### **MEMORANDUM OF AGREEMENT**

This Memorandum of Agreement made effective this <u>25</u> day of <u>February</u>, 2020 (the "Agreement").

**BETWEEN:** 

Leduc County

OF THE FIRST PART

and

#### The City of Beaumont

#### OF THE SECOND PART

and

#### The City of Edmonton

OF THE THIRD PART

#### WHEREAS:

- A. Leduc County, the City of Beaumont and the City of Edmonton (hereinafter defined as "the Partner Municipalities") entered into the Intermunicipal Planning Framework Agreement in February of 2018;
- B. The Partner Municipalities have distinct interests and cultures and the actions of one municipality affects it neighbours;
- C. The Partner Municipalities have undertaken the development of an Intermunicipal Planning Framework (Attached hereto as "Schedule A"); and
- D. The Intermunicipal Planning Framework Oversight Committee has granted approval of the same.

NOW THEREFORE THIS AGREEMENT WITNESSETH that the parties hereto covenant and agree with each other as follows:

- 1. The Partner Municipalities are legislatively separate and governed by independent elected Councils.
- 2. The Partner Municipalities support the recommendations and will follow the guiding principles contained within Schedule A and implement the policy objectives of the same.
- 3. That Schedule A to this agreement:

- a. provides guidance to the administrations of the Partner Municipalities regarding intermunicipal collaboration and communication through the coordination of infrastructure and land use planning along shared boundaries;
- b. provides a foundation for future discussions which supports regional prosperity; and
- c. demonstrates leadership in cooperation between regional partners.
- 4. This Memorandum of Agreement does not supersede or extinguish any rights or obligations that any of the Partner Municipalities have under existing or future legislation, regulations or agreements of any nature.
- 5. It is acknowledged that Schedule A will be dissolved in the manner described therein. In the event of dissolution of Schedule A, this Memorandum of Agreement shall be automatically terminated.

**IN WITNESS WHEREOF** this Agreement is executed by the parties' properly authorized officers in that behalf, all on the day and year first above written.

## LEDUC COUNTY

Per:

Chief Administrative Officer

## **CITY OF BEAUMONT**

Per:

Per:

Chief Administrative Officer

CITY OF EDMONTON: Per: Per:

Interim City Manager





# **Intermunicipal Planning Framework**

## Submitted to: Intermunicipal Planning Framework Partners

## October 23, 2019



McElhanney Ltd. 201, 13455 114 Avenue Edmonton AB, T5M 2E2

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## 1. Introduction

## 1.1. Intermunicipal Planning Framework Agreement

In February 2018, the City of Edmonton (Edmonton), City of Beaumont (Beaumont), and Leduc County, collectively known as the Partner Municipalities, signed the Intermunicipal Planning Framework Agreement (Agreement), formally committing the Partner Municipalities to collaborative planning within the Study Area. The location of the Study Area is identified on Figure 1. The Agreement acknowledges the interconnected and interdependent relationships among the Partner Municipalities and confirms a commitment to uphold collaboration and an enhanced level of responsible planning and development.

Under the Agreement, the Partner Municipalities agreed to develop a high-level conceptual Intermunicipal Planning Framework (Framework) to identify land use, infrastructure, and transportation concepts for the Study Area to inform future projects, plans, and studies. As part of this Framework, the Partner Municipalities developed a Cost Sharing Plan to enable infrastructure development in the Study Area, to support growth in each of the municipalities.

The following considerations were key to developing appropriate boundary interfaces throughout the Framework:

- Land use compatibility
- Transportation connectivity
- Water and wastewater servicing connectivity
- Surface drainage and stormwater management
- Environmental and natural areas considerations
- Agricultural conservation and interface
- Open space and trail connectivity
- Development constraints
- Utility infrastructure and pipeline right(s) of way setbacks
- Demographic trends (population growth or loss)
- Supply of residential and employment lands

The Framework is guided by: the Framework purpose, 50 year vision, the Agreement's principles, approach, goals and objectives, and policy objectives.



## **INTERMUNICIPAL PLANNING FRAMEWORK** LOCATION MAP



September 5, 2019

FIGURE 1

### LEGEND

	STUDY AREA BOUNDARY
	ROADS
	- MUNICIPAL BOUNDARY
	EIA BOUNDARY
BEAUM	ONT
EDMON	ITON
LEDUC	COUNTY
	ITON INTERNATIONAL RT
STRATH COUNT	
LEDUC	

Prepared by: MCElhanney

Edmonton





## **1.2.** Framework Purpose

The Framework is meant to be a guiding document to foster cooperation, coordination, and communication among the Partner Municipalities. This Framework is an agreement that outlines how the Partner Municipalities envision development occurring in the Study Area.

The Framework is not intended to be a prescriptive policy document.

This Framework addresses:

- Land uses;
- Infrastructure servicing and transportation; and,
- A Cost Sharing Plan.

The purpose of this Framework is to create a shared vision and well-integrated concept for the Study Area's future land use planning and servicing. The Framework provides clarity on effective and cost-efficient servicing, implementation, and recommendations to coordinate standards, boundary management, and ongoing proactive intermunicipal collaboration.

The land use, infrastructure, and transportation concepts contained in this Framework have been informed by the Edmonton Metropolitan Region Growth Plan (Growth Plan) as well as existing Leduc County, Beaumont, and Edmonton approved statutory planning documents pertaining to the Study Area. However, the Framework itself is not a statutory plan. It is an agreement among the Partner Municipalities to work together and develop this sub-region collaboratively.

To support the implementation of the Framework, this document includes policy objectives agreed to by the Partner Municipalities. Each Municipality is responsible for incorporating these policy objectives in their own municipal processes or adopting appropriate strategies, policies, and other implementation tools in plans and processes.

The policy objectives have been written for ease of inclusion, where determined appropriate by their respective Councils, in future statutory plans and statutory plan amendments. When the Partner Municipalities update their statutory plans and include any of the Framework's policy objectives, each municipality will follow normal statutory planning processes. This Framework provides the Partner Municipalities with a clear understanding of their commitments and obligations, and their roles during implementation, and through the next steps. To be clear, the Framework is not intended to take away the Partner Municipalities' municipal autonomy in their adoption and amendment of statutory plans, nor do they bind municipal Council's to adopt the policy objectives outlined in this Framework. Rather, the policy objectives represent high-level development practices for the Study Area that are jointly agreed upon by the Partner Municipalities at the time the Framework was developed, while recognizing that this Framework is non-statutory and these policy objectives will be required to undertake an appropriate statutory plan approval process for implementation. Over time, the land use concept, servicing strategies and policy objectives may change, however the policy objectives contained in this Framework outline the joint commitment between the Partner Municipalities to collaborate on land use, infrastructure, and transportation decisions in the Study Area.

## 2. Vision and Principles

The Partner Municipalities recognize the value of building this Framework as a foundational structure for future and ongoing collaborative planning. The Partner Municipalities appreciate the interdependence among the three municipalities and the importance of working collaboratively to develop and deliver efficient infrastructure services to support sustainable growth and development in each municipality.

## 2.1. 50 Year Vision

Along our shared municipal boundaries, planning decisions are made collaboratively to ensure coordinated development. Land uses are compatible and infrastructure services are delivered seamlessly, efficiently, and cost effectively.

To realize this shared long-term vision, the Partner Municipalities recognize:

- The need for a continued cooperative partnership;
- Open, clear, and transparent communication;
- That actions of one municipality have effects on its neighbours; and,
- That each municipality is legislatively separate and has distinct needs, interests, and cultures.

## 2.2. Intermunicipal Planning Framework Agreement Principles

When the Agreement was signed in February 2018, the Partner Municipalities agreed to core principles that would guide future planning initiatives. These principles are:

- Considering the whole as important;
- Think about the "big picture";
- Commit to priorities based on collaboration;
- Work in the interest of the sub-region versus alone to maximize the benefit to the sub-region;
- Whoever can do it best should be charged with doing it; and,
- Minimize duplication and maximize benefits to the sub-region.

These principles have been used throughout the development of this Framework as a touchstone for decisions. Each significant decision has been tested against these principles.

## 2.3. Approach: "think bigger, focus on equity and collaboration"

Building on the overarching principles and embedding them in the project plan, the Partner Municipalities agreed that the plan approach would:

- Focus on the best way of getting it done the project, the plan, and delivery long-term;
- Plan for the entire Study Area as a collaborative intermunicipal planning approach;
- Be open to innovative solutions new ideas may be the best way of getting it done;

- Be transparent in decision-making so it is easy for future Councils and administrations to understand how decisions were made; and,
- Align with regional plans and initiatives including shared investment for shared benefit.

## 2.4. Goals and Objectives

Recognizing the need to accommodate growth aligned with the Growth Plan, the Partner Municipalities identified the following goals and objectives, as they relate to this Framework.

- Sustainable growth
  - o Increased non-residential tax assessment
  - o Increased job growth
  - o Cost effective and efficient servicing
  - o Optimize existing infrastructure
  - o Eliminate duplication of efforts
  - Compact and contiguous form
- Regional connectivity
  - o Seamless and efficient integration of infrastructure
  - o Complementary and compatible land uses
- Intermunicipal collaboration
  - o Support a common cost sharing model for land use, transportation, and infrastructure
  - o Address sub-regional challenges and opportunities collaboratively
  - o Collaboratively advocate to secure all levels of government funding, especially provincial and federal funding.

## 3. Study Area

Recently approved annexations by both Beaumont and Edmonton have resulted in multiple, newly shared municipal boundaries among the Partner Municipalities. The Partner Municipalities recognize that, by working together, they can achieve more sustainable and livable communities in the Study Area and the Edmonton Metropolitan Region.

## 3.1. Current State

Existing policy documents, including the Growth Plan, Municipal Development Plans and Area Structure Plans, have provided the basis for understanding and developing a vision for development in the Study Area.

North Nisku Industrial Park, located along the west end of the Study Area, is a significant employment area within the local and metropolitan region and includes developed, developing, and undeveloped employment lands. The communities of East Vistas (in Leduc County) and Elan (in Beaumont) are planned and developing urban residential areas. Additional urban residential is planned in north Beaumont, supplemented by commercial and industrial uses along 50 Street and lands south of Highway 625. Additionally, there are several existing pockets of Country Residential development throughout the study area.

At the time this Framework was being developed, Edmonton was completing their Municipal Development Plan review and update. While there were no approved statutory plans confirming the future land uses of the Edmonton lands, based on the annexation applications it was anticipated that a significant portion of the lands will be developed as residential.

