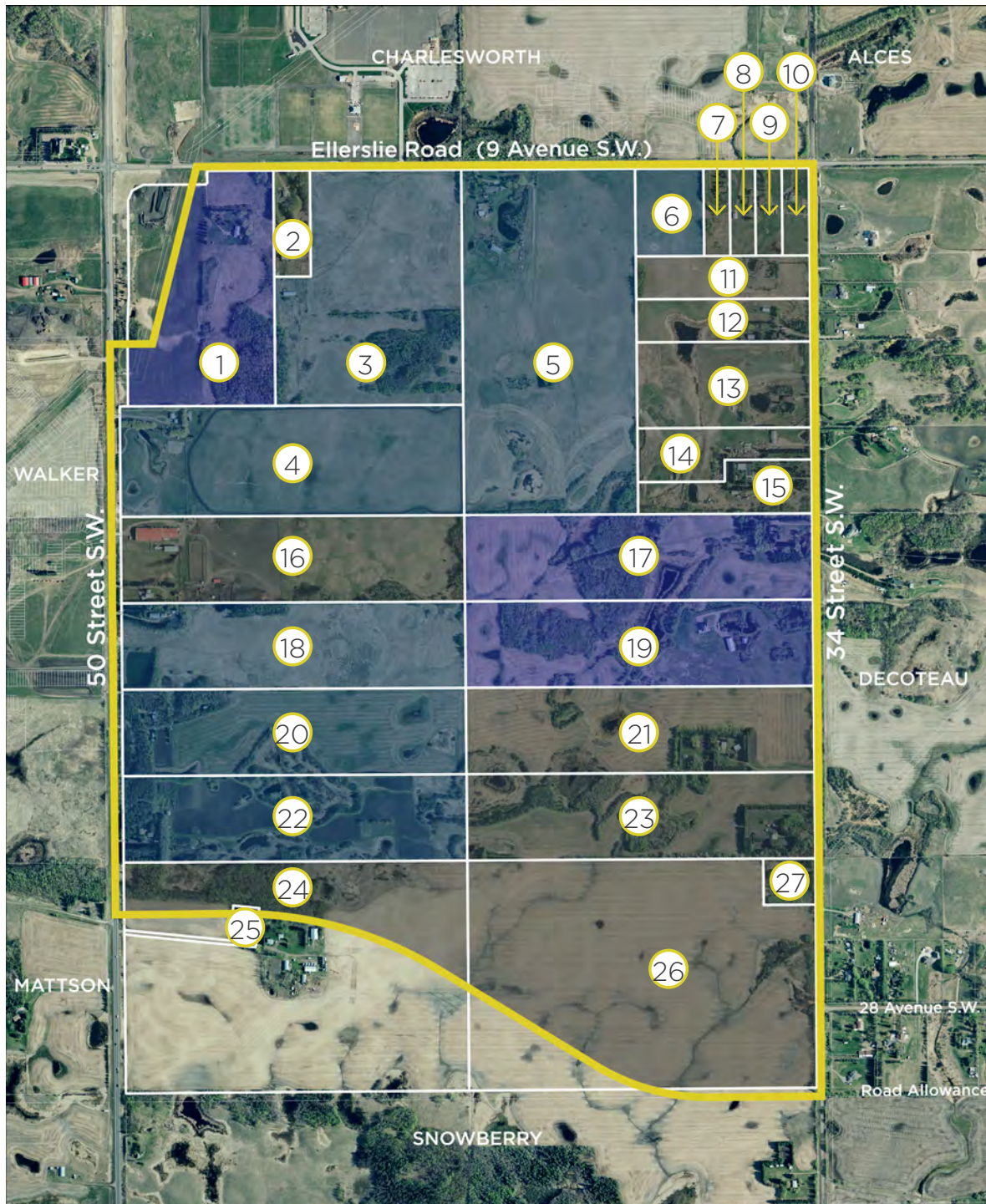


NTS

SITE CONTEXT

-  City Boundary
-  Meltwater NSP
-  North Saskatchewan River
-  River Valley





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FIGURE OWNERSHIP



SITE CONTEXT

- Private
- Proponent
- City of Edmonton

TABLE 1: OWNERSHIP

LOT	TITLED OWNER	LEGAL DESCRIPTION	TOTAL AREA (HA)	AREA IN PLAN (HA)
1	City of Edmonton	Lot E, Block 1, Plan 1123066	17.99	14.24
2	Private Owner	Lot D, Plan 9522763	2.10	2.10
3	Private Owner	Lot C, Plan 7720611	21.79	21.79
4	Private Owner	Lot A, Plan 1446TR	20.03	20.03
5	Private Owner	NE 24-51-24-4	32.49	32.49
6	City of Edmonton	Lot R (Reserve), Plan 2324RS	3.24	3.24
7	Private Owner	Lot 5, Plan 7521330	1.24	1.24
8	Private Owner	Lot 6, Plan 8921718	1.20	1.20
9	Private Owner	Lot 7, Plan 8921718	1.26	1.26
10	Private Owner	Lot 8, Plan 8921718	1.29	1.29
11	Private Owner	Lot 2A, Plan 9523067	4.04	4.04
12	Private Owner	Lot 2B, Plan 9523067	4.04	4.04
13	Private Owner	Lot 3, Plan 2324RS	8.09	8.09
14	Private Owner	Lot 4A, Block 1, Plan 0223753	4.03	4.03
15	Private Owner	Lot 4B, Block 1, Plan 0223753	4.05	4.05
16	Private Owner	Lot D, Plan 2890RS	15.69	15.69
17	City of Edmonton	Lot D, Plan 517NY	16.24	16.24
18	Private Owner	Lot C, Plan 3246NY	15.69	15.69
19	City of Edmonton	Lot C, Plan 517NY	16.24	16.24
20	Private Owner	Lot B, Plan 3246NY	16.06	16.06
21	Private Owner	Lot B, Plan 517NY	16.24	16.24
22	Private Owner	Lot A, Plan 3246NY	16.06	16.06
23	Private Owner	Lot A, Plan 517NY	16.24	16.24
24	Private Owner	NW 13-51-24-4	42.02	12.61
25	Private Owner	Lot 1, Plan 8923124	0.80	0.10
26	Private Owner	NE 13-51-24-4	41.93	37.28
27	Private Owner	NE 13-51-24-4	1.30	1.30





The natural areas are located west of the midpoint of 34 Street, between Ellerslie Road and 25 Avenue, and moves towards the northeast corner of 50th Street and 25 Avenue intersection. In the Decoteau ASP, the plan area is primarily designated for residential uses.

The Walker, and Charlesworth Neighbourhood are directly west and north respectively, providing a variety of residential options, a city level park, and large community commercial sites aimed to become a destination and focal point for the area. The areas to the south and east of the plan area are currently unplanned at the neighbourhood level, and are agricultural and rural residential lands. Under the Decoteau ASP, they are designated primarily as residential with a mix of commercial and park spaces.

2.3.2 Existing Transportation Routes

Ellerslie Road, 50th Street, and 34th Street are existing arterial roadways surrounding the Plan Area. 50th Street and 34th Street provide connections into the Mill Woods area and Anthony Henday Drive to the north, and to Edmonton's urban growth areas and the City of Beaumont to the south. Ellerslie Road provides connections across the City to the west, and to Strathcona County to the east. Both 50th Street and Ellerslie Road have been designed with Shared Use Paths, on the east and north sides of the road respectively.

Meltwater is adjacent to the Charlesworth and Walker neighbourhoods, which will provide active transportation connections to the Plan Area from the north and west. These connections include pedestrian linkages, cycling routes, and shared use paths that not only provide both active and ecological connections, as they connect the Natural Areas, school/park sites, and stormwater management facilities together.

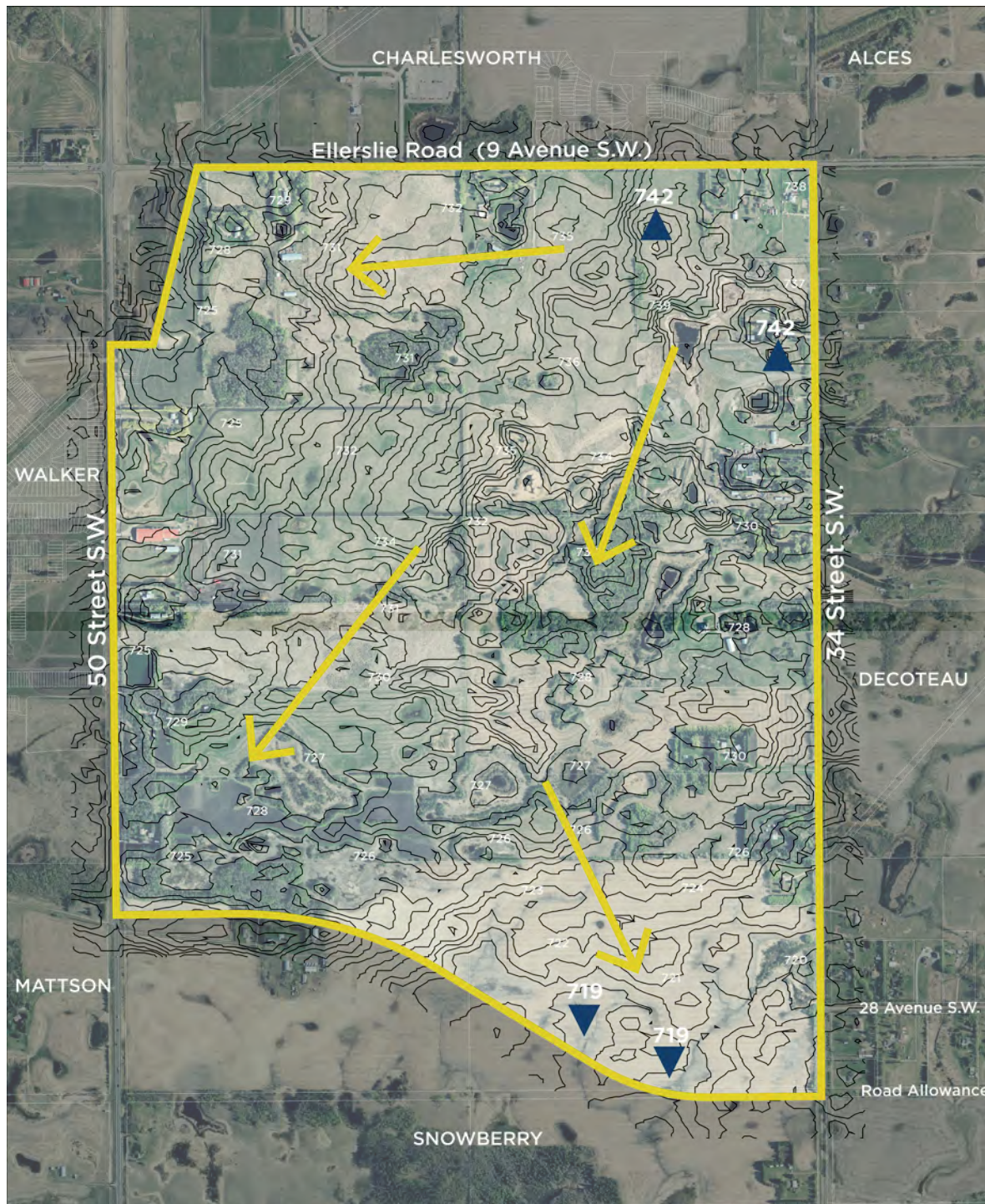
2.3.3 Topography and Soils

The topography of the lands within the Meltwater NSP is gently rolling, primarily sloping towards the southeast portion of the site. Elevations in the plan area vary from approximately 742m to 719m. Surface drainage generally runs in a southeastern direction, towards the Koroluk-Kozub Natural Area, and towards the southeast (see Figure 3).

The general soil stratigraphy of the neighbourhood consists of the following:

MATERIAL	SOIL DESCRIPTION	RANGE OF THICKNESS (m)
Topsoil	Organic, silty, trace sand, some clay, moist, black	0 - 0.8
Clay Fill / Organic Clay*	Clay (Fill) - silty, some sand, organic to trace organic to organics, trace pebbles, low to medium plastic, moist, dark greyish brown to black Organic Clay - silty, trace sand to sandy, moist to wet, low to medium plastic, soft to firm, black	0 - 1.2
Clay / Clay Till-Like	Clay - silty, some sand, trace pebbles, moist to wet, low to medium plastic, firm to stiff, dark greyish brown Clay (Till-Like) - silty, sandy, trace coal and pebbles, moist to wet, low plastic, firm to stiff, dark greyish brown	0.7 - 4.5
Clay Till	Silty, sandy, trace coal and pebbles, moist, low plastic, stiff to very stiff, grey to dark greyish brown, occasional water-bearing sand layer, up to 1.0m thick	>8.6

As expected, the groundwater table varies throughout the neighbourhood. Groundwater levels were identified as ranging between 2.3m to 6.1m in depth, indicating a shallow groundwater flow towards the natural low-lying wetland areas. Given these features in soil and groundwater, the conditions were deemed acceptable for the proposed urban development as per the recommendation of the geotechnical report.



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FIGURE EXISTING TOPOGRAPHY



- ▲ High Point
- ▼ Low Point
- Flow Direction
- ≡ Contour Interval 1.0 m

2.3.4 Site Features and Natural Resources

There are currently over 60 structures constructed within the plan area, consisting of homes, sheds, and barns. The majority of these structures will be removed once development of the plan area commences. Meltwater also contains numerous natural areas and wetlands, many of which will be protected through Municipal Reserves and Environmental Reserves. A Phase II Ecological Network Report that analyzed the neighbourhood's natural features was prepared in support of the NSP. The report identified the natural areas within the plan area, classified each natural feature, and provided recommendations on retention for the land use concept.

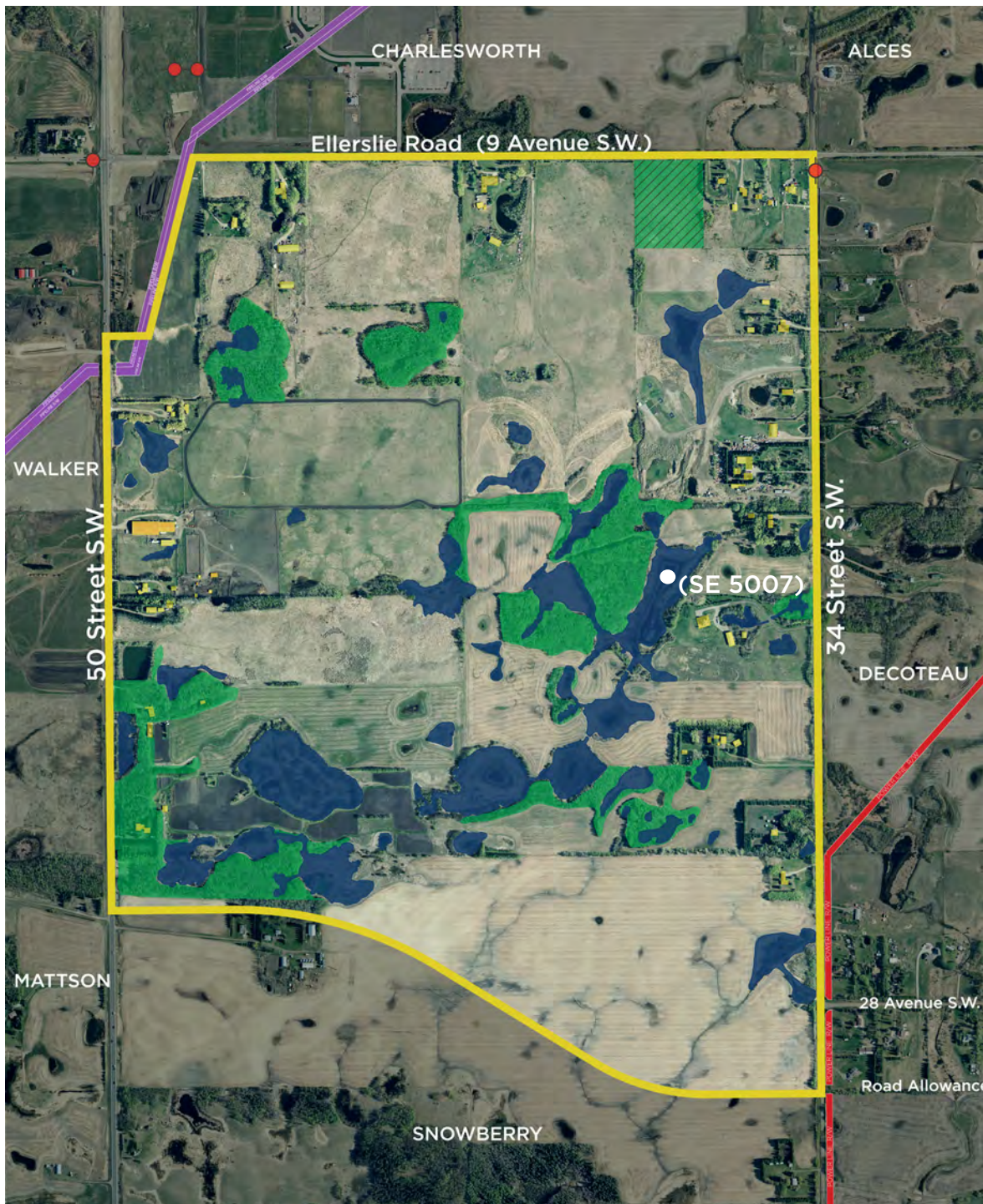
The City of Edmonton's Inventory of Environmentally Sensitive and Significant Natural Areas identified the following natural area in the Meltwater NSP:

SE5007 The Koroluk-Kozub Natural Area is a regionally significant natural area that is inter-connected with many existing wetlands. The Natural Area is a relatively healthy upland/wetland complex that contains mature aspen and aspen-balsam poplar, homogeneous shrub understorey, diverse forb and grasses, and wetlands composed of willow/sedge with cattails in open water areas. The Koroluk-Kozub natural area is a major feature in the neighbourhood as it provides the best wildlife habitat in south Edmonton, and will be protected and incorporated into development (see Figure 4).

