

# *Riverview Neighbourhood #1 Neighbourhood Structure Plan*

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*Office Consolidation September 2015*

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*Prepared by:*

*Current Planning Branch  
Sustainable Development  
City of Edmonton*

Bylaw 17269 (as amended) was adopted by Council in September 22, 2015. In September 2015, this document was consolidated by virtue of the incorporation of the following bylaws which were amendments to the original Bylaw 17269.

*Bylaw 17269*      Approved September 22, 2015 (to adopt the Riverview Neighbourhood #1 Neighbourhood Structure Plan)

## **Editor's Note:**

This is an office consolidation edition of the Riverview Neighbourhood Structure Plan, Bylaw 17269, as approved by City Council on September 22, 2015. This edition contains all amendments and additions to Bylaw 17269.

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

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

City of Edmonton

Sustainable Development



# Riverview

## Neighbourhood 1

## Neighbourhood Structure Plan

Prepared for:  
Walton Development and Management LP  
Qualico Developments  
Melcor Developments Ltd.

July 6, 2015



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# 1 INTRODUCTION

## 1.1 PLANNING FRAMEWORK AND PLAN AREA

The *Municipal Government Act* (MGA) allows municipalities to establish a Municipal Development Plan (MDP) and to plan a framework for neighbourhoods through an Area Structure Plan (ASP). The City of Edmonton's MDP, *The Way We Grow*, designates Riverview as an Urban Growth Area, which is planned to accommodate much of the city's residential growth.

The Riverview ASP was approved by Edmonton's City Council in July 2013, through the adoption of Bylaw 16407. Riverview 1 is identified in the Riverview ASP as Neighbourhood 1. The Riverview 1 Neighbourhood Structure Plan (NSP) has been prepared in response to current and anticipated market demands in the Edmonton area as well as the aspirations of the landowners in the plan area. The preparation of this NSP has been guided by existing City of Edmonton statutory plans and policy documents.

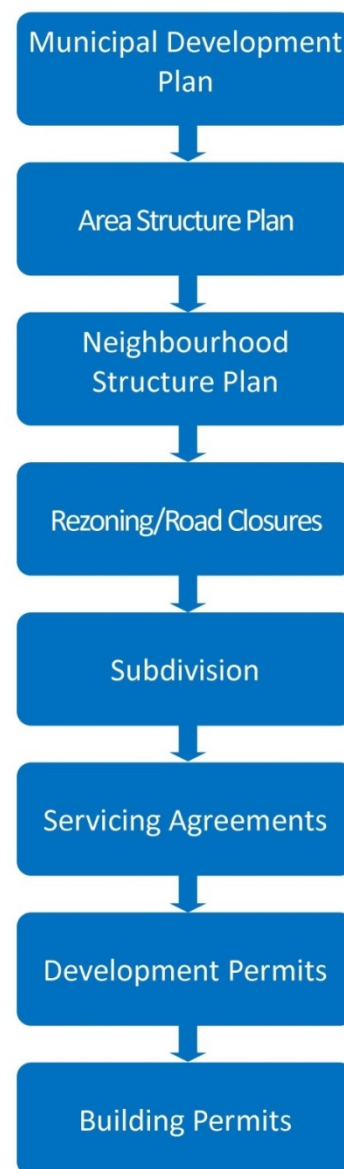
The purpose of this NSP is to establish a framework for future land use planning, and the provision of municipal infrastructure, services and amenities in conformance with established planning policies, objectives and requirements of the City of Edmonton and based on the characteristics and opportunities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

This NSP describes:

- The general pattern of development and subdivision;
- The location, configuration and size of various land uses, including residential, commercial, parks and open spaces, and public utility land uses;
- The anticipated density of residential development;
- The pattern and alignment of the arterial and collector roadway and pedestrian walkway systems; and,
- Detailed servicing schemes.

The Riverview 1 NSP is the first and northernmost of five neighbourhoods described in the Riverview ASP and encompasses approximately 280 hectares (ha) of land located in southwest Edmonton and defined by the following boundaries, (see Figure 1: Location and Figure 2: NSP Boundaries):

- North – Wedgewood Creek/Anthony Henday Drive
- East – 23 Avenue/Anthony Henday Drive
- South – 23 Avenue
- West – Winterburn Road / 215 Street NW (City Boundary)



In relation to planned and developing neighbourhoods, Riverview 1 represents a logical extension of infrastructure and services. Development in Riverview 1 is expected to commence in 2015 and should develop over the next 10 to 15 years.

## 1.2 AUTHORIZATION

As per policy 3.2.1.11 of The Way We Grow, Edmonton's Municipal Development Plan (MDP), all NSPs within the Edmonton's Urban Growth Areas require Council authorization and compliance with the Growth Coordination Strategy, Integrated Infrastructure Management Plan, and City-Wide Food and Agriculture Strategy. A report was prepared for City Council consideration and on August 28, 2013, Edmonton City Council provided authorization for work to commence on the Riverview 1 NSP.

The Riverview 1 NSP was adopted by Edmonton City Council on (insert date) as Bylaw (insert #) in accordance with Section 633 of the *Municipal Government Act* (MGA). The Riverview 1 NSP complies with all higher documents including the Riverview ASP.

## 1.3 STAKEHOLDER CONSULTATION

The consultation process proceeded in accordance with Edmonton's public involvement process and guidelines (Policy C513). All affected landowners and community leagues in the area have been notified in accordance with the City of Edmonton's policies and application requirements for new neighbourhood plans. The following is a summary of consultation activities that took place.

### 1.3.1 PRE-APPLICATION CONSULTATION

A technical advisory session was held on October 9, 2013. This session involved relevant review agencies and civic departments. The purpose of this session was to present neighbourhood information, identify technical constraints, discuss application process, and to receive general comments from the review agencies.

On October 28, 2013, a visioning session was held with key civic departments and the participating land owners. The purpose of this session was to present a preliminary neighbourhood concept and the integration of *Designing New Neighbourhoods: Guidelines for Edmonton's Future Residential Communities*. The commentary in this session focused on the:

- Vision, land use integration and development of the town centre;
- Integration of multi-modal transportation and transit;
- Establishment of quality public open spaces; and
- Protection of the Wedgewood Creek, North Saskatchewan River and ravine system.

These sessions guided the development of the principles and vision for the Riverview 1 NSP development.

A Riverview landowner open house was held on February 25, 2014, which invited all affected landowners and stakeholders within Riverview 1 to attend. This event provided the opportunity for landowners and residents within the neighbourhood to receive information regarding development staging, timing and processes as well as provide feedback on the preliminary land use concept.

### 1.3.2 ADVANCED NOTIFICATION

Consistent with Policy C513, the City of Edmonton's Public Involvement Policy, advance notification was sent to Parkland County and all neighbourhood landowners and residents on December 17, 2014, advising them of the application's submission and encouraging them to contact either Sustainable Development or the applicant (Stantec Consulting Ltd.) for further questions or to communicate any possible concerns.

### **1.3.3 PUBLIC MEETING**

A public meeting hosted by Sustainable Development was held to review the draft Plan on January 28, 2015. Mailed notification letters were sent to landowners in and surrounding the NSP area advising of this meeting. The purpose of the meeting was to provide an update on the proposed Plan and the planning process followed to date, and to hear from attendees regarding their questions, comments and concerns. All written comments and feedback received at the public meeting have been summarized in Sustainable Development's report to City Council.

### **1.3.4 PUBLIC HEARING**

In accordance with the MGA, landowners have been notified of the Public Hearing and were given the opportunity to provide written comments or register to speak in front of City Council. A public hearing was held in order to hear representations made by parties affected by the proposed bylaw and to receive approval by Council.

## **1.4 INTERPRETATION**

All maps, map symbols, boundaries, and images, contained within the Riverview 1 NSP shall be considered conceptual and interpreted as approximate unless otherwise specified in the plan, or coincide with clearly recognizable physical features or fixed (i.e. legal) boundaries.

A statement containing "shall" or "will" is mandatory and must be implemented. Where a policy proves impractical or impossible, an applicant may apply to amend the Plan. A statement containing "should" is an advisory statement and indicates the preferred objective, policy and/or implementation strategy. If the "should" statement is not followed because it is impractical or impossible, the intent of the policy may be met through other agreed-upon means, without formal plan amendment.

## **1.5 AMENDMENT**

Policies, text and mapping information contained within the Riverview 1 NSP may be amended from time to time in order to remain current and up-to-date in response to broader or more specific issues affecting the plan area.

Any change to policy, text or mapping information contained within the Riverview 1 NSP shall be in accordance with the *Municipal Government Act*, the *Riverview Area Structure Plan (Bylaw 16407)*, and the terms of reference for the preparation and amendment of residential NSPs.

## 2 NEIGHBOURHOOD CONCEPT

### 2.1 GENERAL PLAN CONTEXT

Riverview 1 is one of five neighbourhoods in the Riverview ASP, and covers approximately 280 hectares (ha). Currently, Riverview 1 consists of undeveloped agricultural land and existing country residential development (see Figure 2: NSP Boundaries).

The Riverview 1 NSP has been prepared in response to current and anticipated commercial and residential market demands in the Edmonton region, a review of best practices in land use planning, as well as the aspirations of the various landowners in the plan area.

This NSP area is designated as Urban Growth Area within the Municipal Development Plan, *The Way We Grow*, to accommodate a portion of the anticipated growth within the city of Edmonton. This neighbourhood also plans to provide significant employment and commercial land uses catering to its residents and adjacent communities.

The NSP is designed in accordance with City of Edmonton servicing standards, creating a well-defined planning unit that represents a logical extension of infrastructure and services expanded from Edgemont neighbourhood, north of Wedgewood Creek. Development staging and extension of infrastructure will be contiguous, efficient, and economical while having regard for potential environmental and ecological impacts.

#### 2.1.1 TECHNICAL REVIEW

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

Technical studies, including but not limited to, Environmental Site Assessment, Risk 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 may be required prior to rezoning of non-participating lands. An amendment to the Riverview 1 NSP and Riverview ASP may also be necessary to maintain accuracy and a comprehensive approach to neighbourhood planning.

#### 2.1.2 LAND OWNERSHIP

The NSP was prepared on behalf of three private corporations, who have ownership of the majority of lands within the Plan area at the time of plan preparation. The remaining parcels are held by non-participating landowners and although not directly participating in the NSP process, have been consulted through the plan preparation process.

#### 2.1.3 EXISTING LAND USES

Riverview 1 has historically been used for agricultural purposes. A country residential subdivision has been developed along Wedgewood Creek, approximately 14 ha in size, located east of 199 Street and north of Woodbend Wynd. The balance of the plan area is comprised of larger tracts of land used for the cultivation of crops. A number of farmsteads remain within the neighbourhood consisting of various accessory buildings and storage facilities.

#### 2.1.4 TOPOGRAPHY

The topography of land within the Riverview 1 neighbourhood can be described as flat to rolling, though gently sloping from south to north and west to east towards the Wedgewood Creek ravine and Anthony Henday Drive. Elevations through the plan area vary between 683 m and 690 m. The neighbourhood's topographic contours are illustrated in Figure 3: Site Contours.

### **2.1.5 SOIL AND GROUNDWATER CONDITIONS**

As part of the Plan preparation, a geotechnical investigation was conducted for the participating lands contained within the Plan area. The Geotechnical Report (Hoggan Engineering & Testing (1980) Ltd, 2014) has been submitted to the City of Edmonton under separate cover and has been reviewed by the City of Edmonton's Geotechnical Engineer.

Soils within the Riverview 1 generally consist of 50-750 mm of topsoil, underlain by a native deposit of lacustrine clay material and bedrock. The depth of bedrock varies throughout the plan ranging from 14m to 40m and classified as either clay shale or sandstone.

The groundwater table within the neighbourhood is variable, with low to high table levels. The soil and groundwater conditions at this site are generally feasible for residential development. However, the presence of a high water table and underlying wet, silty soils may cause construction challenges in some locations. Additional geotechnical investigation and analysis will be required to provide sufficient technical detail at zoning or subdivision stage to the satisfaction of the City of Edmonton.

### **2.1.6 NATURAL AREAS AND ECOLOGICAL RESOURCES**

The Wedgewood Creek ravine, governed by the North Saskatchewan River Valley Area Redevelopment Plan (ARP), is a locally designated Environmentally Sensitive Area and forms a portion of Riverview 1's northern boundary. The ravine has diverse plant and animal species and is an important wildlife corridor within the North Saskatchewan River Valley and Ravine system.

The City of Edmonton's Inventory of Environmentally Sensitive and Significant Natural Areas (Geowest, 1993) does not identify any environmentally sensitive or significant natural areas within the boundaries of Riverview 1.

A Phase II Ecological Network Report (Stantec Consulting Ltd, 2014) has been submitted under separate cover and identifies the neighbourhood's various natural areas and wetlands scattered throughout the neighbourhood. This document also recommends the retention of some of the more established natural areas.

A Class 4 semi-permanent natural area containing a wetland and deep marsh vegetation, such as cattails and duckweed, is located in the east portion of the neighbourhood, north of the AltaLink ROW and west of Anthony Henday Drive. This natural area is to be retained using Environmental Reserve (ER) designation in accordance with the MGA and City Policy C531.

An upland tree stand is located adjacent to the Wedgewood Creek, north of the AltaLink ROW and west of 199 Street. This natural area is to be retained using Municipal Reserve (MR) in accordance with the MGA and City Policy C531.

### **2.1.7 SLOPE STABILITY - WEDGEWOOD CREEK RAVINE**

A Slope Stability Report (2014) has been submitted under separate cover by Hoggan Engineering & Testing (1980) Ltd. The report investigated the south bank of the Wedgewood Creek between 199 Street and 215 Street, contained within lands legally described as SW, SE & NE 6-52-25-W4M. In accordance with City Policy C542, a minimum 10m public upland area setback is provided from the Top of Bank (TOB) Line to provide public access and circulation. In addition, the slope stability report recommends a development setback distance from the TOB using a factor of safety of 1.3 to establish the Urban Development Line (UDL). In this area, a recommended setback distance of 10-20 m from the TOB line has been recommended and land between the TOB and UDL will be dedicated as Environmental Reserve (ER). The UDL has been established so that for the 150 year design period, any future slope movement will not affect the development on the upland surface and would reduce the human impact on slope stability.

### **2.1.8 ENVIRONMENTAL OVERVIEW**

An Environmental Overview (Stantec Consulting Ltd., 2014) of the Riverview area has been submitted under separate cover. The purpose of this overview is to provide a high-level assessment based on a desktop review and a focus on areas that may impact development such as areas of potential soil contamination. The City of Edmonton requires that individual landowners provide Environmental Site Assessments (ESA) prior to the rezoning stage. A Phase I ESA is meant to evaluate the location and type of surface and/or subsurface impacts that may be present on the subject site and adjacent areas. Where deemed to be required, a Phase II or Phase III ESA will further evaluate areas where contamination may be present.

#### 2.1.9 HISTORICAL RESOURCES

The preservation, conservation and integration of cultural, historical and/or archaeological resources within the Riverview area is important to retaining local history and character that may also be of regional or provincial significance. A Statement of Justification for *Historical Resources Act* requirements of lands under the ownership of the plan proponents has been completed. Non-participating landowners will be required to apply for Historical Act clearance for their respective parcels prior to rezoning. At the direction of Alberta Culture and Community Spirit (ACCS), additional review, such as through a Historical Resources Impact Assessment (HRIA) may also be required prior to development.

#### 2.1.10 WELLS AND UTILITY CORRIDORS

An AltaLink transmission corridor, containing 240 kV and 500 kV power lines, transects the neighbourhood's midpoint between Sections 6-52-25W4 and 5-52-25W4. A smaller north-south EPCOR transmission line enters the neighbourhood from the north, located along the eastern boundary of the NW¼ Sec. 5-52-25W4, and connecting perpendicular to the AltaLink corridor. These utility corridors have been identified within Figure 4: Site Constraints and Figure 5: Development Concept. Utility rights-of-way provide an opportunity to incorporate shared used paths that pass through the neighbourhood, establishing a pedestrian and ecological network internal to the neighbourhood and connecting to adjacent communities.

The plan area has experienced the exploration of natural resources, as there are several abandoned wellheads located within the eastern portion of the plan area. A review of the AER pipeline and oil well information indicates that there are five wellheads located in Neighbourhood 1, identified in Table 1: Well Site Information and illustrated in Figure 4: Site Constraints. All wellheads will be required to be surveyed prior to rezoning or subdivision to ensure the exact location and to determine required development setbacks. Development adjacent to oil, gas, and electrical facilities will comply with all applicable municipal, provincial, and federal policies and guidelines.

**TABLE 1: WELL SITE INFORMATION**

<b>Well Id</b>	00 / 03-05-052-25 W4 / 0	00 / 07-05-052-25 W4 / 0	00 / 08-05-052-25 W4 / 0	02 / 08-05-052-25 W4 / 2	00 / 09-05-052-25 W4 / 0
<b>Licence #</b>	5016	4985	4185	60394	4283
<b>Licence Date</b>	19-Jul-52	11-Jul-52	4-Feb-52	28-Sep-76	29-Feb-52
<b>Location</b>	03-05-052-25 W4	07-05-052-25 W4	08-05-052-25 W4	08-05-052-25 W4	09-05-052-25 W4
<b>Licensee</b>	n/a	Wardean Drilling Co. Ltd.	American Leduc Petroleum Ltd.	Penn West Petroleum Ltd.	Suncor Energy Inc.
<b>Spud Date</b>	22-Aug-52	13-Jul-52	3-Feb-52	2-Nov-76	5-Mar-52
<b>Final Drill Date</b>	28-Sep-52	31-Jul-52	17-Feb-52	7-Nov-76	31-Mar-52
<b>Status/ Substance</b>	Abandoned	CR-OIL ABD	CR-OIL ABD	Abandoned	Abandoned
<b>Abandoned Date</b>	30-Sep-52	7-Jul-57	17-Jul-57	22-Nov-91	4-Apr-52
<b>Total Depth (m)</b>	1650.5	1263.4	1252.1	1277.1	1294.5
<b>Abandoned Status</b>	RecExempt	RecExempt	RecExempt	RecCertified	RecExempt

#### 2.1.11 ENOCH CREE NATION INTERFACE

An urban-rural interface exists between the City of Edmonton and Enoch Cree Nation immediately west of Riverview 1. As development occurs in Riverview 1, Winterburn Road (215 Street) in its ultimate form will provide an essential north-south connection to the surrounding neighbourhoods and would provide a clear delineation between the City and Enoch Cree Nation. 215 Street is expected to be upgraded to an urban-arterial standard, with shared use path, sidewalk, street lighting, landscaping, and noise attenuation.

### 3 NEIGHBOURHOOD VISION STATEMENT

Riverview 1 is a sustainable, walkable, and complete community settled along the beautiful Wedgewood Creek ravine with an active employment hub and an extensive commercial centre. Riverview 1 respects and celebrates its unique natural landscape, while integrating the Town Centre, which enlivens the heart of the community with places to meet, eat and converse.

#### 3.1 DEVELOPMENT CONCEPT

Riverview 1 is planned to be a residential/commercial/business employment neighbourhood in west Edmonton. Its unique location, nestled along the Wedgewood Creek provides a natural ambiance that connects its residents to Edmonton's "*Ribbon of Green*", the North Saskatchewan River Valley and Ravine System. The neighbourhood's town centre commercial and business employment areas offer significant employment opportunities for the greater Riverview area and adjacent communities. These two hubs for business and retail activity are located along 23 Avenue, Riverview's main arterial road, connecting directly to Edmonton's ring road, the Anthony Henday Drive.

The following section outlines the development concept for the Riverview 1 NSP. Figure 5: Development Concept, illustrates the designated land uses based on the direction of the neighbourhood vision, which is to be further implemented through zoning and subdivision. For more detailed information on the distribution of land uses, please refer to Appendix 1: Land Use and Population Statistics.

The overall goals of the Riverview 1 NSP are intended to establish a community that:

- Creates a unique neighbourhood identity using appropriate urban design principles that also address year-round weather conditions;
- Maintains a high regard for the Wedgewood Creek ravine and its preservation;
- Offers a variety of residential uses for a range of economic levels and household types;
- Supports retail and employment uses for the neighbourhood and surrounding communities;
- Emphasizes public open spaces that encourage community interaction;
- Encourages opportunities for active and passive recreational activities;
- Achieves a balanced transportation network that provides connectivity to neighbourhood amenities and integrates an efficient transit system; and,
- Ensures a compact urban form that provides efficient and orderly infrastructure.

The neighbourhood vision statement and overall goals provide the basis for the following plan objectives and policies, which have been derived from the Riverview ASP and further refined to guide the development of Riverview 1.