## 3.2. Constraints

## **Natural Constraints**

The entirety of the Study Area exists within the Whitemud Creek Watershed and contains a number of significant creeks and water bodies, including Cawes Lake, Blackmud Creek, Irvine Creek, and LeBlanc Canal. LeBlanc Canal runs through Beaumont and discharges into Irvine Creek, providing stormwater management and surface water storage for the area. Irvine Creek is a tributary to Blackmud Creek and flows northeast to southwest through the Study Area. Blackmud Creek drains through Edmonton, discharges into Whitemud Creek, and, ultimately, into the North Saskatchewan River. These creek systems provide important fish, wildlife, and riparian habitat in addition to surface water drainage for the area. Cawes Lake, located in the Study Area, and Saunders Lake, located just outside the Study Area, contribute significantly to the Blackmud Creek Watershed Basin.

Other natural features, including waterbodies, wetlands, and floodplains, are prevalent throughout the Study Area (Figure 2). These natural features support a large ecological network providing wildlife habitat, native vegetation, surface water storage, and mitigation against local flood and drought events. These natural features were considered in the development of the

land use and infrastructure concepts in this Framework. However, the importance and impacts of development on these features will need to be considered in future planning exercises. Further discussion regarding plans and studies to address environmental and natural features can be found in Section 4.3.

### Linear Constraints

In addition to natural constraints, there are existing infrastructure corridors, pipelines, and utility rights-of-way that encumber the land and future development (Figure 3). At the scale of this Framework, the impacts of these constraints are minimal. However, they have been noted and considered in the concept development.



## **INTERMUNICIPAL PLANNING FRAMEWORK EXISTING ENVIRONMENTAL FEATURES, DRAINAGE, STORMWATER MANAGEMENT**





FIGURE 2



## **LEGEND - GENERAL**

- MUNICIPAL BOUNDARIES STUDY AREA BOUNDARY

## **LEGEND - CATCHMENT AREAS**

BLACKMUD CREEK CATCHMENT CLEARWATER CREEK CATCHMENT **IRVINE CREEK CATCHMENT** WHITEMUD CREEK CATCHMENT









## **INTERMUNICIPAL PLANNING FRAMEWORK INFRASTRUCTURE CORRIDORS AND RIGHT OF WAY**



FIGURE 3

## **LEGEND - GENERAL**



 MUNICIPAL BOUNDARIES STUDY AREA BOUNDARY **RIVER / CREEK** WATER BODY

MAJOR TRANSPORTATION CORRIDORS

### **UTILITY CORRIDORS / FEATURES**

+

NATURAL GAS R.O.W. OIL PIPELINE R.O.W. POWER TRANSMISSION LINE ABANDONED WELL SITE







## 4. Future Development Concept

The future development concepts identified in this section (land use, infrastructure, and transportation) are based on anticipated development patterns identified in the Growth Plan, existing statutory plans, utility provider input, as well as specific direction from the Partner Municipalities. These development concepts were used to identify agreement between the Partner Municipalities on policy objectives. They also informed the Cost Sharing Plan and identified potential areas for collaboration.

Policy objectives provided in this section reflect the Partner Municipalities agreement on future development in the Study Area. The policy objectives are non-statutory and have been provided to guide future statutory planning activity in the Study Area. Each municipality is responsible for the review, adoption, and implementation of the objectives identified in this Framework.

The concepts and policy objectives reflected in this Framework must be carried forward to statutory plans for implementation. The objectives contained within this Framework do not supersede the policies of the Growth Plan.

## 4.1. Land Uses

The Future Land Use Concept (Figure 4) of this Framework provides clear and high-level direction for land use in the Study Area and was used to inform infrastructure servicing strategies also outlined in the Framework. The land use concept is based on existing statutory plan approvals, current land use planning principles, anticipated impacts of natural and linear constraints, as well as specific direction from the Partner Municipalities. The following plans and documents were considered in the development of the Land Use Concept.

## Edmonton Metropolitan Region Board

• Edmonton Metropolitan Region Growth Plan

## Leduc County

- Leduc County / Beaumont Intermunicipal Development Plan
- Leduc County Municipal Development Plan
- 2019 Draft Municipal Development Plan
- North Major Area Structure Plan
- WAM Industrial Park Local Area Structure Plan
- Royal Cubera Local Area Structure Plan
- Queen Elizabeth II Business Park Local Area Structure Plan
- East Vistas Local Area Structure Plan
- Blackmud Creek Area Structure Plan
- Royal Woods Outline Plan
- Royal Oaks Estates Outline Plan
- Irvine Creek Outline Plan
- Churchill Meadows Outline Plan

#### Beaumont

- Our Complete Community Municipal Development Plan
- Our Connectivity Transportation Master Plan
- Our Water and Wastewater Systems: 2018 and Beyond
- Elan Area Structure Plan

### Edmonton

- Municipal Development Plan
- Southeast Area Structure Plan
- Decoteau Area Structure Plan
- Ellerslie Area Structure Plan
- The Orchards at Ellerslie Neighbourhood Structure Plan
- Heritage Valley Servicing Concept Design Brief
- Allard Neighbourhood Area Structure Plan
- Cavanagh Neighbourhood Structure Plan

The simplified land use concept incorporated four land use categories within the Study Area: Urban Residential; Country Residential; Employment; and, Agriculture. This Framework outlines the general intent for each of these land use categories, and agreed to policy objectives.



## **INTERMUNICIPAL PLANNING FRAMEWORK FUTURE LAND USE CONCEPT**



September 5, 2019

FIGURE 4



Note: Context land uses are located outside the Study Area and identify existing and proposed land uses on adjacent parcels at the time this plan was prepared. These land uses are for context only and may change over time.

LAND USE CONCEPT ONLY. SUBJECT TO APPROVAL IN STATUTORY PLAN.









## 4.1.1. General Land Use Policy Objectives

These general policy objectives guide all development in the Study Area and are applicable to all the land use categories.

## Policy Objectives:

- 1. All new development located in Urban Residential, Country Residential, and Employment Areas must be developed in accordance with an approved Area Structure Plan.
- 2. Prior to development, all lands are deemed to be Agriculture and may be used for agricultural purposes until such time as they are required for urban expansion.
- 3. To minimize fragmentation and premature conversion of agricultural lands for non-agricultural uses, Area Structure Plans should only be considered on lands contiguous with built-up urban areas and/or other planned areas and where development of the lands is deemed to be required to accommodate population or employment projections. Area Structure Plans will consider and implement measures to mitigate impacts to interim and adjacent agricultural uses.
- 4. Environmentally sensitive lands, parks, and open space may exist in any of the land use categories. Development or protection of these features should be in accordance with the policy objectives identified in this Framework or future intermunicipal projects, and confirmed in an Area Structure Plan or other development approvals.
- 5. The Partner Municipalities will work together to minimize the impact of the movement (export/import) of soils across jurisdictional boundaries and explore opportunities for the re-use of soils that have been stripped to make way for development.

## 4.1.2. Urban Residential

Areas identified for primarily residential development must be supported by municipal servicing. These areas may also include neighbourhood level commercial uses, institutional uses, and other services required to support an urban population. Urban Residential development within the Metropolitan Area Policy Area of the Growth Plan are required to meet density targets established in the Growth Plan.

## Policy Objectives:

- 1. Urban Residential development is expected in areas identified as Urban Residential on the Future Land Use Concept (Figure 4). Expansion of the Urban Residential Area may be supported by the Partner Municipalities if there is a demonstrated need for lands to support population growth; where efficient and cost effective shared infrastructure is a key consideration; and the proposed expansion will not adversely impact the overall viability of Employment Area(s).
- 2. Unless otherwise approved in an existing statutory plan, all Urban Residential Areas shall meet or exceed the Growth Plan density targets.

- 3. All new development within an Urban Residential Area will be serviced with municipal water and sewer. New private on-site servicing is not supported.
- 4. Existing Country Residential development located within an area designated for Urban Residential may continue as a Country Residential use. However, subdivision and development that increases the number of lots, principal dwelling units, or principal non-residential use intensity on these sites will not be supported unless municipal servicing is introduced and the density targets of the Growth Plan are met.
- 5. Area Structure Plans for Urban Residential Areas will incorporate a mix of housing types to meet the needs of a variety of ages, family and/or household types, abilities, and incomes.
- 6. Urban Residential Areas located adjacent to major transportation corridors shall require noise attenuation studies and, if necessary, mitigation measures prior to development approval.
- 7. Higher density, mixed use development is encouraged in and around "Mixed Use Nodes". Residential density around Mixed Use Nodes will strive to meet the Aspirational Urban and Sub-regional Centres Density Targets contained in the Growth Plan. Mixed use development may include commercial and residential uses located in close proximity as either vertically or horizontally integrated development.

## 4.1.3. Country Residential

Country Residential Areas are characterized by low-density residential development that are typically serviced with private, on-site water wells or cisterns, and septic or pump-out sewage systems. Currently, there are both existing and planned (approved) Country Residential Areas in the Study Area.

## Policy Objectives:

- All Country Residential Areas identified on the Future Land Use Concept (Figure 4) are existing and/or approved developments. Country residential developments in the Metropolitan Policy Area of the Growth Plan are permitted to remain as-is until subdivision or redevelopment to a higher intensity land use (e.g. develop to an urban density of 35 dwelling units per net residential hectare in accordance with the Growth Plan) is pursued.
- Country Residential Areas are encouraged to redevelop to Urban Residential, provided the Country Residential lands are located in the Growth Plan Metropolitan Policy Area. Redevelopment of Country Residential requires an Area Structure Plan to identify how development will meet the policy requirements of the Growth Plan for servicing and density.
- 3. Infill of existing Country Residential developments is encouraged outside the Metropolitan Policy Area of the Growth Plan.

## 4.1.4. Employment

The Employment Area identifies where regionally significant businesses and economic activities may occur. Generally, these areas will have high concentrations of employment in the form of industrial parks. Employment Areas, due to the high concentration of jobs, should be supported with an appropriate level of servicing. This land use may include local, neighbourhood serving commercial businesses, and services.

## **Policy Objectives:**

- Employment Areas located adjacent to major transportation corridors, Urban Residential Areas or Country Residential Areas are to be developed to a high aesthetic standard and only allow for low or limited nuisances. For the purpose of this Framework, low or limited nuisances are generally understood as: business activities contained within the building and/or site so there are no noise, odour, visual (including light pollution), or other nuisance impacts beyond the property line. Outdoor storage should not be permitted, unless it is accessory to a primary use and fully screened from adjacent commercial, residential, and public lands.
- In Employment Areas abutting or adjacent to the Urban Residential or Country Residential Areas, the development of noise attenuation features, buffers, or landscaping will be required along the abutting or adjacent property lines to reduce any impacts on adjacent residential use.
- 3. Business activities may occur outdoors and some off-site impacts (noise, dust, odour, visual impacts) may be permitted in Employment Areas not adjacent to or abutting major transportation corridors, Urban Residential or Country Residential (Employment Areas not identified as "High Aesthetic Standard" on Figure 4). Off-site impacts should be mitigated through on-site provisions (landscaping, fencing, berms, etc.). Outdoor storage may be allowed but should be screened.
- 4. Heavy industrial uses or uses that include higher risk activities that require setbacks and buffers from other uses are not permitted in the Study Area. Heavy industrial uses are typically perceived to have potential for off-site health or safety risks that are more significant than nuisance impacts.
- 5. Direct access from Employment Area sites to arterial and collector roads should be limited, with traffic directed through internal roadways to key intersections.