The Koroluk-Kozub Natural Area is an integral part of the City of Edmonton's Emerald Crescent, a connected 10 km park and open space network in southeast Edmonton. The Emerald Crescent aims to serve eight neighbourhoods, while also being a destination for all Edmontonians. The design and planning of the Emerald Crescent is directed by six guiding principles: design with nature, destination, adapt, flow, discover, and inclusivity. These principles were incorporated into the design of adjacent land uses to achieve the vision for this park and open space network.

2.3.5 Environmental Overview

The Environmental Overview provided a preliminary understanding of areas of potential concern with respect to historical and existing operations within the Meltwater neighbourhood and surrounding areas. This included both a historical review, and site review with interviews. The overview identified a few items of potential environmental concern, which are further detailed within the report. While the Environmental Overview reviewed much of the neighbourhood, the report does not exempt landowners from completing an Environmental Site Assessment for their individual lands prior to the rezoning stage.



4

FIGURE SITE FEATURES



SITE CONTEXT

- Existing Structure
- Existing Municipal Reserve
- Natural Area
- Wetland
- Pipeline R/W
- Powerline R/W
- Abandoned Wellhead
- (SE XXXX) Environmental Significant Area

2.3.6 Pipelines and Wells

Two operating pipelines within a utility right-of-way are found within the plan area, running through the northwest corner of the Meltwater neighbourhood. The ROW is located under the constructed shared use paths in the Walker neighbourhood and adjacent to a proposed stormwater management facility in the Meltwater neighbourhood, creating an opportunity to connect these two neighbourhoods. A powerline right-of-way is located outside the boundary of the neighbourhood, and is adjacent to the southeast corner of the plan area. A review of the information provided by the Alberta Energy Regulator (AER) has indicated that there were no abandoned wells found within the plan area. However, four abandoned wells are located near the boundary of the neighbourhood. Future development will adhere to the policies and setback requirements established by the AER and the City of Edmonton.

TABLE 2: PIPELINE R/W

LICENSEE	LICENSE NUMBER	CONTENTS	PRESSURE (kPa)	STATUS
Keyera Energy Ltd.	3015 - 3	HVP Products	7240	Operational
Alberta Products Pipeline Ltd. (operated by Trans-Northern Pipeline Inc.)	7634 - 164, 165, 213	LVP Products	9930	Operational

TABLE 3: ABANDONED WELLS

LICENSEE / LICENCE NUMBER	WELL IDENTIFICATION	DISTANCE FROM SITE	ABANDONED DATE	STATUS
Imperial Oil Resources / 0004467N	W0/01-26-051-24 W4/O	220 m	April 3, 1953	Reclamation Except
Canadian Natural Resources Limited / 0137910	W0/ 04-25-051-24 W4/O	200 m	June 26, 1992	Reclamation Certified
Mutual Oil Company Limited / 0000178	W0/ 04-25-051-24 W4/O	200 m	August 24, 1949	Reclamation Except
Imperial Oil Resources / 0004467M	W0/13-19-051-23 W4/O	1 m	April 3, 1953	Reclamation Except

2.3.7 Historical Resources

A Statement of Justification was completed as part of the Decoteau ASP for the entire plan area. The northeast quarter section of the Meltwater neighbourhood was identified to contain recorded historic structures, primarily the rural residential

dwellings along Ellerslie Road and 34 Street NW. These lands consist primarily of non-participating landowners and will be required to complete a Historical Resources Impact Assessment to assess, document, and potentially mitigate historic structures prior to rezoning.

2.3.8 Existing Infrastructure

An existing sanitary trunk is located at the intersection of 66 Street SW and Anthony Henday Drive, which will immediately service the north sanitary basin. The Koroluk-Kozub Natural Area located throughout the plan area functions as a natural storage for storm runoff. The natural ecology of the existing natural area will be retained and will determine where future stormwater management facilities will be located to maintain pre-development hydrology.

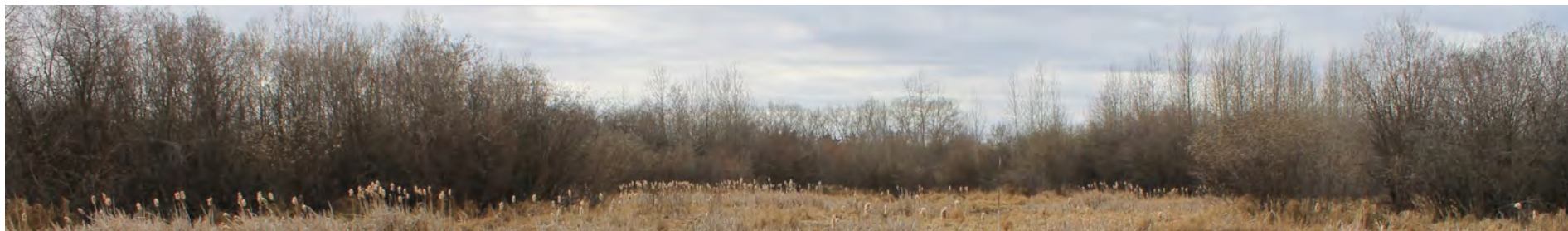
2.3.9 Existing Civic Services

The areas surrounding the Meltwater neighbourhood feature a number of services and institutional establishments. A police station, hospital, and two fire stations are located in the Mill Woods neighbourhood, while an additional fire station is located in the Ellerslie Industrial area.

2.4 TECHNICAL REPORTS

In support of the Meltwater NSP, technical reports have been submitted to the City of Edmonton for lands owned by proponents of the plan. Non-participating lands were not available for survey or study, thus a technical review will be needed to determine the development capability of the lands prior to rezoning.

The technical reports that may be required prior to rezoning for non-participating lands include, but are not limited to, an Environmental Site Assessment, Geotechnical Investigation, Historic Resource Clearance, as well as associated updates and revisions to the Transportation Impact Assessment, Hydraulic Network Analysis, and Neighbourhood Design Report.



SECTION 3

LAND USE



LAND USE

3.1 LAND USE CONCEPT

The land use concept intends for a primarily residential neighbourhood, with mixes of non-residential uses throughout the neighbourhood, planned around an extensive Natural Area landscape (see Figure 5).

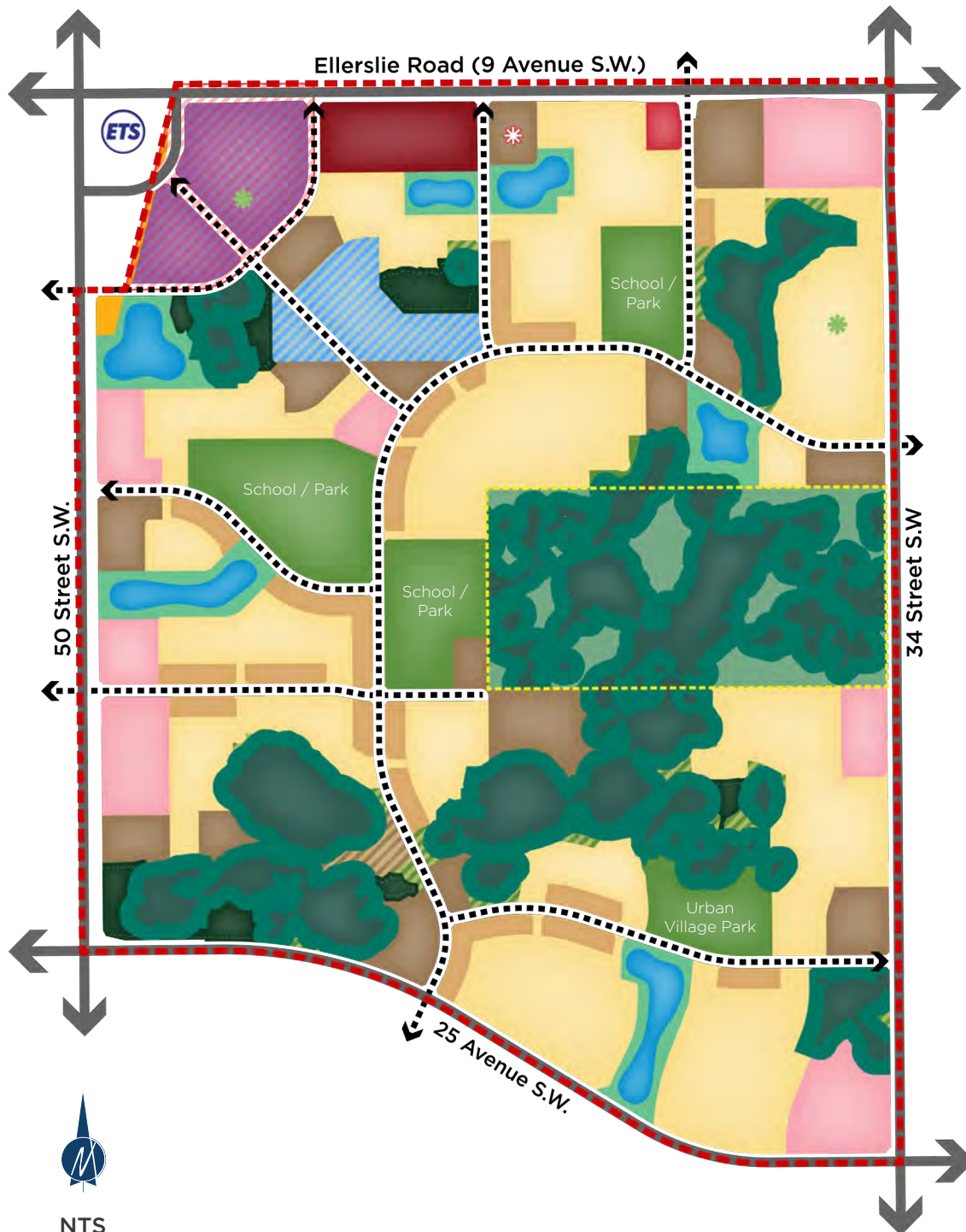
3.2 VISION

Meltwater is a multi-modal, diverse, complete community in southeast Edmonton. It embraces and preserves its unique ecological landscape as a natural amenity space and incorporates an integrated system of park spaces, stormwater management facilities, and Natural Areas to create focal points within and around the neighbourhood. Residents will be able to age in place, while benefiting from community-oriented uses, proximity to the future transit centre, environmentally-integrated design, and a variety of employment opportunities. The neighbourhood design encourages walkability between open spaces, while providing attractive and safe routes for pedestrians within and beyond the neighbourhood. The Meltwater Neighbourhood is interconnected to the surrounding communities through the ecological network, while remaining distinct through its adaptive development, and transect of residential, commercial, and mixed uses.

3.3 PUBLIC REALM

3.3.1 Urban Design and Placemaking

Urban Design and Placemaking are intended to create high quality public spaces that promote spaces for people; spaces that allow residents to interact with a mix of different uses and users. Meltwater has a variety of areas where urban design principles will shape how residents experience the neighbourhood, including the Town Centre, Transit Centre, Parks and Open Spaces, the Natural Areas, and variety of Mixed Use, Commercial, and Medium Density Residential corridors. Urban Design and Placemaking takes these spaces and weaves them together to create a complete, walkable, and well-designed community that accommodates a variety of transportation options.



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FIGURE LAND USE CONCEPT

LAND USE

- NSP Boundary
- Future Transit Centre / Park & Ride
- Low Density Residential
- Street-Oriented Residential
- Medium Density Residential
- Potential Development Area (MDR)
- Town Centre Mixed Use
- Mixed Use
- Community Commercial
- Neighbourhood Commercial
- Stormwater Management Facility
- Institutional / Residential Mixed Use
- Parkland (non-MR)
- School / Park (MR)
- Pocket Park (MR)
- Natural Area (MR)
- Natural Area (ER)
- Natural Area (ER) to be determined*
- Pipeline R/W
- City Owned Lands
- Non ER on City Owned Parcels
- Arterial Roadway
- Collector Roadway
- Special Study Area
- Civic Use

*Buffer to be determined through SSNAMP

3.3.2 Urban Design and Placemaking Policies

Objective 1: Promote streetscapes that are pedestrian friendly, promote safe travel, and contribute to the attractiveness of the neighbourhood.

- Policy 1.1 All streets and sidewalks shall contribute to the neighbourhood's transportation network and provide connections to the Transit Centre, transit facilities, natural areas, open spaces, neighbourhood amenities, and adjacent neighbourhoods.
- Policy 1.2 Wherever feasible, residential streets shall provide treed boulevards, and sidewalks on each side of streets with residential development.
- Policy 1.3 Ensure appropriate transitions are provided between higher density uses (residential, commercial, and mixed use) and lower density residential development.
- Policy 1.4 The number of lots having direct access onto a collector roadway shall be determined at the subdivision stage and shall not exceed 30%. Front driveways shall not be permitted across from school and park sites.
- Policy 1.5 The carriageway shall be narrowed on collector roadways at Key Pedestrian Crossing points to improve pedestrian safety by minimizing the crossing distance and providing traffic calming.
- Policy 1.6 Neighbourhood destinations, including the Town Centre, Transit Centre, parks and open spaces, and Natural Areas, shall be designed to encourage community interactions and gathering places.
- Policy 1.7 Wayfinding signage shall be located in the Town Centre and Natural Areas to promote safety and easy navigation.

Implementation: Specific type and location of land uses, as well as building design, shall be reviewed at the rezoning, subdivision, and development permit application stages, in accordance with the *Zoning Bylaw*. Designs of alternative roadway cross sections shall be prepared at the rezoning or subdivision stage, to the satisfaction of the City.

Objective 2: Streetscapes and the built form within 400m of the Transit Centre will be designed as transit-oriented development.

- Policy 2.1 Streets and development within 400m of the Transit Centre shall be designed to provide a safe, convenient, and attractive connections to the Transit Centre.
- Policy 2.2 Residential and small format retail entrances shall be oriented toward the street or transit facilities, and designed to be human scale, where possible.
- Policy 2.3 Buildings shall display a high standard of architectural aesthetic and design, and utilize high quality materials.
- Policy 2.4 Multi-unit developments with ground floor units shall provide individual entryways to the public sidewalk.
- Policy 2.5 Large, blank building masses shall be reduced through architectural elements, changes in building finishes, materials and textures, or features that create an identifiable pattern and sense of human scale.
- Policy 2.6 Shared parking should be encouraged in the Town Centre to promote walkability and transit services.

Implementation: Figure 12: Active Modes Network illustrates the active and pedestrian linkages throughout the neighbourhood. Land uses and streets will conform to the *Transit Oriented Development (TOD) Guidelines* for areas within 400m of the Transit Centre (the area currently located within the Town Centre Special Study Area). Opportunities to improve pedestrian connectivity through the Town Centre and across arterial roadways shall be explored at the rezoning and subdivision stages.

Objective 3: Develop the Town Centre, Natural Areas, parks and open spaces, and stormwater management facilities to be visually and physically accessible, safe, and aesthetically pleasing.

- Policy 3.1 Neighbourhood focal points, such as parks and open spaces and the Town Centre, shall be designed to support community interaction and socialization with seating areas, shelters, or other features to support community interaction.
- Policy 3.2 Provide for a combination of facilities that may include public roadways, shared use paths, and boardwalks to ensure that stormwater management facilities, Natural Areas, parks and open spaces have clear vistas for surveillance and integration with the community while being accessible, adaptable, and providing active and passive recreation opportunities.
- Policy 3.3 Design School and Community Parks and the Urban Village Park with an identifiable 'gateway' to provide a sense of arrival for park users.
- Policy 3.4 The neighbourhood shall provide adequate road frontage and multiple points of pedestrian access to public open spaces, including Natural Areas, parks and open spaces, and stormwater management facilities to increase natural surveillance.
- Policy 3.5 Stormwater management facilities and park and open spaces shall be located and designed to be neighbourhood amenities and destinations, to reinforce the natural theme for the community.

Implementation: Specific type and location of land uses, as well as building design, shall be reviewed at the rezoning, subdivision, and development permit application stages, in accordance with the *Zoning Bylaw*. Design of alternative roadway cross sections shall be prepared at the rezoning or subdivision stage, to the satisfaction the City.

Objective 4: Encourage architectural design and building orientation that provides local placemaking opportunities, and integrates development sensitively around Natural Areas.

- Policy 4.1 Where feasible, view corridors and public access into the Emerald Crescent shall be provided.
- Policy 4.2 Larger buildings and public spaces shall be designed with high quality materials and appropriately located to ensure safety, visual interest, and be integrated with the community.
- Policy 4.3 Higher density residential, commercial, mixed use, institutional, and civic sites shall be designed to consider building orientation, and variations in façade treatment with regard to massing and human scale architecture.

- Policy 4.4 Use of fire-proof or fire-resistant materials and naturalized landscaping is encouraged to integrate development with the Natural Areas.
- Policy 4.5 Encourage architectural guidelines to ensure aesthetically pleasing streetscapes and design.

Implementation: Specific type and location of land uses, as well as building design, shall be reviewed at the rezoning, subdivision, and development permit application stages, in accordance with the *Zoning Bylaw*. Design of alternative roadway cross sections shall be prepared at the rezoning or subdivision stage, to the satisfaction of the City. The design of the public realm shall be reviewed and developed with the City incorporating appropriate design elements from the *Transit Oriented Development (TOD) Guidelines*, *Complete Streets Standards*, and *The Winter City Strategy*.