## 4 PUBLIC REALM

### CONTEXT AND APPROACH

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

### 4.1 STREETSCAPES AND BUILT FORM

#### OVERVIEW AND RATIONALE

A neighbourhood's built form is important in establishing its character. It can have an impact on perceived safety and is a strong determinant of community health. Urban design also has the ability to impact pedestrian movement patterns and even human behaviour within the public realm – streets, sidewalks, parks, and other open spaces. A comfortable, human-scale and compact urban form that provides a mix of uses and housing types, connected by pedestrian and bicycle friendly streets, will encourage residents to walk and bicycle to neighbourhood amenities instead of using their vehicles, fostering a strong sense of place and promoting active transportation. Accordingly, Riverview 1 is intended to consist of pedestrian-friendly streets and open spaces to connect land uses that are focused on community destinations, such as the Wedgewood Creek ravine or its Town Centre.



Source: Stantec

While developing a compact urban community is important, maintaining privacy and mitigating the impact of traffic noise is equally essential. Good urban design techniques will transition higher intensity uses from lower density residential uses by using careful building orientation, setbacks/stepbacks, screening and landscaping, etc. to minimize any perceived impacts making the Riverview 1 neighbourhood a comfortable place to live and to visit.

Environmental and community characteristics are also reflected in the urban form to maintain a unique identity and character, and to foster a sense of place and attachment. Designs should emphasize views into the ravine system, which is an important and character-defining feature of this neighbourhood. Interaction with the Wedgewood Creek and other open spaces will be provided to encourage activity and interaction in public spaces, such as exercising, photography, or wildlife viewing.

#### **Objective 1: Design streetscapes which are functional, pedestrian friendly, safe and form an integral and attractive component of the public realm**

Designing attractive residential streetscapes supported by built form and appropriate setbacks provide a comfortable physical environment and human-scale development. Orienting buildings towards public spaces also plays an important role in creating interesting and varied streetscapes, while increasing a sense of resident awareness of neighbourhood activities and safety.

1. Design of streetscapes should consider all-season design, public art and furniture.
2. All streets shall form part of the pedestrian network, to link key destinations such as residential areas, transit facilities, open spaces, and retail areas.
3. Encourage appropriate transitions between higher intensity (apartment housing and commercial) uses and lower density residential.
4. Neighbourhood destinations in the form of the Town Centre, park spaces, community gardens, etc. shall be designed to encourage community interactions and gathering places.



Source: Stantec

**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 alternate roadway cross sections shall be prepared at the rezoning or subdivision stage, to the satisfaction of the Transportation Services and Sustainable Development. The design of public realm shall be reviewed and developed in conjunction with the responsible civic departments to ensure the incorporation of appropriate design elements using City of Edmonton's Transit Oriented Design Guidelines, Complete Streets Guidelines and the Winter City Strategy.

## **Objective 2: Design streets and built form within 400m of the transit centre to create a transit supportive public realm**

The transit centre within Riverview Neighbourhood 3 to the south will provide a convenient bus transit option for the surrounding Riverview neighbourhoods. Development within 400m of this transit centre will be designed to support various modes of movement, including pedestrians, bicycles, transit, and vehicles.

Special design consideration will be given to 199 Street and 23 Avenue pedestrian crossings as these two arterial roadways are major barriers between neighbourhoods. In order to provide safe pedestrian connections across 23 Avenue and 199 Street, priority crossings at key intersections will be provided to encourage safe pedestrian movement across these high-traffic arterial roadways. Further, to create an active Pedestrian Zone, the streets and public gathering areas should be designed to provide convenient and safe corridors both between and through the Town Centre areas. Figure 13: Active Transportation Network illustrates the location of the Pedestrian Zone, where the streets and public spaces will be designed to encourage active transportation and a higher quality pedestrian environment.

Where possible, emphasis will be placed on the design of ground floor of buildings to provide an engaging interface with the streets and open spaces. Good site and building design contribute to a more interesting and comfortable streetscape that attracts pedestrian activity.

1. Streets and land uses within 400m of the Transit Centre shall be designed to provide a safe, convenient and attractive connection to the Transit Centre.
2. Streets within the Town Centre and Pedestrian Zone should provide a greater mix of roadway cross-sections that accommodate all modes of transport on city streets, providing access to transit facilities.
3. Attention shall be paid to ensure residential and small format retail entrances are oriented toward the street and transit facilities, and designed to a human scale, where possible.

4. Techniques to promote pedestrian-friendly streetscapes such as building orientation, transparency, scale, etc. shall be explored with the Town Centre area.

**Implementation:** Figure 13: Active Transportation Network illustrates active modes connections and public realm. Streets and land uses will conform to the City of Edmonton Transit Oriented Development Guidelines for areas within 400 m of the transit centre. The City of Edmonton's Complete Streets Guidelines should be used in the identification or cross sections for roadways within the town centre. Opportunities to improve pedestrian connectivity through the Town Centre and across arterial roadways will be explored at rezoning and subdivision stages and monitored as development continues in the Riverview area. Site planning and building design shall be reviewed at the development and building permit stages, in accordance with the Zoning Bylaw.

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### **Objective 3: Encourage innovative architectural design and building orientation that provides local place-making opportunities**

Orientation of buildings towards public areas (e.g. streets, parks) play an important part of creating interesting and varied streetscapes, while increasing a sense of resident awareness of neighbourhood activities and safety. Large building sites also have the opportunity to create interesting and creative use of space.

1. Views and public access into the Wedgewood Creek ravine shall be provided to emphasize pedestrian access and create view corridors as neighbourhood amenities.
2. Larger buildings and public spaces should be designed to be high quality and appropriately located to ensure safety, visual interest, and be integrated with the community.
3. Higher density residential, civic and commercial sites shall be designed considering building orientation and variations in façade treatment with regard to massing and human scale architecture.

**Implementation:** Site planning and building design shall be reviewed at the development and building permit stages, in accordance with the Zoning Bylaw. The design and location of buildings shall be reviewed and developed in conjunction with the responsible civic departments to ensure the incorporation of appropriate design elements using the City of Edmonton's Transit Oriented Design Guidelines, Complete Streets Guidelines and the Winter City Strategy.

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### **Objective 4: Utilize parks and open spaces to create destinations which are visually and physically accessible and aesthetically pleasing**

The location and design of parks and SWMFs provide views into the site from the abutting roadways, and thereby heighten residents' awareness of access and activities within the neighbourhood. This promotes open spaces as walking destinations and enhances their natural surveillance to prevent crime. Parks and SWMFs will be designed to serve as destinations for pedestrians and cyclists, providing passive recreation opportunities.

1. The neighbourhood shall provide road frontage and multiple points of pedestrian access to public open spaces (e.g. stormwater management facilities) to increase natural surveillance.
2. Roadway design and landscaping shall consider opportunities for maximizing views of, and access to, the Wedgewood Creek, parks and stormwater management facilities.
3. Public spaces such as parks and SWMFs shall be designed to encourage passive and active recreational opportunities.
4. Parks and SWMFs shall be designed using Crime Prevention Through Environmental Design (CPTED) principles.

5. Stormwater management facilities and parks shall be located and designed to be neighbourhood destinations, to reinforce the natural theme for the community.
6. A minimum of 50% of the Stormwater Management Facilities' perimeter shall be designed with a shared use path.

**Implementation:** Figure 5: Development Concept illustrates the location of parks and SWMFs. At the subdivision stage, parks and SWMFs will be designed with frontage onto public streets and in safe proximity to residential uses. The Subdivision Authority, in consultation with the reviewing civic departments, shall have regard for the provision of adequate street frontage abutting open spaces to maintain passive and active surveillance and enhance view opportunities.

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## 4.2 HISTORICAL RESOURCES

### OVERVIEW AND RATIONAL

A neighbourhood's historical characteristics should be conserved to maintain its unique relationship to its past and to generate a sense of place.

In review of development within Riverview 1, a Statement of Justification and/or Historic Resource Impact Assessment is to be submitted to Alberta Culture and Tourism. Considering the majority of the Riverview 1 neighbourhood has been cleared for agricultural purposes, it is unlikely to contain any structures or settlements of historical significance. As a result, the likelihood that the planned development will impact any significant historical resources is low.

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### **Objective 5: Ensure that historical, archaeological, and paleontological resources are identified, conserved, and incorporated where applicable**

Identification and protection of historical resources is important for preserving and understanding Alberta's history of the land and culture of the people who have called it home. Where applicable, development within the Riverview 1 neighbourhood will have regard for the preservation of historical, archaeological and paleontological resources identified by the City of Edmonton or Government of Alberta.

1. Statement of Justification and/or Historical Resource Impact Assessments shall be submitted and approved by Alberta Culture prior to development.
2. All historical, archaeological, and paleontological discoveries made during construction shall be reported.

**Implementation:** Pursuant to Section 31 of the *Historical Resources Act*, development proponents, builders and/or their representatives are required to report the discovery of any archaeological, historic period or paleontological resources, which may be encountered during construction. Lands which have not received *Historical Resources Act* clearance will be required to submit and receive sign-off from Alberta Culture and Tourism prior to rezoning.

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## 4.3 ALL WEATHER DESIGN

### OVERVIEW AND RATIONALE

Neighbourhoods designed in consideration of year-round weather conditions will provide opportunities for residents to enjoy and experience all the amenities their neighbourhood has to offer, in all seasons.

Winter is the dominant season in Edmonton, and utilizing winter design initiatives will help to make outdoor public spaces enjoyable throughout the winter months. The City embraces our winters and, through the Winter City Strategy, encourages us to celebrate the winter months. Through a variety of methods such as effective sun capture and wind control measures, as well as landscaping in parks and other outdoor spaces we can enliven these spaces in all seasons.

#### Objective 6: Ensure infrastructure and design elements address year-round weather conditions

Design of streets and buildings should accommodate winter climates, providing a comfortable physical environment for people to enjoy the outdoors throughout all four seasons. Orientation of roadways and function of boulevards will aid in identifying the appropriate cross sections to be used. To ensure comfortable pedestrian movement and safety, sidewalks should be separated from carriageways by treed boulevards to allow for snow storage and buildings should be oriented to capture sunlight and reduce wind tunnelling. The neighbourhood shall be designed to accommodate infrastructure programming requirements in the public realm including snow clearing and landscaping maintenance.



Source: Stantec

1. Boulevards should be designed to accommodate snow removal and year-round service vehicles.
2. Alternative development standards shall meet infrastructure programming needs for all seasons.
3. Encourage the integration of vibrant colours and warm materials in residential, institutional and commercial buildings.
4. Commercial sites and higher density residential areas shall be designed with consideration given to building orientation and variations in façade treatment that reduce the amount of sun shadowing on open spaces in the winter and to prevent wind tunneling.
5. Street orientation and design will take into account opportunities to capture sunlight and reduce wind funnelling.

**Implementation:** Developers are encouraged to include winter design considerations and elements within architectural controls. Developers shall work with civic departments to plan for appropriate snow storage and removal. Transportation Services and Sustainable Development shall review proposed tentative plans of subdivision. Where required, alternate development standards will be prepared and submitted to Transportation Services for review and approval prior to subdivision. The design of public realm shall be reviewed and developed in conjunction with the responsible civic departments will ensure the incorporation of appropriate design elements using the City of Edmonton's Complete Streets Guidelines and Winter City Strategy.

## Objective 7: Consider the winter season in the design of parks, open spaces, plazas and boulevards

Public spaces and buildings within Riverview 1 will be designed for residents to enjoy engaging public activities during the colder months of the year. Design and development of parks, open spaces, plazas, and boulevards will consider the winter season, including use and placement of street furniture, low maintenance landscaping and also the use of light and colour.

1. Design public buildings, parks and open spaces that protect users from the wind and maximize access to sunlight.
2. The design of public open spaces shall consider incorporating design elements that respond to all seasons, through such measures as the creative use of light, and colour.
3. Appropriate plant species should be included in the detailed landscape design of public parks, plazas, and open spaces such that they provide wind shelter, enable solar penetration, or year-long appeal.

**Implementation:** Winter design consideration and elements in public buildings, parks and public spaces is encouraged by the City of Edmonton. Design of public land will be reviewed and developed in conjunction with the responsible civic departments to ensure the incorporation of appropriate design elements using the City of Edmonton's Winter City Strategy.



Source: Stantec

## 4.4 LANDSCAPING

### OVERVIEW AND RATIONALE

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

## Objective 8: Promote the use of natural landscaping using native tree and plant species

This Plan encourages the use of native species, where practical, to enhance the streetscapes and open spaces consistent with the existing landscape to create a sense of place, as well as additional habitat for native birds, small animals and insects. Indigenous landscaping is a more ecologically-sensitive approach to landscaping because native plants are accustomed to the local climate, soil and hydrology of a certain area.



Source: Stantec

Using native plant materials promotes a healthier natural ecosystem that over time will integrate with the surrounding landscape.

1. Landscaping of parks, open spaces, and stormwater management facilities shall incorporate native or adapted plant species that are low maintenance and considered non-invasive.
2. Open spaces shall include indigenous trees and plantings, where practical, intended to improve water quality and provide additional habitat for birds and wildlife.

**Implementation:** Specific species for landscaping on public properties shall be determined between the developer and relevant City departments at the time of review of landscaping plans as part of the engineering drawing review.

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### **Objective 9: Promote the use of edible landscaping in suitable locations**

As the City-Wide Food and Agriculture Strategy evolves, communities and wildlife may benefit from edible landscaping techniques used in open spaces. Landscaping of parks and open spaces are encouraged to provide opportunities for edible landscaping elements, in areas such as pocket park s.

1. The landscape design of parks and open spaces shall provide opportunities for edible landscaping elements, where appropriate.

**Implementation:** Specific species used on landscape plans shall be determined between the developer and relevant civic departments as part of the engineering drawing review and will consider appropriate edible plants. The developer, in conjunction with responsible civic departments, will ensure the incorporation of Fresh: Edmonton's Food and Urban Agricultural Strategy. Figure 7: Urban Agriculture & Food illustrates potential locations where edible landscaping may be planted for the benefit of the community.

## 5 LAND USE

### CONTEXT AND APPROACH

Within the Riverview 1 NSP area the main land use components are residential, commercial, and business employment development. Generally, this neighbourhood has been designed to integrate with the Wedgewood Creek and major transportation corridors along the neighbourhood borders.

A business employment node is located immediately adjacent to Anthony Henday Drive, a logistically significant location making use of the 23 Avenue/Cameron Heights interchange. South-central to the neighbourhood, a commercial town centre is located at the intersection of 199 Street and 23 Avenue, exploiting the traffic generated through this junction.

Higher intensity residential development has been allocated adjacent to 23 Avenue and 199 Street, and lower density residential is designated within the interior portions of the neighbourhood. The following subsections will further discuss these land uses within Riverview 1. Figure 5: Development Concept generally illustrates the location and configuration of land uses within Riverview 1.



Source: Stantec

### 5.1 RESIDENTIAL

#### OVERVIEW AND RATIONALE

Residential uses in Riverview 1 are comprised of Single/Semi-detached Housing, (Stacked) Row Housing, and Low-rise/Medium Density Housing. These housing types are intended to cater to a diverse consumer market of different economic levels and age groups and contributing to a sustainable residential urban form. For neighbourhood land use, density, and population statistics see Appendix 1: Land Use and Population Statistics.

An existing Country Residential node is located south of the Wedgewood Creek and east of 199 Street. This node is identified in the Plan and is expected to remain as Country Residential for the foreseeable future. Future residential development planned to interface adjacent to country residential estates will be complimentary and designed with larger lot sizes, enhanced landscaping and buffering (where needed), so as to reduce any perceived conflicts.

The Single/Semi-detached designation will allow for single-detached, semi-detached and limited amount of rowhousing. This designation offers a balance of housing choices within the community and will take advantage of local amenities offered by commercial and employment uses, stormwater management facilities, shared use trails, and the Wedgewood Creek ravine.

The Row Housing and Low-rise/Medium Density Housing designations allow for higher density residential uses such as row housing, stacked row housing and apartment housing. Such higher density residential developments are best situated along transit routes, within walking distance of the Town Centre and other community destinations to create a more compact, walkable and liveable neighbourhood that reduces vehicular dependency.

Standard zones within the Edmonton Zoning Bylaw will be applied to facilitate residential development consistent with contemporary trends and market innovations. Innovative or intensive housing styles, such as reverse-housing, shallow lot or zero lot line housing, etc., add variety to the streetscape and make neighbourhoods more interesting places to live. The use of site specific Direct Control Provisions (DC1 or DC2) or Special Area Zones may be utilized to achieve these alternative housing forms within this neighbourhood.

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#### **Objective 10: Maintain high regard for the integration of existing country residential, ensuring compatibility with adjacent land uses**

Development immediately adjacent to existing country residential development will incorporate appropriate transition to future low density residential development and business employment uses. Acceptable land uses will be designed to respect the local character and ambiance of local country residential estate living.

A variety of techniques can be used to provide the appropriate transitioning between country residential uses and new development, including increased building setbacks, increased landscaped buffers, the use of building orientation and other design elements. Such techniques can serve to moderate the scale and use differences.

1. Medium and heavy industrial and medium density residential uses shall not be permitted adjacent to country residential uses.
2. Employment uses adjacent to country residential estates shall be sensitive to the existing residential land use by diminishing any light or noise pollution and providing appropriate screening and/or landscaping where it is deemed necessary.
3. Residential uses fronting or backing onto existing country residential shall provide an interface that is similar in nature, including adequate transitioning and landscaping.

**Implementation:** Permitted uses that are sensitive to low density residential uses shall be reviewed at the rezoning stage. At the development and building permit stages, regard for nuisances and logical site planning will be at the discretion of the Development Officer.

The City of Edmonton Zoning Bylaw provides for conventional or direct control zoning that may be applied at the rezoning stage. Site configurations shall be in accordance with the Zoning Bylaw and reviewed by the Subdivision Officer at the subdivision stage.

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## Objective 11: Plan for a variety of residential housing types in different built forms for a range of household types and income levels

Providing a variety of housing types promotes the creation of a well-balanced and complete community, one which can accommodate a range of income groups and household structures throughout their lifecycles. This plan seeks to provide a choice of housing forms within the neighbourhood, and makes more efficient use of land.

1. A mixture of housing types shall be provided including single / semi-detached, secondary suites, row housing, stacked row housing and apartment housing, allowing a range of housing choice.
2. The NSP shall encourage intensive and/or innovative housing forms through the use of alternative and land-efficient development regulations (e.g. reduced minimum site area and depth, reduced lot width, reduced yard requirements, higher site coverage, etc.).

**Implementation:** The City of Edmonton Zoning Bylaw provides for a range of densities and housing forms that will be applied at the rezoning stage through one of the applicable zones. In some cases, Direct Control Provisions (DC1 or DC2) or Special Area Zoning may be utilized for innovative, intensive, affordable, or mixed-use development of individual sites or areas within the neighbourhood.

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## Objective 12: Establish an overall residential density that is compact and efficiently utilizes municipal infrastructure

The Riverview 1 NSP is located in the Capital Region Growth Plan's Priority Growth Area "Cw" which sets a minimum density target of 30 units per net residential hectare. The Riverview 1 NSP exceeds this target and plans for residential density that is able to support public transit, use infrastructure more effectively and provide a user base for community facilities.

1. The Riverview 1 NSP shall meet or exceed the approved density target of 30 units per net residential hectare, as set out by the Capital Region Board.

**Implementation:** Please refer to Figure 5: Development Concept and Appendix 1: Land Use and Population Statistics which will guide intensified urban development.

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## Objective 13: Establish affordable housing in the Riverview 1 NSP

The Riverview 1 NSP provides the potential to provide a more intensive form of residential housing by maximizing land and servicing efficiencies; creating a diversity of housing using a variety of lot sizes and housing forms; and reducing auto dependency by improving pedestrian circulation and access to bus transit. The NSP encourages the exploration of innovation in affordable housing whether it is driven by the developer or the City. The City of Edmonton's Affordable Housing Policies and Guidelines will be applied prior to



Source: Stantec

rezoning.

1. Promote housing affordability through the provision of more intensive forms of residential development.
2. Allow for a wide variety of housing types, with a wide range of price points, to create a more inclusive neighbourhood.
3. Opportunities such as secondary suites, garage suites, or garden suites should be encouraged among builders.

**Implementation:** Developments shall comply with the City of Edmonton's Affordable Housing Policies and Guidelines. Secondary suites can further provide an important potential source of affordable housing for singles and other small households as well as create an additional source of income for the owners of the principal dwelling. Secondary suites, garage suites, or garden suites shall be implemented through the applicable Sections of the Edmonton Zoning Bylaw.

## 5.2 TOWN CENTRE MIXED USE – RESIDENTIAL

### OVERVIEW AND RATIONALE

The Riverview Town Centre is planned to offer a mix of land uses, where higher intensity forms of development will complement each other creating a compatible environment to live, work and play. Riverview 1 offers flexibility and choice in housing form by introducing a Mixed Use – Residential site in the southern portion of the neighbourhood.