## 4.1.5. Agriculture

Agricultural Area identifies lands to be retained in agricultural production, with limited fragmentation and conversion to non-agricultural land use opportunities in the long term.

### **Policy Objectives:**

- 1. Lands identified as Agriculture on the Future Land Use Concept (Figure 4) are to be protected and conserved for agricultural use. On all agricultural lands, agricultural uses should be the primary land use, with all other uses (residential, home-based businesses) being secondary and subordinate.
- 2. All Employment Area land uses including industrial businesses will be located within an Employment Area to limit farmland fragmentation and avoid land use conflicts. Some accessory, agriculture-related business uses may be permitted (home-based businesses, etc.), but larger operations, such as value-added agricultural processing, should be located in serviced Employment Areas.
- 3. A maximum of one subdivision per quarter section is permitted on all Agriculture parcels in the Study Area.
- 4. Agriculture Areas identified in Edmonton have been so designated to encourage densification in Edmonton's urban residential areas, conserve agricultural land and provide certainty to agricultural producers in the Edmonton Metropolitan Region. Conversion from Agriculture to Urban Residential or Employment in the future is not intended to have an impact to shared intermunicipal infrastructure servicing between Edmonton, Beaumont and Leduc County.

## 4.2. Infrastructure

This section provides the preferred infrastructure servicing for water, wastewater, and transportation. Preferred servicing solutions were developed in conjunction with the Future Land Use Concept, following a review of the statutory plans, servicing policies, and technical studies listed below.

## Leduc County

- WAM Industrial Park Local Area Structure Plan
- Royal Cubera Local Area Structure Plan
- Queen Elizabeth II Business Park Local Area Structure Plan
- East Vistas Local Area Structure Plan
- Blackmud Creek Area Structure Plan
- Irvine Creek Outline Plan
- Nisku Off-site Levies, Water Model Update, 2013

#### Beaumont

- Municipal Development Plan
- Our Connectivity Transportation Master Plan approval pending
- Water and Wastewater Systems: 2018 and Beyond, April 2018
- Elan Area Structure Plan

## Edmonton

- City of Edmonton Growth Study, 2018
- Environmental Reserve Analysis Annexation Areas, Leduc County, 2016
- Decoteau Area Structure Plan
- Ellerslie Area Structure Plan
- City of Edmonton Future Land Development Drainage Planning Study (AECOM, 2017)
- The Orchards at Ellerslie Neighbourhood Structure Plan
- Municipal Development Plan
- Leduc Annexation Infrastructure Serviceability Report (Associated Engineering, 2018)

Where available, transportation and utility master plans also informed the development of the infrastructure servicing strategies. In addition to reviewing plans, external stakeholders (including Alberta Transportation, EPCOR, Capital Region Southwest Water Services Commission (CRSWSC), and Alberta Capital Region Wastewater Commission (ACRWC) were interviewed to better understand their future plans and infrastructure investment in the Study Area and to confirm servicing options.

Development, assessment and selection of the servicing options in this Framework were influenced by several factors including the efficient and cost effective means of providing services as well as the current understanding of anticipated development in the Study Area. To

support the option assessment, an order of magnitude probable cost estimate was developed for each servicing option. These costs also helped to inform the development and understanding of the Cost Sharing Plan in this Framework.

Staging and expected timing for development in the Study Area is generally described as:

- Stage 1
- Stage 2
- Stage 3

Stage 1 includes the most immediate development lands, Stage 2 highlights development progression and Stage 3 reflects the final areas to be developed. Development staging reflects projected growth pressures within each municipality. Subsequent stages of development can proceed without full build-out or absorption of previous stages within Partner municipalities. The logical pattern for growth in the Study Area for each of the Partner Municipalities is described below:

**Edmonton** – Edmonton's expansion into the newly annexed lands is planned to be from the northwest to southeast. There are no existing Area Structure Plans or information available on the priority of statutory planning in this part of the Study Area;

**Beaumont** – The Elan Area Structure Plan is currently the primary development area in Beaumont. The northeast annexation lands in the area of the 50 Street/510 intersection are expected to develop in Stage 1 based on input from Beaumont administration. The remaining northwest lands and lands south of Highway 625 have been identified as Stage 2 and Stage 3 respectively; and,

**Leduc County** – North Nisku is a Stage 1 development area, and the eastern part is expected to be Stage 2. Residential development in the East Vistas lands will proceed from north to south and is anticipated within the Stage 1 and Stage 2 timeframe.

The development stages and generalized direction of development are presented in the Development Staging (Figure 5). The staging and costs identified in this report are for information only. More detailed engineering will be required to refine infrastructure options and costs prior to development.



## **INTERMUNICIPAL PLANNING FRAMEWORK DEVELOPMENT STAGING**



September 5, 2019

FIGURE 5





## **LEGEND - STAGING**



DIRECTION OF DEVELOPMENT









## **INTERMUNICIPAL PLANNING FRAMEWORK KEY MAP**



September 5, 2019

FIGURE 6

## LEGEND

STUDY AREA BOUNDARY

### FRAMEWORK ZONES

 ZONE BOUNDARIES
ZONE A
ZONE B
ZONE C
ZONE D

Prepared by: McElhanney







## 4.2.1. Conceptual Servicing Strategies

The following conceptual servicing strategies focus on potential servicing options for future development areas. These areas are in Zone D, a small unplanned area in Zone A, and the four quarter sections immediately south of Beaumont in Zone C. Servicing for areas within Zone B are also considered, to the extent that this area has implications on servicing other areas. These Zone areas are presented in the Key Map (Figure 6).

As development in the Study Area occurs, it is anticipated that infrastructure will follow in a logical manner to minimize premature infrastructure investment. Out of sequence or inefficient extension of servicing (leapfrogging) will not be permitted as development progresses. It is noted these preferred servicing concepts are subject to change along with market conditions and with amendment to the Framework.

The servicing discussed in this Framework was developed based on a high-level schematic planning assessment. Detailed engineering and infrastructure modelling will be required at the Area Structure Plan level to confirm adequate capacities are provided in the infrastructure systems.

## 4.2.2. Water Distribution

## **Existing and Planned Infrastructure Servicing**

The western portion of Zone A is serviced by the Nisku distribution system. A large diameter watermain trunk is located along the Nisku Spine Road within the WAM Industrial Park Local Area Structure Plan.

There is an existing 300 mm watermain located adjacent to Township Road 510, at the Lukas Estates II development in the East Vistas Plan area, and a 200 mm watermain is located adjacent to Highway 625. Planned upgrades include expanding the Highway 625 watermain. It is currently proposed to provide a connection between EPCOR and CRSWSC in the general vicinity of 50 Street and the Edmonton/Beaumont border, but the size of this connection has not yet been determined. The latest servicing work in the East Vistas indicated a 600 mm diameter watermain will be needed to extend from the east Nisku reservoir into the East Vistas. A proposed waterline, as described in the Leduc Annexation Infrastructure Serviceability Report (Associated Engineering), would extend south of Highway 625 into Zone C.

Most of Zone C within Leduc County is rural servicing, based on water wells and private wastewater systems. The southern and eastern areas in Zone C may be more challenging to service, due to the necessity of a trunk main extension through, or around, Beaumont to service these areas in the future. However, no significant barriers related to water servicing have been identified that would prevent the extension of water servicing.

### Future Infrastructure Servicing

Future servicing may consider the potential for a water transmission line extension, originating from the proposed Decoteau Reservoir and extending south into the Zone D. EPCOR will supply the area based on density targets and the required fire flows. The alignment of watermains will be based on technical reports approved through the ASP adoption process.

Based on anticipated growth in Beaumont, there is a requirement for additional water reservoirs to provide adequate water storage and pumping capacity to the lands annexed by Beaumont. Targeted upgrades to the existing watermain distribution network, as identified in Beaumont's Our Water and Wastewater Systems: 2018 and Beyond Study, are required to support servicing of the annexation lands.

Leduc County has identified the need for an additional reservoir, likely in the East Vistas Area, based on increased demand from the approved Area Structure Plans.

#### Sequence and Staging of Development

Zone D will need to consider the impact of development staging on servicing timelines. Advancing the Beaumont northeast annexation lands ahead of the northwest quadrant places additional demands on existing Beaumont infrastructure and the logical extension of infrastructure to the development area. However, servicing some of this area through Beaumont is feasible in Stage 1.

## **Preferred Servicing Strategy**

A preferred servicing strategy (Figure 7) was created which incorporates aspects of all three evaluated alternatives to create a consensus preferred option that was developed at the Infrastructure Workshop. The alternatives were developed using existing information to analyze various servicing options for the current unplanned areas and/or areas without adopted servicing strategies. A clear description of the trade-offs and benefits for each alternative was developed and evaluated using a SWOT analysis (Strengthens, Weaknesses, Opportunities and Threats), as well as team review through the Infrastructure Workshop. Alternatives were considered that would have included shared servicing between the Partner Municipalities, however development staging across boundaries made a shared approach difficult to implement and operate in the future.

The preferred option does include any shared infrastructure between the Partners, it minimizes the investment requirements and is flexible enough to adapt to the unknown development horizons.

The preferred option includes the extension of the CRSWSC to continue providing water supply for Leduc County and Beaumont through the existing alignment from the west. This option also provides a future opportunity to loop the main transmission line back through an extension, potentially in the area of 50 Street, which provides for a more robust overall network. Additional reservoirs would be required for Leduc County (north and south of Township Road 510) as well as in Beaumont for both annexation lands, north and west of Beaumont. The location of the north reservoir is shown schematically on the concept and can be located anywhere between the CRSWSC line and the extension from 50 Street as land is developed.

Key attributes within this option include:

- Elan and Beaumont's west annexation lands would continue to be serviced through the CRSWSC via a connection across QEII, which assumes either a business case for extending infrastructure through an undeveloped northwest quadrant or that development priorities provide opportunities for development in the NW quadrant.
- The northeast section of Beaumont would be serviced initially from the existing water network to the south, then once demand warrants in Beaumont, it would be serviced from a new reservoir between the CRSWSC line and the 50 Street extension to the EPCOR system in Edmonton.
- Zone C lands in Beaumont, south of 625, may be serviced by extending the existing system in Beaumont, as this area will develop within the timelines of this study.
- North Nisku is serviced by existing infrastructure extensions within the Nisku Industrial area and East Vistas will be serviced through CRSWSC via the Leduc County reservoir.
- Edmonton annexation lands will be serviced by the extension of EPCOR infrastructure consistent with the servicing concept presented in the City of Edmonton Leduc Annexation Infrastructure Serviceability (2017) review, with a line south on 50 Street and a connection from the north to service lands west of Cawes Lake.
- It is assumed that CRSWSC would provide water to the reservoirs within Leduc County and Beaumont. EPCOR would provide servicing to the CRSWSC in the general area of the border between Beaumont and Edmonton.