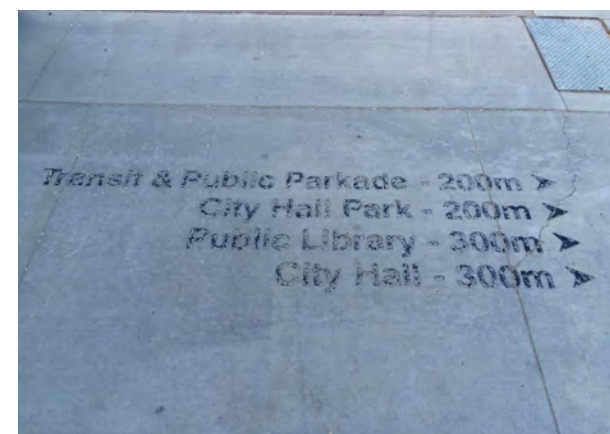
ECOLOGICAL NETWORK



DIVERSITY OF HOUSING



WAYFINDING



3.3.3 All Season Design Policies

Objective 5: Consider all season design in design elements, parks and open spaces, and infrastructure.

- Policy 5.1 Civic sites, parks, and open spaces shall be designed to minimize exposure to wind and maximize exposure to sunlight.
- Policy 5.2 The design of civic sites, parks, open spaces, and entrance features should consider incorporating design elements that respond to all seasons, through such measures as the creative use of light, and colour.
- Policy 5.3 Plant species or architectural features that provide wind shelter, enable solar penetration, and encourage year-round appeal should be included in the design of parks and open spaces.
- Policy 5.4 The pocket park in the Town Centre will be designed to promote four season use and will incorporate unique design elements. These may include a public fire pit / heater in a central gathering area, or other features to promote winter use.

- Policy 5.5 Vibrant colours and warm materials are encouraged in residential, institutional and commercial developments.
- Policy 5.6 Higher density sites, including residential, commercial, mixed use, and the Town Centre, shall be designed with consideration given to building orientation, and variations in façade treatment that reduce the amount of sun shadowing on adjacent open spaces, and to minimize wind tunnelling.

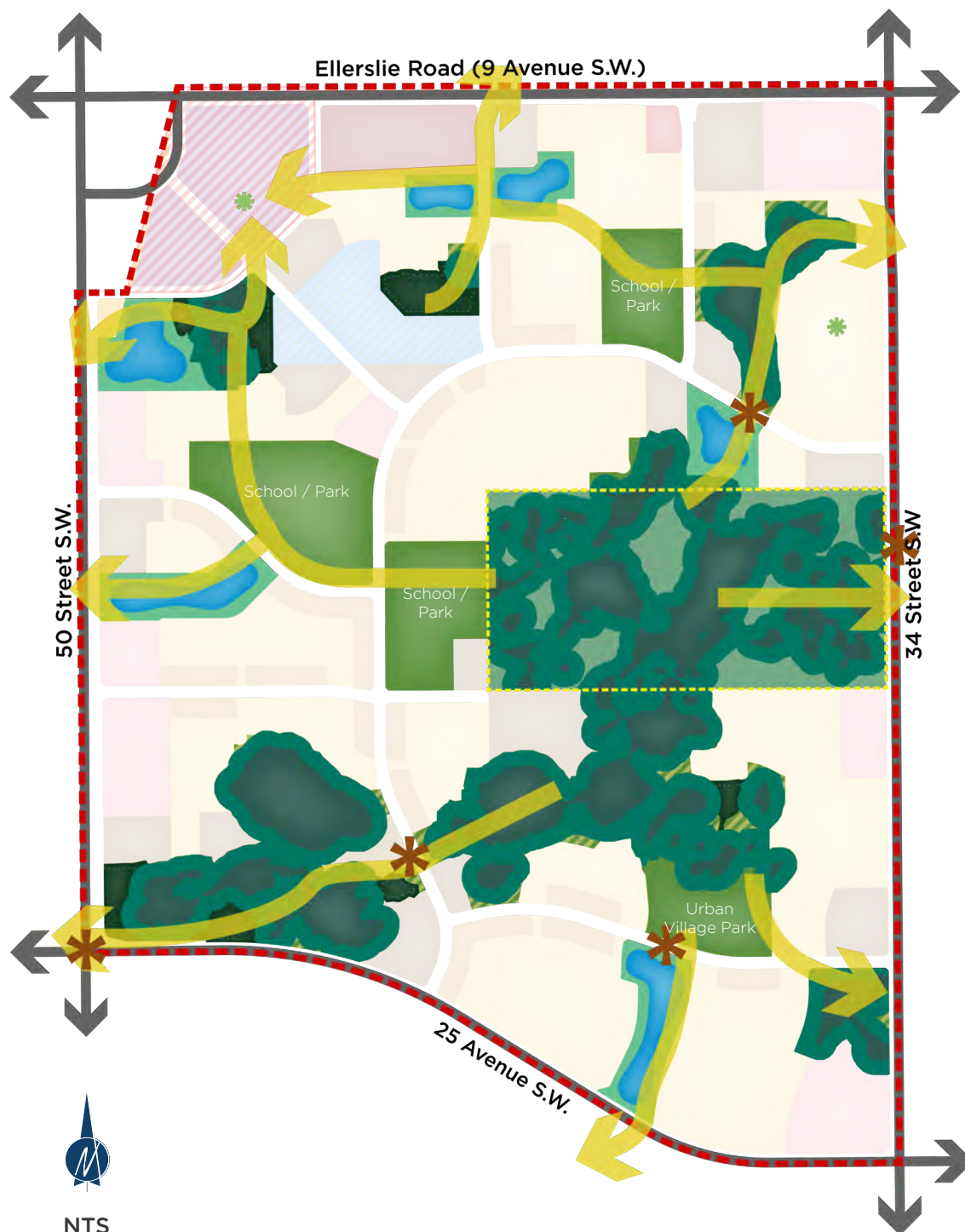
Implementation: The *Winter City Strategy* encourages the development of winter design elements into public buildings, parks and open spaces, and public spaces. Developers are encouraged to incorporate winter design elements into their architectural controls, with the design and location of buildings being reviewed and developed with the City to ensure the *Strategy* is incorporated with appropriate design elements. Meanwhile the design of public lands will also be reviewed and developed with the City to ensure the *Strategy* is incorporated with appropriate design elements.

USE OF LIGHTING TO SUPPORT NIGHTTIME USE OF PARKS AND OPEN SPACES



6

FIGURE GREEN NETWORK



- NSP Boundary
- Stormwater Management Facility
- School / Park (MR)
- Pocket Park (MR)
- Natural Area (MR)
- Natural Area (ER)
- Natural Area (ER) to be determined*
- Parkland (non-MR)
- City Owned Lands
- Non ER on City Owned Parcels
- Wildlife Mitigation Passage
- Ecological Network
- Arterial Roadway

*Buffer to be determined through SSNAMP

3.4 GREEN NETWORK

3.4.1. Ecological Network

The Ecological Network consists primarily of the regionally significant Natural Areas that are part of the Emerald Crescent, a connected park and open space network that spans across Southeast Edmonton. The network is interconnected with recreational spaces, including park and open spaces, schools, Natural Areas, utility corridors, and other open spaces to support both active and passive recreation. The Emerald Crescent is the backbone of Meltwater's Ecological Network, as the neighbourhood conserves and integrates its Natural Areas with park and open spaces. The Ecological Network provides a high level of access to the Emerald Crescent, creating a walkable and pedestrian friendly community that is closely integrated with nature and promotes a high quality of life. The proposed Ecological Network will ensure the long-term sustainability, functionality, and integrity of the Emerald Crescent. The Ecological Network also presents opportunities to incorporate low impact development techniques, such as bioswales, rain gardens, and pervious paving, sensitively transitioning between development and Natural Areas.

3.4.2 Ecological Policies

Objective 6: Protect, connect, and integrate the ecologically-significant Natural Areas into the design of the neighbourhood to support a complete ecological network and create a unique feature for the community.

Policy 6.1	Natural Areas shall be retained through the dedication of Environmental Reserve or Municipal Reserve.
Policy 6.2	Landscaping plants and materials shall be selected with the intention of attracting and retaining wildlife and enhancing the overall biodiversity in the Emerald Crescent.
Policy 6.3	Natural Areas shall be preserved and sensitively integrated into development wherever possible.
Policy 6.4	Natural Areas shall be appropriately buffered to ensure proper transitions with the surrounding development.
Policy 6.5	The illustrative Natural Area Buffer (ER to be determined) has been established at 30 m to ensure the continued viability of natural areas. The buffer may only be modified with supporting technical studies as part of the Site Specific Natural Area Management Plan. Natural Area to be determined shall be refined with supporting technical studies and an amendment to this plan.
Policy 6.6	Natural Areas shall be integrated and linked to other open spaces, such as parks and stormwater management facilities, to enhance habitats and maintain ecological connectivity.
Policy 6.7	Public access to Natural Areas shall be provided wherever possible.
Policy 6.8	Pedestrian connections through the Natural Areas may be provided through Natural Area Buffers (ER to be determined) to provide connections to the neighbourhood's Active Transportation Network subject to supporting technical reports.
Policy 6.9	Drainage from land uses adjacent to wetlands should be directed to wetlands to maintain hydrology.
Policy 6.10	LID features, such as bioswales and constructed wetlands, shall be incorporated to support the retention of Natural Areas.

Policy 6.11 Wildlife mitigation passages shall be provided to support wildlife connectivity between Natural Areas, as identified in this Plan.

Implementation: Figure 6: Green Network illustrates the Natural Areas that will be retained within the neighbourhood. A Phase II Ecological Network Report and Neighbourhood Design Report were prepared and submitted under separate cover in support of this NSP. The ENR identifies natural areas and provides an assessment of the existing ecological network as well as provides recommendations on how to conserve and protect natural areas. The NDR reviews and identifies the natural area pre-development and post-development basin hydrology.

The Natural Areas have been identified as Natural Area (ER), Natural Area (ER) to be determined (the buffers), and Natural Area (MR) according to the type of ecological feature identified. As the exact area and boundaries of the Natural Areas may be adjusted based on legal surveys at the subdivision stage, they have been identified as “Natural Area (ER) to be determined” in the land use concept. Any revisions to the land use concept that impact Natural Areas will require an amendment to the NSP and any relevant supporting documents. A minimum 30.0m buffer will be applied to Natural Areas (ER) and dedicated as Natural Area Buffer (ER) as per City Policy C531. A Site Specific Natural Area Management Plan (SSNAMP) will be required as part of rezoning and/or subdivision applications located within 200.0m of a Natural Area identified for conservation. Exceptions may be allowed, subject to the approval of the City.

Due to limited geotechnical and hydrological information available during the preparation of the Neighbourhood Design Report, more detailed analysis of hydrological features will be required at the time of subdivision to ensure Natural Areas are sustained post-development. Detailed site-specific pre/post development water balance calculations will be required and illustrated within Site-Specific Natural Area Management Plans, and subsequent Neighbourhood Design Report updates. LID features should also be incorporated into detail engineering design at the subdivision stage to ensure that LID features enhance the pre- and post-development flows for the sustainability of Natural Areas.

Figure 6: Green Network also illustrates the location of wildlife mitigation passages that will be designed based on the recommendations in the Phase II Ecological Network Report and consultation with the City, following the *Wildlife Passage Engineering Design Guidelines*. The City will review the design of wildlife mitigation passages and roadway cross sections at the concept plan stage for arterials, and at subdivision for other roadways.

NATURALIZED SPACES



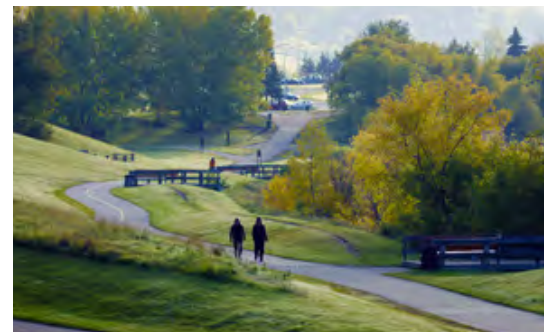
Source: Qunli Stormwater Wetland Park

LOW IMPACT DEVELOPMENT



Source: NATCO Urban Street Design Guide

INTEGRATION AND LINKAGES



Source: City of Edmonton

Objective 7: Preserve and integrate the Natural Areas on the City Owned Parcels while supporting potential future programming.

- Policy 7.1 Public access to the Natural Areas on the City Owned Parcels may accommodate potential future interpretive and passive recreational opportunities.
- Policy 7.2 The Natural Area buffers on the City Owned Parcels should provide connections to the neighbourhood's Active Transportation Network through sensitive development of trails.

Implementation: Figure 5: Land Use Concept illustrates the parcels owned by the City of Edmonton. Details regarding future programming on the City Owned Parcels will be determined by the City. This programming could include an interpretive centre, wayfinding signage, or gravel trails. Further studies to determine possible opportunities will be conducted at the rezoning and subdivision stages.

Figure 12: Active Modes Network illustrates the conceptual active modes network through the neighbourhood. While the network illustrated through Natural Areas is conceptual, it should be used as a guide at the detailed engineering phase when sensitively locating trails.

Breathe: Edmonton's Green Network aims to create an integrated network of public spaces that promote wellness, ecology, and celebration. The *Breathe* Strategy identifies these lands as having a high support of ecological functions, moderate support of celebration functions, and low support of wellness functions. Further details about these lands will be determined by the City at a later date.

3.4.3 School and Park Spaces

School and Park Spaces in this Plan include school and community park sites, an urban village park, pocket parks, and parkland (non-MR). Three School and Community Park sites have been identified in the plan area, which typically include an educational institution and associated recreational facilities. One of the School and Community Park sites has been identified for a Francophone School. An Urban Village Park is identified in the southeast side to serve residents further away from the School and Community Parks. A pocket park is located in the Town Centre, which provides access to open space in a higher density area while connecting the Town Centre to the neighbourhood's active transportation network. A potential pocket park of up to 0.50 ha (final size to be determined in consultation with the City) will be located in the northeast of the Plan Area to distribute park spaces throughout the neighbourhood. Parkland (non-MR) has been included in the plan to provide a higher level of accessibility, visibility, and permeability to Natural Areas.

3.4.4 Parks and Open Space Policies

Objective 8: Accommodate City of Edmonton requirements for parks and school sites within neighbourhoods.

- Policy 8.1 Due to the environmental features in the plan area, developers and landowners are responsible for providing parkland to the City in a suitable condition for development. This includes, but is not limited to: obtaining permission from the Province of Alberta for the removal of any wetlands located on school and park sites, draining and physical removal of the wetland, providing engineered fill, and grading prior to rezoning.

- Policy 8.2 As part of the subdivision approval process, Municipal Reserve shall be dedicated as land, cash in lieu of land, or a combination thereof, in accordance with the Municipal Government Act.
- Policy 8.3 Servicing shall be provided to parks and school sites, where required, to accommodate any and all facilities which may be developed on site.

Implementation: Figure 5: Land Use Concept illustrates the location of schools, parks, open spaces, Natural Areas (MR), Natural Areas (ER) in Meltwater. At the time of subdivision, the City shall determine the Municipal Reserve owing and the areas dedicated as Municipal Reserve shall be confirmed by legal survey. The neighbourhood design report will ensure that the type and amount of servicing required is provided within roadways to service park facilities and will adhere to the guidelines outlined in the *Urban Parks Management Plan* and *Breathe: Edmonton's Green Network*. Utilities that serve the Municipal Reserve exclusively may be located on Municipal Reserve sites as deemed appropriate by the City. Utilities that serve uses other than Municipal Reserve exclusively will require approval from the City.

Objective 9: Promote the use of natural landscaping using native tree and plant species.

- Policy 9.1 The design of parks and open spaces, and stormwater management facilities shall incorporate native plant species that are low maintenance and considered non-invasive.
- Policy 9.2 Open spaces shall include native trees and plantings, where practical, intended to provide additional habitat for birds and wildlife.

Implementation: Specific tree and plant species on public properties shall be determined between the developer and the City during the review of landscaping plans at the engineering drawing review stage.

NATURAL PLAYGROUND



Source: Natural Playgrounds Company

RE-PURPOSED MATERIAL PLAYGROUND



Objective 10: Promote the use of urban agriculture and edible landscaping in suitable locations.

- Policy 10.1 Parks and open spaces should provide opportunities for urban agriculture and edible landscaping elements.
- Policy 10.2 Support opportunities for urban agriculture opportunities on utility rights-of-way, where feasible.
- Policy 10.3 Support opportunities for community garden plots within public and private lands, where feasible.
- Policy 10.4 Landscaping of public parks, open spaces, and private spaces should consider edible fruit and vegetable plants.

Implementation: The location of urban agriculture and community gardens may be explored by developers and the City at the rezoning and subdivision stage. The implementation, design, and specific species used will be reviewed and developed with the City during the review of landscaping plans at the engineering drawing review stage for urban agriculture in parks and open spaces. Urban agriculture on utility rights-of-way will be determined through investigation by the City and associated partners.

URBAN AGRICULTURE

Objective 11: Provide linkages between park spaces, and key neighbourhood nodes.

- Policy 11.1 Park and open spaces shall be connected to shared use paths to allow for a high level of connectivity and walkability.
- Policy 11.2 Park spaces and shared use paths shall be designed to accommodate a diversity of users, ages, abilities, and activities.
- Policy 11.3 Connections to existing shared-use paths in adjacent neighbourhoods should be provided.
- Policy 11.4 The pipeline right-of-way located in the northwest corner of the neighbourhood shall provide a shared use path connection linking the neighbourhoods of Walker, Meltwater, and Charlesworth.
- Policy 11.5 Integrate wayfinding along shared use paths to highlight areas of interest.