The intent of this development is to allow for low-rise/medium density residential integrated with commercial uses within a comprehensively planned development. The intended density will not be achieved in the initial stages of development. Accordingly, the intent of this designation is to set the framework within which the development can grow and intensify over the long term as the market evolves and the neighbourhood matures.

1. High quality architectural guidelines and design elements shall be established for the site.
2. Mixed use development will be pedestrian-friendly, universally accessible, comfortable and aesthetically pleasing.
3. 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 intensity.
4. Allow land uses to intensify incrementally over long term through logical phasing of development or redevelopment of lower intensity uses.
5. Building siting will have high regard for maximizing sunlight and reducing sun shadowing on open space and residential uses.
6. Larger buildings shall use design techniques and materials to reduce the massing perception.



Source: Stantec



Source: Stantec

7. Landscaping shall be used to enhance building entries, screen areas of surface parking and enhance the overall character of these sites.
8. Street furnishings, pedestrian corridors and site landscaping will utilized to connect transit facilities, promote activity and interaction as well as ensure visual interest.

**Implementation:** The City of Edmonton Zoning Bylaw provides for a range of densities and housing forms that will be applied at the rezoning stage through one of the applicable zones. The Development Officer should have regard for building placement, pedestrian accessibility, etc. in conjunction with the responsible civic departments to ensure the incorporation of appropriate design elements using the City of Edmonton's Transit Oriented Design Guidelines, Complete Streets Guidelines and the Winter City Strategy, in assessing development applications under the applicable zone.

## 5.3 TOWN CENTRE – COMMUNITY COMMERCIAL

### OVERVIEW AND RATIONALE

The Riverview Town Centre is located in the south-central portion of the neighbourhood, at the intersection of 199 Street NW and 23 Avenue NW. The Town Centre - Community Commercial site forms a comprehensive commercial node located in the heart of Riverview. The site is intended to serve the commercial needs of the neighbourhood, surrounding communities and the travelling public. The site offers ideal visibility along the two major arterials through the Riverview neighbourhoods and serves as a focal point and destination for neighbourhood visitors. This multi-use shopping center will integrate a diverse and compatible mix of retail, entertainment, office, civic and leisure land uses allowing synergies to be created between employment opportunities and amenities within the Town Centre area.

The Town Centre - Community Commercial node is ideal for a more intensive form of development that will aid in maintaining a viable shopping centre and facilitating the efficient use of transit along 199 Street and 23 Avenue which are both designated arterial roadways. However, it is acknowledged that the intended intensity of commercial development will not be achieved in the initial stages of development. The intent of this designation is to set the framework within which the development can grow and intensify over the long term as the market evolves and the neighbourhoods in Riverview mature.



Source: Stantec

### Objective 14: Provide an inviting experience and ensure maximum visibility and convenient access

Community commercial development is intended to be located adjacent to arterial/collector roadways and in close proximity to transit facilities to provide adequate access and visibility, and reduce the number of single-occupancy vehicular trips. Entrances into the Town Centre – Community Commercial should be prominent and celebrated to establish a sense of arrival

for patrons and visitors. These entrances should be well defined and heavily landscaped to create landmarks, especially useful for wayfinding.

1. Building clustering is recommended to help create smaller parking lot areas and encourage the 'park-once' shopping experience.
2. Encourage a street-oriented building orientation, with parking located behind the buildings, to create a sense of place and identity within the Town Centre.
3. Site planning shall minimize impacts on adjacent residential areas by appropriately locating buildings, parking and loading facilities.
4. 23 Avenue and 199 Street are designated as high-traffic arterial roadways and will require careful design and landscape considerations to soften the presence of the automobile and parking areas.
5. Gateway entrances will be located along the northern collector roadway with only minor ingress/egress to 199 Street only.
6. Buildings and/or enhanced landscaping should generally be designed to frame entrances and prominent amenity/open spaces.
7. Utilize well-designed wayfinding signage within the sites to orient the visitors.
8. Interesting elements such as public art, open space, monuments and prominent architecture should be incorporated into the site design.
9. Creation of multi-functional space on the ground level that can be used for small scale retail or public amenity is encouraged.

**Implementation:** The Development Officer should have regard for building placement, landscaping, and pedestrian accessibility and activity areas to ensure the incorporation of appropriate design elements using the City of Edmonton's Transit Oriented Design Guidelines, Complete Streets Guidelines and the Winter City Strategy in assessing development applications for commercial development under the applicable zone(s).

### Objective 15: Create a compact Town Centre that supports transit ridership and enhances the quality of life

The Town Centre – Community Commercial is a key focal point and destination node within the Riverview area. Portions of the Town Centre are located within 400m of the Transit Centre in Riverview 3 NSP. However, it is not intended to perform as the core transit-oriented



Source: Stantec & Google Earth

development (TOD) area because 23 Avenue NW and 199 Street are major barriers for pedestrian movement towards the Transit Centre. Accordingly, it promotes “transit supportive” development that allows transit to efficiently and conveniently serve the area and designed to aid in the movement of pedestrians through the Town Centre. This should minimize the demand for off-street parking and, through good urban design, promote pedestrian traffic to and within the Town Centre.

1. Utilize the City of Edmonton’s Transit Oriented Development Guidelines as a guide to facilitate development of a compact and higher intensity and mixed use Town Centre.
2. Allow and plan for land uses to intensify incrementally over the long term, through logical phasing of development or redevelopment of lower intensity uses.
3. Where practical, locate higher intensity buildings along transit routes with main entrances oriented toward transit facilities.
4. 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 intensity.
5. Site plans shall allow for direct and convenient pedestrian access between transit facilities and nearby commercial buildings/amenity areas.

**Implementation:** The Development Officer shall have regard for the appropriate application of setbacks, landscaping, buffers, pedestrian access, and façade treatments available under the Zoning Bylaw at the Development Permit stage. The developer, in conjunction with responsible City departments, will ensure the incorporation of appropriate design elements using the City of Edmonton’s Transit Oriented Development Guidelines.

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## Objective 16: Manage vehicle circulation and off-street parking to complement the urban character of the Town Centre

The Town Centre will be designed to minimize the visual presence of automobile circulation as well as service functions as much as possible, such as locating parking and service access away from primary amenity areas or open spaces. This will also be achieved by minimizing vehicular access (curb cuts) on primary building frontages to reinforce a clear hierarchy and organization of circulation within the Town Centre and minimizing conflicts between vehicles and pedestrians.

1. Where feasible, provide smaller, decentralized off-street parking areas serving different clusters of buildings.
2. Vehicular access points should be shared between buildings to minimize curb cuts that interrupt pedestrian movement.



Source: Southlands – Aurora, CO

**Implementation:** The development officer shall provide recommendations for provision of smaller parking areas and appropriate locations for shared vehicular access points during the development permit stage.

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## Objective 17: Create a pedestrian-friendly and comfortable node that encourages interactive and social well-being

The Town Centre area is a place to work and shop as well as a place to congregate and socialize. Within the Town Centre, the public realm will include smaller open spaces capable of providing programmable space for community events or passive recreation. These open spaces should be connected by pedestrian corridors and complimented by the adjacent commercial uses by including outdoor patios or seating areas.

1. Plazas and courtyards should connect to other activities such as outdoor cafes, restaurants, and building entries.
2. Public amenities, open space and plazas should be designed to be easily accessible and comfortable for as much of the year as possible.
3. Open space and plazas should be oriented to take advantage of view corridors and sunlight.
4. Design features including, but not limited to public art, public seating areas and street furniture, and ornamental planting beds will be incorporated into open spaces.
5. Buildings adjacent to the open spaces will be oriented and designed to frame and enhance the area and provide opportunity for passive surveillance.
6. Building facades that front onto open spaces should include architectural elements such as terraces and porticos that contribute to the pedestrian experience and animate the street.
7. An integrated landscaping theme should be used to highlight major circulation patterns, pedestrian linkages, and the overall development.

**Implementation:** The development officer shall have regard for the appropriate application of landscaping, and façade treatments available under the Zoning Bylaw at the development permit stage.

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## Objective 18: Minimize the impacts and perceived nuisances of commercial development on adjacent land uses

Impacts associated with commercial development shall be minimized and carefully integrated with surrounding residential development. Attention to site design will separate incompatible uses and minimize potential impacts. In particular, activity associated with larger and intense commercial uses shall be oriented towards arterial or collector roadways, away from low density residential uses.

1. Minimize the impact of commercial uses on adjacent residential areas through the use of transitional land uses; location and orientation of buildings, parking and loading facilities; and the appropriate application of setbacks and landscaping available through the Zoning Bylaw.
2. Larger buildings shall be articulated and landscaped in a manner that softens the building edge and creates visual relief.
3. Appropriate fencing and landscaping shall be provided to buffer residential uses that back on to or flank commercial uses, in



Source: Stantec

accordance with the Zoning Bylaw.

**Implementation:** The development officer shall have regard for the appropriate application of setbacks, landscaping, buffers and façade treatments available under the Zoning Bylaw and the Transit Oriented Design Guidelines at the Development Permit stage.

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## 5.4 BUSINESS EMPLOYMENT

### OVERVIEW AND RATIONALE

Business Employment land uses provide employment opportunities for residents within the neighbourhood and broaden the economic base. Jobs within a community also contribute to its sustainability and residents' quality of life, while reducing traffic levels and environmental costs associated with commuting long distances.

The Business Employment designation is located in the northeast portion of the plan, adjacent to Anthony Henday Drive and 23 Avenue, to ensure the area has a high degree of access and visibility. This designation is intended for high quality general business developments, including office and service uses. Small scale retail and convenience commercial uses would also provide benefits to the adjacent residential and commuting employees within this area. Additionally, restaurants, hotels, and highway commercial opportunities would also be beneficial in the Business Employment area by increasing interaction during off-peak business hours. This area however, is not intended for the development of large format commercial, medium or heavy industrial uses.

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### Objective 19: Provide a diversity of local employment, civic and ancillary commercial opportunities

The Business Employment designation is intended to provide general business, highway commercial, automobile sales, light industrial, professional office, business support, hotels and other employment related uses. These uses are appropriate in areas that are located with high visibility to Anthony Henday Drive and 23 Avenue, providing the necessary sightlines and access requirements necessary for those commercial uses to succeed. Restaurants, urban services, and convenience and commercial uses are also encouraged as ancillary uses, to be located where they are highly visible and easily accessible to provide benefits to employees, visitors, as well as surrounding residential development during off-peak business hours and weekends. Due to its proximity to 23 Avenue, the opportunity for emergency service facilities may be located within the Business Employment area.

1. Appropriate land uses shall be determined by the applicable zones.
2. Low intensity and highway commercial uses and services shall be located along arterials and/or collector roadways to maintain high visibility and convenient access.
3. Emergency services such as a fire rescue and emergency medical services may be located within the Business Employment area to provide convenient and efficient access to service areas.

**Implementation:** Development will be in compliance with the Zoning Bylaw, providing the permitted uses and development regulations that will be applied through one of the applicable zones at the rezoning stage.

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## Objective 20: Encourage “green” initiatives, such as renewable energy generation, green roofs/walls, naturalized stormwater retention or district heating

Continual advancement in technology has provided an increasing range of small scale options for producing renewable energy and reducing greenhouse gas emissions. While some of these options may currently be too expensive, they will undoubtedly become more affordable and efficient in the future. Government grants and incentives (monetary or other form), may encourage innovative projects to take shape and should be encouraged at the development stages.

Business Employment provides opportunities for larger scale developments to integrate the production of renewable energy or to establish synergies between complimentary businesses reducing resources, water and waste. Synergies will need to be discussed between the developers and civic departments at the early stages of the project with ample consideration of infrastructure maintenance, management and project life-time. Land uses shall be determined by the applicable zones of the Zoning bylaw.



Source: Stantec

1. Techniques to maximize energy efficiency/production and water conservation should be encouraged into the design of buildings and the area as a whole.
2. Opportunities to share resources and synergies among related business should be encouraged.

**Implementation:** The Development Officer should have regard for efficient site planning, green building design, and LEED® standards in assessing development applications for development under the applicable zone.

## Objective 21: Ensure a high quality visual appeal and minimize perceived nuisances

Business Employment located adjacent to Anthony Henday Drive and 23 Avenue demands high regard for good urban design. Additionally, more sensitive land uses, such as low density residential will be buffered and screened appropriately to mitigate light and noise pollution, as well as any perceived impacts.



Source: The Lake at Thousand Oaks, California

1. Business employment uses that generate offsite noise, odour, earthborn vibrations, heat, intense light or dust nuisance factors beyond the enclosed buildings shall not be permitted adjacent to residential land uses.
2. All loading and outdoor storage facilities shall be located away from any adjacent residential uses, where feasible, or appropriately and aesthetically screened from view through methods such as landscaping, berms, fencing, or a combination thereof.
3. Ensure that appropriate transitioning is included between business and residential land uses, in compliance with the Zoning Bylaw.

**Implementation:** The Development Officer should have regard for building placement, pedestrian accessibility and activity areas in assessing development applications for development under the applicable zones.

## 5.5 INSTITUTIONAL/CIVIC SERVICES

### OVERVIEW AND RATIONALE

Whether provided by the City of Edmonton or by other agencies and organizations, urban service uses aid in the development of a “complete community.” By identifying and anticipating future community needs, land may be set aside for fire rescue, emergency medical services, health providers, religious assemblies or other uses.

#### Objective 22: To accommodate future development of institutional and civic service land uses

Institutional/Civic Service land uses are permitted within the Town Centre, Business Employment, and Parks designations and are intended to support social sustainability, providing space for worship, learning, and community safety. The NSP supports the future development of institutional and civic services in the Riverview area, including religious assemblies, fire halls, and/or police stations

1. The NSP shall allow for development of institutional, civic, and urban service uses based on assessed requirements.

**Implementation:** The location of emergency services shall be determined through consultation with Edmonton Fire Rescue Services or any other emergency service agency. A review of the perceived nuisances and impacts of the proposed uses will be reviewed by Sustainable Development and Transportation Services at the rezoning stage. The Development Officer will have regard for building placement, buffering, landscaping in assessing development applications under the applicable zones.



Source: City of Edmonton

## 6 ECOLOGY, PARKS AND AMENITIES

### CONTEXT AND APPROACH

The majority of lands within the Riverview 1 neighbourhood have been historically cultivated for agriculture with the exception of existing country residential uses and the Wedgewood Creek ravine. The following objectives support the goals of preserving the ravine area and integrating new open spaces that provide new habitat into the neighbourhood. The preservation and integration of the Wedgewood Creek ravine will help facilitate the movement of wildlife and additional aesthetic and recreational benefits for the residents of Riverview 1.

Phase I (Ecoventure, 2013) and Phase II (Stantec Consulting Ltd., 2015) Ecological Network Reports (ENR) have been submitted to the City of Edmonton that identify natural areas within the Plan area, provides an assessment of the existing regional ecological network and provides recommendations on how to conserve or protect any remaining integral natural areas. An ENR was undertaken for the plan proponents' land, and a desktop review has been completed for the entire neighbourhood. The report will require approval prior to any rezoning and subdivision approvals.

### 6.1 ECOLOGICAL AREAS

#### OVERVIEW AND RATIONALE

The North Saskatchewan River valley and ravine system is an important ecological system in Edmonton. The NSP ensures that the Wedgewood Creek ravine system is preserved and protected through the establishment of an Urban Development Line (UDL) demarcating the boundary between urban development and non-developable area (Environmental Reserve). Public access to the circulation network abutting the river valley and ravine system will be provided via a combination of Top of Bank (TOB) Park and walkways.

In regards to water supply of Wedgewood Creek Top of Bank and Natural Area (MR), drainage may be provided by surface drainage via back of residential lots and the public upland area setback. Residential roof leaders will be connected directly to the City's storm service, which reduces groundwater recharge, but mitigates geotechnical concerns.

In addition, a TOB shared use path will be established along the entire length of the Wedgewood Creek for circulation and amenity purposes. An exception to this would be previously developed areas that have been subdivided for residential development. In this scenario, a linkage will connect back into the neighbourhood's pedestrian network (e.g. streets and greenways).



Source: Stantec

## Objective 23: Protect natural areas within the community

Upland natural systems play an important role in ecological conservation. Mature tree stands and wetlands offer a rich mixture of habitat for rare or sensitive vegetation, birds and wildlife. Riverview 1 NSP designates a Natural Area (ER) wetland complex located in the eastern portion of the plan area, north of the AltaLink corridor and west of 184 Street. A second Natural Area (MR) complex consisting of an upland tree stand of mature aspen and poplar trees is located west of 199 Street and north of the AltaLink corridor.

Portions of the drainage system have been designed to provide a water source to the retained natural areas, mimicking pre-development water balances as much as possible, rather than being conveyed directly to a SWMF facility. These natural areas will be provided with an overflow relief to ensure any excess water has a safe outlet to a SWMF.

1. Conservation planning in Riverview shall adhere to City of Edmonton Policy C531 Natural Area Systems.
2. A Wetland Assessment shall be completed for each titled parcel.
3. A Natural Area Management Plan (NAMP) shall be completed prior to the rezoning or subdivision of land within 250m of a retained natural area.
4. Each natural area shall be appropriately buffered from urban development.
5. Where natural areas and buffers are to be retained, land shall be dedicated as Environmental or Municipal Reserve, in accordance with the *Municipal Government Act*.
6. Ensure development maintains pre-development water balance to be directed to Natural Areas, the greatest extent possible.
7. Explore opportunities for the retention of natural areas through a variety of mechanisms including retention, compensation or incorporation with stormwater management facilities.
8. Street lighting shall be designed to reduce light pollution in proximity to retained natural areas.

**Implementation:** An ENR and NDR was prepared and submitted under separate cover in support of the 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.

Rezoning and subdivision applications within 250m of a retained natural area will not be approved without an accepted Natural Area Management Plan (NAMP). Exceptions to this requirement shall be approved by the Urban Ecology Unit. The NAMP will address issues related to ongoing management, maintenance and sustainability of the natural areas planned to be retained in the Riverview 1 neighbourhood. Buffers around natural areas are set to 30m for wetlands and 10m for tree stands, unless otherwise indicated within an NAMP and approved by Urban Ecology. Methods to minimize disturbances to natural areas may include matching pre-development



Source: Stantec

grading, restrictive covenants, and/or other low impact development techniques, as determined within the NAMP.

A Wetland Assessment is required for each titled area prior to rezoning or subdivision approval. Wetland Assessments will identify any potential wetlands and determine the required regulatory approvals, and potential sustainability of wetlands with future development. The Subdivision Authority in consultation with Parks + Ecology will determine the dedication of Reserves owing for the neighbourhood, to be confirmed by legal survey at the time of subdivision.

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## **Objective 24: Strengthen Edmonton's ecological network and maintain ecological linkages to the North Saskatchewan River valley and ravine system**

The Wedgewood Creek ravine, north of the Plan area, plays a significant role in the region's ecological network and provides an important ecological resource for the neighbourhood. Parks, greenways and SWMFs provide for connectivity within the neighbourhood. Providing connections to the larger North Saskatchewan River valley and ravine will add diversity and vitality of the neighbourhood's ecology. Wildlife crossings will be considered in accordance with the Wildlife Passage Guidelines and specific structure types are detailed in the ENR, submitted under separate cover.

1. Integrate and connect green open spaces (e.g. parks, greenways, and SWMFs) to maintain habitat and promote ecological connectivity.
2. Maintain wildlife connections within the Wedgewood Creek ravine to the greater North Saskatchewan River and ravine system.
3. Native plant species should be used in upland areas abutting the top of bank and public spaces to increase the habitat value of the ecological network.
4. Any development proposed within the Wedgewood Creek shall undergo the necessary environmental approvals, in accordance with the North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 7188.

**Implementation:** Figure 5: Development Concept illustrates the location and configurations of parks, greenway and SWMFs. Where required, potential wildlife crossings illustrated in Figure 12: Transportation will be located and designed using the Wildlife Passage Engineering Design Guidelines and shall be reviewed by Transportation Services in conjunction with the Ecology Unit (Sustainable Development). Tree plantings and landscaping will be determined at the design stage, in consultation with Sustainable Development, to enhance wildlife habitat as well as to mitigate avian conflicts with arterial roadways, where practical.

## **6.2 GREEN DEVELOPMENT**

### **OVERVIEW AND RATIONALE**

In support of the City of Edmonton's Green Building Plan and *The Way We Green* policy documents, the Riverview 1 NSP provides consideration to green initiatives and innovations. This Plan encourages implementing innovative and sustainable ideas such as green building design and environmentally conscious landscaping techniques into neighbourhood development.