## Costing

Water servicing investment is estimated (order of magnitude, excluding contingency and engineering services) at:

## Total Cost Estimate: \$100 – 120 million

## Policy Objectives:

- The Partner Municipalities will work collaboratively to develop a common set of standards to guide the design and construction of water infrastructure required to support development in the Study Area as informed by the conceptual servicing assessments completed as part of this project.
- 2. If available, the Partner Municipalities will share all technical studies related to water supply and storage that would impact any of the Partner Municipalities to inform future development in the study area.

3. The Partner Municipalities will regularly monitor infrastructure capacity and servicing needs for water with the intent of identifying intermunicipal collaboration opportunities.



## **INTERMUNICIPAL PLANNING FRAMEWORK CONCEPTUAL WATER SERVICING STRATEGY**



FIGURE 7

## **LEGEND - GENERAL**



- ---- MUNICIPAL BOUNDARIES STUDY AREA BOUNDARY
  - **RIVER / CREEK** WATER BODY

## **LEGEND - WATER**

- CRSWSC TRANSMISSION LINE \_ EXISTING AND FUTURE WATER TRANSMISSION LINE
  - EXISTING STORAGE RESERVOIR



EXISTING BOOSTER STATION



FUTURE RESERVOIR STAGE 1 STAGE 2 STAGE 3 CRSWSC REQUIRES CONNECTION TO RESERVOIR

#### **LEGEND - STAGING**



STAGE 1 STAGE 2 STAGE 3

SERVICING CONCEPTS ONLY - SUBJECT TO CONFIRMATION IN THE FUTURE.







## 4.2.3. Wastewater Collection

#### Existing and Planned Infrastructure Servicing

A review was conducted of the wastewater servicing and development of options (recognizing capacity constraints within the existing South Edmonton Sanitary Sewer (SESS)). This review was based on the previously referenced reports.

There is need for a SESS expansion to the Gold Bar Wastewater Treatment Facility, to accommodate the estimated additional 50,000 residents in the area who will be served by this trunk sewer. This upgrade is beyond the boundary of this Study Area, and it will require considerable overall investment in the future.

Currently, the wastewater for the entire Study Area is ultimately conveyed to the Gold Bar Facility, owned and operated by EPCOR. There is a reciprocal swap agreement to accept flows and treat wastewater between EPCOR and ACRWC.

Similar to the water servicing preferred option, various options were developed and evaluated (including the use of a SWOT analysis (Strengthens, Weaknesses, Opportunities and Threats)), as well as team review through the Infrastructure Workshop. The preferred option has been developed as a hybrid between two options.

The preferred option includes the alignment of the main trunk, north to the SESS trunk main connection along 66 Street (Figure 8). It is expected that development will generally occur west of 66 Street/south of 41 Avenue before it occurs west of 50 Street/south of 41 Avenue.

- Existing servicing is available through an existing 525 mm diameter Southeast Regional Trunk Sewer (SERTS) running from east to west within the regional trunk sewer right-of-way servicing Beaumont. This regional pipeline ranges from 200 mm to 1200 mm in size and flows from east to west and south to north. At 52 Avenue, a 525 mm sewer becomes twinned with a 1200 mm sewer, which ultimately makes up the SERTS line.
- Further twinning and deepening of the SERTS Stage 4 Trunk Main will extend the service area within Zone B to approximately Township Road 505. However, twinning may only extend 800 1000 m south, rather than 1600 m to Township Road 505.
- Additional flows from new development in Zone B would be addressed through the completion of the 1200 mm sewer twinning the 525 mm sewer. A portion of the 1200 mm sewer has been constructed within Beaumont boundaries and currently acts as a storage facility.
- Most of the area within Zone C in Leduc County is rural based servicing using septic or pump-out wastewater systems. The southern and eastern areas in Leduc County in Zone C are not expected to be developed with municipal wastewater infrastructure.

#### Future Infrastructure Servicing

• Lift Stations and Forcemains: Zone B can be serviced by gravity through the extension of the ACRWC system. Portions of Zone C areas may be serviced by gravity through the extension of the Beaumont wastewater collection system. However, gravity servicing of a portion of these lands may be restricted by the existing utility infrastructure system within Beaumont (sanitary sewer capacity and lift station wet well and pumping capacity). Thus, these lands are subject to a detailed engineering analysis of Beaumont's existing wastewater system. Zone D lands cannot be fully serviced by gravity by Beaumont or ACRWC wastewater collection systems, and they will require lift stations and a forcemain.

Portions of Zone D may be serviced by gravity through the extension of the Beaumont wastewater collection system. Similar to Zone C, gravity servicing of a portion of these lands may be restricted by the existing utility infrastructure system within Beaumont (sanitary sewer capacity and lift station wet well and pumping capacity). Thus, these lands are also subject to a detailed engineering analysis of Beaumont's existing wastewater system.

• Extension of Deep Sewer Trunk Mains: The extension of the deep SESS trunk mains to the Zone D lands north of the Beaumont annexation lands could provide serviceability value should there be future capacity limitations in the SERTS system. However, there may be opportunities to provide wastewater services on a larger and more regional basis by expanding the capacity and/or adding storage within the region. The City of Edmonton Future Land Development Drainage Study (AECOM, 2017) indicated an option to service the Edmonton annexation lands and support additional servicing beyond Edmonton's boundaries.

This option would require upsizing the trunks through the proposed southeast and southwest Edmonton development areas to provide servicing to members of the ACRWC through the proposed trunks as identified in the 2017 AECOM study. While this may be a long term consideration similar to the preferred water servicing concept, there remains a practical advantage to minimize the connection points between the two systems, where possible.

## Sequence and Staging of Development

From a development timing perspective, Zone D will need to consider the impact of development staging on servicing timelines. There may be multiple options for servicing, including interim strategies, versus a final strategy with more than one option for service provision, until enough development is completed to require the new proposed trunk main. There is also an area north of Irvine Creek, within Beaumont, where wastewater is better served by gravity to the north into the system servicing land in Edmonton.

## Preferred Servicing Strategy

The preferred wastewater servicing concept builds on the existing infrastructure, with Beaumont annexation lands not connecting directly to the SESS system. This provides flexibility for development staging, independent of an SESS extension (also noting the SESS expansion will still be required, as the SERTS ultimately connects into the SESS). The wastewater servicing concept also contemplates servicing the initial stage of development in Edmonton through a connection to the existing SESS trunk sewer, prior to the construction of a future trunk sewer connection along 66 Street.

The servicing strategy for Edmonton annexation lands was adjusted, recognizing the capacity constraints with the existing SESS trunk. A connection to the existing SESS trunk remains identified as a potential for servicing the initial development. However, this recognizes the ultimate build out of Edmonton lands requires a new trunk main from the annexation areas to SESS.

This concept is presented in the Conceptual Wastewater Servicing Strategy (Figure 8).

Key attributes within this option include:

- Servicing focuses on servicing East Vistas, Elan, and the North Nisku areas, provided by ACRWC through the SERTS, where current development and interest exists.
- Servicing in Zone C south of Beaumont will be through Beaumont (lift station required)
- Servicing in Zone D in Edmonton and areas north of Irvine Creek is provided from the north through SESS.
- Ultimate servicing option for Zone D in Beaumont to support future development beyond gravity sewer limits will require use of forcemain(s) and lift station(s) as identified in the City of Beaumont Water and Wastewater Systems: 2018 and Beyond, including a connection to ACRWC through the NW quadrant. Other options include in-pipe storage and temporary lift stations.
- Lands in the more immediate development area of northeast Beaumont may be serviced through the existing system in Beaumont, until demand warrants a lift station and trunk to connect to the SERTS. Detailed engineering analysis is required to confirm the optimal system configuration and timing.
- Edmonton annexation lands may be serviced through SESS to initiate development of Stage 1 lands. However, ultimate buildout of these annexation lands requires the construction of a new trunk main identified in the Infrastructure Serviceability Report. That trunk will be required when remaining capacity has been exhausted in the SESS system and identified at approximately 15% of Stage 1 development.
- An area in North Nisku is currently without a Local Area Structure Plan and will be serviced from an extension of SERTS. It is also noted that there may be interim storage

requirements within the SERTS system at the connection point to SESS or further south, until such time as the SESS connection on 66 Street is completed.

This option has the following identified assumptions:

- a. Existing EPCOR sewers do not have sufficient capacity available to accommodate ultimate flows from the annexation areas, nor will the planned future expansion of the SESS mains at the currently proposed pipe sizes. Significant investment in both on-site and off-site infrastructure will be required to service the entire Study Area and beyond (Infrastructure Serviceability Report, Associated Engineering), including an assumed SESS expansion to the Gold Bar Wastewater Treatment Facility.
- b. The servicing strategy for the northeast Beaumont annexation lands allows for phased development utilizing the gravity sewer network where feasible and further supported by the construction of lift station/forcemain infrastructure as required.
- c. There is limited redundancy in the overall system as there are minimal connection points between EPCOR and ACRWC.

## Costing

Wastewater servicing investment is estimated (order of magnitude, excluding contingency and engineering services) at:

## Total Cost Estimate: \$170 – 215 million

## **Policy Objectives:**

- 1. The Partner Municipalities will work collaboratively to guide the design and construction of wastewater infrastructure required to support development in the Study Area as informed by the conceptual servicing assessments completed as part of this project.
- 2. If available, the Partner Municipalities will share all technical studies that would impact any of the Partner Municipalities to inform future development in the study area.
- 3. The Partner Municipalities will regularly monitor infrastructure capacity and servicing needs for wastewater with the intent of identifying intermunicipal collaboration opportunities.



## **INTERMUNICIPAL PLANNING FRAMEWORK CONCEPTUAL WASTEWATER SERVICING STRATEGY**



FIGURE 8

## **LEGEND - GENERAL**



- MUNICIPAL BOUNDARIES STUDY AREA BOUNDARY
- RIVER / CREEK
- WATER BODY

## **LEGEND - WASTEWATER**



- EXISTING ACRWC SERTS TRUNK SEWER EXISTING SESS TRUNK SEWER
- SESS FACILITIES



FUTURE LIFT STATION STAGE 1 STAGE 2 STAGE 3

## **LEGEND - STAGING**



SERVICING CONCEPTS ONLY - SUBJECT TO CONFIRMATION IN THE FUTURE.






#### 4.2.4. Stormwater Management

The management of drainage requires a collaborative approach by the Partner Municipalities. This section identifies the key issues and considerations impacting future growth and development, including consistency across servicing standards, downstream water management, and the approach to identifying preservation areas. Stormwater management in the Study Area is challenging, due to the relatively flat topography, distance to outlets, and historical development in the Study Area, which has created barriers to conveyance.