Implementation: Figure 12: Active Modes Network illustrates the location of potential shared-use paths, pedestrian linkages, and pedestrian crossings. The exact alignment and design of the active transportation network will be determined at the rezoning and subdivision stage in consultation with the City. Connections between shared use path sections may take the form of a sidewalk or on-street markings to aid in wayfinding.

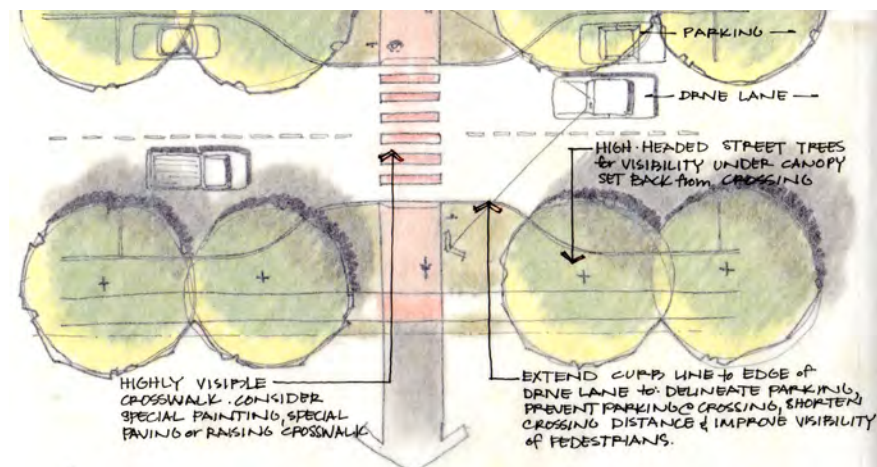
Objective 12: Provide safe routes to schools.

- Policy 12.1 Utilize signage, surface treatments, and lighting to distinguish Safe Routes to Schools.
- Policy 12.2 Connect shared use paths to school sites where possible.
- Policy 12.3 A network of shared use paths and sidewalks shall be developed to minimize the amount of major roadway crossings to school sites.
- Policy 12.4 Street-oriented development shall be located adjacent to school sites.
- Policy 12.5 School sites shall be designed according to the *Edmonton Joint Use School Site Functionality Study*.
- Policy 12.6 Streets around school sites shall be designed to accommodate adequate off-site parking.

Implementation: Figure 12: Active Modes Network illustrates the location of potential shared-use paths, pedestrian linkages, and pedestrian crossings. These connections provide convenient access between residential areas, the Town Centre, Natural Areas, park sites, and future sidewalk connections, creating a strong active transportation network throughout the neighbourhood. The exact alignment and design of the active transportation network will be determined at the rezoning and subdivision stage in consultation with the City.

Design and details of school sites will be determined at the detailed engineering stage and in accordance with the *Joint Use School Site Functionality Study*. On-street parking will be reviewed at the detailed engineering stage to ensure that adequate parking is available to meet the needs of the school.

SAFE ROUTES TO SCHOOL CROSSWALK



STREET-ORIENTED DEVELOPMENT



Objective 13: Design park and open spaces to appeal to all users and utilize the natural landscape.

- Policy 13.1 Park and open spaces shall be programmed to support passive and active recreation.
- Policy 13.2 Consider natural landscaping and natural playgrounds in the design of park spaces.
- Policy 13.3 Encourage naturalized landscapes to ensure lower maintenance costs.
- Policy 13.4 Encourage the development of naturalized parks and playgrounds on park sites adjacent to wetlands and natural areas.

Implementation: Figure 6: Green Network identifies the locations of parks, Natural Areas, and open spaces in the neighbourhood. *Breathe: Edmonton's Green Network* aims to create an integrated network of public spaces that promote wellness, ecology, and celebration. The plan's Green Network provides opportunity to support public spaces that promote wellness, ecology, and celebration through the different types of park and open spaces available (i.e. urban open spaces in the town centre, Natural Areas, and school and community parks / urban village parks). Design and details of these sites will be determined at the detailed engineering stage in consultation with the City.

Objective 14: Encourage accessibility and safety of park sites and Natural Areas.

- Policy 14.1 Parks and open spaces shall incorporate Crime Prevention Through Environmental Design (CPTED) principles, where possible
- Policy 14.2 Natural Areas shall have adequate roadway frontage to provide public access and visibility, where appropriate.
- Policy 14.3 Lighting shall be appropriately provided in park and open spaces.

Implementation: Figure 6: Green Network identifies the locations of School and Community Park sites, Urban Village Park sites, pocket parks, and Natural Areas. Design and details of these sites will be determined at the detailed engineering stage in consultation with the City. Parks and open spaces will be designed as per the *Urban Parks Management Plan*, *Breathe Strategy*, and CPTED principles.

TRADITIONAL PARK SPACE



NATURALIZED PARK SPACE



3.4.6 Urban Village Park

The Urban Village Park is located in the southeast portion of the Plan Area, and provides opportunities for integration with the surrounding Natural Areas. The Urban Village Park landscaping will be semi-naturalized to accommodate community active and passive recreational needs, while extending the natural habitat and providing a transitional buffer from adjacent development. The location is a potential staging area to provide access into the natural area network. The Urban Village Park is also a potential Community League site, and may include amenities such as ice rinks, sports fields, or landscaped green spaces.

CLIMATE APPROPRIATE MATERIALS



Source: Landscape Forms

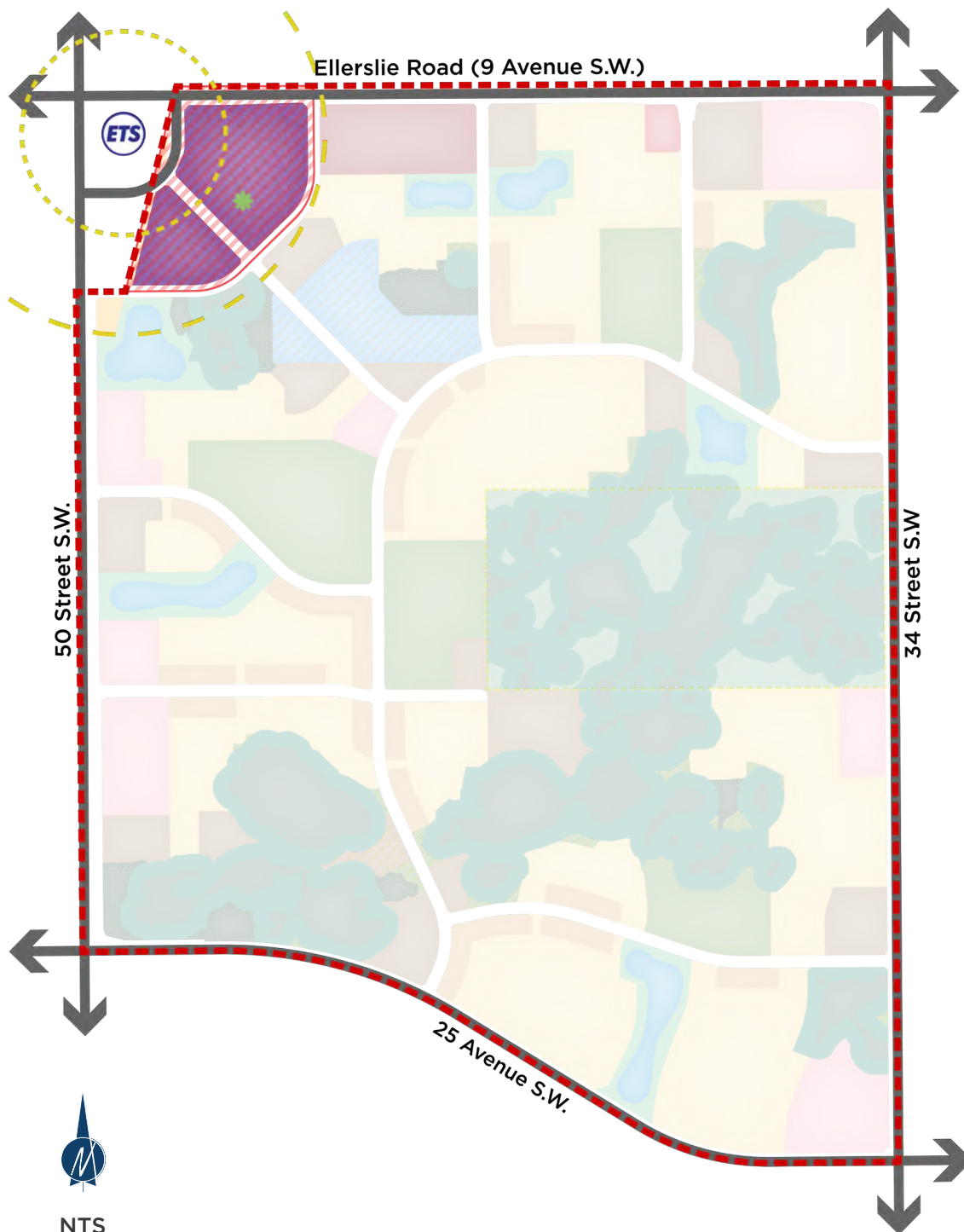
ALL SEASONAL PARK



Source: PinPin Studio

3.4.7 City Owned Natural Areas

The City of Edmonton owns parcels 17 and 19 (see Figure 2), which were purchased with the intention to preserve the existing Natural Areas. *Breathe - Edmonton's Green Network Strategy* indicates these lands as having a high support of ecological functions, moderate support of celebration functions, and low support of wellness functions. While the program elements to be included within or adjacent to the Natural Area are to be determined with future planning, these parcels will anchor the overall ecological network. Further details about these lands will be determined by the City of Edmonton at a later date.



7

FIGURE TOWN CENTRE MIXED USE

LAND USE

- - - NSP Boundary
- (ETS) Future Transit Centre / Park & Ride
- Town Centre Mixed Use
- Special Study Area
- * Pocket Park (MR)
- - - 200m Radius
- - - 400m Radius
- Arterial Roadway



NTS

3.5 TOWN CENTRE MIXED USE (SPECIAL STUDY AREA)

The City of Edmonton owns the majority of the lands located in the Town Centre Mixed Use (TCMU). Lands directly adjacent to the Town Centre to the west, also owned by the City of Edmonton, are intended to be used as a Transit Centre / Park and Ride as per the Walker NSP, with the possibility to become a future LRT station (presumed alignment). The City is evaluating these lands for future LRT (if presumed alignment is approved by Council), and as such, the lands that make up the Transit Centre and the Town Centre have been identified as a Special Study Area as a number of uses are possible but have yet to be determined. Such uses could include, but not limited to, a transit centre, a LRT station, a mobility hub, transit, or Light Rail Vehicle storage for cleaning, storage, and maintenance. Given the land area constraints, as well as the potential for conflicting land uses, the Special Study will consider the compatibility of uses within or part of the Town Centre area. These lands or portions of these lands may be identified as Public Utility Lot(s) in future amendment(s) to this Plan to ensure their compatibility and transition with surrounding land uses.

The Town Centre is intended to be developed as a high-quality, street-oriented, and pedestrian-friendly urban employment node. It is located in the northwestern corner of the plan area, adjacent to the future Transit Centre, and will feature transit-oriented development (TOD) at higher intensities and mixed uses compared to the rest of the neighbourhood. This area will include residential, commercial, and office development supplemented with park spaces. The Town Centre will be a major gathering place for the neighbourhood, owing to its high accessibility by multiple modes of transportation, high visibility, and mix of uses. It is connected to the rest of the Meltwater neighbourhood with a spine road that intersects a collector roadway, which is intended to be developed as a main street to extend the walkable, pedestrian-oriented development inwards towards the Natural Areas. Mixed use development will enhance the quality of life for residents by offering a more urban lifestyle, while being conveniently located adjacent to the future Transit Centre. If residential development is ultimately not to be included in the Town Centre, an amendment to this NSP will be required.

MAIN STREET DEVELOPMENT



If residential development does occur, it is anticipated it would develop in the form of low rise to medium rise buildings, consisting of ground floor retail, office on the second floor, and residential above; or as standalone residential buildings. The buildings are envisioned to be developed at 4-6 storeys, but could be taller in order to achieve the proposed density, while providing a variety of uses at the ground level. As a result, the Town Centre is projected to be broken down as follows:

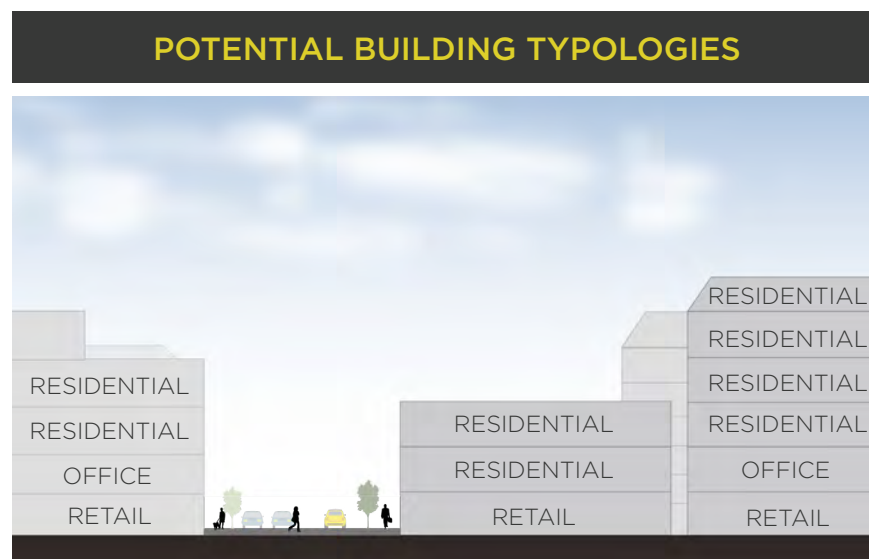
Use	Area	%*	Expected Density/FAR	Units / Size	Population
Town Centre Office	0.81 ha	10.0%	2.0**	16,200 m ²	n/a
Town Centre Commercial	1.81 ha	22.5%	2.0	36,200 m ²	n/a
Town Centre Residential	5.44 ha	67.5%	90 units/ha***	490	881
Pocket Park	0.5 ha	n/a	n/a	n/a	n/a
Total	8.56 ha				

* Percentage is of the total TCMU less the Pocket Park. The Pocket Park size was determined by Policy 3.4.1(b) in the Decoteau ASP (location of the Pocket Park) and Policy 5.2.4.3 of the Urban Parks Management Plan (sizing of pocket parks). Percentages are based on averaging portions of a building in a 4 and 6 storey building assuming ground floor retail, second storey office, and 2-4 storeys of residential) See below image on potential building typologies for example.

** Town Centre Office FAR is based on similar development areas, such as the Griesbach Village Centre and the Heritage Valley Town Centre. It is envisioned that the Town Centre Mixed Use will be a TOD, which would accommodate more density and reduced parking providing more developable lands.

*** Town Centre Residential density is based on averaging requirements of New Neighbourhood TOD guidelines (200m = 125 units, 200-400m = 63 units); averaging at 90 due to the majority of the TCMU falling within the 200-400m radius.

This breakdown on the Town Centre was used to inform the Transportation Impact Assessment for this NSP, and should continue to guide development in the Town Centre until an amendment is completed for this area.



Although identified as a Special Study Area, visioning for the Town Centre and Transit Centre area has identified the following features to be included:

- A mix of uses including residential, commercial, and office in the form of low-rise and medium-rise buildings;
- The opportunity to increase residential densities if the Transit Centre is serviced by LRT;

- A pocket park strategically located to compliment key features of the Town Centre; and
- The transition and integration of park-and-ride facilities from surface lots into integrated parking structures.

The exact location of the pocket park is to be determined as part of the Special Study Area identified for the Town Centre, which will confirm the details of the Transit Centre's needs and feasibility to better configure the location of the pocket park cohesively. However, it is envisioned that this pocket park attributes the themes of the neighbourhood, i.e. the natural environment and the urban Town Centre in its design. The City's Paul Kane Park is an example that combines the elements of Natural Areas and an urban interface together. Policies on how the pocket park will develop are included in this NSP.

A major consideration of the Town Centre are the two pipelines that run adjacent to the Town Centre's western boundary. The pipelines run through the Orchards of Ellerslie, Walker, Meltwater, and Charlesworth neighbourhoods in Southeast Edmonton. A risk assessment was completed in 2018 by Thomson Environmental Consulting on the pipelines, which identified the greatest risk contour as 21.0m from the corridor right-of-way. Setbacks would be applicable subject to the nature of the use, as summarized in the following table.

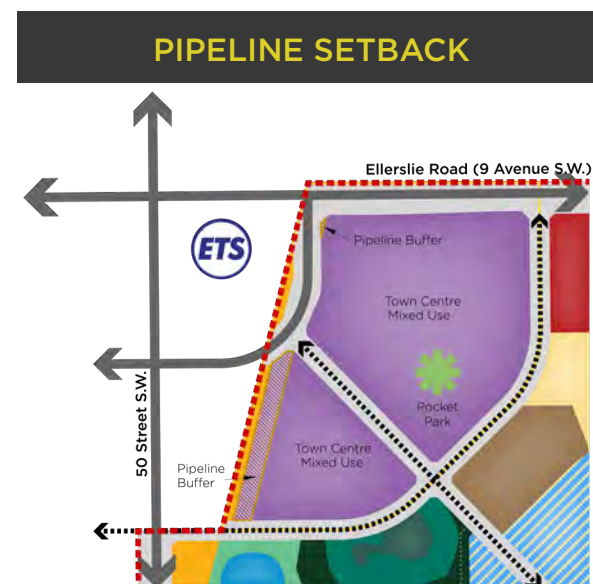


TABLE 4: RISK SETBACKS

CATEGORY	RISK	SETBACK	POTENTIAL USES
Sensitive Uses	0.3×10^{-6}	21.0m	Child Care Services, Commercial Schools, Libraries, Religious Assemblies, Institutional Uses
High Intensity Commercial and High Density Residential Uses	1×10^{-6}	16.0m	Apartment Hotels, Bars and Neighbourhood Pubs, Government Services, Health Services, Hotels, Nightclubs, Medium-Density Residential Development
Low Intensity Commercial and Low Density Residential Uses	1×10^{-5}	10.0m	Retail Stores, Offices up to 2-storeys, Restaurants, Low-Density Residential Development

As a result, the potential loss of density would need to be accommodated by other areas within the Town Centre. The above image titled "Pipeline Setback" depicts the area affected by the risk contour.