Engineering and design standards establish a baseline for construction that provides safe and reliable municipal infrastructure. However, recent trends and rapidly improving technology provide ample opportunities for alternative standards to reduce construction and maintenance costs. This plan encourages the exploration of alternative development standards (e.g. reduced roadway widths, smaller lot design, and servicing techniques that differ from City standards) as a way of stepping toward increased sustainability.

Low Impact Development (LID) is an approach that uses simple ecological principles to reflect natural ecosystem processes with respect to managing stormwater in a developed area. This Plan encourages implementing innovative and sustainable ideas such as green building design and environmentally conscious landscaping techniques, including the use of native species to the extent feasible. The following LID techniques are recommended for this NSP, in accordance with the City of Edmonton Low Impact Development Best Management Practices Design Guide Edition 1.0 (2011).

#### *Absorbent Landscaping*

Absorbent landscaping could be incorporated into the development of all the SWMFs and parks, by increasing the depth of topsoil within the NSP in order to help temporarily store stormwater and allow stored water to permeate over time. This is particularly helpful for small, frequent events. This can be accomplished by increasing the depth of topsoil to 200 - 300 mm. The addition of the increased organic layer will increase the water holding capacity of the soil surrounding the various SWMFs and parks, increasing absorption and break down of pollutants. Residential development directly abutting the Wedgewood Creek top of bank should be designed to provide back-of-lot surface drainage to the ravine, as well as an increased depth of topsoil.

#### *Bioswales and Bioretention Areas*

Bioswales and bioretention areas are small stormwater treatment areas located within a shallow depression using vegetation and additional topsoil. These areas provide water quality treatments, reduce runoff and aid in infiltration. Bioswales and bioretention areas could be incorporated in the form of parking lot islands, islands within cul-de-sacs, traffic circles, bump outs and rain gardens, where feasible.

#### *Naturalized Stormwater Management Facilities*

Naturalized stormwater management facilities incorporate local topsoil or live soils, where available, and native vegetation to maintain water balance and remove pollutants from stormwater by increasing the duration that the water remains within vegetated areas. These systems also provide wildlife habitat. In addition, there may be opportunities to integrate naturalized storm ponds with natural wetlands to ensure the long term sustainability of the natural areas in the NSP. Early planning and innovative designs will help to ensure natural wetlands are conserved and integrated into the neighbourhood.

#### *Stormwater Reuse*

Stormwater reuse is a method of conserving rain water and aids in decreasing the amount of contaminants entering the groundwater system. This is an inexpensive method that can be incorporated by all of the businesses and residential



Source: Stantec

developments within the neighbourhood. Storm water collection can be accomplished by the use of rain barrels, rain gardens or used to irrigate public areas within The NSP. This LID technique could be coupled with resident education regarding the benefits of reusing storm water.

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#### **Objective 25: Consider sustainable, alternative or low impact development standards in the planning and design of the neighbourhood**

Best practices will be used in the development of the Riverview 1 NSP. Technological advances and innovation in the construction industry will continually improve and the demand for more efficient and affordable construction practices and products are changing the way neighbourhoods are built. Stormwater management systems can simultaneously satisfy regulatory requirements and protect the environment by controlling runoff, in addition to reducing infrastructure costs – all of which minimize the impact of development.

1. Where feasible and appropriate, incorporate alternative development standards and sustainability measures, such as LID Principles, in accordance with the City of Edmonton's Low Impact Development Best Management Practices Design Guide.
2. Landscaping of parks and open spaces should incorporate increased top soil depths and landscaped with native plant species, where appropriate.
3. SWMFs shall include naturalized shoreline plantings and other native vegetative species intended to provide habitat opportunities for wildlife and promote natural water treatment.
4. Where possible, utilize bioswales or bioretention areas to increase groundwater infiltration and improve water quality prior to discharging into the ravine system.
5. Consider utilizing pervious surfaces where appropriate, such as trails and parking areas in public and private development.
6. In addition to LID best practices, consider alternative development standards such as energy efficient lighting, green building standards/technologies and alternative road construction standards to reduce energy consumption of buildings and neighbourhood development as a whole.

**Implementation:** Figure 14: Low Impact Development Opportunities illustrates areas identified to potentially utilize LID principles. Detailed design of parks, naturalized stormwater management facilities, bioswales or bioretention areas will be reviewed by City Administration. Plant, shrub, and tree species for landscaping on public properties shall be determined between the developers and City Administration at the time of review of landscaping plans and as part of the engineering drawing review. Sufficient technical detail will be provided on any proposed LID at zoning and subdivision to the satisfaction of Drainage Services. Details of alternative design standards proposed will be reviewed as part of the engineering drawing stages and will require approval from City Administration.

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#### **Objective 26: Conserve the ecology and hydrology of the Wedgewood Creek ravine**

The Wedgewood Creek ravine is an important and diverse ecological corridor and system adjacent to the NSP boundary. It is protected and preserved as per the MGA, North Saskatchewan River Valley ARP, and the policies and guidelines of *The Way We Grow* and *The Way We Green*.

Wedgewood Creek receives water from several sources such as base flow derived from groundwater upwelling and sheet flow run-off from the top of bank. In moments of increased stormwater generation, urban development in Riverview should minimize hydrological impacts on the ravine.

1. Wedgewood Creek and its ravine shall be protected from urban development and dedicated as Environmental Reserve, in accordance with the Municipal Government Act.
2. Where feasible, incorporate greater-than-standard depth of top soil in areas adjacent to the ravine to promote groundwater infiltration.
3. Top-of-bank areas shall be designed such that the concentration of stormwater runoff is minimized and pre-development hydrological conditions are met to the greatest extent possible.
4. Management of the Wedgewood Creek ravine shall occur in conjunction with ongoing residential development to mitigate impacts of the retained natural features.
5. Where possible and with approval from The City of Edmonton, point source flows to the Wedgewood Ravine fingertips should be encouraged to ensure the viability of the ravine's hydrology.
6. Where possible and with approval from The City of Edmonton, LID measures, such as bioswales should be utilized to increase groundwater infiltration and improve water quality of surface run off.

**Implementation:** The Wedgewood Creek ravine will be dedicated as Environmental Reserve (ER) to the City of Edmonton at the time of subdivision, in accordance with the MGA. The ENR, submitted under separate cover, recommends a number of tools to minimize interim and post-development impacts on the Wedgewood Creek ravine. A geotechnical slope stability report detailing the required setbacks and other recommendations to ensure bank stability for urban development shall be submitted and reviewed by Transportation Services prior to development. Top-of-bank parks and additional setbacks beyond the urban development line will be dedicated as Municipal Reserve, in accordance with the MGA.

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## 6.3 PARKS AND OPEN SPACE

### OVERVIEW AND RATIONALE

Wedgewood Creek serves as a significant feature for the neighbourhood and provides opportunities for passive recreation and educational opportunities. A shared use path will be constructed along the full extent of the top-of-bank to allow for uninterrupted access to the ravine. This shared use path will be connected into the pedestrian network by walkways, sidewalks and other shared use paths that connect with parks, open spaces and utility corridors, to ensure a safe and conveniently accessible network throughout Riverview 1 and surrounding neighbourhoods.

Parks within the neighbourhood will be linked to other open spaces (i.e. stormwater management facilities, greenways and utility corridors) to allow for pedestrian and wildlife connectivity. An integrated open space network is proposed for the Riverview 1 NSP, as shown in Figure 6: Ecological Network and Parks. The area attributed to Park and Open Space is shown in Appendix 1: Land Use and Population Statistics.



Source: University Village – Seattle, WA

### *Natural Areas*

Two natural areas have been identified in the Riverview 1 neighbourhood. Both of these natural areas are being retained to conserve the wildlife habitat among the mature trees, native vegetation and wetland complexes that exist today. These natural areas act as stepping stones, providing connectivity through the residential neighbourhood to the North Saskatchewan River and ravine system. These natural areas are also utilized as passive recreation areas for residents that are linked into the pedestrian network by shared use paths.

### *Pocket Parks*

Pocket parks will be used to serve residential sub-areas within the neighbourhood to meet the needs of all users within the community. The pocket parks have been placed to ensure that all residents have convenient access to parkland for everyday activities.

### *Urban Village Park*

Existing park land is located south of Woodbend Wynd and will be developed as an Urban Village Park to provide active and passive recreational opportunities for the neighbourhood residents. Active recreation options may include a space for a community league building or active recreation space such as ice rinks, sports fields or landscaped green spaces.

### *Stormwater Management Facilities*

Stormwater management facilities are considered neighbourhood amenities and part of the open space network. These facilities add to the neighbourhood's attractiveness, character and image as pedestrian-friendly community. All SWMFs are linked within the neighbourhood trail network and complement the open space system by providing additional areas for passive recreation.

A Parkland Impact Assessment (PIA) and Community Knowledge Campus Needs Assessment (CKCNA) were completed and submitted under separate cover, in support of this NSP, these assessments have not been finalized, and however they will require support from administration prior to any rezoning and subdivision approvals.

This neighbourhood has a lower percentage of parkland allocated within its NSP boundary, in order to accommodate the assembly of the District Park site, located in the Riverview 3 NSP. Although overall, approximately 10% of all gross developable area has been designated as Municipal Reserve within the Riverview ASP.

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## **Objective 27: Accommodate City Of Edmonton requirements for park sites within the neighbourhood**

The Urban Parks Management Plan (UPMP) provides strategic direction for the acquisition, design, development and management of Edmonton's parkland. This NSP uses the UPMP to guide the allocation of park sites and land assembly guidelines.

1. The UPMP shall be utilized as the guiding document for the distribution of parkland.
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.



Source: Stantec

3. Servicing shall be provided to park sites, where required, to accommodate any and all facilities which may be developed on site.

**Implementation:** The urban village park site, pocket parks, natural areas and open spaces are conceptually illustrated in Figure 6: Ecological Network and Parks. The Subdivision Authority, in consultation with Parks Planning shall determine the Municipal Reserve owing for the Riverview 1 NSP, and the areas dedicated as MR shall be confirmed by legal survey at time of subdivision. The neighbourhood servicing scheme shall ensure that the type and amount of servicing provided within roadways to service park facilities and adhere to UPMP guidelines.

## 6.4 AGRICULTURE AND FOOD

### OVERVIEW AND RATIONALE

The Riverview 1 NSP supports the intent of Fresh, Edmonton's City-Wide Food and Agricultural Strategy. It does this by proposing a number of land uses, policies and approaches to support local food production in the area, to encourage the local food market, as well as to promote education and sustainable food practices.

Businesses that facilitate value-added food production will be encouraged within the Business Employment area to promote the use and production of local foods in Edmonton. Supporting local food production contributes to the development of the local economy and can encourage a healthy sustainable food system.

Incorporation of urban agriculture in the form of community gardens and edible landscaping will create an interest and uniqueness to the open spaces in Riverview 1, and will increase access to local food. Figure 7: Urban Agriculture & Food identifies potential locations that communities gardens and edible landscaping may be explored.



Source: Stantec

### Objective 28: Support the development of local food infrastructure

Community gardening is considered both a recreational and community building activity. Community gardens may be incorporated into the programming of community parks in balance with other park programming needs. Community gardens could also be integrated into any public or private open spaces.

Community gardens are features that are found in many neighbourhoods throughout the city where people can connect and experience connections through food and the growing, preparing and celebrating of food. Community gardens are generally divided into individual plots which are made available to the public or members of the community, often for a nominal fee or for no cost. These spaces serve multiple purposes – from social gathering spaces, to



vegetable gardens, to ornamental flower gardens – and are often popular in locations with higher density housing where private open space is limited. Public open spaces may be dedicated to community gardens throughout the Riverview 1 neighbourhood. Organizations such as community leagues, non-profit societies, residents associations or faith groups are often willing to administer community gardens, likely with minimal support from Community Services.

1. Provide opportunities for community garden plots within public and private lands.
2. Allow for the utilization of harvested rainwater for irrigation of community gardens.
3. Where required, provide electrical outlets and storage facilities to accommodate the convenient use of community gardens.

**Implementation:** Implementation of community gardens may be explored at the detailed landscape design stage in consultation with Sustainable Development and Community Services.



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### Objective 29: Support the development of value-added food production

The Business Employment area is predominantly designated for light industrial and business uses, which has the potential for incorporating value-added food processing, storage and distribution centres into the neighbourhood, creating a more resilient and thriving local food economy.

1. Support businesses that contribute to the local food industry within the Business Employment area.
2. Where feasible, encourage agri-business synergies that will further improve food security and sustainable practices.
3. Ensure that any potential nuisance factors (i.e. noise, odour, or visual impacts) do not extend outside of the principal building.

**Implementation:** Typically, this type of development is regulated by the (IL) Local Industrial or (IB) Business Employment Zones.



Source: Stantec

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### Objective 30: Support the development of pocket markets, mobile markets, and/or mobile food vendors

Open areas such as urban plazas or parking lots within commercial developments, such as the Town Centre; provide opportunities for temporary markets such as farmers' markets or mobile food vendors, providing residents with entertaining special events and local food options.

1. Open spaces and quasi-public spaces should encourage the accommodation for local food establishments.

**Implementation:** Programming and event coordination will be planned at the permitting level through Sustainable Development. Consideration shall be provided to ensure accessibility and suitable parking management.

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### Objective 31: Support the use of edible plant species in landscaping of open spaces

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

1. Landscaping of public parks, open spaces and private spaces should consider edible fruit and vegetable plants where appropriate.

**Implementation:** Figure 7: Urban Agriculture & Food identifies potential locations that edible landscaping may be utilized in public open spaces. Selection and location of plant species will take place at the detailed design stage and incorporated where feasible.

## 7 INFRASTRUCTURE AND SERVICING

### CONTEXT AND APPROACH

Expansion of the City's infrastructure will be necessary to accommodate Riverview 1 development. The Riverview 1 NSP will be a fully serviced neighbourhood designed and constructed in accordance with City servicing standards. Development staging and extension of infrastructure will be contiguous, efficient, and economical while having regard for potential environmental and ecological impacts. Opportunities for research and innovation should be supported in order to discover efficient, low cost or low environmental impact servicing options.

Further details on the sanitary and stormwater collection services have been supplied in the NDR, under separate cover. Details on the water distribution system have been provided in a Hydraulic Network Analysis (HNA), also submitted under separate cover to EPCOR Water Services.

### 7.1 SANITARY AND STORMWATER DRAINAGE

#### OVERVIEW AND RATIONALE

The Riverview area will be serviced by the South Edmonton Sanitary Sewer (SESS) system. SESS will ultimately carry the neighborhood sanitary flows to the Gold Bar Wastewater Treatment Plant. The construction of SW7 is not planned until 2030; however, a commitment by major developers to develop the Riverview area sooner may result in advancement of this timeline. The sanitary servicing network concept is identified on Figure 8: Sanitary Servicing.

Since the ultimate sanitary servicing will not be in place at the time of development, an interim sanitary servicing alternative is required to allow development to advance within Riverview prior to construction of SW7. The Riverview NDR proposes to utilize the excess capacity in the Edgemont pump station and forcemain system. As a component of the overall infrastructure for the Riverview neighbourhoods privately owned and operated lift station(s) and forcemain combination may be proposed to carry the sanitary flows from Riverview to Edgemont.



Source: Stantec

Stormwater management for the Riverview basins will consist of a series of interconnected SWMFs that will provide storage for peak events as well as treatment of stormwater prior to release into existing watercourses. All the SWMFs maintain adequate distance from the TOB line, as per the recommended setback in the Slope Stability Assessment for Wedgewood Creek. Stormwater drainage within the Riverview 1 neighbourhood includes two basins, where a piped outfall will discharge the controlled flows to either Wedgewood Creek or the North Saskatchewan River. The general direction of stormwater drainage to each of these watercourses is shown on Figure 9: Stormwater Servicing. High regard will be given to the quality and rate of discharge into the North Saskatchewan River as the E.L. Smith Water Treatment Plant's intake near the Cameron Heights neighbourhood is located down river of the NSRV outfalls. The monitoring program will be developed in consultation with EPCOR Water as neighbourhood plans that will require outfalls to the river are undertaken.

Portion of the drainage system has been designed to provide a water source to the retained Natural Area (ER), rather than being conveyed directly to the piped network. The natural area will be provided with an overflow relief to ensure any excess water has a safe outlet to a SWMF.

LID principles related to stormwater management will be implemented wherever feasible to increase infiltration of stormwater, improve cleansing, and help manage runoff rates. Figure 14: Low Impact Development Opportunities illustrates areas identified to potentially utilize LID principles. For more information on LID principles, please refer to 6.2 Green Development. Stormwater management facilities will also be designed as easily accessible community destinations within Riverview, including shared use paths and landscaping to enhance the overall quality of the public open space.

As indicated within the Geotechnical Report, prepared by Hoggan Engineering (2014), some soil conditions may cause construction challenges. Further geotechnical information shall be required at the detailed engineering review. The Slope Stability Report, submitted by Hoggan Engineering (2014), recommends a setback from the top-of-bank line for all SWMF locations. Further details regarding the sanitary and stormwater drainage scheme for Riverview 1 are provided in the associated Neighbourhood Design Report (NDR) submitted under separate cover.

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**Objective 32: Ensure that the sanitary and stormwater drainage systems are provided at an urban standard and in an efficient, contiguous and staged manner using LID principles or other sustainable infrastructure solutions**

The City's storm and sanitary systems will be extended into Riverview to safely manage stormwater runoff and disposal of sanitary waste. Riverview's sanitary network will ultimately deliver waste to the Gold Bar Wastewater Treatment Plant for treatment.

Managing stormwater runoff through culverts, pipes and stormwater management facilities prevent flooding and destruction of property while also providing primary treatment of water prior to discharging into the North Saskatchewan River and Wedgewood Creek. Advancements in engineering practices and technology continuously create new and innovative ways to reduce runoff, improve water quality, and lower maintenance costs. These innovative advancements, including LID principles will continually be reviewed and utilized during neighbourhood development.

1. Sanitary and stormwater servicing shall be provided in accordance with the associated NDR.
2. LID principles related to stormwater management facilities shall be implemented wherever feasible.

**Implementation:** Approval of engineering drawings and servicing agreements shall be required for installation of sanitary and stormwater servicing. LID techniques such as bioswales and stormwater management facilities shall be integrated, where feasible, through consultation with relevant civic departments. Sufficient technical detail will be provided on any proposed LID at zoning and subdivision to the satisfaction of Drainage Services.

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## 7.2 WATER DISTRIBUTION

### OVERVIEW AND RATIONALE

Water services for the neighbourhood will be extended from the Edgemont neighbourhood via a water main in Winterburn Road (215 Street) and 199 Street. Servicing within the neighbourhood will be designed to provide peak and fire flows for low and medium density residential, as well as commercial and business employment uses.

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**Objective 33: Ensure that the water distribution system is provided at a full urban standard and in an efficient, contiguous and staged manner**

The servicing design will ensure that the water distribution system is provided at a full urban standard and in an efficient, contiguous and staged manner. Water servicing will be designed to provide peak hour flows and adequate fire flows for residential, commercial and business employment uses.

1. Water servicing shall be provided in accordance with the approved Hydraulic Network Analysis.
2. Water looping will be provided in accordance with the requirements of EPCOR Water Services Inc.

**Implementation:** A neighbourhood level HNA has been submitted under separate cover to EPCOR Water Services. Approval of engineering drawings and servicing agreements shall be required for installation of water servicing. The conceptual water system for the neighbourhood is illustrated in Figure 10: Water Servicing.



Source: Urecon

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## 7.3 STAGING

### OVERVIEW AND RATIONALE

The anticipated sequence of development is conceptually shown in Figure 11: Staging. Initial development is expected to advance from north to south along 199 Street and east to west along 23 Avenue, with the Town Centre and Business Employment areas seeing slower staged growth.

In general, development will proceed in a manner that is contiguous, logical and economical with respect to municipal servicing. Development of individual development stages may vary depending on contemporary market demands and the aspirations of the respective landowners. Should sufficient demand warrant or engineering design be made more efficient, portions of separate phases may be developed concurrently with Riverview 2 or Riverview 3 neighbourhoods.

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**Objective 34: Ensure that the Riverview 1 NSP is serviced to a full urban standard, in an efficient, contiguous and staged manner**

In general, development will proceed in a manner that is contiguous, logical and economical with respect to municipal servicing. Initial services to the Riverview 1 neighbourhood will be expanded from the Edgemont neighbourhood via 199 Street crossing at Wedgewood Creek. Should sufficient demand warrant or engineering design be made more efficient, portions of separate phases may be developed concurrently.

1. Provide infrastructure on a phased basis to accommodate the logical extension of services.
2. Utilize the 199 Street right-of-way crossing the Wedgewood Creek to provide Riverview neighbourhoods with utilities and servicing.
3. Sanitary and stormwater servicing will be provided in accordance with the associated NDR, submitted under separate cover.
4. Water servicing to the NSP area shall be provided in accordance with the associated HNA, submitted under separate cover
5. Shallow utilities shall be extended into the plan area as required.