The Blackmud/Whitemud Creek Surface Water Management Study (2017) recommended a coordinated water management plan for the basin to facilitate orderly and sustainable development based on consistent servicing standards.

The overall stormwater management strategy for the Study Area will need to consider the impact of the sequence and staging of development with respect to hydraulic capacity and flow conveyance from the proposed annexation areas to not adversely impact downstream lands.

#### Policy Objectives:

The following expands on specific recommendations referenced in the Blackmud/Whitemud Creek Surface Water Management Study:

- 1. The Blackmud and Whitemud basins should consider a maximum release rate of 3.0 L/s/ha which is similar to the existing flows for most of the basin creeks with the exception of Irvine Creek and LeBlanc Canal.
- 2. The Study identifies that there are no flow data in the tributary streams other than in West Whitemud Creek. Flows in Irvine Creek should be monitored where extensive development is planned and where impacts are likely to be the greatest, so these impacts can be mitigated with development.
- 3. The Study identifies two viable concepts (channel improvement and trunk sewers) to mitigate the impacts of future development within the Blackmud and Whitemud basins. More detailed studies are recommended to develop the details and further evaluate these proposed concepts as part of development, as there are many areas where either approach or combination of approaches may provide the most effective solutions:
  - a. Trunk Sewers: A network of outfall trunk sewers adjacent to the existing stream channels may be the more environmentally sensitive option to carry the releases from the connected stormwater management facilities to a downstream location where adequate channel capacity and depth are available. Existing channels should be preserved to carry the runoff from upstream undeveloped lands and disturbance of these channels should be minimized. In consideration towards the use of outfall trunk sewers, the protection and preservation of wetlands in relation to overland drainage needs to be addressed to balance runoff volumes between trunk sewers and wetland areas; and,

- b. Channel Improvements: These improvements would seek to lower the creek channel in places to facilitate drainage of the adjacent, tributary lands. The existing channel of Irvine Creek would be lowered to provide an outlet of sufficient capacity for an underground piped system. LeBlanc Canal would also be deepened to provide more capacity.
- 4. Cawes Lake should be provided with an outlet channel to Irvine Creek to control the lake levels and convey the outflow from developing areas to the north. Current development plans call for the Decoteau Neighbourhood to the north and east to drain to Cawes Lake through an interconnected system of stormwater management facilities. Further study of Cawes Lake will be required to determine the optimum water level for wildlife habitat and to prevent flooding of adjacent lands.
- 5. More detailed drainage planning and floodplain modelling will be required during subsequent planning stages to define the extent of all floodplains and the design requirements for any drainage option that might be adopted. All modelling should consider future impacts of climate change and recent historical storm event data.
- 6. Further studies will be required to determine a mechanism for future costs and cost sharing for off-site improvements and erosion repairs, and an assignment of responsibility.
- 7. The Partner Municipalities should develop monitoring programs for water quality, rainfall, and flow data within the basins. This will aid in monitoring the impacts of development such as erosion and flooding.
- 8. The Partner Municipalities will share all technical studies that would impact any of the Partner Municipalities to inform future development in the study area.
- 9. The Partner Municipalities will regularly monitor infrastructure capacity and servicing needs for stormwater with the intent of identifying intermunicipal collaboration opportunities.
- 10. The Partner Municipalities may collaborate on a comprehensive Master Stormwater Management Plan that builds on the findings of the Blackmud/Whitemud Creek Surface Water Management Study and provides climate change resilience, adaptation, and mitigation that reflect the long-term planning horizon of the Framework

#### 4.2.5. Transportation Network

A future transportation network has been developed based on utilizing existing major and minor regional arterial roadways to provide access and capacity for future development. The Study Area is expected to see up to 16 traffic lanes accommodating traffic travelling east and west:

- 41 Avenue is expected to increase to a six, and potentially eight-lane roadway in some sections;
- Township Road 510 will be an arterial corridor identified as a four-lane roadway; and
- Highway 625 is proposed to be a four-lane twinned alignment and is under provincial jurisdiction.

Additionally, at the current planned full build-out there may be approximately 24 lanes providing north-south connectivity, between 17 Street and the Nisku Spine Road. While alignments have been identified based primarily on existing road networks, there is an expected need for an additional north-south connector, connecting 41 Avenue and Township Road 510 and it is shown as a potential southerly extension of 66 Street (see Figure 9).

To illustrate the relative importance of each corridor, the existing and planned roadways have been classified into three categories:

*Major Regional Arterial* – these roadways provide key access through the Study Area and are regionally significant beyond the Study Area boundaries. These are roadways that will typically have six or more lanes of traffic, with interchanges at regional highways;

*Minor Regional Arterial* – these roadways are regionally significant, especially for travel movements within the Study Area, and the primary purpose of the roadways are to provide access to end destinations. As opposed to the Major Regional Arterials, which provide better accommodation of through travel movements, these roadways typically provide four lanes of traffic; and,

*Regional Collector* – this type of roadway is for local access to areas, providing connections to Major and Minor Arterial roadways. While these roadways are typically planned for four lanes of traffic, it is more likely that they would remain as two-lane facilities for the timelines of the Study.

This network plan does not replace the need to specifically plan each roadway and connection based on access, land use, Area Structure Plans, regional transportation planning (including Alberta Transportation, the Integrated Regional Transportation Master Plan, and the Metropolitan Region Servicing Plan), traffic forecasting and traffic impact assessments. This is intended to provide a framework for future road development based on the relative importance of each planned facility.

The strategic directions for these roadways will impact transportation planning for the Study Area and logical connections into/out of the Study Area. Future Area Structure Plans and the

associated technical studies will need to assess existing and planned transportation network arterial capacity. Specifically, they will assess what capacity considerations and performance measures inclusive of active transportation and multi-modal level-of-service factors will be appropriate.

It is strategic for future development to invest in roadways, including connections to existing and future roadways of critical importance to the long-term development of the Study Area. The key objectives in identifying a future transportation framework include:

- a) Maintaining key corridors for movement of industrial goods and services;
- b) Identification of options to reduce traffic pressure on 50 Street, through parallel additional north/south lane capacity; and,
- c) Establishing a network to support existing and future development.

The Future Transportation Network Strategy is presented in Figure 9.

#### Highlights of this network include:

#### 50 Street/Highway 814

50 Street is an important north-south arterial in the Study Area and is the primary connection between Beaumont and Edmonton (including Anthony Henday Drive). It is classified as a Major Regional Arterial north of 510. 50 Street is planned to have a gradual reduction in lane capacity to function as a Minor Regional Arterial and in some sections a local roadway south of Township Road 510 (outside of the Study Area) entering Beaumont from the north, and ultimately to a local roadway south of Township Road 510 within the built up area of Beaumont (while maintaining the function of 50 Street as an arterial connection).

On the southern boundary of the Study Area, Highway 814 south of Highway 625 is recommended to remain a rural highway (Regional Collector), providing access between rural areas, Beaumont, Edmonton, City of Leduc, Edmonton International Airport, and Nisku.

#### Highway 625

Highway 625 is an important connection across and connecting to the QEII and is classified as a Major Regional Arterial. Highway 625 is an important link in Alberta's highway network and also serves as a bypass around Edmonton (from the south and east) and is provincially classified as a High Load Corridor. This is of special importance for goods movement out of Leduc/Nisku to northern Alberta.

Highway 625 is planned to be twinned and capacity will be added as required by Alberta Transportation. Access control to the Highway from Beaumont and Leduc County will be the responsibility of the local jurisdiction, with approvals required by Alberta Transportation.

#### 41 Avenue SW

This is planned as a Major Regional Arterial roadway west of 50 Street. With the completion of the interchange at QEII, it has become an industrial development catalyst to the east, and a growth catalyst to the west (of QEII). Planned for a minimum of six lanes west of 50 Street, it will continue to play a large role in moving people and goods through the region. 41 Avenue should continue to develop as a higher classification (limited access) roadway and add capacity as development occurs in the Study Area and on the land north of 41 Avenue.

#### Nisku Spine Road

Nisku Spine Road is a Major Regional Arterial, connecting Edmonton and Nisku directly. This roadway is required to provide access for the developed and undeveloped lands in Nisku to connect to the regional markets. Nisku Spine Road is expected to extend south to the City of Leduc and beyond in the future.

#### Township Road 510

Township Road 510 is halfway between 41 Avenue and Highway 625 and connects the north end of Nisku to Beaumont. It is identified as a Minor Regional Arterial between the Nisku Spine Road and 34 Street, providing access to future communities and employment areas along the corridor.

#### Range Road 243 / Range Road 244

Long range plans exist to align the currently offset intersection of Range Road 244/Range Road 243 resulting from the Correction Line along Township Road 510. Existing power transmission lines located along the east side of Range Road 243 may present a design constraint to the realigned intersection. Range Road 243/Range Road 244 is planned as a Regional Collector.

#### Range Road 245

Range Road 245 between Highway 625 and Township Road 510 is planned as a Regional Collector roadway, as densities on the west side of this road are not expected to significantly increase over the life of the East Vistas Local Area Structure Plan and traffic on this roadway is expected to be less than that expected on regional arterial roads.

#### 34 Street/RR 241 and 17 Street/RR 240

Range Road 241 and Range Road 240 are rural roadways providing access to country residential development along the eastern portion of the Study Area. As urban development adjacent to these roadways is not anticipated within the planning horizon of this report they are planned as Regional Collector roadways.

#### Policy Objectives:

 Common design standards should be developed for roads that extend across municipal boundaries. Currently, there is a lack of consistency within the design standards between all partners, as well as differences in levels of service and cross-sections.

- 2. Establish shared performance metrics for the transportation network to determine the appropriate number of vehicle traffic lanes and the impacts of multi-modal transportation integration. This will also be affected by roadway planning beyond the Study Area and will need to be coordinated with Alberta Transportation's Regional Travel Model.
- 3. Eliminate the off-set intersection at Range Road 244/243 and Township Road 510.
- 4. Extend a Minor Regional Arterial south of 41 Avenue from 66 Street to provide additional capacity between Leduc County, Beaumont and Edmonton. The alignment of this connection requires further study and is shown for illustrative purposes in the Future Transportation Network Strategy (Figure 9).
- 5. Each municipality will take road right(s)-of-way through dedication at the time of subdivision for the future development of the Major and Minor Regional Arterial roadways.
- 6. All development permit applications abutting Major and Minor Regional Arterial roadways will need to consider the protection of the right(s)-of-way required for future road widening as well as appropriate access management.
- 7. Highway 625 is a regionally significant roadway and a part of the Provincial High Load Corridor system for the transport of product out of the Nisku industrial area. The functionality of this corridor must be protected. Maximize functionality of 625 as a High Load Corridor by limiting access and ensuring traffic flow.
- 8. Support the Edmonton Metropolitan Region Board initiatives related to an integrated regional transit system to encourage a shift away from private automobile use.
- 9. Collaborate on the development of functional planning studies for Major and Minor Regional Arterials.
- 10. Review and assess the identified regional transportation corridors including staging and timelines for infrastructure segment requirements.
- 11. Share all technical studies that may impact any of the Partner Municipalities to inform future development in the study area.
- 12. Regularly monitor infrastructure capacity and servicing needs for transportation with the intent of identifying intermunicipal collaboration opportunities.