Some additional considerations when developing the Town Centre include the jughandle that facilitates eastbound to northbound turn movements from Ellerslie Road SW, which is located to the west of the Town Centre. The jughandle separates the Transit Centre and the Town Centre from one another, while also bisecting the Transit Centre into two areas.

This piece of arterial roadway is vital to the transportation network in southeast Edmonton, as 50 Street provides direct connections into the City, while also providing access to Anthony Henday Drive. Finally, Ellerslie Road is also anticipated to be widened when it is constructed to its ultimate form. This arterial roadway dedication for the widening has already been accommodated in the land use concept.

3.5.1 Town Centre Mixed Use Policies

Objective 15: Promote transit-oriented and pedestrian-oriented development through the Town Centre Mixed Use.

- Policy 15.1 The Town Centre shall be developed as a high-quality, pedestrian-friendly environment to support the Transit Centre.
- Policy 15.2 Development along roadways and adjacent to the Transit Centre shall be pedestrian-oriented.
- Policy 15.3 Residential development in the Town Centre shall be developed in the forms of mixed use development, medium density residential development, or high density residential development.
- Policy 15.4 Parking areas shall be located underground, internal to sites, or at the sides or rear of buildings to maintain safe pedestrian access, and a more compact and dense urban form.
- Policy 15.5 Buildings on the same site should be located closely together to create more opportunities for shared parking, and walkability.
- Policy 15.6 Vibrant colours and warm materials are encouraged in the Town Centre and public spaces.
- Policy 15.7 Strong pedestrian connections through the Town Centre shall be provided to facilitate pedestrian movement towards the Transit Centre.
- Policy 15.8 Climate appropriate materials should be considered for street furniture for year round use.
- Policy 15.9 Flexible streetscapes should be considered to allow for temporary street closures for festivals or community events.
- Policy 15.10 At such time that Light Rail Transit is extended to the adjacent Transit Centre, based on the presumed alignment due to the location of the Mill Woods LRT station, increases to the Town Centre's minimum density, height, and floor area ratio may be considered.

Implementation: The *Winter City Strategy* encourages development to include colour and lighting when designing for a winter city. Developers are encouraged to incorporate winter design elements into their architectural controls, with the design and location of buildings being reviewed and developed with the City to ensure the Strategy is incorporated with appropriate design elements.

The development of the Town Centre shall be implemented through appropriate zoning in accordance with the *Zoning Bylaw*. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

Land uses and streets will conform to the *Transit Oriented Development (TOD) Guidelines* for areas within 400m of the Transit Centre (the area currently located within the Town Centre Special Study Area). The land in the Town Centre could be developed prior to the arrival of the presumed

future Light Rail Transit alignment, resulting in a transitioned approach to density and floor area ratio. At such time the Transit Centre is serviced by the presumed future Light Rail Transit alignment, the Town Centre's density and floor area ratio shall be reviewed through an amendment to this plan. If higher densities and floor area ratios than described in Section 3.5 of this plan are proposed prior to the commencement of presumed Light Rail Transit service, an updated Transportation Impact Assessment shall be required for any development, and must be supported by the City. Any improvements identified in the analysis will be conditions of development approvals.

FLEXIBLE STREETSCAPES



PEDESTRIAN-FRIENDLY



MIXED USE



Objective 16: Develop the Town Centre to integrate with the Transit Centre.

- Policy 16.1 Adjacent development shall be integrated with the Transit Centre through the provision of street-oriented uses, pedestrian connections, landscaping, human-scaled massing and quality building materials.
- Policy 16.2 Encourage the consideration of Transportation Demand Management in designing the Town Centre, such as incorporating a variety of modes, providing opportunities to live and work in the Town Centre, and providing access and connectivity to the Transit Centre.

Implementation: The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage. The design of transportation networks within the Town Centre will be reviewed by the City at the subdivision stage to ensure Transportation Demand Management principles/programs are properly incorporated.

Objective 17: Create inviting open spaces that are safe and attractive, which connect the Town Centre to the neighbourhood's natural environment.

- Policy 17.1 Incorporate themes of the natural environment into the design of the pocket park in the Town Centre.

- Policy 17.2 The pocket park and plaza spaces in the Town Centre shall be designed with winter design principles.
- Policy 17.3 The Town Centre should encourage uses that include elements that contribute to activating the public realm, such as patios, plazas, and gathering places opportunities.
- Policy 17.4 The Natural Area adjacent to the Town Centre shall be preserved.

Implementation: The *Winter City Strategy* encourages development to include colour and lighting when designing for a winter city. Developers are encouraged to incorporate winter design elements into their architectural controls, with the design and location of buildings being reviewed and developed with the City to ensure the Strategy is incorporated with appropriate design elements.

Figure 6: Green Network identifies a pocket park to be located in the Town Centre. This pocket park shall incorporate both soft and hardscaping, and act as a primary gathering space in the Town Centre. Additional open spaces may be found in the Town Centre, which will be determined later by the City of Edmonton.

NATURAL THEME / SOFT AND HARDSCAPING



ENHANCED PEDESTRIAN WALKWAYS



Source: HUB Surface Systems

Objective 18: Provide flexible development opportunities in the Town Centre that respond to market conditions.

- Policy 18.1 The Town Centre shall allow for a mix of office, retail, and residential uses.
- Policy 18.2 Land uses may be vertically integrated within a single building, or horizontally integrated within multiple buildings on a site, to provide a compatible mix of uses and intensities.
- Policy 18.3 The amount and ratio of the type of development (i.e. residential vs. office vs. institutional vs. commercial) shall respond to market conditions at the time of development, as well as over the long term.

Implementation: Figure 7: Town Centre Mixed Use identifies the location of lands designated for the Town Centre. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

The development of the Town Centre shall be implemented through appropriate zoning in accordance with the *Zoning Bylaw*. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

Objective 19: Design parking areas and structures to be of high-quality and urban design.

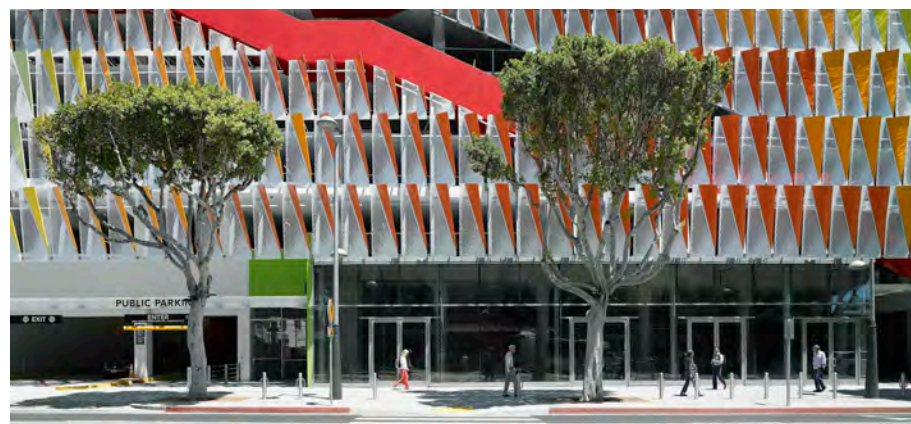
- Policy 19.1 Parking shall include a mix of short and long-term parking, bicycle parking, and on-street parking in order to accommodate different users and mitigate any potential parking impacts on adjacent residential areas.
- Policy 19.2 Encourage the development of structured or underground parking to accommodate current and future parking demands.
- Policy 19.3 Encourage enhanced parking islands with walkways to facilitate safe pedestrian movement from the parking areas to entrances.
- Policy 19.4 Surface parking abutting arterial or collector roadways shall be minimized.
- Policy 19.5 Parking structures visible from roadways shall use colour and design elements to support the public realm.

Implementation: The development of the Town Centre shall be implemented through appropriate zoning in accordance with the *Zoning Bylaw*. This zone shall be developed to align with the *Transit Oriented Development Guidelines*. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

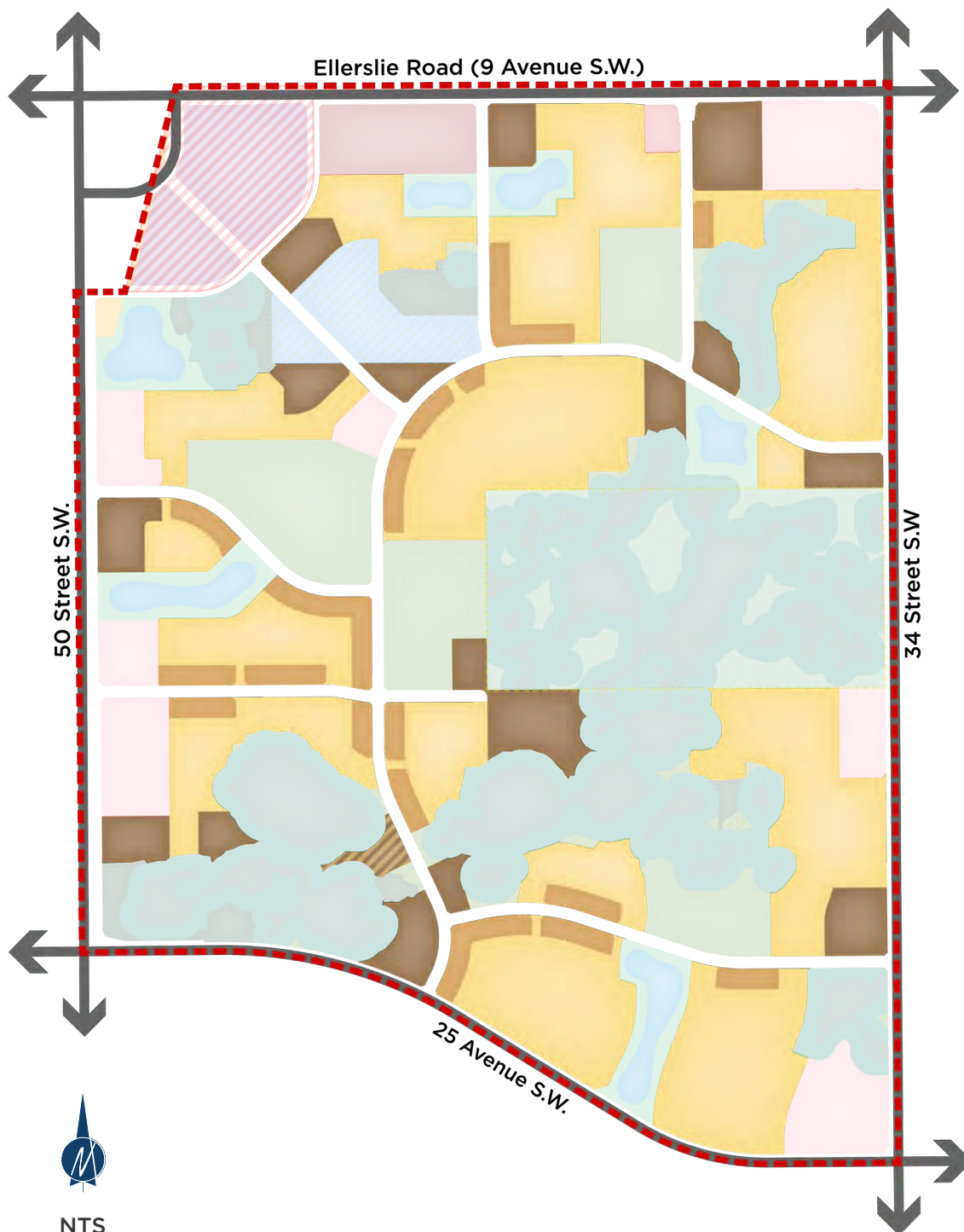
UNDERGROUND PARKING



INTEGRATED PARKING STRUCTURE



Source: Behnisch Architekten









8

FIGURE

RESIDENTIAL USES

LAND USE

-  NSP Boundary
-  Low Density Residential
-  Street-Oriented Residential
-  Medium Density Residential
-  Potential Development Area (MDR)
-  Arterial Roadway

3.6 RESIDENTIAL USES

Meltwater will feature a mix of residential land use designations to promote an inclusive community by offering opportunities for aging in place, affordable housing, and a variety of housing types. This includes residential uses in the Town Centre that will feature higher density residential units, and mixed use development that will support the future Transit Centre and potential Light Rail Transit.

Low density residential development will be the predominant form of residential development in the neighbourhood, with street-oriented residential development located along collector roadways, adjacent to school sites, and in areas with high pedestrian mobility. It is intended that low density residential will allow for a variety of housing forms, including single detached, semi-detached, duplexes, and limited row housing. Street-oriented residential will also allow for a variety of housing forms, including stacked rowhousing, rowhousing, duplexes, semi-detached, and single detached housing. Street-oriented residential development should have doorways, windows, and porches at ground level while prohibiting front driveways and front garages.

Medium density residential development may be found near activity centres, such as the Town Centre, commercial and mixed use sites, School and Community Park sites, Natural Areas, and along collector and arterial roadways to promote walkability, healthy living, and public transit use. Medium density residential development will include both low-rise and medium-rise developments, but could include stacked rowhousing and project-oriented rowhousing. While the location of both low-rise and medium-rise developments will vary based on market conditions, it would be anticipated that medium-rise development would be located along arterial roadways, while low-rise development would be located internally to the neighbourhood. However, medium-rise development would also be supported around key neighbourhood features, such as the Town Centre and School and Community Park sites.

STREET-ORIENTED RESIDENTIAL



A Medium Density Residential site is identified with an asterisk for a Civic Use (Fire Station) on the land use concept. The Fire Station is a high priority for the City of Edmonton. In the event that the City confirms that the Fire Station is not required, the landowner may rezone the site for Medium Density Residential use without amending this plan.

A Potential Medium Density Residential site is identified on the land use concept as Potential Development Area (MDR). While it is the intent for this site to develop as a medium density residential site, constraints from the adjacent natural areas could reduce the amount of developable area on this site. This site would likely be developed in the form of rowhousing or stacked rowhousing, and aim to incorporate low-impact development techniques and innovative architecture.

3.6.1 Residential Policies

Objective 20: Provide a mix of housing types and sizes for a more inclusive neighbourhood.

- Policy 20.1 A mix of housing types shall be provided, including single detached, semi-detached, duplex, and multi-unit housing.
- Policy 20.2 A mix of housing types should be encouraged on the same block to diversify the built form.
- Policy 20.3 Encourage the development of secondary suites, live-work units, or garden suites.
- Policy 20.4 Innovative and alternative forms of residential land uses that are sensitive to Natural Areas should be explored.
- Policy 20.5 Allow the opportunity for shallow wide lots, especially where Natural Area Buffers make traditional lot depths unachievable.
- Policy 20.6 Development shall comply with the City of Edmonton's affordable housing policies.

Implementation: Table 4: Development Statistics illustrates the planned density for Meltwater, which exceeds the density target for Priority Growth Area B of the Edmonton Metropolitan Region's *Growth Plan*.

Appropriate zones in the *Zoning Bylaw* provide opportunities for a variety of residential forms and densities. Figure 8: Residential Uses will guide the suitability of standard zones, with applications being reviewed with the City at the rezoning and subdivision stages.

Objective 21: Develop higher density residential sites to a higher urban design standard.

- Policy 21.1 Portions of higher density residential development abutting collector roadways shall be street-oriented in order to enhance the experience of the pedestrian, the safety of the community, and to facilitate opportunities for social interactions.
- Policy 21.2 Portions of higher density residential development abutting arterial roadways should incorporate street-oriented units to activate the streetscape and enhance the experience of the pedestrian.

SINGLE DETACHED**SEMI-DETACHED****ROWHOUSING****LOW RISE APARTMENT**

Policy 21.3 Parking areas should be located internal to sites or underground to maintain safe pedestrian access.

Implementation: Figure 8: Residential Uses identifies the location of lands designated for higher density residential development. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

Objective 22: Provide opportunities for commercial uses in residential areas, if demand exists.

Policy 22.1 Small-scale commercial uses shall be allowed in residential areas where they are secondary to the residential uses of the site. These uses are intended to serve the immediate population, and shall not reduce the residential density of a parcel.