**Implementation:** Approval of engineering drawings and servicing agreements shall be required for the installation of water, sanitary and stormwater servicing. Installation of shallow utilities shall be executed through servicing agreements.



Source: Stantec

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## 7.4 ENVIRONMENT AND ENERGY INFRASTRUCTURE

Lands within the neighbourhood will be suitable for urban development and their environmental status will be confirmed prior to rezoning. Those lands identified as contaminated must undergo remediation according to Federal, Provincial, and Municipal standards. Policies relating to abandoned oil and gas facilities will ensure conscientious development around well sites at all stages of the plan implementation and construction process while minimizing potential disturbances to the area's future residents.

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### Objective 35: Ensure that the environmental status of lands is suitable for development

To ensure lands within the Riverview 1 NSP are continually suitable for development, the environmental status of the land must be evaluated. The City requires that Phase I Environmental Site Assessments (ESA) be submitted, reviewed and endorsed prior to the rezoning stage of development.

1. Environmental conditions of the site shall be confirmed through submission of ESA reports and/or updates prior to rezoning or subdivision.

**Implementation:** The City of Edmonton requires that individual landowners provide ESAs or disclosure statements prior to the rezoning stage.



Source: Stantec

The Phase I ESA evaluates the types and location of surface and/or subsurface impacts that may be present on the subject site and adjacent areas. All Phase I, II, & III ESA reports and updates shall receive sign-off by civic departments prior to rezoning. Phase I ESA reports older than one year from the date of the report shall be updated, and any Phase I ESA report older than five years from the date of the report shall be redone.

Where necessary, a Phase II or Phase III ESA may be required where contaminated material is found and needs to be removed and disposed in an environmentally sensitive manner and in accordance with Federal, Provincial and Municipal regulations. A Phase III ESA shall dictate the reclamation plan for the site remediation.

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**Objective 36: Minimize oil and gas well sites' potential hazards and disruption of residential areas through careful neighbourhood design and adhering to all relevant requirements of the Alberta Energy Regulator (AER) and the City of Edmonton**

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

1. Parcels abutting or containing a well site(s) shall be designed to comply with the relevant requirements of the AER regulations and the City of Edmonton policies.

**Implementation:** An assessment of risk and nuisance will be conducted on operating or suspended oil and gas wells, as directed by existing or future City policy for the integration of oil facilities prior to any rezoning of the parcel where the facility is located. Special care will be taken to mitigate the risk of those developments near oil and gas facilities. Figure 4: Site Constraints illustrates the approximate locations of existing facilities. Exact locations shall be confirmed and surveyed prior to rezoning and subdivision approval. Subdivision planning shall adhere to all relevant AER regulations and City of Edmonton Policy C515.

## 8 TRANSPORTATION

### CONTEXT AND APPROACH

The transportation network has been designed to meet both the internal and external traffic generated through the neighbourhood in accordance with City of Edmonton's guidelines and standards. A hierarchy of arterial, collector and local roadways are intended to facilitate the efficient movement of vehicular traffic (see Figure 12: Transportation).

Arterial roadways facilitate the movement of intra-municipal traffic and generally maintain limited direct access to adjacent land uses. Within the plan area, Winterburn Road (215 Street), 23 Avenue, and 199 Street are designated as arterial roadways, which will provide the neighbourhood with major access to the surrounding areas and Anthony Henday Drive.

The collector roadway network has been designed to prevent shortcutting; allow efficient transit services; and to provide convenient access for residents, employees and visitors travelling within the neighbourhood.

At the T-intersection of the arterial roadway and 23 Avenue NW (See Figure 12: Transportation), a northbound left-turn movement will be permitted onto 23 Avenue NW on an interim basis. Such left-turn movement may be removed when 23 Avenue NW gets upgraded to a 4-lane roadway, or until such time as the left turn becomes detrimental to the operation of the intersection, at the discretion of Transportation Operations.

Neighbourhood connectivity contributes to the development of a compact, integrated community with a balanced transportation network. The transportation system has been designed to balance efficiency, safety and comfort for all types of users and modes. Riverview 1 will accommodate all modes of travel, including automobiles, buses, walking and bicycling.

Neighbourhoods that have a high degree of connectivity encourage residents use more active modes of travel, reducing the number of trips made by vehicles and promoting recreational and commuter transportation. An efficient and continuous active modes network connecting key nodes (e.g. parks and open spaces, employment and commercial uses) will promote safe pedestrian access within and external to the neighbourhood.

An active modes network is illustrated in Figure 13: Active Transportation Network, which will utilize the roadway network and will be integrated with shared-use paths and walkways connecting key destinations and adjacent residential areas. Pedestrian



Source: Stantec

crossings will be clearly marked using appropriate signage and markings in order to minimize potential conflicts between vehicles, cyclists, and pedestrians in the neighbourhood.

A Transportation Impact Assessment (TIA) has been submitted under separate cover for review and approval by Transportation Services.

## 8.1 ROADWAY NETWORK

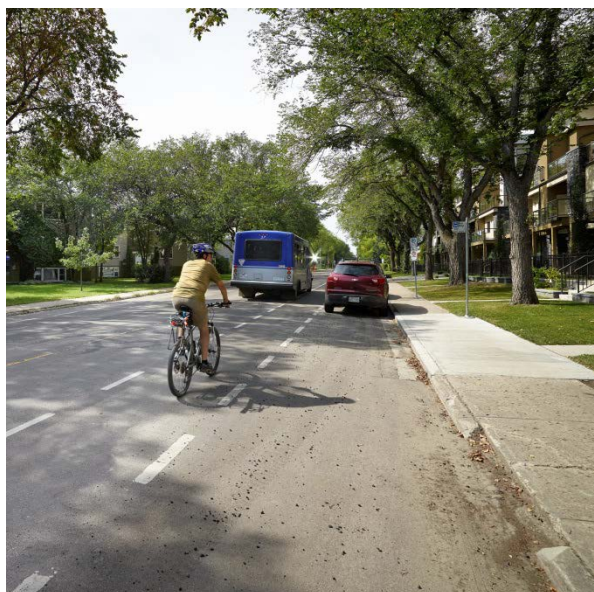
### OVERVIEW AND RATIONALE

Access from Anthony Henday Drive is provided via the Cameron Heights interchange. 23 Avenue NW between Anthony Henday Drive and 215 Street is designated as a highway connector within the Transportation Master Plan: *The Way We Move*. It is anticipated that 23 Avenue will be constructed to a combination of four- and six-lane divided arterial roadway standards. Future planning and construction of 23 Avenue may contemplate a widening up to 6 lanes with the ultimate development of the Riverview ASP neighbourhoods. Both 199 Street (4 lanes) and 215 Street (6 lanes) will be ultimately upgraded to urban arterials along the existing roadway alignments as they extend south from Edgemont and connect to 23 Avenue. Within the Town Centre area, special attention will need to be given to the function and design of 23 Avenue and 199 Street, as this area will also need to facilitate way-finding and enhanced pedestrian crossings between each of the Town Centre quadrants.

An internal arterial roadway has been designed to connect 199 Street to 23 Avenue providing an essential alternative route. At the T-intersection of arterial roadway and 23 Avenue NW (as identified on Figure 12: Transportation), the northbound to westbound left-turn movement will be permitted onto 23 Avenue NW on an interim basis. Such left-turn movement shall be removed when 23 Avenue NW is upgraded from a 2-lane to a 4-lane roadway, or when alternate access is provided which accommodates the northbound to westbound left turn movement, or when merited by deficient levels of service along 23 Avenue NW, whichever comes first, at the discretion of Transportation Services.

The collector network has been designed to provide efficient and convenient transit service through the neighbourhood, including a loop through the business employment area. Collector service within the Business Employment area may be subject to heavy traffic during morning and evening peak hours. To mitigate any perceived nuisances, the east-west collector linking 199 Street to the Business Employment area will restrict truck movements, ensuring the collector accesses to 23 Avenue are the main entrances to the Business Employment area. The collector network has also been designed to be safe for vehicles by allowing sufficient space for turning and safe for the neighbourhood by preventing shortcutting and excessive speeds. It is anticipated that the roadways within the town centre will implement alternate cross-sections that reflect the Complete Streets Guidelines.

Local roadways provide access to adjacent land uses and maintain a limited role in the overall movement of traffic within Riverview 1.



Source: Stantec

### Objective 37: Implement the City of Edmonton's road hierarchy system of an integrated arterial, collector and local roadway network

The transportation network has been designed to meet both the internal and external traffic flow requirements generated by the neighbourhood in accordance with City of Edmonton guidelines and standards. A hierarchy of roads are intended to facilitate the efficient movement of vehicular traffic, see Figure 12: Transportation. Vehicular access to the surrounding arterial roadways will be provided via 199 Street, 23 Avenue and Winterburn Road (215 Street).

As the City's urban form continues to transform, opportunities for redesigning the public realm becomes essential to maintain a balance between the built form and the way people move. The Complete Streets Guidelines provide a framework of principles to accommodate multiple modes of transportation in an efficient and safe manner. Opportunities within the Riverview 1 neighbourhood to integrate viable and cost effective transportation solutions will be encouraged in the early design of the neighbourhood and reviewed at the subdivision and development stages.



1. Lands within the Riverview 1 NSP, with the exception of parkland, shall be subject to an Arterial Road Assessment (ARA) to cost share the roadway facilities needed to service the area.
2. A well-integrated system of arterial, collector and local roadways shall be established for vehicular and pedestrian circulation within the NSP boundaries and the adjacent neighbourhoods.
3. Opportunities for roadways to be developed with innovative and/or alternative standards that follow Complete Streets principles shall be explored.
4. At the T-intersection of arterial roadway and 23 Avenue NW, the northbound to westbound left-turn movement will be permitted onto 23 Avenue NW on an interim basis. Such left-turn movement shall be removed when 23 Avenue NW is upgraded from a 2-lane to a 4-lane roadway, or when alternate access is provided which accommodates the northbound to westbound left turn movement, or when merited by deficient levels of service along 23 Avenue NW, whichever comes first, at the discretion of Transportation Services.
5. Wildlife crossings shall be provided where transportation thoroughfares create barriers to key wildlife corridors within the Neighbourhood.

**Implementation:** Figure 12: Transportation illustrates the transportation network and potential wildlife crossing locations within neighbourhood 1. The Arterial Roads for Development Bylaw 14380 shall be amended to include the Riverview catchment basin. Road right-of-way and arterial road widening shall be dedicated to the City of Edmonton in accordance with the MGA at the subdivision stage of development. Roadway design shall be in accordance with City of Edmonton design regulations. Roadway designs that do not comply with City of Edmonton design regulations will be submitted for review and consideration by Transportation Services and Sustainable Development.

### Objective 38: Design collector roadways to enhance safety, minimize internal roadway congestion and move vehicular traffic efficiently through the neighbourhood

Front drive access will be restricted along collector roadways with high traffic volumes in order to promote a safe and pedestrian friendly streetscape and to reduce vehicular conflicts. Traffic calming such as roundabouts, pedestrian islands,

raised intersections, or curb extensions at significant roadway locations (e.g. collector-to-collector or local-to-collector intersections) may be beneficial as they reduce vehicular speeds and enhance pedestrian safety.

1. The number of residential lots fronting onto and having direct access to a collector road will be minimized to at or below 30%, where practical, and shall not interfere with transit manoeuvring or transit facilities.
2. Traffic calming should be employed to reduce automobile speeds, increase pedestrian safety and improve the streetscape.

Source: Stantec

**Implementation:** The Subdivision Authority, in consultation with Transportation Services shall have regard for the number of lots having direct access onto a collector roadway. The provision of front drive access within the overall plan area will be consistent with applicable City of Edmonton policies and will be determined prior to rezoning and subdivision approval.

Traffic calming measures such as roundabouts, raised intersections or curb extensions may be incorporated along roadways. Details will be confirmed with Transportation Services and Sustainable Development prior to development.

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## 8.2 TRANSIT AND LAND USE INTEGRATION

### OVERVIEW AND RATIONALE

Planning communities to incorporate and embrace transit infrastructure helps encourage transit use, develops a more compact city, and minimizes Edmonton's ecological footprint. The transportation network within Riverview 1 has been designed to complement the neighbourhoods residential, commercial and employment land uses, reducing the need for automobile travel.

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#### Objective 39: Maximize access to transit for the greatest number of residents and in accordance with City of Edmonton Transit System Guidelines and demands

Public transit service will be extended into the Riverview 1 NSP area in accordance with the City of Edmonton Transit System Guidelines and demands. The neighbourhood has been designed to ensure that all residents are within 400 metres walking distance (approximately a 5 minute walk) of transit service. Future transit routes will be established on the basis of the proportion of trips which are expected to be generated from within the neighbourhood and adjacent areas. Transit service will be accommodated via collector roadways which will be developed to a suitable standard providing readily accessible service to all areas of the neighbourhood.

1. All residential land uses should be within 400 metres walking distance of a transit route.
2. Transit services shall be initiated at the early stages of development of the neighbourhood.
3. Pedestrian linkages shall be provided to transit facilities located within Riverview 1.

**Implementation:** Edmonton Transit System will determine the routing



Source: Stantec

for public transit along the arterial and collector roadways which have been identified as future transit routes. In an effort to provide transit services earlier in the development of the neighbourhood, participating landowners may cooperatively fund transit for the first two years of service. Following this two year period, Edmonton Transit shall consider providing transit service, subject to City Council budget approvals and other factors, including sufficient ridership levels. Shared use paths along utility corridors in addition to sidewalk and walkway connections along collector and local roadways will provide access to the transit facilities.

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#### **Objective 40: Mitigate the impact of automobile traffic associated with commercial and higher density residential areas on adjacent single/semi-detached residential areas**

Commercial and higher density residential uses are to be located along the periphery of the neighbourhood and along arterial and collector roadways, to reduce the impact of traffic on local roadways.

To aid in reducing the total number of vehicles used within the community, reductions for private off-street parking may be accepted in conjunction with development applications for residential and commercial areas of the Town Centre and Business Employment areas. Where it can be demonstrated that commercial or higher density residential development encourages transit use over vehicle use or where there are overlapping requirements, such as mixed use development, parking may be reduced. Reducing the amount of area of land required for parking is not only cost efficient and more aesthetically appealing, but also passively encourages the use of public transit where it is feasible to do so.

1. Commercial and Low-rise/Medium Density Housing shall be located adjacent to arterial or collector roadways.
2. Where opportunities exist, shared parking facilities may be used to reduce the area required for parking.

**Implementation:** Figure 5: Development Concept and Figure 12: Transportation conceptually illustrates commercial and other high intensity land uses and surrounding arterial and collector street pattern. Access to these sites will be confirmed at the rezoning and subdivision stages.

Transportation Services and Sustainable Development will review applications proposing a reduction in the number of parking stalls required by the Zoning Bylaw. Applications for reduced parking may be required to demonstrate its feasibility through a Parking Impact Study. Vehicular parking will generally be provided on-site in conjunction with Commercial and Medium Density Residential development applications.

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#### **Objective 41: Provide noise attenuation for residential uses abutting transportation corridors**

Where residential development will be constructed adjacent to arterial roadways, the City of Edmonton requires the proposed development to address nuisance noise. If required by Transportation Services, noise level evaluations will be carried out by the developer prior to the design phase of the project. Based on the results of the study, noise attenuation facilities may be required (i.e. berm, fence, or combination thereof) to be incorporated into the design of subdivisions bordering arterial roads.



Source: Stantec

1. Appropriate noise attenuation facilities, where required, shall be provided for residential uses adjacent to 199 Street, 215 Street, and 23 Avenue.

**Implementation:** Transportation Services shall determine if a noise attenuation assessment is required for residential development at the subdivision approval stage, in accordance with the City of Edmonton Urban Traffic Noise Policy C5o6.

## 8.3 ACTIVE MODES NETWORK

### OVERVIEW AND RATIONALE

The Riverview 1 NSP supports the creation of a walkable, complete community. This includes provision of alternative transportation modes that support a range of users (and abilities) to access neighbourhood destinations, amenities and services within the neighbourhood.

Connectivity is characterized by a logical network for movement that comprehensively links destinations within as well as outside of the neighbourhood, provides accesses and is integrated with the environment. Neighbourhoods designed with connectivity in mind support the residents' ability to walk and cycle to destinations, reducing the number of vehicle trips, promoting active transportation, supporting social interaction, and reducing energy consumption and greenhouse gas emissions.

Active modes connections will be constructed along arterial roadways, Wedgewood Creek top-of-bank, utility rights-of-way, and storm water management facilities with a 3 m hard surface shared use path (SUP). Active modes connections identified within local or collector roadways may include dedicated or shared bike lanes and/or SUPs. The type of facility selected for these roadways should consider the adjacent land use, roadway traffic volumes, and the type of facility developed along the remainder of the link. It is also noted that a key element along links within local or collector roadways is way-finding information.

Where multiple facilities can be provided within parallel rights-of-way or corridors only one facility is required to be constructed. The type of facility selected along the segment should provide a logical, consistent extension of the overall active modes network. Wherever possible, the SUPs should be extended to adjacent intersections to facilitate pedestrian crossing.

In addition to the active modes network components identified above, sidewalks and on-street bicycle access will be available along arterial, collector, and local roadways as per existing standards.

Within the Town Centre area, a Pedestrian Zone has been identified, illustrated in Figure 13: Active Transportation Network. The Pedestrian Zone will require special attention to the design of streets and active mode



Marcus Partners



Source: Stantec

connections, making pedestrian travel as safe and convenient as possible. The City of Edmonton's Complete Streets Guidelines and Transit Oriented Guidelines will be utilized to achieve the design and functionality of the Pedestrian Zone. Enhanced design consideration will also need to be given to the Pedestrian Zone's collector-arterial intersections, located at 23 Avenue and 199 Street. These key intersections will also need to facilitate way-finding and priority pedestrian crossings between each of the Town Centre quadrants.

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#### **Objective 42: Provide strong, direct and convenient active modes connections to neighbourhood amenities and to surrounding communities**

Walkways, roads and shared-use paths provide a circulation system that is safe and convenient. As outlined in Figure 13: Active Transportation Network, active modes linkages will be designed to provide convenient connections to destinations, such as shopping and community amenities such as schools, libraries, recreations centres, community leagues, playgrounds and transit facilities in this neighbourhood, as well as adjacent communities. Where off-street connections are not feasible or available, sidewalks along local and collector roadways will facilitate obvious pedestrian connectivity.

Active modes connections between neighbourhoods will be assisted by crossing improvements in specific locations at arterial and collector roadways. A mid-block pedestrian crossing is planned on 199 Street to create strong pedestrian connection between the AltaLink corridor. Priority crossings are also located at controlled intersections within the Town Centre and will be designed to facilitate pedestrian movement across 23 Avenue and 199 Street, within the Town Centre's Pedestrian Zone, as shown on Figure 13: Active Transportation Network. This means that minimum pedestrian crossing times across 23 Avenue and 199 Street should be provided during all time periods (no pedestrian actuation). A two stage pedestrian crossing has also been identified at the collector-arterial intersection near the Cameron Heights interchange. This means that there will be a longer pedestrian delay period to allow adequate time for pedestrian to cross 23 Avenue.

1. Create convenient pedestrian access to amenity areas such as parks and open spaces, Business Employment node and Town Centre.
2. A network of hard-surfaced sidewalks, walkways, and shared-use paths shall be provided to promote walkability, cycling and access to community amenities, parks and open space, and the Public Upland Area adjacent to Wedgewood Creek ravine.
3. Shared-use paths shall be provided through the SWMFs, parks, utility corridors, adjacent to arterial roadways, and adjacent to the Wedgewood Creek ravine.
4. Pedestrian timing strategies at controlled intersections shall be provided in key locations for safe pedestrian crossing within the Pedestrian Zone, across 23 Avenue and 199 Street, as shown on Figure 13: Active Transportation Network.
5. Mid-block crossings shall be designed to facilitate pedestrian movements across 199 Street where safe pedestrian linkage is required.
6. All local roadways shall be developed with sidewalks on at least one side of the street.
7. All collector roadways shall be developed with sidewalks on both sides of the street, providing a sufficient level of pedestrian access.
8. Minor walkways shall be provided to promote walkability and access to transit facilities and neighbourhood amenities.
9. The Complete Streets Guidelines and Transit Oriented Design Guidelines will guide the design of streets, intersections and crossings within the Pedestrian Zone.