#### Costing

Transportation investment is estimated (order of magnitude, excluding contingency and engineering services) at:

#### Total Cost Estimate: \$150 – 160 million



# **INTERMUNICIPAL PLANNING FRAMEWORK FUTURE TRANSPORTATION NETWORK STRATEGY**



FIGURE 9





 MUNICIPAL BOUNDARIES **RIVER / CREEK** WATER BODY - STUDY AREA BOUNDARY

#### ULTIMATE LANE CONFIGURATION



MAJOR REGIONAL ARTERIAL MINOR REGIONAL ARTERIAL **REGIONAL COLLECTOR** ALIGNMENT TO BE DETERMINED





Prepared for:





#### 4.3. Environment and Recreation

By taking a regional approach to stewarding existing land uses and planning for the environmental and recreational elements in the Study Area, the Partner Municipalities will enhance and improve environment systems and create a regional network of parks, open spaces, and active transportation amenities that functions better than if each of the Partner Municipalities were to implement their own strategies.

To be successful, the Partnering Municipalities must adopt and consistently apply policies and practices throughout the Study Area. This section outlines the key opportunities and planning projects that could support planning for the environmental and recreational elements in the Study Area.

#### 4.3.1. Future Parks and Open Space

Parks, open spaces, and active transportation are integrally linked to each other and to the various land uses and transportation routes within the Study Area. While each municipality has identified these as important components within their planning documents, there are inconsistencies with respect to how these components:

- align and connect from municipality to municipality;
- relate and are incorporated into the various land use areas within the Study Area;
- integrate, preserve, and support the existing natural features and environment within the region; and,
- establish a well-defined open space classification system with common standards and/or guidelines.

While many of the Area Structure Plans are introducing innovative open space and active transportation initiatives, these are only consistent within the boundaries of these plans. To establish a cohesive, well-defined, and integrated regional open space and active transportation network, further planning is required. The following policy objectives and next steps have been identified.

#### **Policy Objectives:**

- 1. The Partner Municipalities may collaborate on the development and implementation of the following studies and plans in the Study Area:
  - a. Develop a sub-regional Open Space and Active Transportation Plan to allow for the development of a regionally connected active transportation network as well as an interconnected open space network across the municipal boundaries. This plan will build on the framework of corridors and activity hubs identified in the Future Parks, Open Space and Active Transportation Framework (Figure 10). Primary/secondary corridors are potential active transportation routes that align with minor and major roadways and open space/natural area networks. Hubs are areas of potentially high concentrations of intersecting movement, activity and use. The network may include an integrated regional open space and transportation approach, complete with regional hubs (primary/secondary) that support wayfinding, gathering, public

transit connections, and park and ride development. Both (primary (aligned with major regional arterials) and secondary (aligned with minor regional arterials/collectors and natural/open space corridors) greenway/active transportation routes may be developed to establish an integrated open space and active transportation network that incorporates both public and private lands and has a consistent standard and classification approach to encourage regional use; support a safe, secure inclusive and sustainable network and year-round environment; introduce regional wayfinding and interpretive/educational programming; and, establish linkages to surrounding regional areas and destinations.

- b. Develop an open space classification system or strategy to guide the assessment and evaluation of existing and proposed open spaces in the Study Area. This may include the integration of existing/proposed recreational facilities, schools, and other related development and respond to current incompatible uses and transitional issues.
- Incorporate agricultural heritage and land use conservation in future plans to reflect opportunities for expanding regional sustainability and identity, such as symbiotic relationships between agricultural uses and regional industries, businesses, and residents.
- 3. Demonstrate leadership in environmental design and sustainability by ensuring that all municipal facilities and spaces achieve a measurable benefit in moving the Study Area toward greater environmental, economic, fiscal, and social sustainability.



# **INTERMUNICIPAL PLANNING FRAMEWORK** FUTURE PARKS, OPEN SPACE AND ACTIVE TRANSPORTATION FRAMEWORK



FIGURE 10





**RIVER / CREEK** NAMED LAKE EXISTING WETLAND CLASS IV / CLASS V EXISTING WETLAND CLASS I / CLASS II / CLASS III CONSTRUCTED STORMWATER WETLAND (SUPER WETLAND) IDENTIFIED FLOOD ZONE AREA POTENTIAL ENVIRONMENTAL

#### **BUFFER AREA**

#### **LEGEND - GENERAL**

 MUNICIPAL BOUNDARIES
 STUDY AREA BOUNDARY

#### **LEGEND - CATCHMENT AREAS**

BLACKMUD CREEK CATCHMENT CLEARWATER CREEK CATCHMENT **IRVINE CREEK CATCHMENT** WHITEMUD CREEK CATCHMENT

#### **LEGEND - FUTURE**

NATURAL AREA - PARK, OPEN SPACE AND ACTIVE TRANSPORTATION INTEGRATION

**GREENWAY / ACTIVE TRANSPORTATION** DEVELOPMENT

PRIMARY

SECONDARY

PRIMARY REGIONAL HUBS

McElhanney

Prepared for:







#### 4.3.2. Natural Areas

The Partner Municipalities each have their own policies and processes for the identification, review, preservation, or alteration of natural features. The Partners also have an obligation to comply with provincial and federal legislation related to the natural environment. Many of the natural features in the Study Area are linked and are part of a larger watershed and ecological network. Natural features may cross municipal boundaries, and the impacts of development on the ecological network may also cross boundaries. To better understand the impacts of development and provide a consistent approach, future collaboration will be necessary.

#### **Policy Objectives:**

- 1. The Partner Municipalities may collaborate on the development and implementation of the following studies in the Study Area:
  - a. Natural and Environmentally Significant Areas (ESA) Inventory: Create a current and complete inventory of Natural and Environmentally Significant Areas in the Study Area. Continue to incorporate and manage natural assets within the watershed during future planning and development in the Study Area. Where development is scheduled to occur, the ESA inventory can be used as a tool to assist developers and the Partner Municipalities by confirming the presence and ecological value of these landscape features (i.e., field verification).
  - b. Wetland Policy: Develop a wetland policy or strategy for the Study Area that fulfills the requirements of the Alberta Wetland Policy and its Directives, but addresses wetland mitigation and replacement specific to the Study Area. This may include the identification and prioritization of wetlands for preservation. It is recommended that this strategy be developed in collaboration with future stormwater management plans.
  - c. Standardized Environmental Review Process for New Development: Create standard requirements for environmental reviews that provide fair metrics for development impacts to be reviewed and addressed at a landscape scale.
  - d. ESA Setback Framework: Establish a setback framework to provide consistency of application around ESA's across the Study Area. Setbacks provide protection to natural features from development and support the health of riparian areas. Riparian areas provide essential ecosystem services, such as water filtration, bank stabilization in flood zones, reduction of flow velocity (thereby erosion protection), and retention of nutrients, all of which buffer the waterbody from potential disturbance (e.g., erosion, nutrient loading, etc.). There are no legislated setback requirements from natural features. However, there are several best management practices to be considered in the development of any setback policies (Stepping Back from the Water handbook, Cows and Fish, Master Schedule of Standards and Conditions (MSSC)). The most common setback is a 30 m riparian setback, which provides a vegetated buffer between development and a waterbody (e.g., wetland, drainage, watercourse, lake, etc.). Setbacks associated with upland (e.g., not a

waterbody) can be achieved through land purchase. Conservation tools of the Municipal Government Act also provide further opportunities for setbacks of upland features, such as forests.

- 2. Incorporation of Natural Areas into Open Space Design: Incorporate natural areas into publicly accessible open spaces and consider the connectivity of these natural features and open spaces in the development of a regional open space network. Such a network would enhance community involvement/enjoyment in nature and the environment and reinforce the preservation of natural corridors.
- 3. Nutrient Management and Monitoring: Monitor nutrient loading from stormwater runoff into water bodies as a key function in managing overall watershed and natural area health. Baseline and regular monitoring are required to understand the impact of any land management decisions.

The Future Land Use Concept with Environmental Features (Figure 11) has been provided for information only, to highlight the potential impacts of natural features on future development areas. The policy objectives proposed above will help the Partner Municipalities better understand and mitigate impacts of development.



# **INTERMUNICIPAL PLANNING FRAMEWORK FUTURE LAND USE CONCEPT WITH ENVIRONMENTAL FEATURES**



September 5, 2019

FIGURE 11



FOR INFORMATION ONLY.





Prepared for:





## 5. Implementation

The implementation section of the Intermunicipal Planning Framework is intended to identify any specific actions or initiatives related to land use, infrastructure, transportation, natural areas, and parks and open space the Partner Municipalities have agreed to undertake in the future.

#### Policy Objectives:

#### 5.1. General

- 1. The Partner Municipalities will collaborate on an ongoing basis to achieve the goals of this Framework, the Growth Plan, and other regional initiatives.
- 2. Opportunities for grant funding will be pursued collaboratively by the Partner Municipalities for all aspects of the Framework's implementation.

#### 5.2. Land Use

- 1. The Partner Municipalities will review, update or repeal statutory land use plans that are inconsistent with current policy objectives. Statutory plans to be updated or repealed include, but are not limited to:
  - a. North Major Area Structure Plan to align with current policy in Leduc County's recently adopted Municipal Development Plan and to remove Edmonton and Beaumont land from the plan area; and,
  - b. Beaumont/Leduc County Intermunicipal Development Plan.
- 2. The Partner Municipalities agree to update their Zoning Bylaw or Land Use Bylaw to include, but not limited to:
  - a. Protection of Agriculture land in the appropriate Agricultural Districts through restriction of uses and other appropriate regulations; and,
  - b. Updated regulations to support the development of high aesthetic standard and low or limited nuisance employment uses and development.
- 3. The Partner Municipalities will strive to ensure consistency between all future statutory plans in the Study Area to implement the policy objectives of the Framework.

#### 5.3. Boundary Interface

- 1. The Boundary Interface area is depicted in Figure 12.
- Proper integration of water, wastewater, transportation and stormwater infrastructure at boundary interfaces will be coordinated at the time of development of new Area Structure Plans. Integration of water infrastructure will occur in consultation with EPCOR and CRSWSC. Integration of wastewater infrastructure will occur in consultation with EPCOR and ACRWC.

**3**. Connectivity of natural areas, parks and open space at boundary interfaces will be determined through the development of Area Structure Plans and will be consistent with the sub-regional Open Space and Active Transportation Plan, when it is completed.