Implementation: Standard zones in the *Zoning Bylaw* provide opportunities for commercial uses in residential zones. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

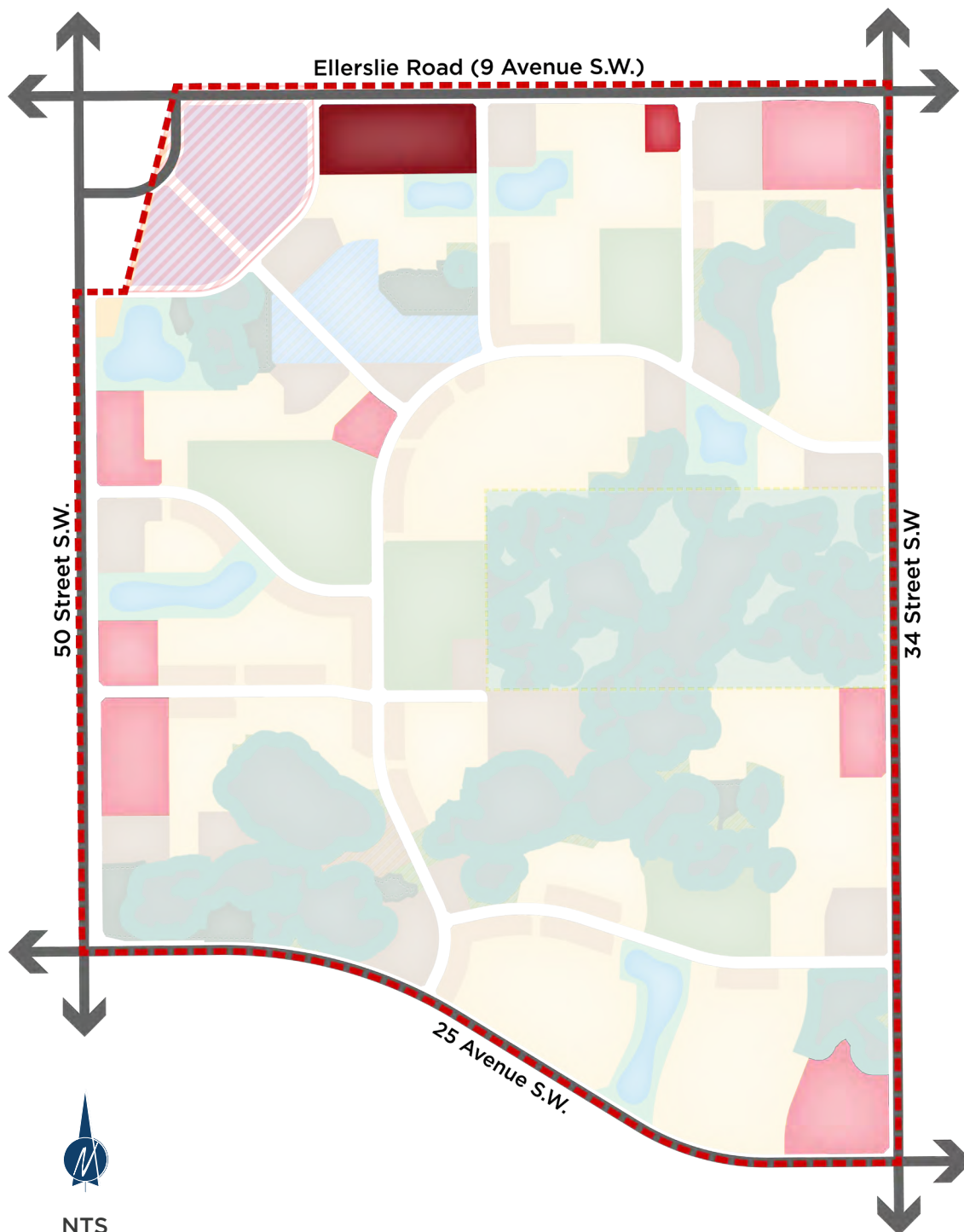
Objective 23: Provide opportunities for additional development around Natural Areas that incorporate low impact development techniques and innovative architecture.

- Policy 23.1 The Natural Area Buffer may be modified with supporting technical studies as part of the Site Specific Natural Area Management Plan. Development for areas identified as “Natural Area to be determined” identified on Figure 8 will require supporting technical studies as determined by the City and an amendment to this plan.
- Policy 23.2 Landscape treatments adjacent to Natural Areas shall be naturalized.
- Policy 23.3 Development adjacent to upland vegetation areas around Natural Areas should be encouraged to incorporate environmentally sensitive design principles and materials, such as incorporating natural tall grasses, LID techniques, and selecting durable, long lasting materials.
- Policy 23.4 Private yard spaces should be minimized, however where incorporated, they shall have naturalized ground treatments.

Implementation: Figure 8: Residential Uses identifies the location of lands designated for residential development. Development of lands adjacent to Natural Areas shall be implemented through appropriate zones and overlays within the *Zoning Bylaw*. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage. The design and location of buildings shall be reviewed and developed in conjunction with the City to ensure appropriate design elements that are sensitive to adjacent Natural Areas are incorporated. LID features should be incorporated into detail engineering design at the subdivision stage to ensure that LID features enhance the pre- and post-development flows for the sustainability of Natural Features.

EXAMPLE OF DEVELOPMENT INCORPORATING LID TECHNIQUES










9

FIGURE COMMERCIAL USES AND MIXED USE

LAND USE

-  NSP Boundary
-  Mixed Use
-  Community Commercial
-  Neighbourhood Commercial
-  Arterial Roadway

3.7 COMMERCIAL USES

Commercial uses located outside of the Town Centre and Mixed Use sites accommodate both Community Commercial and Neighbourhood Commercial uses.

Community Commercial sites are intended to be larger in scale, meeting the commercial retail needs of residents in all of Decoteau's neighbourhoods, including Meltwater. One site is located east of the Town Centre along Ellerslie Road, providing high visibility, accessible by multiple modes of transportation, and located nearby neighbourhood amenities.

Neighbourhood Commercial sites are intended to be smaller in scale, meeting the daily commercial retail needs of residents in Meltwater. Future sites would be integrated into the neighbourhood, connected by active modes and integrated with their surrounding land uses. One site is located in the northeast side of the neighbourhood along Ellerslie Road, across from a Medium Density Residential site.

3.7.1 Commercial Policies

Objective 24: Provide daily commercial retail services and employment opportunities to both residents of Meltwater and the adjacent neighbourhoods.

Policy 24.1 Community Commercial sites shall be located along arterial roadways, while Neighbourhood Commercial sites shall be located along collector roadways.

Implementation: Figure 9: Commercial Uses and Mixed Use identifies the location of lands designated for Community Commercial and Neighbourhood Commercial uses. Appropriate zones in the *Zoning Bylaw* will guide the development of these sites, with the Development Officer having regard for site design, landscaping, parking areas, building articulation, and transitioning with other land uses.

Objective 25: Develop Community Commercial and Neighbourhood Commercial sites to be pedestrian-friendly, accessible, and with a high standard of architectural aesthetic and urban design.

Policy 25.1 Encourage a street-oriented building orientation, with parking located behind the buildings, to create a sense of place and stronger public realm along roadways, where possible.

Policy 25.2 Community Commercial and Neighbourhood Commercial sites shall be highly accessible by multiple modes of transportation, including transit and active modes, and be easily accessible from residential areas through internal neighbourhood linkages.

Policy 25.3 Landscaping shall be used to enhance entrances to the site, building entrances, and to break up surface parking areas.

- Policy 25.4 Landscaping, street furniture, and pedestrian corridors shall be used to enhance connectivity and pedestrian movement through surface parking areas. This may include direct routes for pedestrians, enhancing site entrances, or connections between amenities.
- Policy 25.5 Community Commercial and Neighbourhood Commercial sites shall be designed with consideration given to building orientation and variations in façade treatment that reduce the amount of sun shadowing on open spaces in the winter and to prevent wind tunnelling.

Implementation: Figure 9: Commercial Uses and Mixed Use identifies the location of lands designated for Community Commercial and Neighbourhood Commercial uses. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

ARCHITECTURAL AESTHETIC



GROUND FLOOR RETAIL



PEDESTRIAN MOVEMENT



Objective 26: Provide opportunities for additional commercial land uses if demand exists.

- Policy 26.1 Medium Density Residential sites may accommodate small-scale commercial uses vertically integrated with residential uses.
- Policy 26.2 Small-scale commercial uses shall be secondary to the residential uses of the site with the intent to serve the immediate population and shall not reduce the density for the parcel.

Implementation: Figure 8: Residential Uses identifies the location of lands designed for Medium Density Residential. Incorporation of commercial uses into a site designated as Medium Density Residential will be determined at the rezoning and development permit stage, and shall be implemented without an amendment to the plan. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

3.8 MIXED USE

Mixed Use sites are intended to allow for the development of compatible residential uses, with a mix of appropriate commercial and institutional uses either vertically or horizontally on a site. Residential uses could include row housing, stacked row housing, low-rise apartments, and medium-rise apartments. These sites will be compatible with surrounding residential development, and serve the day-to-day needs of the neighbourhood, commuters, and the surrounding community. Each Mixed Use site is expected to have a minimum residential density of 35 du/ha and a minimum commercial floor area ratio of 0.25. Development of these sites may happen in stages allowing for sites to reach or exceed these minimum densities over time.

3.8.1 Mixed Use Development Policies

Objective 27: Provide flexible development opportunities in the neighbourhood that respond to market conditions.

- Policy 27.1 Each Mixed Use site shall allow for a mix of commercial, institutional, and residential uses.
- Policy 27.2 Land uses may be vertically integrated within a single building, or horizontally integrated within multiple buildings on a site, to provide a compatible mix of uses and intensities.

Implementation: Figure 9: Commercial Uses and Mixed Use identifies the location of lands designated for mixed use development. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage. Section 3.10 Land Use and Population Statistics provides guidance on the residential and non-residential mix.

Appropriate zones in the *Zoning Bylaw* provide opportunities for mixing of uses in both residential and commercial zones on a vertical built-form. Subdivision of sites to allow for horizontal mixed use, or Site Specific Development Control Provisions can also be implemented, and will be reviewed by the City at the rezoning and subdivision stages.

Objective 28: Mixed Use areas will be developed to cater to a variety of users, be pedestrian-friendly, and with high-quality urban design.

- Policy 28.1 High quality architectural guidelines and design elements shall be established for a Mixed Use site.
- Policy 28.2 Mixed Use development shall be pedestrian-friendly, universally accessible, comfortable, and aesthetically pleasing.
- Policy 28.3 Landscaping shall be used to enhance entrances to the site, building entrances, and surface parking.
- Policy 28.4 Development with residential uses should be street-oriented to create a pedestrian-oriented streetscape and an engaging public realm.

- Policy 28.5 Shared parking should be encouraged on Mixed Use sites.
- Policy 28.6 Residential entrances should be clearly differentiated from non-residential entrances through distinct architectural features.
- Policy 28.7 Larger buildings shall use design techniques, materials to reduce massing perception.
- Policy 28.8 Landscaping, street furniture, and pedestrian corridors shall be used to enhance connectivity and pedestrian movement through surface parking areas. This may include direct routes for pedestrians, enhancing site entrances, or connections between amenities.
- Policy 28.9 Mixed Use sites shall be designed with consideration given to building orientation and variations in façade treatment that reduce the amount of sun shadowing on open spaces in the winter and to prevent wind tunnelling.

Implementation: Figure 9: Commercial Uses and Mixed Use identifies the location of lands designated for Mixed Use. The design, location of buildings, landscaping, parking areas, and transitioning between land uses will be reviewed by the Development Officer at the development permit stage.

Appropriate zones in the *Zoning Bylaw* provide opportunities for mixing of uses in both residential and commercial zones. Subdivision of sites to allow for horizontal mixed use, or Site Specific Development Control Provisions can also be implemented, and will be reviewed by the City at the rezoning and subdivision stages.

DIFFERENTIATED ENTRANCES



STREET-ORIENTED



ACCESSIBLE BY MULTIPLE MODES



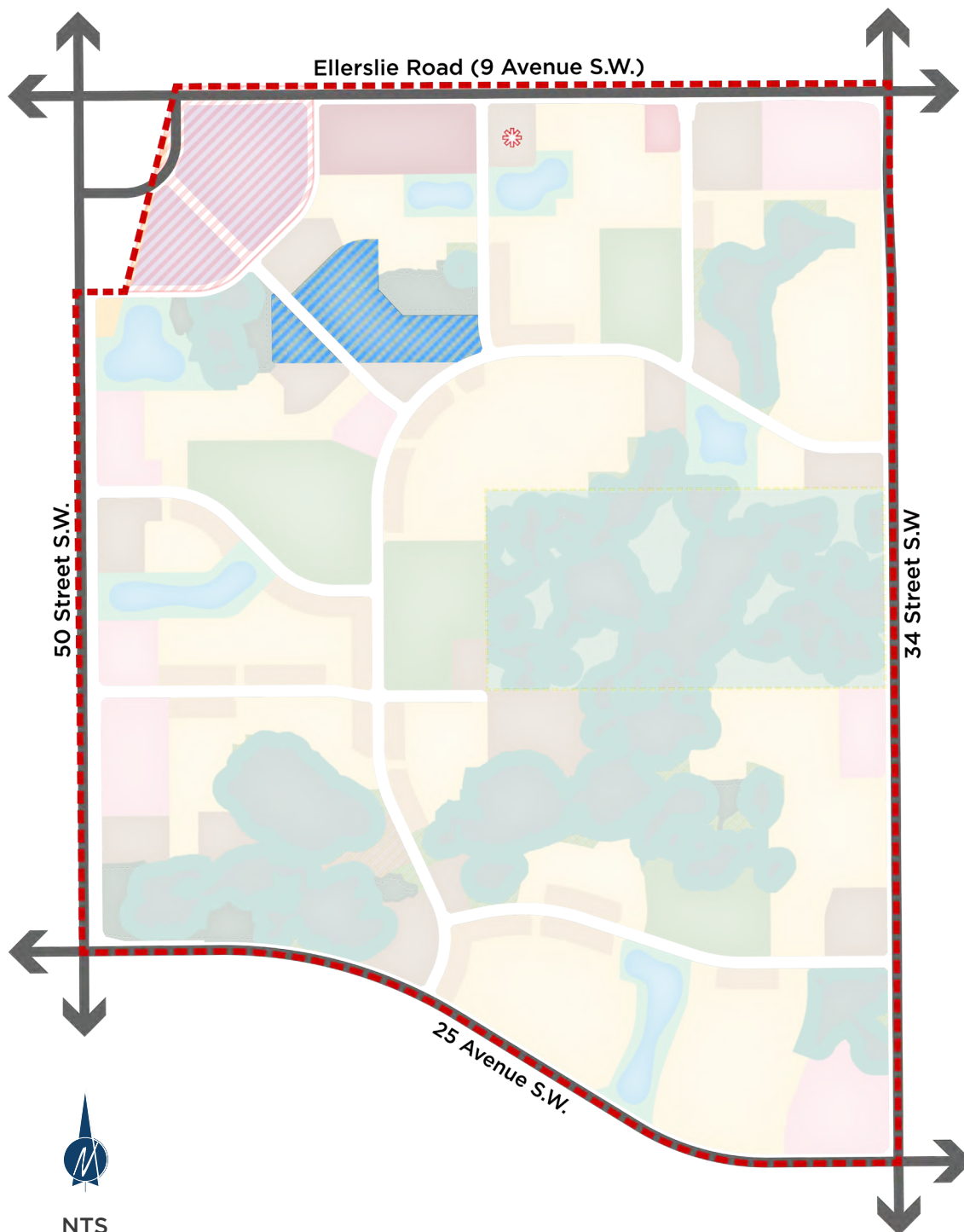
Objective 29: Provide daily commercial retail services and employment opportunities to both residents of the neighbourhood and the community.

Policy 29.1 Mixed Use sites with office or retail uses shall be located along arterial or collector roadways.

Policy 29.2 Mixed Use sites shall be highly accessible by multiple modes of transportation, including transit, and be easily accessible from residential areas through internal neighbourhood linkages.

Implementation: Figure 9: Commercial Uses and Mixed Use identifies the location of lands designated for Mixed Use. Appropriate zones in the *Zoning Bylaw* will guide the development of these sites, with the Development Officer having regard for site design, landscaping, parking areas, building articulation, and transitioning with other land uses.









10

FIGURE
COMMUNITY SERVICES

LAND USE

-  NSP Boundary
-  Institutional / Residential Mixed Use
-  Arterial Roadway
-  Civic Use

3.9 COMMUNITY SERVICES

Community Services sites include both public and private institutional service and civic uses. These sites support the development of a complete community by providing sites for social interaction, private educational facilities, facilities for worship and spiritual contemplation, and necessary civic services.

Two Community Services sites are identified in the land use concept: a religious and cultural facility mixed with potential residential development, identified as Institutional / Residential Mixed Use in the land use concept, and a Civic Use (Fire Station) site in the north centre area of the plan, identified as a Medium Density Residential site with an asterisk.

Additionally, two potential religious assemblies were identified through engagement with their respective landowner. Development requirements for these parcels will be determined at the rezoning, subdivision, and development permit stage. If these parcels are developed as religious assemblies, an amendment to this plan will be required to ensure the residential density is maintained.

The Fire Station is a high priority for the City of Edmonton. In the event that the Fire Station is not required by the City, the landowner will be allowed to rezone the site for development as a Medium Density Residential use without amending this plan.

3.9.1 Community Services Policies

Objective 30: Accommodate future development of institutional, civic, and community services.

Policy 30.1 Institutional, civic, and community services shall be developed based on assessed requirements.

Policy 30.2 As private educational institutions are not included in the City's joint-use agreement, such institutions shall not be located abutting public park spaces, and shall accommodate their open space requirements on-site.

Implementation: Figure 10: Community Services illustrates the location of lands designated for Community Services. If additional institutional uses are proposed, additional technical studies may be required by the City to demonstrate the site can accommodate the additional demands generated by the use. The location of the proposed additional institutional uses will also be reviewed by the City at the rezoning stage. Appropriate zones in the *Zoning Bylaw* will guide the development of these sites, with the Development Officer having regard for site design, landscaping, parking areas, building articulation, and transitioning with other land uses at the development permit stage.

The Fire Station will require further discussions with the City and Fire Rescue Services to ultimately determine its location, with discussions with the landowner to finalize the purchase agreement for the land.