**Implementation:** Figure 12: Transportation and Figure 13: Active Transportation Network conceptually illustrates the arterial/collector street network and active modes connections within the neighbourhood, respectively. Local roadway configuration and pedestrian crossing facilities will be reviewed at the subdivision stage in consultation with the Sustainable Development and Transportation Services. The Subdivision Authority, in consultation with Transportation Services, will have regard for the location and dedication of road rights-of-way to promote walkability and appropriate access to neighbourhood amenities and transit facilities.

---

#### **Objective 43: Ensure the ongoing operation and integrity of power line corridors**

Development abutting the power line corridors shall be implemented according to the Edmonton Zoning Bylaw and in consultation with the utility operators with respect to setbacks from development to ensure the safe and ongoing operations of these facilities. Construction of a shared-use path along corridors will require approval from power line operators.

1. Integrate the existing power line corridors into the NSP to make use of potential pedestrian corridors while having regard for the safe, ongoing operation of these facilities.

**Implementation:** Figure 4: Site Constraints illustrates the location of the power line corridors. Exact location of pedestrian linkages will be determined at the subdivision stage in consultation with the utility operator. The provision of shared-use paths within utility corridors will be explored by the developer, City of Edmonton Transportation Services and the utility companies, at the rezoning and subdivision stage. If permission for a shared-use path and walkway is granted by the utility companies, a 3 m shared-use path will be built by the developer at their expense with adjacent development.

## APPENDIX 1: LAND USE AND POPULATION STATISTICS

	Area (ha)	% of GA	% of GDA			
Gross Area	283.85	100%				
Environmental Reserve						
Public Upland Area	4.46	1.6%				
Natural Area (ER)	1.14	0.4%				
Altalink Power Corridor	23.63	8.3%				
Existing Rural Residential	13.52	4.8%				
Arterial Road Right-of-Way	16.59	5.8%				
Gross Developable Area	224.51		100%			
Business Employment	39.57		17.6%			
Commercial						
Town Centre Commercial	15.01		6.7%			
Town Centre Mixed Use – Residential*	2.80		1.2%			
Parkland, Recreation, School (Municipal Reserve)						
Urban Village Park	5.66		2.5%	} 3.5%		
Pocket Parks	1.00		0.4%			
Greenway	0.13		0.1%			
Natural Area (MR)	1.04		0.5%			
Transportation						
Circulation	44.90		20.0%			
Infrastructure & Servicing						
Stormwater Management	17.84		7.9%			
Total Non-Residential Area	127.95		57.0%			
Net Residential Area (NRA)	96.56		43.0%			
RESIDENTIAL LAND USE, DWELLING UNIT COUNT AND POPULATION						
Land Use	Area (ha)	Units/ha	Units	% of NRA	People/Unit	Population
Single/Semi-Detached	81.68	25	2,042	84.6	2.80	5,717
Row Housing	4.93	45	222	5.1	2.80	621
Low-rise / Medium Density Housing	7.15	90	644	7.4	1.80	1,158
Town Centre Mixed Use - Residential*	2.8	90	252	2.9	1.80	454
Total	96.56		3,159	100		7,951
SUSTAINABILITY MEASURES						
Population Per Net Residential Hectare (p/NRA)						82.3
Dwelling Units Per Net Residential Hectare (du/NRA)						33
[Single/Semi-detached] / [Row Housing; Low-rise/Medium Density; Medium to High Rise] Unit Ratio						64.6% /35.4%
Population (%) within 500m of Parkland						94%
Population (%) within 400m of Transit Service						100%
Population (%) within 600m of Commercial Service						66%
Presence/Loss of Natural Areas		Land	Water			
Protected as Environmental Reserve		0.0	1.1			
Conserved as Naturalized Municipal Reserve (ha)		1.0	0.0			
Protected though other means (ha)		0.0	0.0			
Lost to Development (ha)		7.8	0.0			
STUDENT GENERATION STATISTICS		Notes:				
Level	Public	Separate	*Town Centre Mixed Use – Residential is divided amongst Residential Uses (50%) and Non-residential Uses (50%) (i.e. Total area is 5.60 ha; area of residential is 2.8 ha and non-residential is 2.8 ha).			
Elementary	449	225				
Junior High School	225	112				
Senior High School						
School	225	112				
Total	898	449				

## APPENDIX 2: FIGURES

### LIST OF FIGURES

FIGURE 1: LOCATION

FIGURE 2: NSP BOUNDARIES

FIGURE 3: SITE CONTOURS

FIGURE 4: SITE CONSTRAINTS

FIGURE 5: DEVELOPMENT CONCEPT

FIGURE 6: ECOLOGICAL NETWORK AND PARKS

FIGURE 7: URBAN AGRICULTURE & FOOD

FIGURE 8: SANITARY SERVICING

FIGURE 9: STORMWATER SERVICING

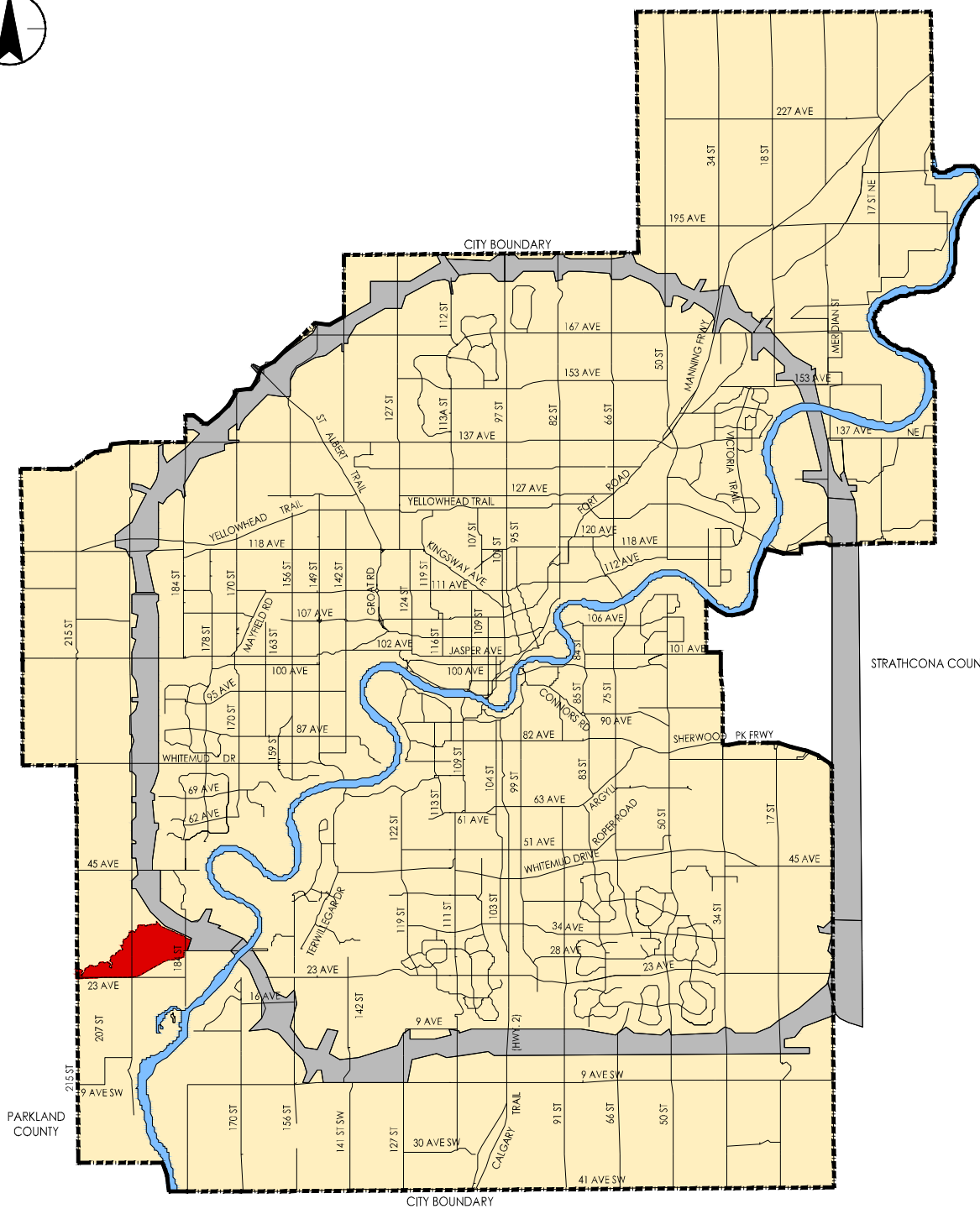
FIGURE 10: WATER SERVICING

FIGURE 11: STAGING

FIGURE 12: TRANSPORTATION

FIGURE 13: ACTIVE TRANSPORTATION NETWORK

FIGURE 14: LOW IMPACT DEVELOPMENT OPPORTUNITIES



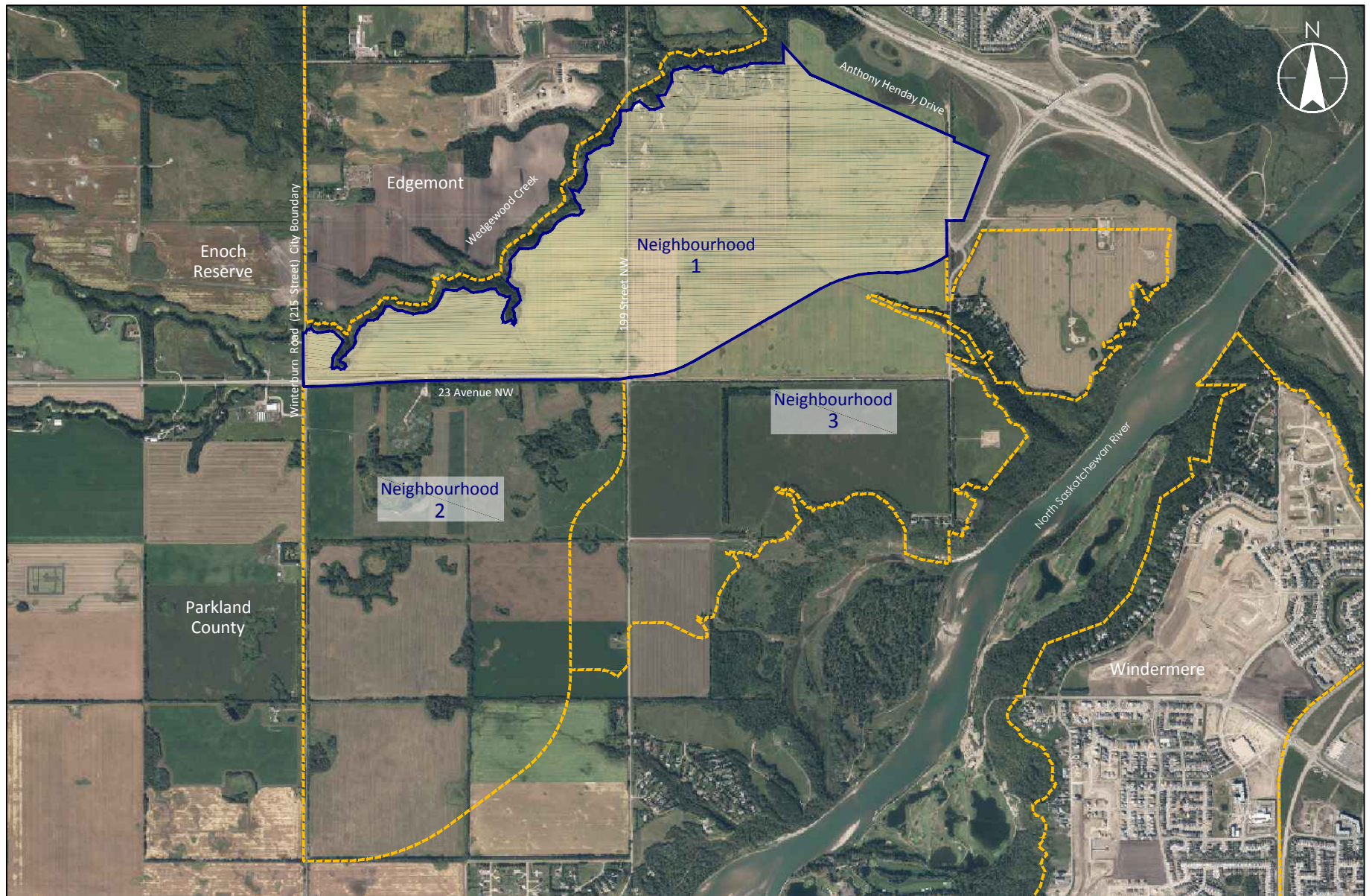
March 31, 2015  
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Client/Project  
Riverview Neighbourhood 1  
Neighbourhood Structure Plan

Figure No.  
1.0

Title  
Location Plan





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#### Legend

- Riverview Neighbourhood 1 NSP Boundary
- Adjacent Neighbourhood Boundary



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Figure No.

2.0

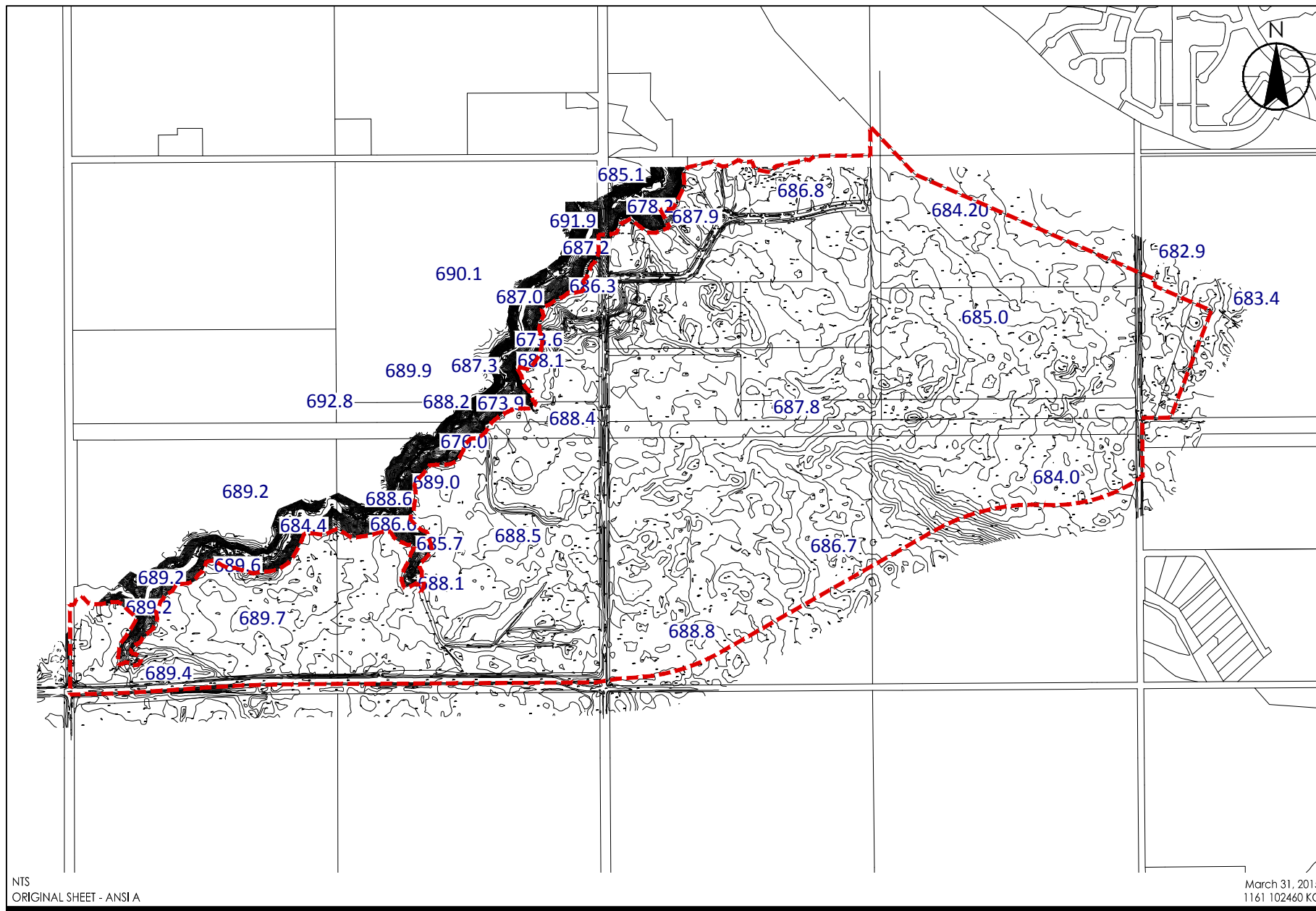
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NSP Boundaries

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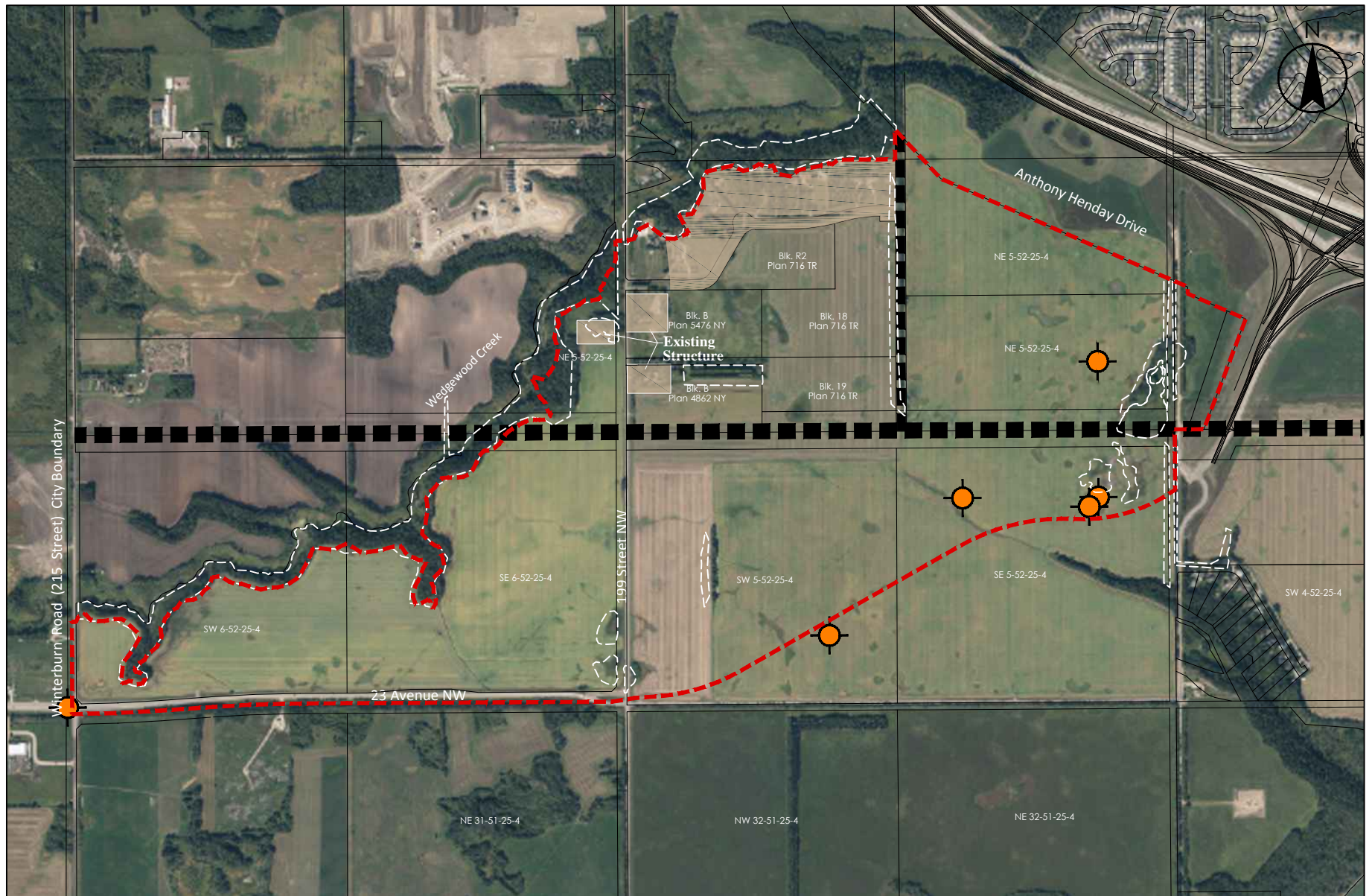


Legend  
## Elevation in Metres  
- - - NSP Boundary

Client/Project  
Riverview Neighbourhood 1  
Neighbourhood Structure Plan

Figure No.  
3.0  
Title  
Site Contours

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#### Legend

Existing Structure

Natural Area

Abandoned Wellhead

Utility Corridor (Power)

NSP Boundary



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Figure No.