# **INTERMUNICIPAL PLANNING FRAMEWORK BOUNDARY INTERFACE**



September 18, 2019

FIGURE 12

#### LEGEND



MUNICIPAL BOUNDARY STUDY AREA BOUNDARY

BOUNDARY INTERFACE AREA

Edmonton

Prepared for:





#### 5.4. Implementation Action Summary

To accomplish the Framework's goals, the Partner Municipalities have agreed to several policy objectives that outline future actions. For ease of reference when the Intermunicipal Administrative Committee begins prioritization, the implementation actions that may be undertaken in the future are summarized in Table 1 - Implementation Action Summary.

Framework Section	Action	
Capital Infrastructure Projects		
4.2.2 / 6.2 Water Servicing	No shared infrastructure implementation actions	
4.2.3 / 6.3 Wastewater	Stage 1 Requirements	
	Stage 2 Requirements	
	Stage 3 Requirements	
4.2.5 / 6.4 Transportation	66 Street south of 41 Avenue	
	50 Street	
	Township Road 510	
	Nisku Spine Road	
	41 Avenue west of 50 Street	
Future Studies / Actions		
4.2.2	Work to guide the design and construction of water infrastructure required to support development in the Study Area.	
4.2.3	Work to guide the design and construction of wastewater infrastructure required to support development in the Study Area.	
4.2.4	Develop a Master Stormwater Management Plan that builds on the findings of the Blackmud/Whitemud Creek Surface Water Management Study	
4.2.5	Develop common design standards for roads that extend across municipal boundaries	

Table 1 Implementation Action Summary

4.2.5	Establish shared performance metrics for the transportation network
4.2.5	Collaborate on the development of functional planning studies for the Minor and Major Arterial roads
4.3.1	Work to develop a sub-regional open space and active transportation plan
4.3.1.	Develop an open space classification system or strategy
4.3.2	Create a current and complete inventory of Natural and Environmentally Significant areas
4.3.2	Develop a common wetland policy or strategy
4.3.2	Establish a setback framework for environmentally sensitive areas
5.1.1	Growth Plan integration
5.1.2	Collaborative exploration of grant opportunities
5.2	Update Statutory plans and Land Use Bylaws as required
8.1.2	Establish the Intermunicipal Oversight Committee and Intermunicipal Administrative Committee and develop Terms of Reference for both committees

# 6. Cost Sharing Plan

The Partner Municipalities have agreed to share the costs of investments in infrastructure required to service growth within the Study Area and that will generate shared benefits. Only costs that are to be borne by the municipalities are to be considered in the Cost Sharing Plan. Costs that will be funded by other orders of government, or entirely by utility providers, will be excluded since the Partner Municipalities will not be responsible for funding or administering these costs. Generally, the Partner Municipalities have agreed to review cost sharing on the following infrastructure, where there is a shared benefit to more than one of the Partner Municipalities:

- Regional arterial roadways;
- Wastewater;
- Water and reservoirs; and,
- Stormwater.

## 6.1. General Approach

The cost of new shared investments will be shared amongst the Partner Municipalities according to the relative benefits received by each partner using the following basic formula:

# Allocation = (Total cost of shared investment less tri-party grant funding) x (Benefit received by partner / Total benefits received by all partners)

For infrastructure projects, the total cost of shared investment for purposes of this formula will include:

- Design and final construction costs; and,
- Land acquisition costs related to the infrastructure project.

Operating and maintenance costs for shared investments may also be shared by the Partner Municipalities. The allocation and formula for any operations and maintenance costs will be determined on a project-by-project basis and will be documented in a cost sharing agreement.

#### **Development and Servicing Standards**

The Partner Municipalities may have different development visions or standards for different types of infrastructure (e.g. requirements for bike lanes on roadways). Where the Partner Municipalities have not agreed to a common standard, the lowest common functional standard required by the Partner Municipalities who will share that infrastructure will be used to determine the shareable cost of a particular infrastructure project. This is not necessarily the lowest standard of any Partner Municipalities who will share that is required to meet the basic needs of all Partner Municipalities who will share the infrastructure. A municipality may choose to upgrade the infrastructure to a higher standard, but would bear the full cost of the upgrade.

#### **Development Staging**

Development within the Study Area will occur over an extended period of time and may occur at different rates within different municipalities. While infrastructure may be of shared benefit to more than one of the Partner Municipalities at full build out, it may be required to service development in one municipality long before it is required to service the development in a neighbouring municipality.

There are four general approaches to address this issue, which are as follows:

- 1) First one pays the partner that requires the infrastructure first will be responsible for funding the full infrastructure cost;
- 2) All pay when first needed the Partner Municipalities may agree to share the cost of shared infrastructure once it is required to service development, regardless of where that development will occur;
- 3) First one pays with subsequent recovery the partner that requires the infrastructure first will be responsible for funding the full infrastructure cost and will recover a portion of this cost from other Partner Municipalities once the infrastructure is required to service development within their boundaries; and,
- 4) Staged funding approach the partner that required the infrastructure first will fund the first stage of the new shared infrastructure and other Partner Municipalities will fund later stages. For example, if a four-lane urban road is ultimately required, the first partner may fund the road improvement from a rural two-lane road to an urban two-lane road and the later partner(s) would fund the other two lanes, once required.

The Partner Municipalities will discuss development staging and the timing of each partner's contribution to shared infrastructure costs on a project-by-project basis through the Intermunicipal Administrative Committee process identified in Section 7: Collaboration and Administration. The Partner Municipalities expect that most projects will use a "First one pays with subsequent recovery" approach, but other approaches or a combination of approaches may also be considered.

#### Funding

Each partner will be responsible for identifying and obtaining its own funding for its share of project costs. Potential funding mechanisms include, but are not limited to:

- 1) Municipal Off-site Levies;
- 2) Intermunicipal Off-site Levies;
- 3) Endeavour to Assist Agreements;
- 4) Debt Financing;
- 5) Municipal Sustainability Initiative Grants; and,
- 6) Tax Revenues.

#### Cost Sharing Agreements

Projects identified as being of shared benefit to the Partner Municipalities will ultimately be subject to a binding cost sharing agreement. These agreements will be negotiated on a project-by-project basis.

These agreements will include details regarding each municipality's share of project costs and the timing of required payments or the triggering events that will result in a requirement for payment.

These triggering events should be tied to a municipality's demand for the use of shared infrastructure or services. Triggering events may include, but are not limited to, reaching defined thresholds for:

- Population growth within a defined benefiting area;
- Hectares of land developed within a defined benefiting area; and,
- Other metrics that reflect the municipality's demand for the use of the shared infrastructure.

Cost sharing agreements may also consider the payment of interest to Partner Municipalities who have provided initial funding for a shared infrastructure project under a "First one pays with subsequent recovery" approach. Clauses requiring payment within a certain time-frame, regardless of whether a triggering event has occurred, may be required for Partner Municipalities who have made initial investments in anticipation of another municipality's future growth from undue financial burden if development growth does not progress as expected.

#### 6.2. Water

The Intermunicipal Infrastructure Concept Report and subsequent materials identify the water servicing investments that will be required within the Study Area. Based upon discussions with EPCOR and the CRSWSC, the following assumptions and conclusions were reached:

- 1) The CRSWSC will fund the construction of all identified transmission line infrastructure that will be serviced from the CRSWSC transmission line in the western portion of the Study Area, with the exception of the new reservoirs located in Leduc County and the Beaumont. The cost of CRSWSC's transmission line infrastructure will be recovered through CRSWSC rates. CRSWSC does not fund the required meter room at new reservoir locations, or the service lateral/tie in to their existing line. That is constructed by the municipality during reservoir construction and turned over to CRSWSC. CRSWSC will construct any new transmission line to locations where new reservoirs are identified.
- 2) The new reservoirs in Leduc County and Beaumont will be used to service each individual municipality's own residents and will not be shared. These reservoirs will be funded by each individual municipality, likely through the use of off-site levies.
- 3) EPCOR will fund the construction of all identified infrastructure that is serviced from the transmission line that runs down 50 Street, with the exception of a portion of line running from the north border of Beaumont to the new reservoir in northwest Beaumont.
- 4) A portion of the 50 Street transmission line running from the north border of Beaumont to the new reservoir in northwest Beaumont provides for a redundancy of supply to Beaumont residents and will be funded by the CRSWSC. Beaumont receives their water from CRSWSC and as such the line from the north border of Beaumont to the new reservoir would be constructed/owned/operated and funded by CRSWSC. Any interconnection of Beaumont's new and existing reservoirs within their city limits for distribution looping would be Beaumont's responsibility. CRSWSC would likely connect two supply lines from the north and the west

regardless to provide redundancy to the supply but it cannot be done from the reservoirs as that is past the point of supply at the air gaps. This may mean there are two separate lines connecting these systems; one by CRSWSC on the transmission supply line before the gap, and one by Beaumont to interconnect the reservoirs downstream of the air gap as part of their distribution looping strategy.

The Conceptual Water Servicing Strategy is identified in Figure 7. Based on this analysis, there is currently no significantly shared infrastructure within the current water servicing concept that needs to be considered for cost sharing.

If future development plans include shared infrastructure, such as shared reservoirs or downstream distribution systems, the cost of this infrastructure would be considered for cost sharing between the benefiting municipalities. The cost sharing methodology for this infrastructure would be very similar to the methodology outlined in this report for wastewater servicing and would be based on the anticipated demand for water from each municipality that will share the infrastructure. This demand would be quantified based on engineering studies.

#### 6.3. Wastewater

Based on the preferred future wastewater servicing strategy identified in Section 4.2.3, the following conclusions were reached:

- In the immediate term, growth in Beaumont will be serviced through the ACRWC line to the west of the Study Area. All costs associated with the installation of this line will be borne by Beaumont, as this infrastructure does not service more than one municipality and therefore would not be funded by the ACRWC. The cost of this infrastructure may be recoverable from developers through Beaumont's off-site levies.
- 2) In the longer term, all growth areas north of Township Road 510 will be serviced through EPCOR infrastructure that is expected to run north along 66 Street. All three partner municipalities will benefit from this shared infrastructure.
- 3) The new line running north from the Beaumont boundary and west on 41 Avenue to 66 Street will be of shared benefit to Beaumont and Edmonton. A section of the new line running north on Range Road 243 boundary and east on 41 Avenue to 66 Street will be of shared benefit to Leduc County and Edmonton. This shared benefit infrastructure would be considered for cost sharing.
- 4) The new line running north along 66 Street will benefit all three municipalities. Because this line would benefit more than one member of the ACRWC, any costs related to this line would be borne by the commission, not Beaumont or Leduc County. Any agreements related to cost sharing for this line would be negotiated between the ACRWC and EPCOR, and not the Partner Municipalities.