3.10 LAND USE AND POPULATION STATISTICS

TABLE 5: LAND USE STATISTICS

	Area (ha)	% of GA				
GROSS AREA	311.4	100.0%				
Arterial Roadway	18.5					
Natural Area (ER)	26.4					
Natural Area Buffer (ER) to be determined	45.6					
Pipeline R/W	0.6					
GROSS DEVELOPABLE AREA	220.3	100.0%				
Town Centre Mixed Use ¹	2.6	1.2%				
Mixed Use Commercial ²	6.9	3.1%				
Community Commercial	4.4	2.0%				
Neighbourhood Commercial	0.7	0.3%				
Parkland, Recreation, School (Municipal Reserve)	26.7	12.1%				
<i>School / Park (MR)</i>	17.7					
<i>Pocket Park (MR)</i> ³	1.0					
<i>Urban Village Park (MR)</i>	3.6					
<i>Natural Area (MR)</i>	4.5					
Parkland (Non-MR) ⁴	2.2	1.0%				
Institutional / Residential Mixed Use ⁵	3.4	1.5%				
Civic Use ⁶	1.2	0.6%				
90% of Non ER on City Owned Parcels ⁴	5.11	2.32%				
Transportation @ 20%	44.1	20.0%				
Stormwater Management Facilities	15.2	6.9%				
TOTAL Non-Residential Area	112.6	51.1%				
Net Residential Area (NRA)	107.8	48.9%				
RESIDENTIAL LAND USE AREA, UNIT, AND POPULATION COUNT						
Land Use	Area (ha)	Units/ha	Units	People/Unit	Population	% of NRA
Low Density Residential	57.8	25	1,446	2.8	4,049	53.7%
Street-Oriented Residential	11.6	35	405	2.8	1,134	10.7%
Medium Density Residential	21.8	90	1,963	1.8	3,533	20.2%
Potential Development Area (MDR)	0.7	90	66	1.8	118	0.7%
Mixed Use Residential ²	10.4	45	467	2.8	1,308	9.6%
Town Centre Mixed Use Residential ^{1 7}	5.4	90	490	1.8	881	5.1%
Total Residential	107.8		4,836		11,023	100%

SUSTAINABILITY MEASURES

Population Per Net Residential Hectare (ppnrha)	102.3
Units Per Net Residential Hectare (upnrha)	44.9
Units Ratio (Low Density Residential and Street-Oriented Residential / Medium Density Residential, Mixed Use Residential, and Town Centre Mixed Use Residential)	39.7% / 60.3%
Population (%) within 500m of Parkland	100.0%
Population (%) within 400m of Transit Service	100.0%
Population (%) within 600m of Commercial Service	97%

PRESENCE/LOSS OF NATURAL FEATURES

Protected as Environmental Reserve (ha)	72.0
Conserved as Naturalized Municipal Reserve (ha)	4.5
Protected through Other Means (ha)	0.7
Lost to Development (ha)	4.3

STUDENT GENERATION STATISTICS

Level	Public	Separate	Francophone	Total
Elementary School	455	228	250	933
Junior High School	228	114	125	467
Senior High School	228	114	125	467
Total	911	456	500	1,867

¹ The total area of this designation is 8.56 ha, with 0.50 ha intended for a future Pocket Park (MR). The assumed split between residential and non-residential (retail and office) land uses is assumed as 67:33 respectively.

² The total area of this designation is 17.31 ha. The assumed split between residential and non-residential (retail and office) land uses is assumed as 60:40. Each Mixed Use site is expected to have a minimum residential density of 35 du/ha and a minimum commercial floor area ratio of 0.25. Development of these sites may happen in stages allowing for sites to reach or exceed these minimum densities over time.

³ Includes a potential pocket park up to 0.50 ha in the northeast of the Plan Area (size TBD).

⁴ Parkland (Non-MR) includes the remaining 10% of Non ER on City Owned Parcels (0.57 ha)

⁵ The total area of this designation is 5.63 ha. The assumed split between residential and institutional land uses is assumed as 40:60. The residential portion of this designation is accounted for in Medium Density Residential.

⁶ The Civic Use site (Fire Station) is identified as a Medium Density Residential site with an asterisk on the Land Use Concept.

⁷ Units/ha is an average between the 125 units/ha for development 0-200m and 63 units/ha for development 200-400m from the Transit Centre respectively.

SECTION 4

TRANSPORTATION & SERVICING

4

TRANSPORTATION & SERVICING

4.1 ROADWAY NETWORK

The Meltwater Neighbourhood's roadway network proposes an internal circulation system connected to the existing and planned roadway networks, in accordance with City of Edmonton's guidelines and standards. A hierarchy of arterial, collector and local roadways is intended to facilitate the efficient movement of vehicular traffic. Due to the unique natural landscape that encompasses much of the neighbourhood, alternative roadway cross sections will be explored that align with the Complete Street Guidelines.

4.1.1 Regional Network

50 Street SW and Ellerslie Road SW provide the Meltwater Neighbourhood with direct connections to the Edmonton Metropolitan Region, major transportation centres, and employment areas through Edmonton's regional transportation network. These roadways include the QEII, Anthony Henday Drive, and Whitemud Drive.

4.1.2 Arterial Roadways

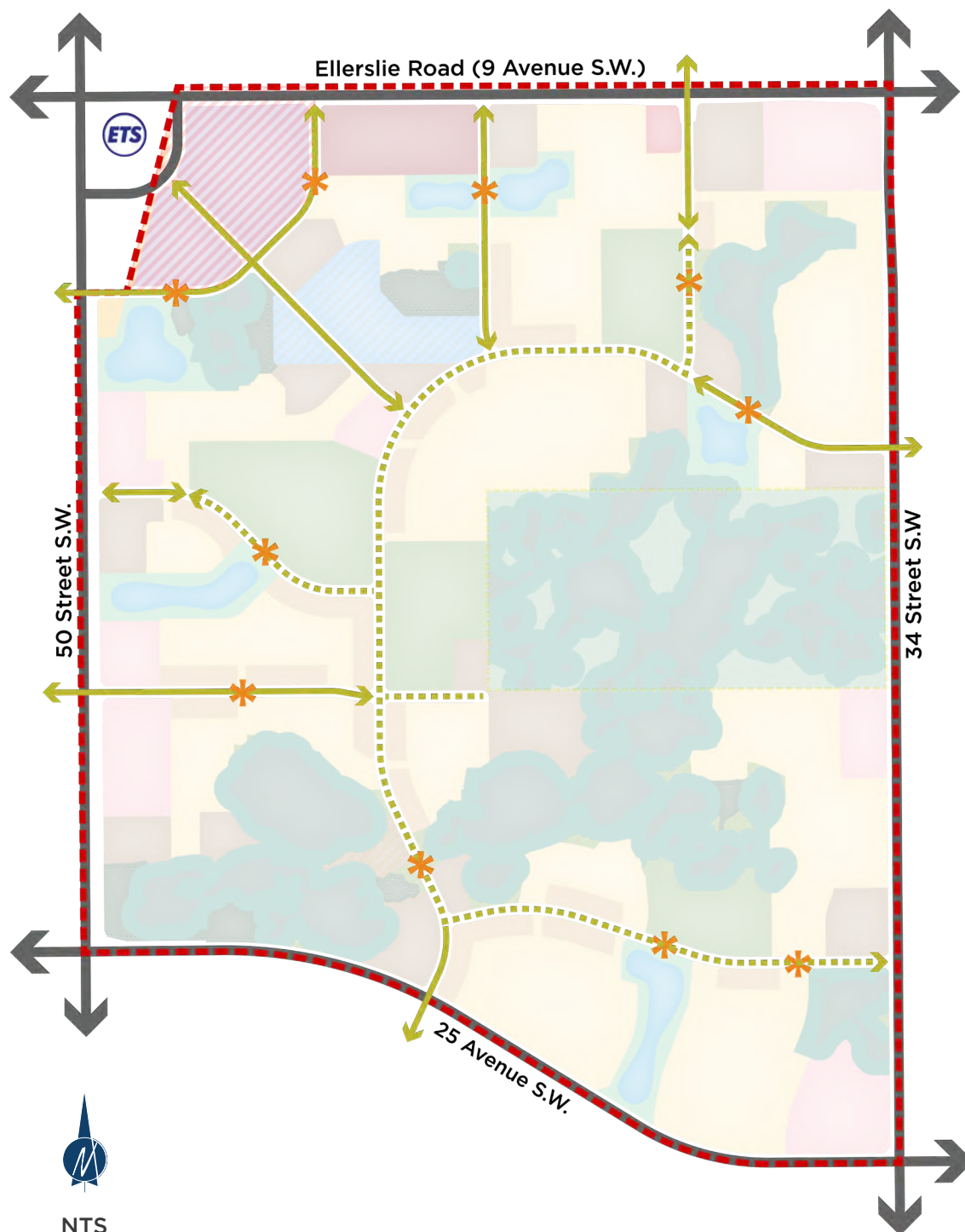
The plan area is surrounded by existing and planned arterial roadways; Ellerslie Road SW, 50 Street SW, 25 Avenue SW, and 34 Street SW. These arterial roadways facilitate the movement of intra and inter-municipal traffic, and generally have limited direct access to adjacent land uses.

4.1.3 Internal Roadway Network

The internal roadway network includes both collector roadways and local roadways. Collector roadways provide efficient and convenient access to residential areas, while conserving the natural areas through minimal crossings. Local roadways will offer safe and convenient access throughout the neighbourhood. They maintain a limited role in the overall movement of traffic. Roadways will be designed in accordance to the Complete Street Guidelines. One segment of the collector roadway network connects the northwest and southeast portions of the neighbourhood, crossing the Emerald Crescent Parkway. This segment will be required to sensitively integrate and cross adjacent Natural Areas. To achieve this, the roadway is proposed to gradually narrow from a typical collector roadway to one that offers more prominent boulevards. The landscaping within the boulevards will look to pull the natural vegetation palette from the surrounding context, incorporate low impact development principles, and provide an urban forest experience for active transportation users. Further studies, including a Site Specific Natural Area Management Plan (SSNAMP) will help inform the design of the roadway.

11

FIGURE ROADWAY TYPOLOGIES



- NSP Boundary
 - ETS Future Transit Centre / Park & Ride
 - Arterial Roadway
 - Collector Roadway*
 - * Mid-Block Crossing
- *Dashed lines indicate the "Safe Routes to School"

4.1.4 Transportation Policies

Objective 31: Establish an integrated roadway network through the City of Edmonton's road hierarchy system.

- | | |
|-------------|---|
| Policy 31.1 | Lands within the neighbourhood, except where exempted, shall be subject to an Arterial Roadway Assessment to cost share roadway facilities needed to service the area. |
| Policy 31.2 | A well-integrated system of arterial, collector, and local roadways shall be established for vehicular and pedestrian circulation that also discourages cul-de-sacs within the neighbourhood boundaries and the adjacent neighbourhoods. |
| Policy 31.3 | Opportunities for roadways to be developed with innovative and/or alternative standards that follow the Complete Street Guidelines shall be explored. |
| Policy 31.4 | Boulevard and/or median landscape treatment shall be constructed at main entry points, where possible. |
| Policy 31.5 | Wildlife mitigation passages shall be provided to support wildlife connectivity where the roadway network bisects retained Natural Areas and other open spaces (including parks, school sites, and stormwater management facilities) internally and between neighbourhoods. |

Implementation: Figure 11: Roadway Typologies illustrates the transportation network. Road right-of-way shall be dedicated to the City of Edmonton in accordance with the Municipal Government Act at the subdivision stage of development. Roadways shall be designed in accordance with the City of Edmonton's standards, unless innovative cross sections are proposed and approved by the City.

Timing of arterial roadway construction will be discussed with the City to identify a strategy that balances level of service and financial viability of the development of the neighbourhood. Prior to development of the Meltwater NSP, the Arterial Roads for Development Bylaw 14380 shall be amended to include the Decoteau catchment basin.

Figure 6: Green Network illustrates the location of wildlife mitigation passages that will be designed based on the recommendations in the Phase II Ecological Network Report and consultation with the City, following the *Wildlife Passage Engineering Design Guidelines*. The City will review the design of wildlife mitigation passages and roadway cross sections at the concept plan stage for arterials, and at subdivision for other roadways.

Objective 32: Design collector roadways to provide safe routes to school, and minimize shortcutting.

- | | |
|-------------|---|
| Policy 32.1 | The number of lots having direct access onto a collector roadway shall be determined at the subdivision stage and shall not exceed 30%. Front driveways shall not be permitted across from school and park sites. |
| Policy 32.2 | Traffic calming techniques shall be employed to reduce automobile speeds, minimize shortcutting, increase pedestrian safety, and improve the streetscape, where possible. |

Implementation: Figure 12: Active Modes Network identifies key pedestrian crossing locations. Traffic calming measures, such as raised intersections or curb extensions, will be included at these locations and may be included elsewhere in the neighbourhood, where appropriate, along collector roadways. Details will be confirmed with the City prior to development.

Objective 33: Provide noise attenuation for low density residential uses abutting major transportation corridors.

- Policy 33.1 Where required, appropriate noise attenuation shall be provided for residential uses adjacent to Ellerslie Road, 50 Street, 34 Street, and 25 Avenue.
- Policy 33.2 Higher density development should be located abutting major transportation corridors to provide active streets.

Implementation: The City shall determine if a noise attenuation assessment is required for residential development at the subdivision stage, in accordance with the *Urban Traffic Noise Policy C506*.

Objective 34: Preserve and maintain the Natural Area connection where collector roadways cross the Emerald Crescent.

- Policy 34.1 An alternative roadway cross section shall be explored to preserve and maintain the ecology connection of the Natural Area.
- Policy 34.2 Landscape treatments adjacent to Natural Areas shall be naturalized.

Implementation: The collector roadway design will be submitted for review and consideration by the City at the subdivision stage.

4.1.5 Transit Service

The collector and arterial roadway network are designed to accommodate interim and future transit service. The collector roadway network includes connections to adjacent neighbourhoods to provide a logical extension of these services. Bus stop locations will be determined when transit is extended into the plan area and in the subdivision process.

4.1.6 Transit Policies

Objective 35: Support transit accessibility throughout the neighbourhood.

- Policy 35.1 Residential land uses shall be located within walking distance of a transit route.
- Policy 35.2 Bus shelters should be considered along major transit corridors.
- Policy 35.3 A high level of pedestrian connectivity shall be provided to the Transit Centre.
- Policy 35.4 Transit infrastructure shall be considered in the staging of the ultimate design of arterial roadways in and adjacent to the neighbourhood.
- Policy 35.5 Transit looping should be considered in the development of staging for the neighbourhood.
- Policy 35.6 Transit infrastructure should be considered in the staging of the ultimate design of arterial roadways in and adjacent to the neighbourhood.

Implementation: Edmonton Transit Service will determine the routing for public transit along all arterial and collector roadways identified for future transit.

Shared use paths along utility corridors and other pedestrian connections along collector and local roadways shall provide access to the transit facilities.

4.2 ACTIVE TRANSPORTATION NETWORK

A continuous network of sidewalks and shared use paths have been designed to accommodate pedestrians and cyclists, and provide connectivity to various land uses, destinations, and focal points. The design and provision for pedestrian and cycling routes will connect residents to employment, services, and amenities throughout the neighbourhood.

4.2.1 Active Transportation Policies

Objective 36: Develop a continuous and convenient network of sidewalks and pathways for pedestrians and cyclists to neighbourhood amenities, services, and the surrounding neighbourhoods.

- | | |
|-------------|---|
| Policy 36.1 | A network of hard-surfaced shared use paths and walkways shall be provided to promote walkability, cycling, and access to park and open spaces, natural areas, transit facilities, and neighbourhood amenities. |
| Policy 36.2 | In Natural Areas, shared use paths shall have low-impact granular surfaces to provide permeability and minimize runoff. |
| Policy 36.3 | Shared use paths shall connect to existing networks in adjacent neighbourhoods. |
| Policy 36.4 | Mid-block crossings shall be designed to facilitate pedestrian movements between neighbourhood amenities. |
| Policy 36.5 | Pedestrian crossings should be designed with minimum crossing distances and maximum visibility. |

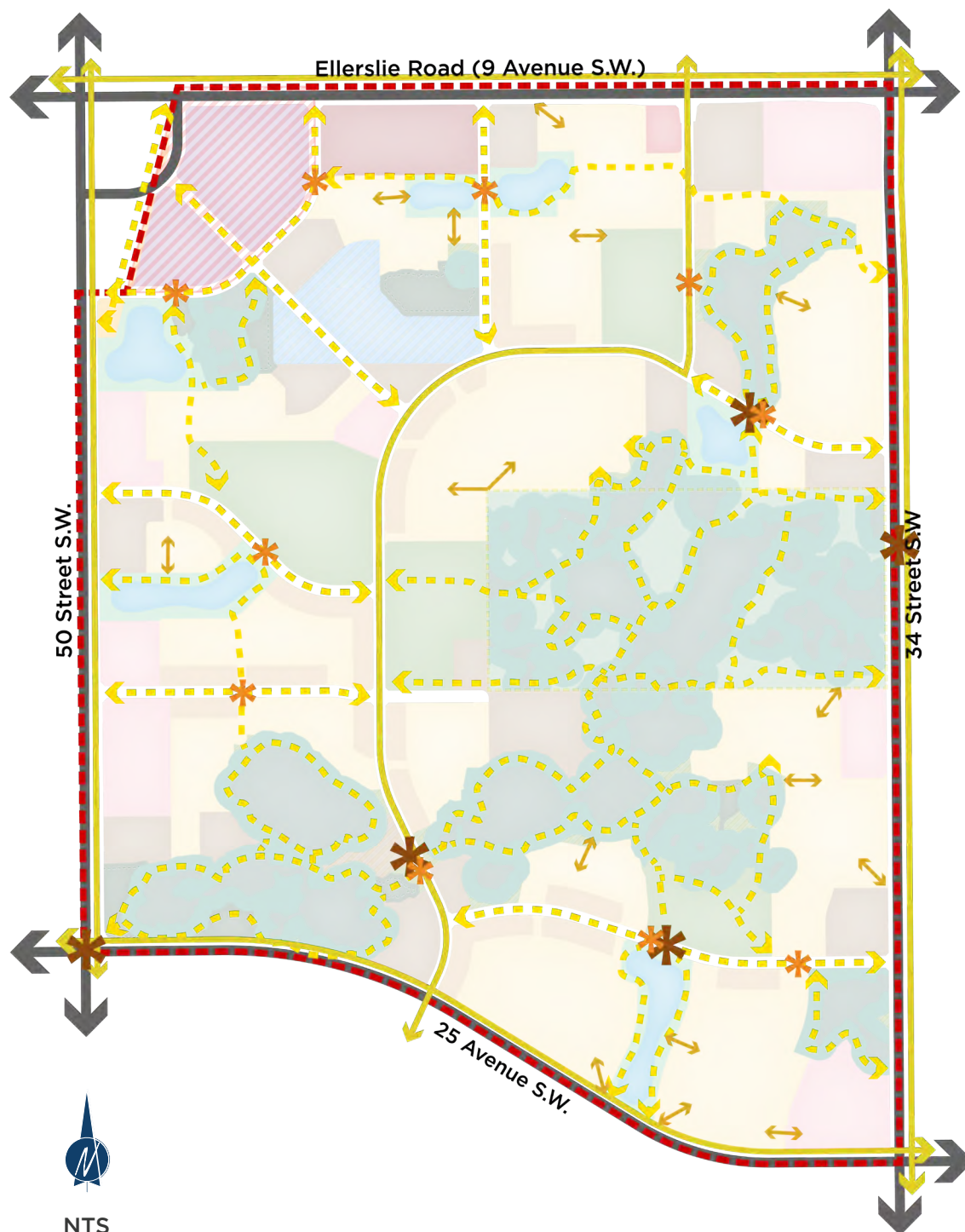
Implementation: Figure 11: Roadway Typologies illustrates the arterial and collector roadway network, and their connection to adjacent neighbourhoods. The configuration of local roadways will be determined and reviewed at the subdivision stage. The Subdivision Authority should have regard for the dedication of walkways to promote walkability and appropriate access to neighbourhood amenities and transit facilities.