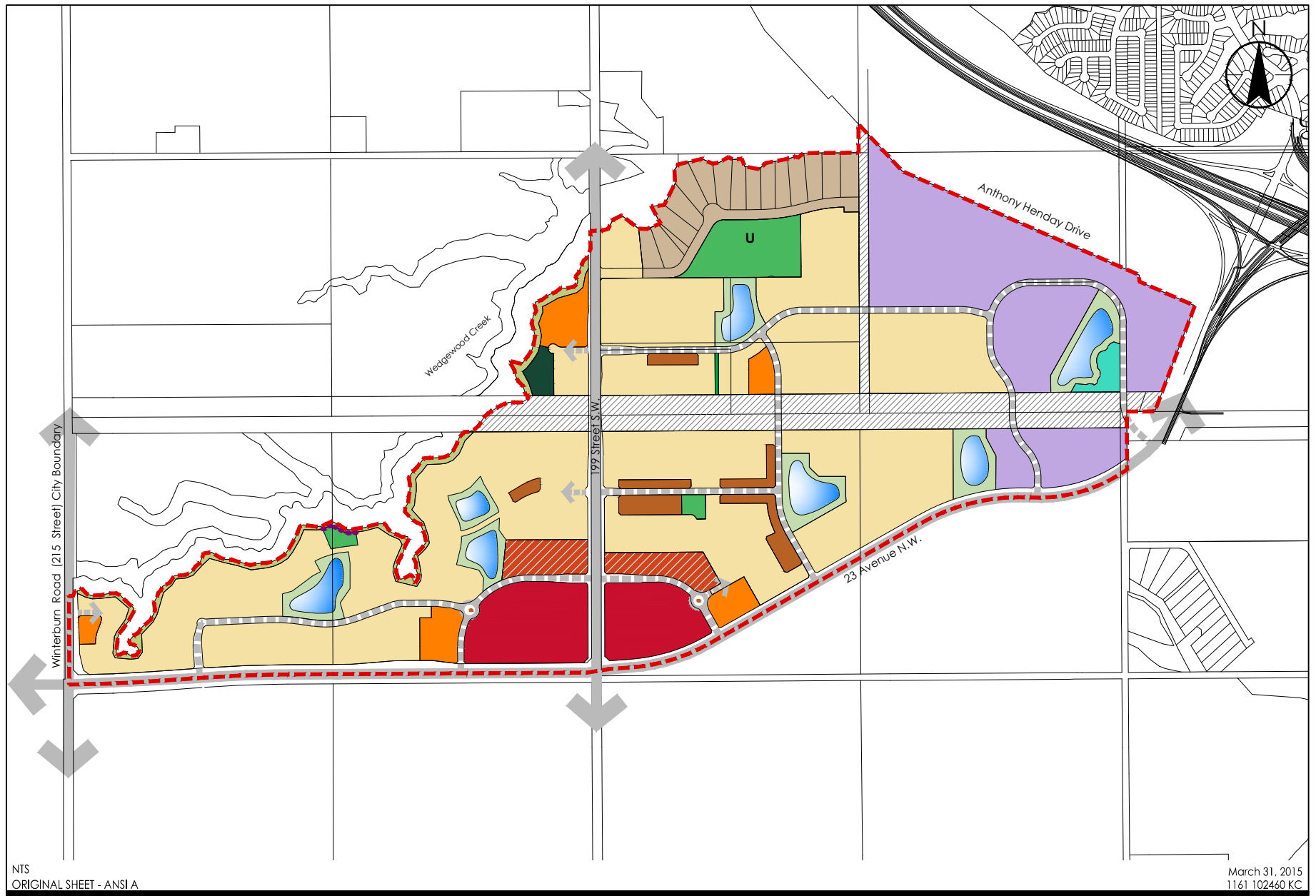
4.0

Title

Site Constraints

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 2015/04/10 11:34 AM By: Claudiu, Kevin

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#### Legend

- Existing Country Residential
- Single/ Semi-Detached Residential
- Row Housing
- Low Rise / Medium Density Housing
- Town Centre Mixed Use - Residential
- Town Centre - Community Commercial

- Business Employment
- Public Upland Area (ER)
- Urban Village Park
- Pocket Park / Greenway
- Natural Area (MR)
- Natural Area (ER)

- Stormwater Management Facility
- Public Utility
- Top-of-Bank Roadway / Park
- Collector Roadway
- Arterial Roadway
- NSP Boundary

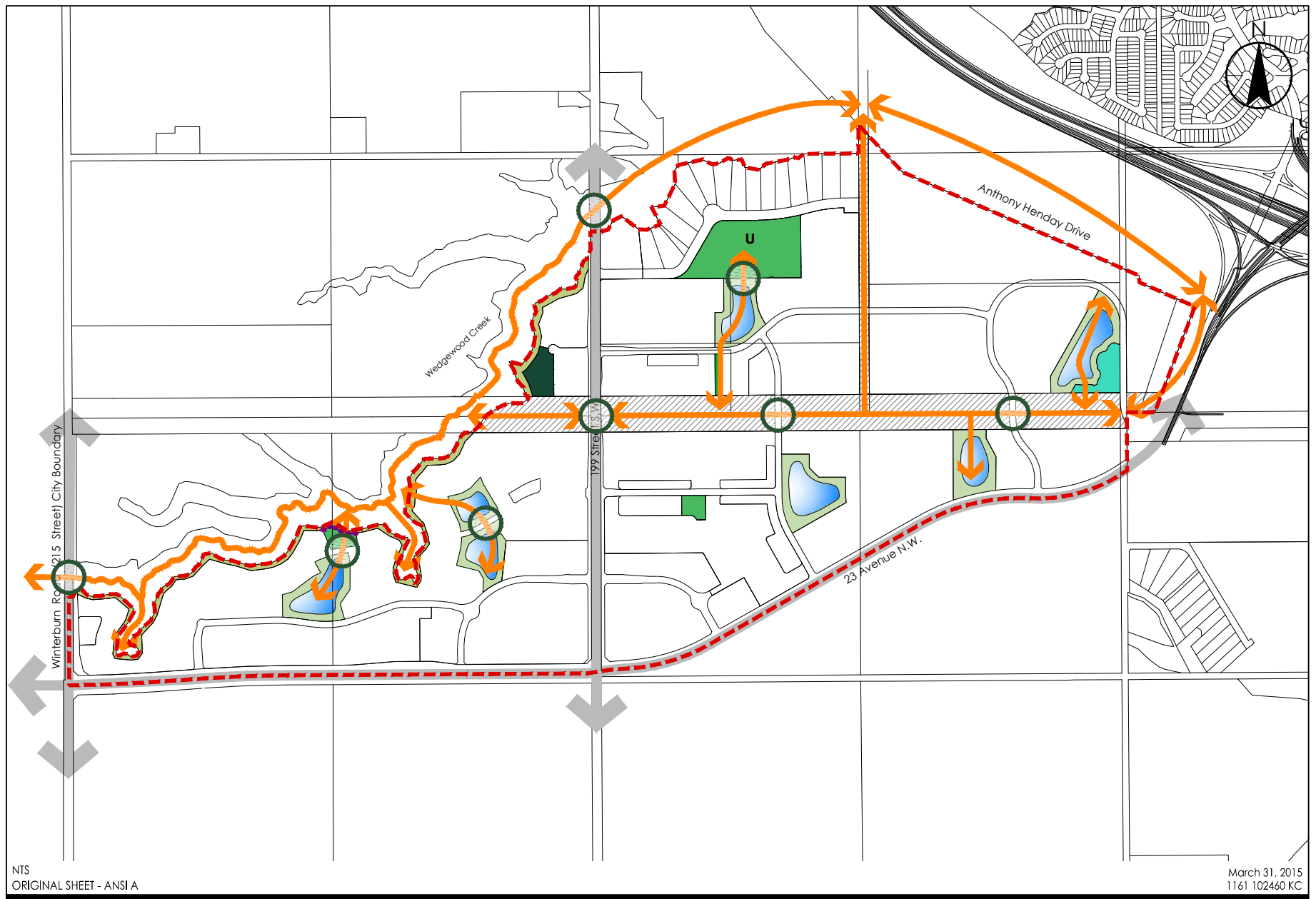
Client/Project  
 Riverview Neighbourhood 1  
 Neighbourhood Structure Plan

Figure No.  
 5.0

Title  
 Development Concept

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#### Legend

- Public Utility
- Urban Village Park
- Pocket Park / Greenway
- Natural Area (MR)
- Stormwater Management Facility
- Public Upland Area (ER)
- Natural Area (ER)

- Ecological Link
- Potential Wildlife Passage
- Top-of-Bank Roadway / Park
- Arterial Roadway
- NSP Boundary

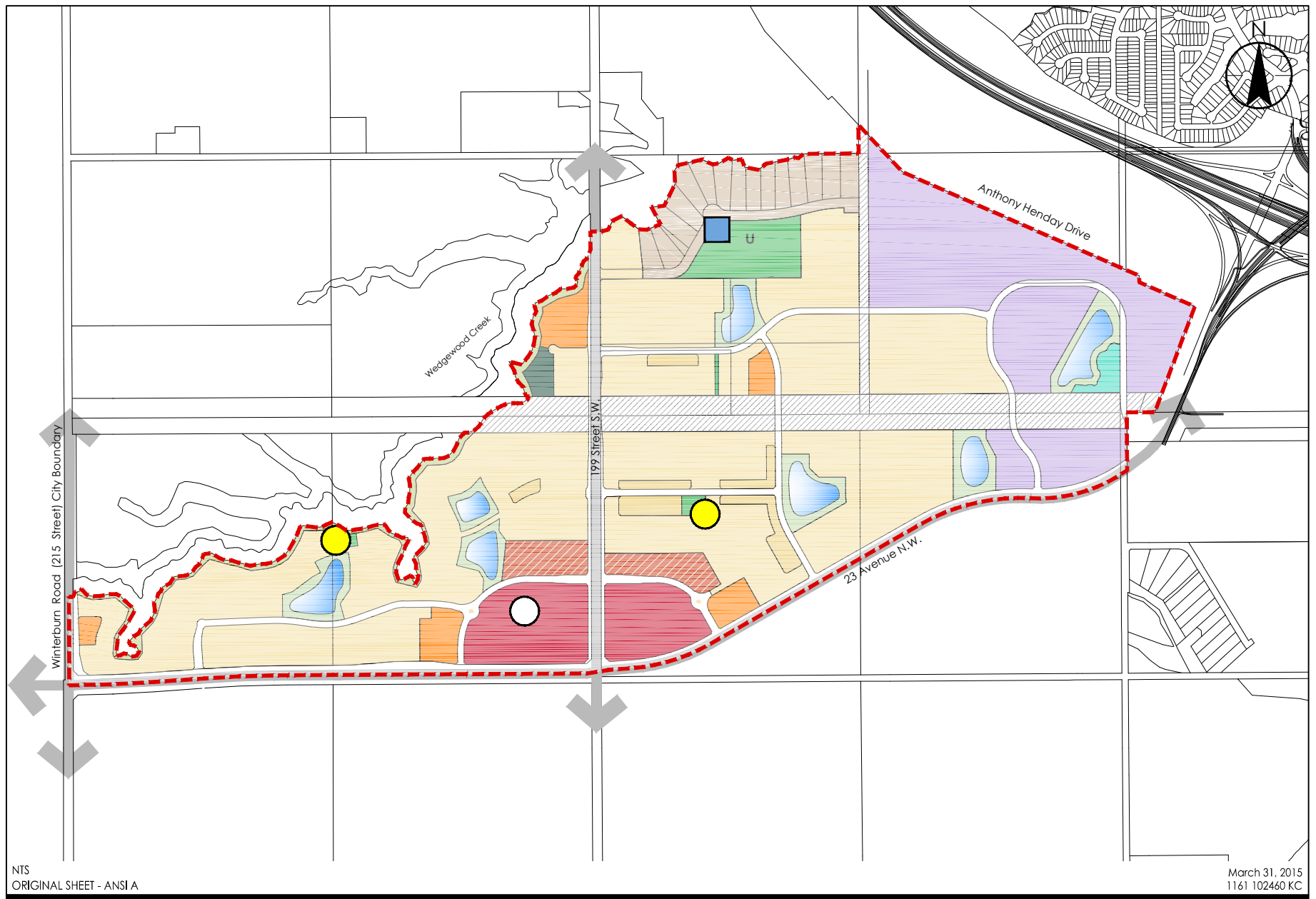
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Riverview Neighbourhood 1  
Neighbourhood Structure Plan

Figure No.  
6.0

Title  
Ecological Network & Parks

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2015/04/10 11:32 AM By: Clancillo, Kevin

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- Legend**
- Potential Community Garden
  - Potential Farmers Market
  - Potential Edible Landscaping
  - NSP Boundary

Client/Project  
Riverview Neighbourhood 1  
Neighbourhood Structure Plan

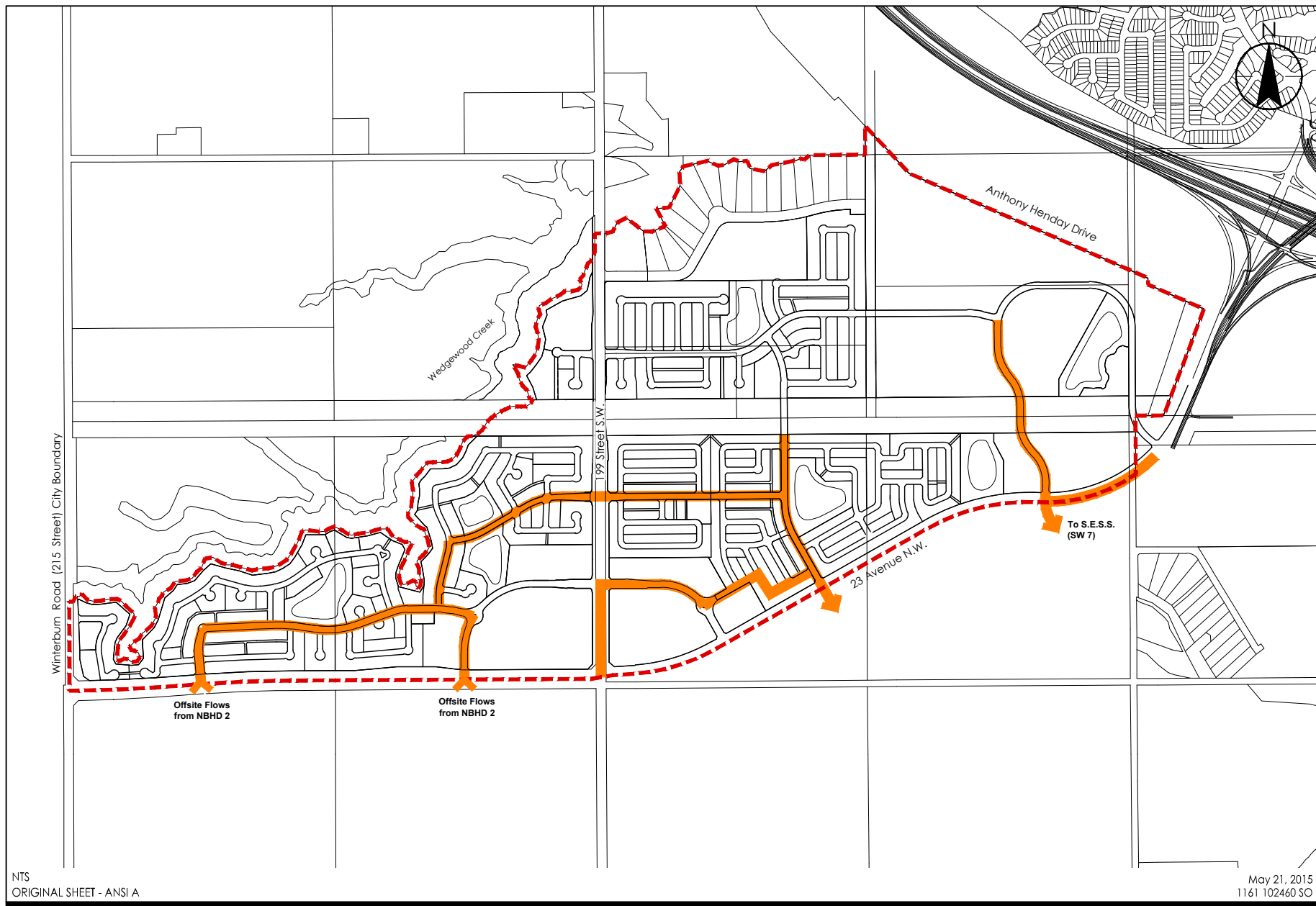
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7.0

Title

Urban Agriculture & Food

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2015/05/21 3:09 PM By: Orlan, Sarah



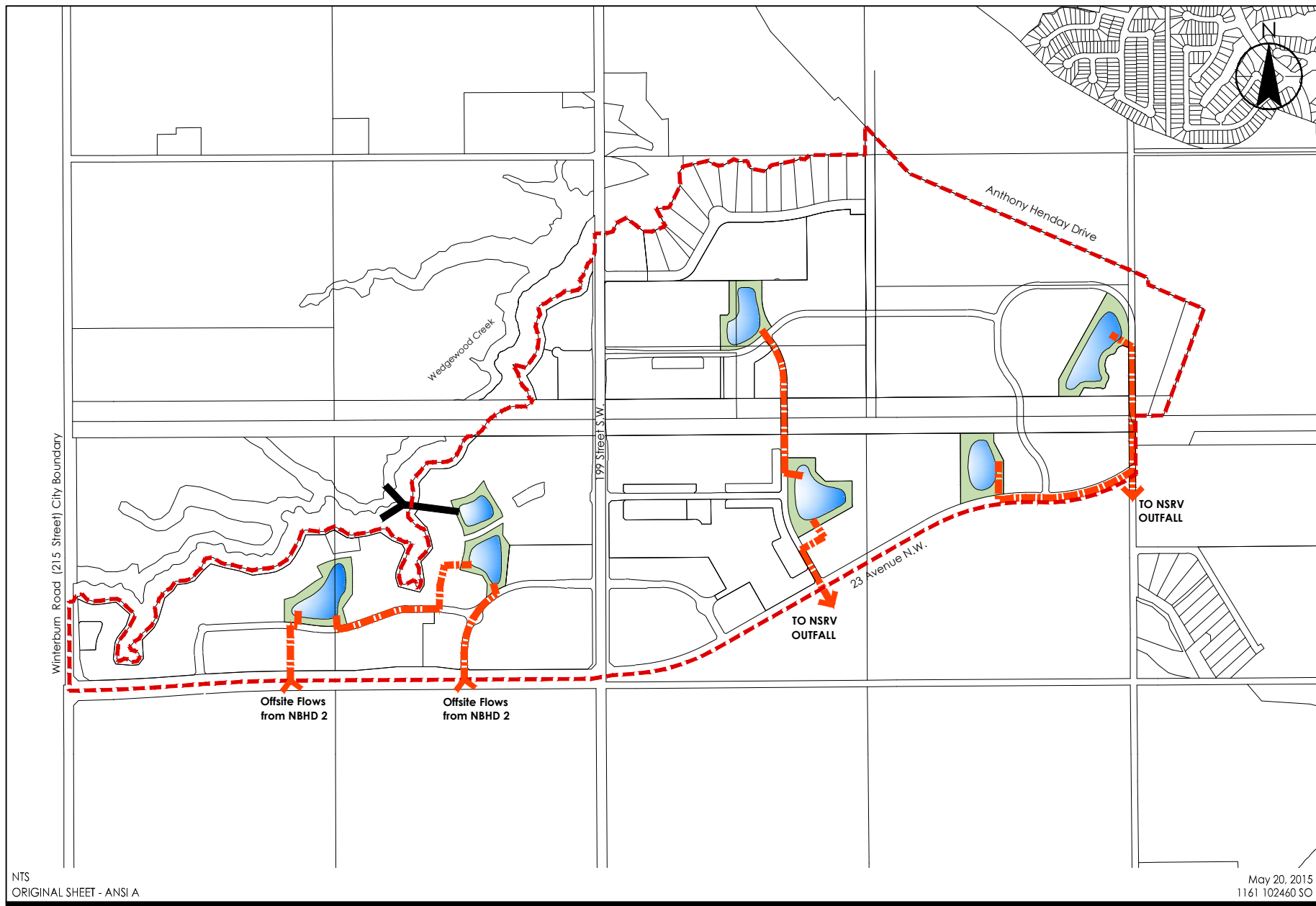
**Legend**  
Sanitary Trunk  
NSP Boundary

Client/Project  
Riverview Neighbourhood 1  
Neighbourhood Structure Plan

Figure No.  
8.0

Title  
Sanitary Servicing

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2015/05/21 3:04 PM BY: Orlan, Sarah



- Legend**
- Stormwater Management Facility
  - Storm Trunk & Interconnecting Pipe
  - Outfall
  - NSP Boundary

Client/Project  
Riverview Neighbourhood 1  
Neighbourhood Structure Plan

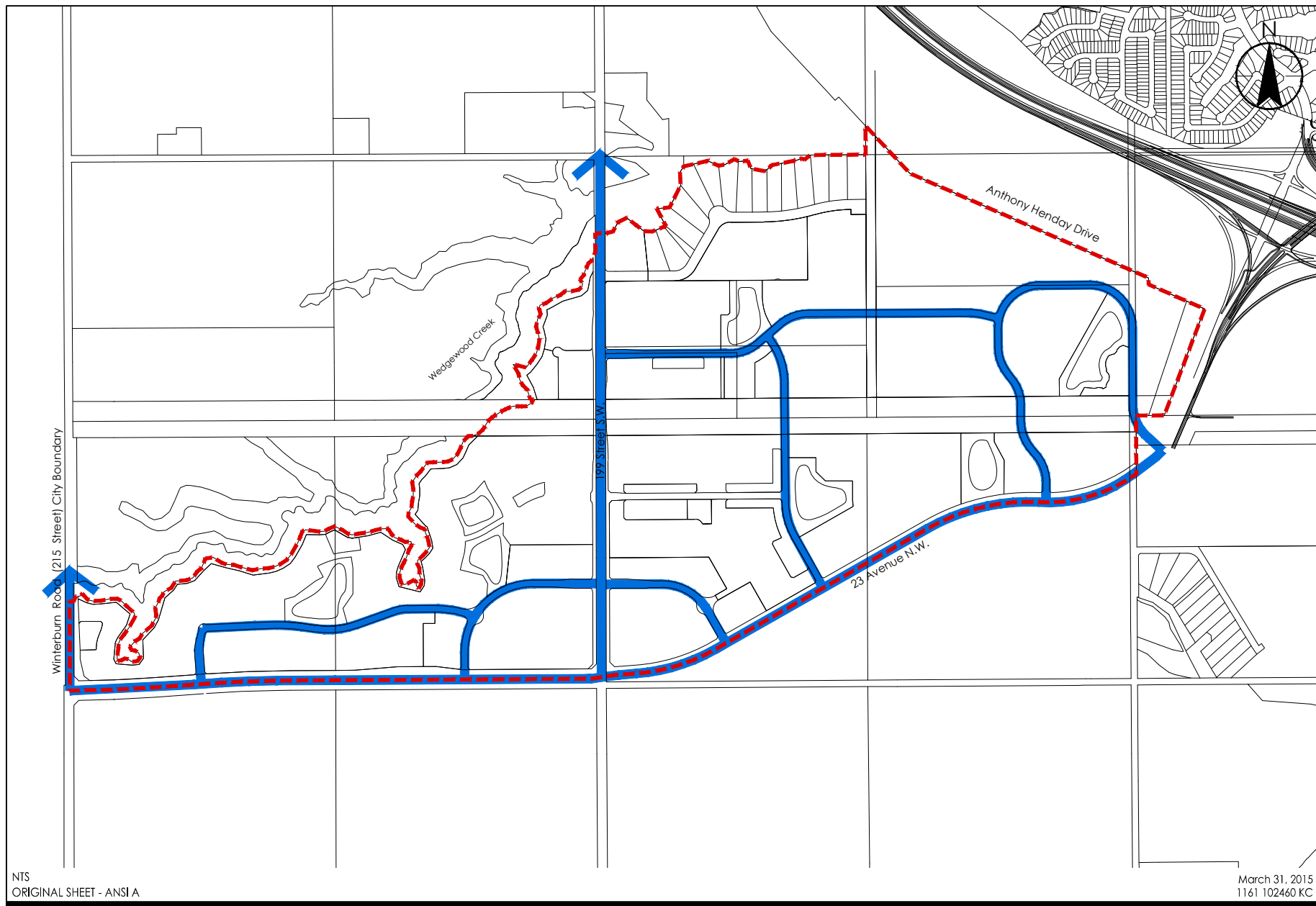
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Title  
**Stormwater Servicing**

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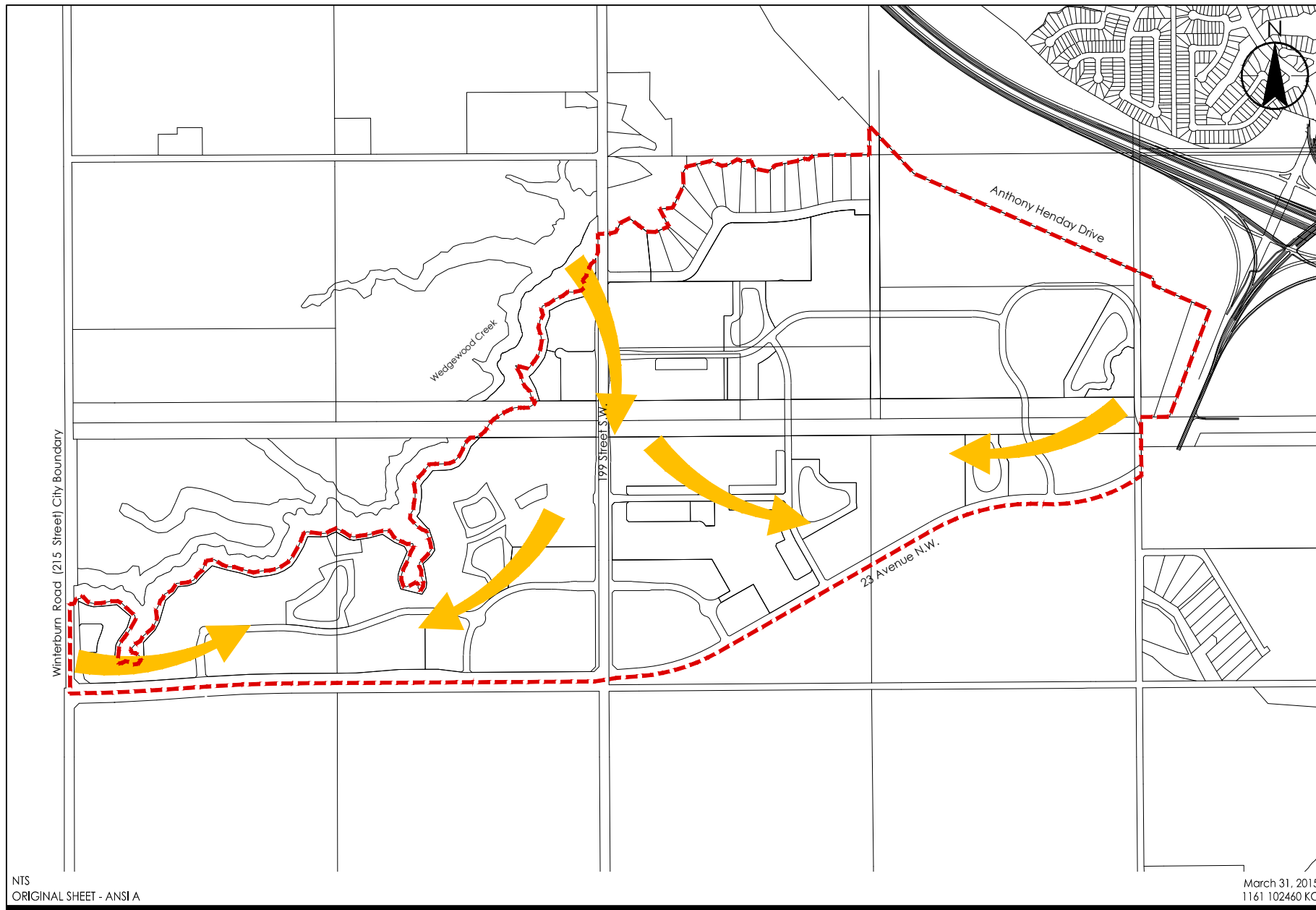
Legend  
Water Main  
NSP Boundary

Client/Project  
Riverview Neighbourhood 1  
Neighbourhood Structure Plan

Figure No.  
10.0

Title  
Water Servicing

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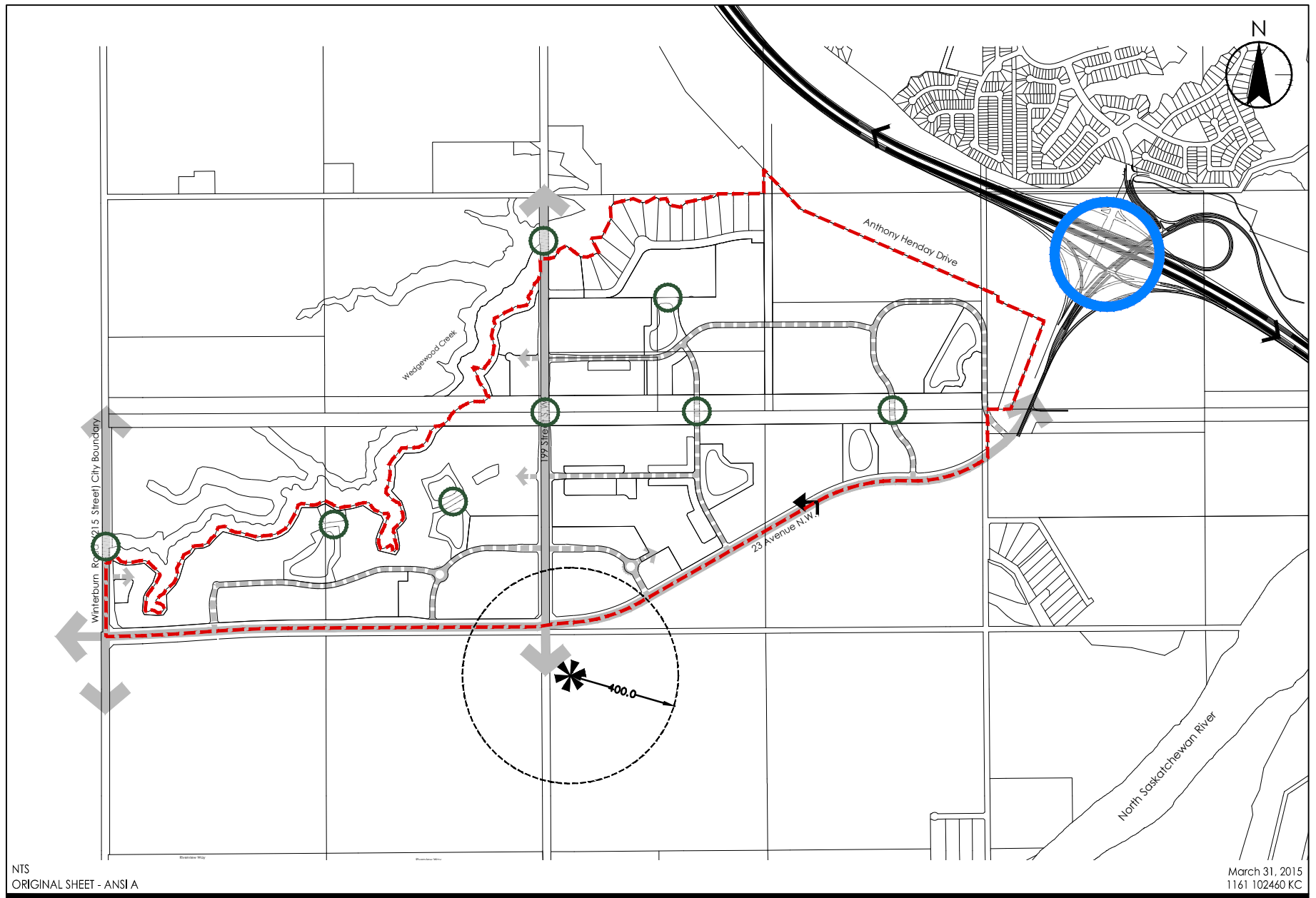


**Legend**  
 General Direction of Development  
 NSP Boundary

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Figure No.  
 11.0  
 Title  
 Staging



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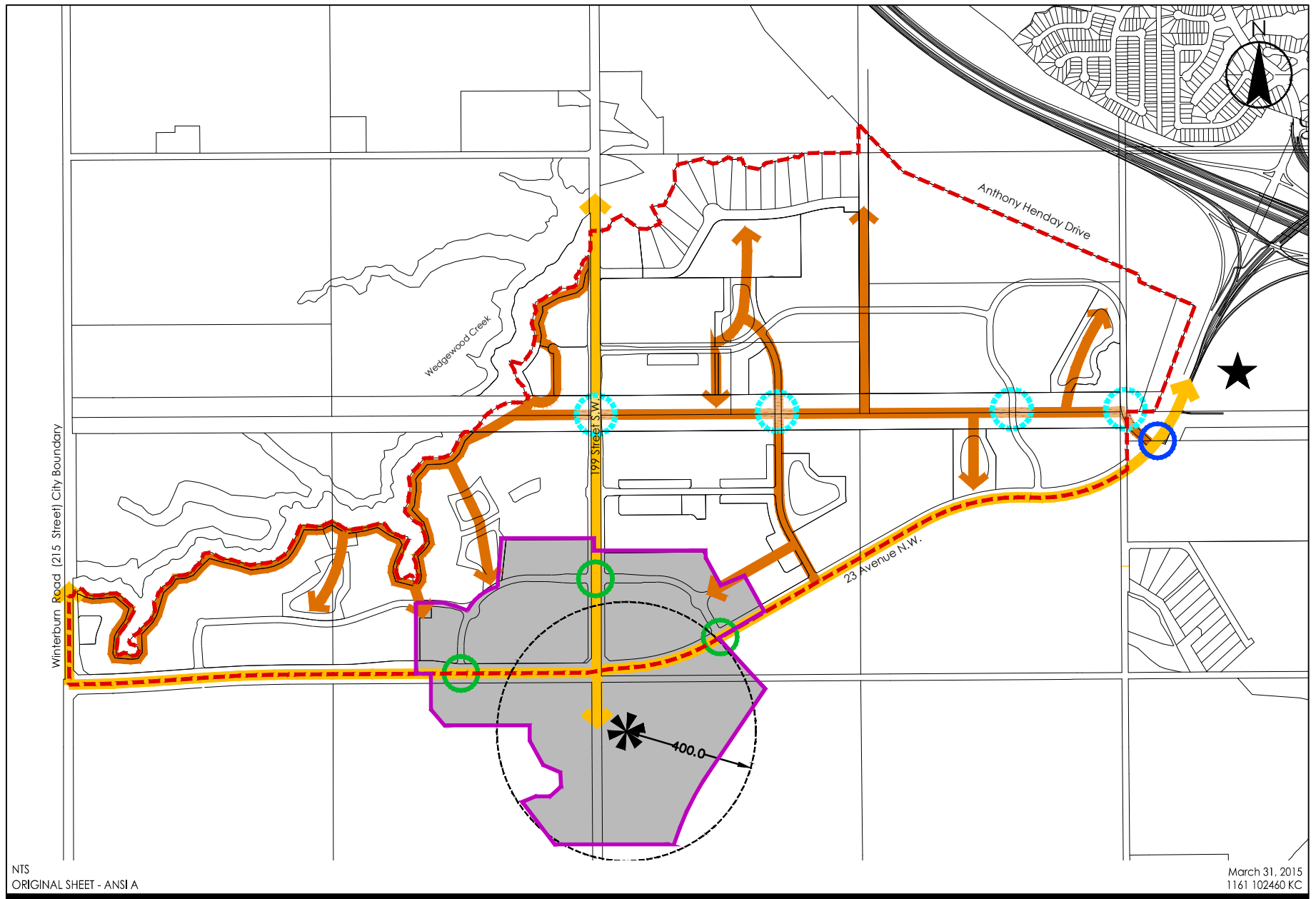
- Legend**
- Collector Roadway
  - Arterial Roadway
  - Freeway (Anthony Henday Drive)
  - Potential Wildlife Passage\*
  - Transit Centre
  - Service Interchange

- Interim Left-turn Movement
- NSP Boundary

\*See ENR11 for Passage Details

Client/Project  
 Riverview Neighbourhood 1  
 Neighbourhood Structure Plan

Figure No.  
**12.0**  
 Title  
**Transportation**



**Legend**

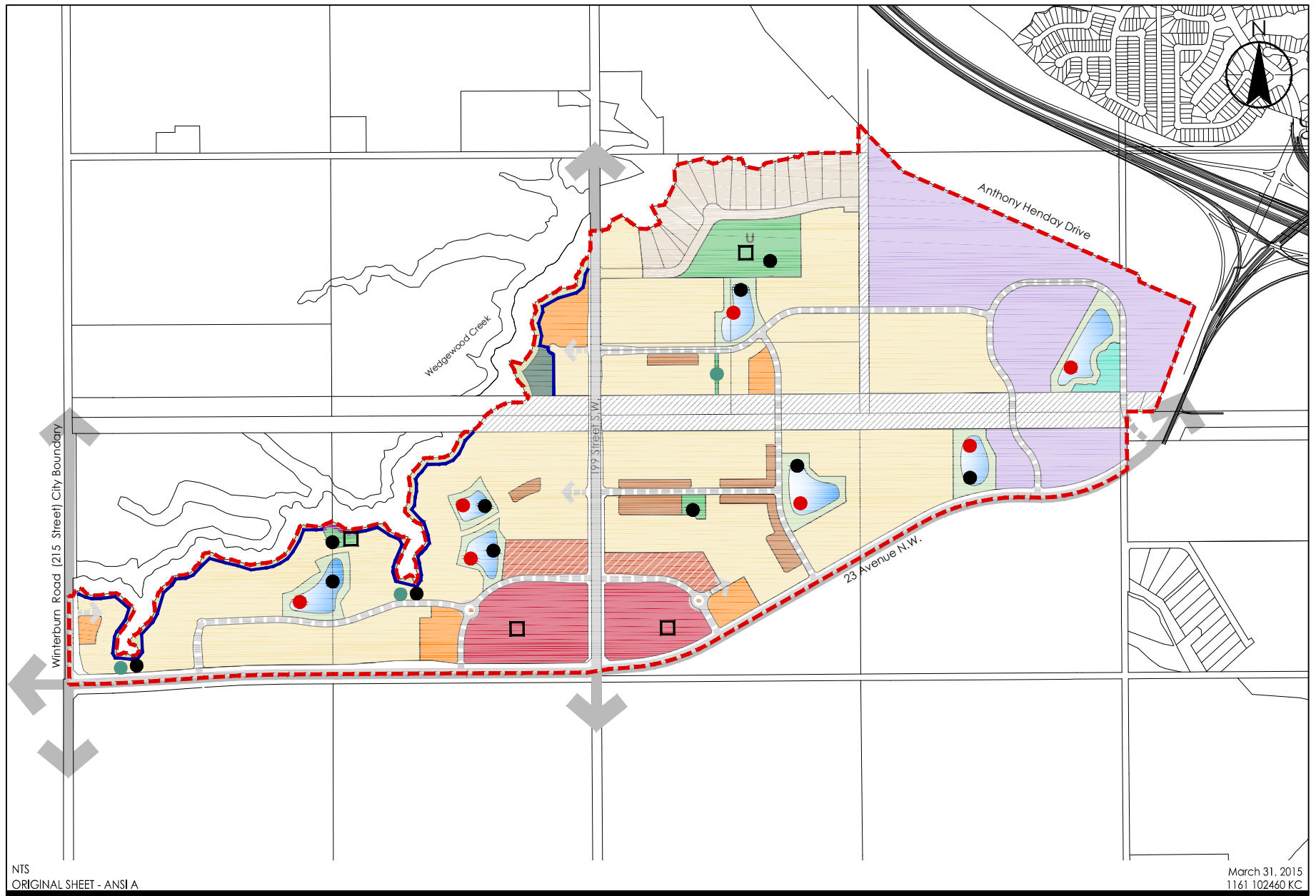
- Arterial Roadway
- Shared Use Path Active Modes Connection
- Pedestrian Zone
- Pedestrian Mid-Block Crossing
- Priority Pedestrian Crossings
- Two-Stage Pedestrian Crossings

- ✱ Transit Centre
- ★ Shared Use Path Connection to Anthony Henday Pedestrian Bridge
- NSP Boundary

Client/Project  
 Riverview Neighbourhood 1  
 Neighbourhood Structure Plan

Figure No.  
**13.0**

Title  
**Active Mode Transportation**



- Legend**
- Absorbent Landscaping
  - Bioswale
  - Naturalized Storm Water Management Facility
  - Bioretention Area
  - Back of Lot Drainage & Increased Top Soil Depth
  - ▨ Public Utility
  - ▨ Collector Roadway
  - ▨ Arterial Roadway
  - NSP Boundary

Client/Project  
 Riverview Neighbourhood 1  
 Neighbourhood Structure Plan

Figure No.  
 14.0

Title  
 Low Impact  
 Development Opportunities