Shared Use Paths within utility corridors will be explored at the rezoning and subdivision stage. If the permission for a shared use path and walkway is granted by the utility companies, the design will be guided by the City's *Construction & Design Standards* at the subdivision stage.

Figure 12: Active Modes Network illustrates the conceptual network throughout the entire neighbourhood. Shared Use Paths within Natural Areas shall be further explored by the City to ensure the preservation of the significant natural features. These details will be determined at the Subdivision or Development Permit stages. The Subdivision Authority and/or Development Officer should have regard to the impacts of developing Shared Use Paths in and around the Natural Areas.

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FIGURE ACTIVE MODES NETWORK



- - - NSP Boundary
- Arterial Roadway
- - - Active Modes Network*
- Active Modes Linkages
- Shared Use Path
- * Mid-block Crossing
- * Wildlife Mitigation Passage

**Active Modes Network through Natural Areas is conceptual*

**NETWORK OF HARD
SURFACED SHARED USE PATHS****LOW-IMPACT SURFACES****MINIMIZED CROSSING****4.3 SERVICES**

The following sections provide a brief overview of the engineering service design concepts proposed for the Meltwater NSP. A more detailed analysis and discussion is provided in the Meltwater Neighbourhood Design Report (NDR).

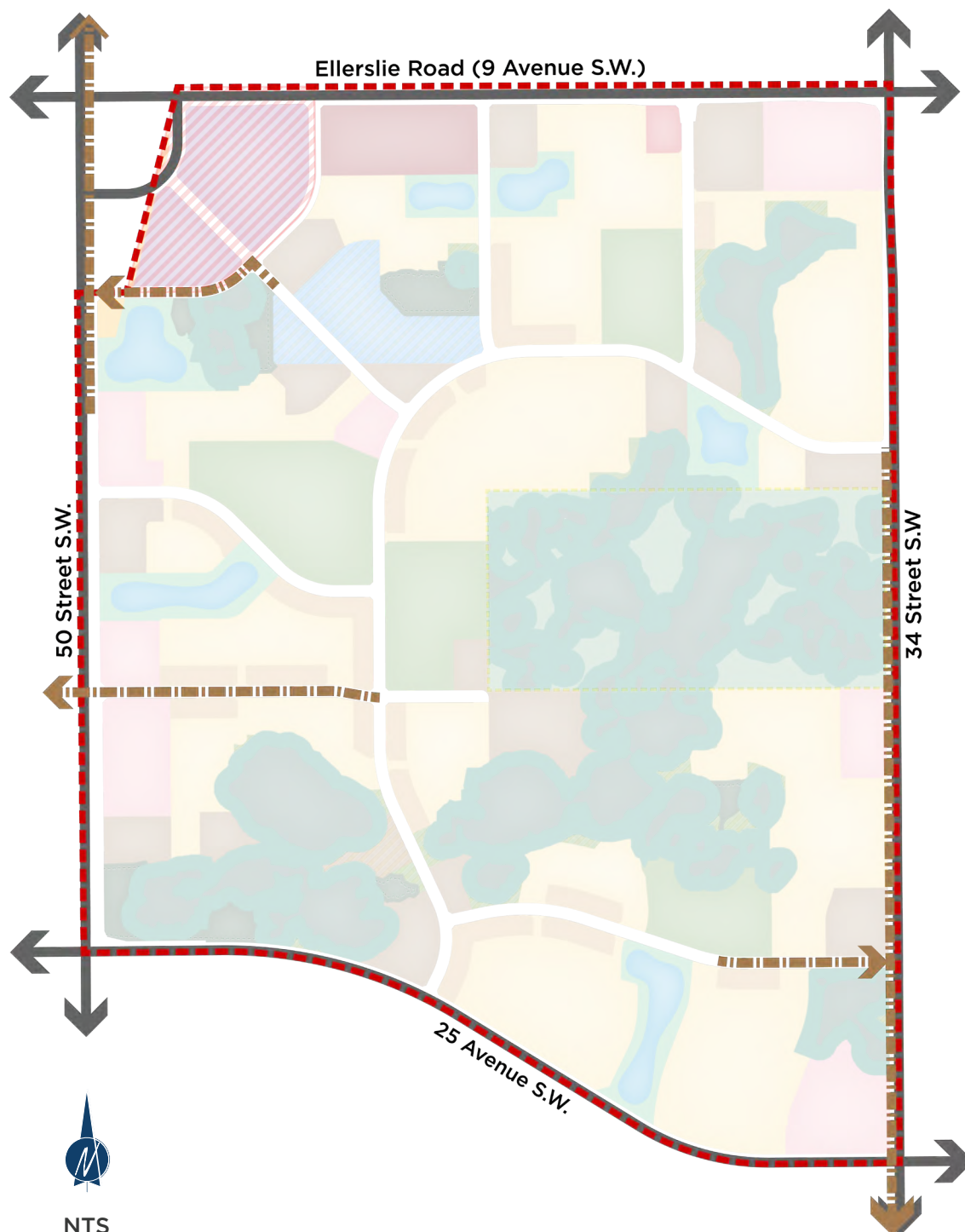
4.3.1 Sanitary

The flow for the sanitary system designed for the neighbourhood ultimately moves to the northwest, west, and southeast. The northwestern portion of the Plan Area will be piped to the 50 Street right-of-way and then northwards to the Transportation and Utility Corridor, and westward within the TUC. The western portion of the Plan Area will be piped to the Walker Neighbourhood, connecting to the existing sanitary trunk sewer. This trunk is piped to 66 Street right-of-way, and then northwards to the Transportation and Utility Corridor as well. Finally, the eastern side of the plan area will be piped to 34 Street right-of-way, and then southward to the 41 Street right-of-way.

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FIGURE SANITARY SERVICING

- NSP Boundary
- Arterial Roadway
- Sanitary Trunk



4.3.2 Stormwater

There are six stormwater management facilities proposed for the Plan Area. These facilities have been strategically positioned to take advantage of the Plan Area's natural site topography and drainage patterns, to address land ownership and staging considerations, and to maintain the Natural Areas' pre-development intake. Stormwater will be conveyed using a system of interconnecting pipes directed towards a trunk outfall situated within Ellerslie Road and ultimately discharged further west into the Blackmud Creek.

4.3.3 Water

Water service will be provided through the existing watermain located along 50 Street and the existing quaternary system transmission main along Ellerslie Road. A booster station is proposed along 50 Street and Ellerslie Road. Water servicing has been designed to provide peak hour flows and fire flows for residential and commercial uses. Water looping will be provided in accordance with the requirements of EPCOR Water. A Hydraulic Network Analysis was submitted to EPCOR Water for review and approval.

4.3.4 Shallow Utilities

Power, gas, and telecommunication services are located within proximity to the Plan Area, and will be provided by the respective utility operators concurrently with development.

4.4 DEVELOPMENT STAGING

Development will commence along the arterials roads: Ellerslie Road and 50 Street, as infrastructure to service these lands have already been extended from previous developments. Development will likely occur along the arterial roads, developing from the northwest both west and south, then inwards towards the southeast.

4.4.1 Development Staging Policies

Objective 37: Ensure that the Meltwater Neighbourhood is developed in an efficient, contiguous, and staged fashion.

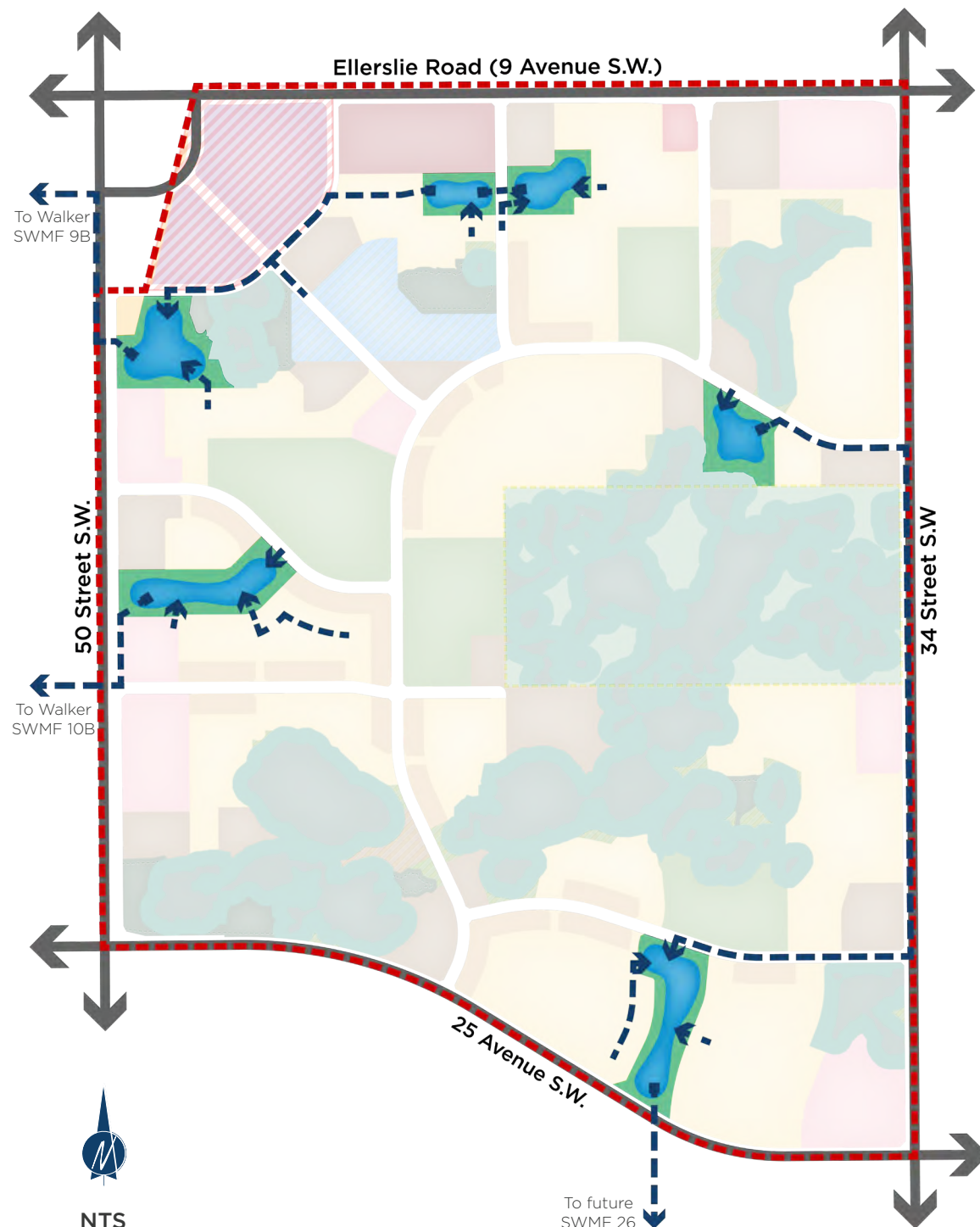
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|-------------|--|
| Policy 37.1 | Infrastructure shall be provided in a phased approach to accommodate the logical extension of services. |
| Policy 37.2 | Shallow utilities shall be extended into the neighbourhood as required. |
| Policy 37.3 | Opportunities to utilize existing arterial roadways on interim bases should be explored to support an efficient and cost effective staging of the neighbourhood. |

Implementation: Figure 16: Staging identifies the anticipated sequencing of the Meltwater neighbourhood. Engineering drawings and servicing agreements shall be required to be approved prior to the installation of water, sanitary, and stormwater servicing. Shallow utilities shall be installed through the execution of servicing agreements.



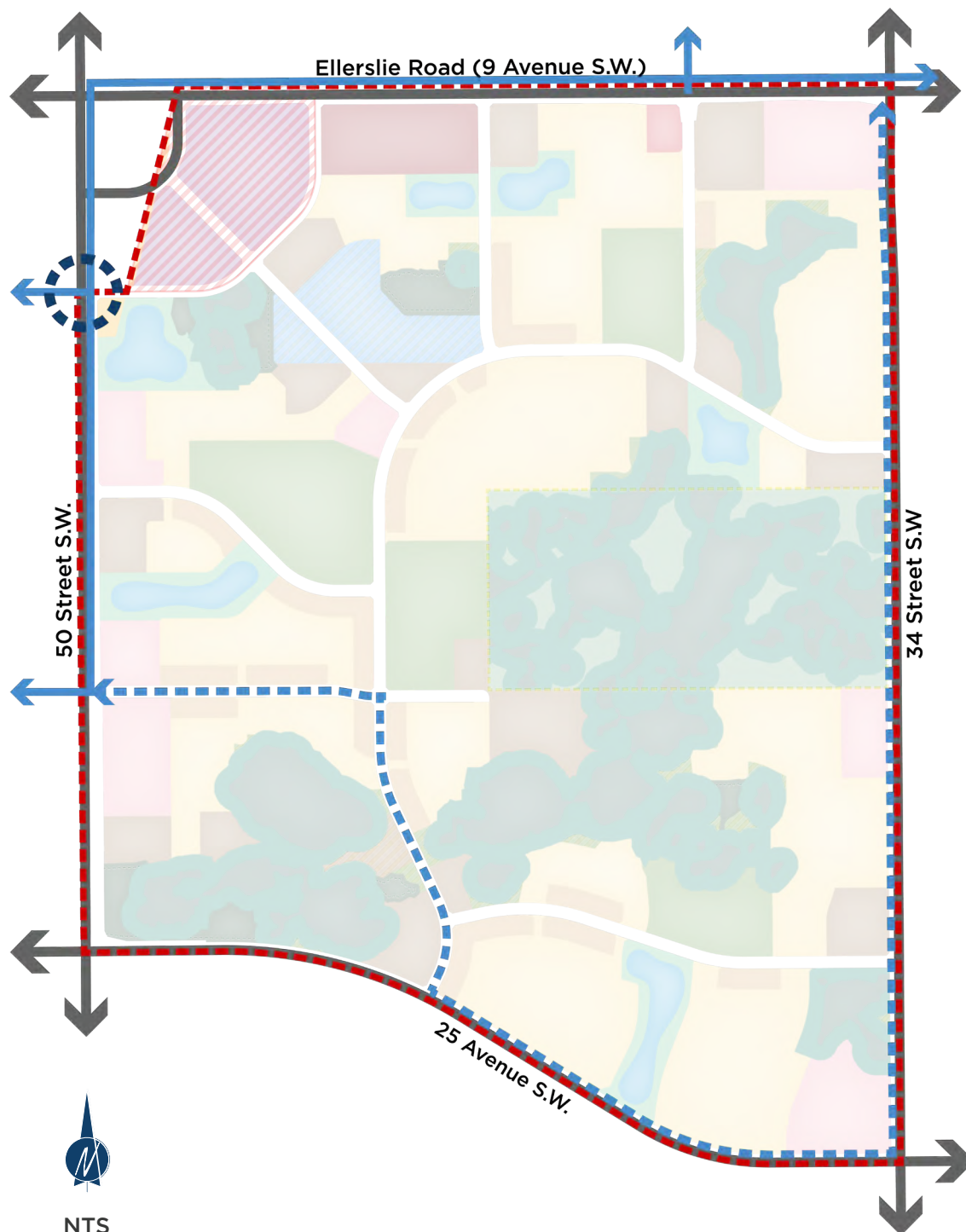
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FIGURE STORMWATER SERVICING



- NSP Boundary
- Arterial Roadway
- - Inlet
- - Outlet
- Stormwater Management Facility


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FIGURE
WATER SERVICING

- NSP Boundary
- Arterial Roadway
- Existing Water Main
- Future Water Main
- Potential Future Booster Pump Station

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FIGURE STAGING

-  NSP Boundary
-  Arterial Roadway
-  General Direction of Development