The Anticipated Shared Wastewater Infrastructure (based on the conceptual wastewater servicing strategy) is identified in Figure 13. It is recognized that wastewater infrastructure requirements may change as technology advances and development plans become more defined. As a result, the identified shared infrastructure is subject to change.

The Partner Municipalities will collaborate on engineering studies to determine the land area that will benefit from a shared wastewater project and the volume of wastewater that each Partner Municipality within that land area is likely to generate. The volume of wastewater generated by a municipality will be used to determine the benefit received by that municipality from the shared wastewater infrastructure.



# **INTERMUNICIPAL PLANNING FRAMEWORK** ANTICIPATED SHARED WASTEWATER INFRASTRUCTURE



September 5, 2019

FIGURE 13

#### **LEGEND - GENERAL**



- MUNICIPAL BOUNDARIES STUDY AREA BOUNDARY
- **RIVER / CREEK**
- WATER BODY

#### **LEGEND - WASTEWATER**



- EXISTING ACRWC SERTS TRUNK SEWER EXISTING SESS TRUNK SEWER
- SESS FACILITIES



FUTURE LIFT STATION STAGE 1 STAGE 2 STAGE 3

#### **LEGEND - STAGING**



STAGE 2 STAGE 3

#### SHARED INFRASTRUCTURE



EDMONTON / LEDUC COUNTY

**BEAUMONT / EDMONTON** 

#### SERVICING CONCEPTS ONLY - SUBJECT TO CONFIRMATION IN THE FUTURE.







#### 6.4. Transportation

All transportation investments in the Study Area will be funded by the municipalities, with the exception of the twinning of Highway 625, which will be funded by the Province. The Partner Municipalities have agreed that only regional arterial roadways should be considered for potential cost sharing using the Cost Sharing Plan. Collector and local roadways are excluded from consideration for cost sharing under this plan.

In determining which regional arterial roadway projects may be of benefit to multiple municipalities, the Partner Municipalities considered the following:

- 1. Does the roadway project support development of more than one municipality; and,
- 2. Will the roadway be used as a primary transportation corridor by more than one municipality's residents or employers.

Based on these factors, the following sections of roadway were identified by the Partner Municipalities as being of potential shared benefit. These Anticipated Shared Roadways are identified in Figure 14.

Shared Roadway	Planned Infrastructure	Benefiting Municipalities
Township Road 510 (west of Range Road 243 to Nisku Spine Road)	Minor Regional Arterial	Edmonton Leduc County Beaumont
66 Street Extension (north of Township 510 to 41 Avenue)	Minor Regional Arterial	Edmonton Leduc County Beaumont
Nisku Spine Road (north of Township 510 to 41 Avenue)	Major Regional Arterial	Edmonton Leduc County Beaumont
41 Avenue (west of 50 Street to QEII)	Major Regional Arterial	Edmonton Leduc County Beaumont
50 Street (north of Beaumont to 41 Avenue)	Major Regional Arterial	Edmonton Beaumont

The Partner Municipalities will collaborate on trip and origin traffic modelling calculations to determine the land areas that will benefit from a shared transportation project and the expected number of trips that will be generated by each Partner Municipality within that land area. The number of trips generated by a municipality will be used to determine the benefit received by that municipality from the shared transportation infrastructure.

The Partner Municipalities recognize that residents may shift to alternative modes of transportation in the future and the plan for future transportation infrastructure will change as development plans become more defined. As a result, this list of shared roadways is subject to change.

#### 6.5. Summary of Results

The Partner Municipalities have agreed that specific infrastructure investments required to support the growth and development of the Study Area may have benefit to one or more municipalities. They have also agreed that the cost of investments in the identified infrastructure, typically borne by the individual municipality, should be shared by each of the municipalities that benefits from that infrastructure. Based on this Framework's anticipated infrastructure plans, this shared benefit infrastructure has been identified and agreed to by the Partner Municipalities.

At the time that growth in the Study Area triggers demand for a particular infrastructure project, a cost sharing agreement among the applicable Partner Municipalities will be developed for that piece of infrastructure. At such time, this cost sharing agreement will be used to allocate costs of the infrastructure as well as identify a funding and payment method.



# **INTERMUNICIPAL PLANNING FRAMEWORK ANTICIPATED SHARED ROADWAYS**



FIGURE 14





 MUNICIPAL BOUNDARIES **RIVER / CREEK** WATER BODY - STUDY AREA BOUNDARY

#### ULTIMATE LANE CONFIGURATION



MAJOR REGIONAL ARTERIAL MINOR REGIONAL ARTERIAL **REGIONAL COLLECTOR** ALIGNMENT TO BE DETERMINED

#### SHARED INFRASTRUCTURE

ALL PARTNERS

**BEAUMONT / EDMONTON** 

ROAD NETWORK SHOWN IS CONCEPTUAL AND SUBJECT TO FUTURE PLANNING AND DESIGN.

McElhanney

Prepared for:





## 7. Collaboration & Administration

#### 7.1. Governance and Communications

The Framework marks a new relationship among the Partner Municipalities with a shared view of future land use and infrastructure concepts. Knowing that concepts change over time, the Partner Municipalities have proactively agreed on how they will continue to work together in the future and facilitate amendments to the Framework. The Framework principles, especially considering the big picture and working for the Study Area, will continue to guide the Framework's implementation through the Intermunicipal Administration Committee's mandate of proactive communication and acting as an intermunicipal forum. The agreed upon policy objectives provide clarity of roles, decision-making authority, and communications and enable the Partner Municipalities to effectively address future changes collaboratively.

The Partner Municipalities understand and agree that each municipality will implement the Framework.

The Framework represents a commitment by each of the three Partner Municipalities to follow the principles, goals, and objectives, and to collectively move forward with the policy objectives.

#### Policy Objectives:

#### 7.1.1. Plan Hierarchy

- 1. The Framework serves as a tri-party planning framework between Beaumont, Edmonton and Leduc County and is similar in scope to an Intermunicipal Development Plan.
- 2. The Framework is directly informed by the Growth Plan and the future land use concept is based on the Partner Municipalities' approved statutory plans.
- 3. The Partner Municipalities agree to update their three respective Municipal Development Plans with statutory policy reflecting the Framework.
- 4. The Partner Municipalities will use the Framework to guide policy development and approval of all future statutory and non-statutory plans that affect the Study Area (Figure 15).

#### Figure 15 Plan Hierarchy



#### 7.1.2. Roles and Decision-making (Governance)

- 1. The Framework will be approved by the Council of each Partner Municipality through a Memorandum of Agreement.
- 2. To promote continued collaboration and proactive communication, an Intermunicipal Administrative Committee will be established with the mandate of the Framework's implementation including, but not limited to:
  - a. Coordination of budgeting processes for implementation;
  - b. Cost sharing proposals;
  - c. Regular review and amendment process;
  - d. Review of proposed amendments that emerge outside of the regular review and amendment process;
  - e. Acting as a forum for appropriate intermunicipal opportunities (i.e., grants) or issues that arise; and,
  - f. Providing the administrative function of the conflict resolution process as per Section 7.3.

- 3. The Intermunicipal Administrative Committee will consist of equal numbers of standing members representing the planning administration from each of the Partner Municipalities.
- 4. An Intermunicipal Oversight Committee, comprised of senior administration, including Chief Administrative Officer (CAO) or delegate and a Council representative for each Partner Municipality, will meet on an ad hoc basis, when required. It is anticipated the Intermunicipal Oversight Committee will be required for the regular Framework amendment process, and, should the conflict resolution process be required, they will actively participate, as per Section 7.3.
- 5. The Intermunicipal Administrative Committee and the Intermunicipal Oversight Committee will be governed by a Terms of Reference that will address:
  - a. Roles;
  - b. Responsibilities;
  - c. Decision-making authority; and,
  - d. Record keeping and reporting expectations.
- 6. Both the Intermunicipal Administrative Committee and the Intermunicipal Oversight Committee will use consensus decision-making so that this collaborative relationship can continue to achieve mutual goals.
- 7. Consensus decision-making means that decisions are only made when all Partner Municipalities provide support. Differing opinions are explored to better understand each partner's perspective and to look for solutions. Levels of support for each specific decision may differ, and the Partner Municipalities are prepared to support the overarching decision as a whole.
- 8. Each municipality continues to have full authority within their own municipal jurisdiction and be responsible for the administration and decisions of all statutory plans, land use bylaws, amendments thereof, subdivision applications, and development permit applications, as per the *Municipal Government Act*.
- 9. The Partner Municipalities agree that each municipality will administer the Framework's implementation actions for lands within their respective jurisdiction.

## 7.1.3. Intermunicipal Administrative Committee Meetings

- The Intermunicipal Administrative Committee will meet annually and on an as-needed basis to address emerging matters, including proposed amendments. These regular Intermunicipal Administrative Committee meetings will involve plan monitoring discussions focused on whether the plan outcomes are being realized.
- 2. It is agreed that, should emergent Intermunicipal Administrative Committee meetings be required, the Partner Municipality that has identified a cost sharing proposal, proposed amendment, opportunity, or issue will contact the full Intermunicipal Administrative Committee membership by email. The request for a meeting will include: a clear meeting purpose, any background information that may be available and potential meeting date/time options. The Intermunicipal Administrative Committee will

respond to arrange a meeting within 5 calendar days and hold a meeting within 21 calendar days.

3. Intermunicipal Administrative Committee meetings will have the ability to include subject matter experts at meetings, as appropriate for the topic.

#### 7.1.4. Communication

- 1. The Partner Municipalities will continue to build productive relationships by communicating between the Intermunicipal Administrative Committee members on an as needed basis.
- 2. Communication will generally focus on municipal referrals; amendments; cost sharing implementation; and cross-boundary intermunicipal development.
- 3. The Intermunicipal Administrative Committee members will also communicate upcoming or new municipal plans, initiatives, data, or studies that may affect the Study Area.

#### 7.2. Framework Interpretation, Updates, and Amendments

Changes over time are to be expected, and the Partner Municipalities have considered how best to build on the culture of collaboration while respecting each municipality's autonomy and administrative resources. The Partner Municipalities agree that typical referral processes for new plans and applications are effective, and that the Framework should have regular comprehensive reviews with the ability to make proposed amendments as necessary. Additionally, the Partner Municipalities have agreed that situations could arise where the Framework may no longer be necessary and have created a process for that circumstance. Each of these agreed processes are built from the perspective that information sharing and communication of each partner's perspective on new proposals will result in enhanced planning and coordinated infrastructure servicing for the Study Area.

#### **Policy Objectives:**

#### 7.2.1. Referrals

- 1. In the Framework Study Area, the Partner Municipalities agree to refer all:
  - a. New statutory plans and amendments to existing statutory plans;
  - b. New land use bylaws and amendments to existing land use bylaws;
  - c. New non-statutory plans and amendments (i.e., concept plans, outline plans or master plans), redistricting, subdivision, and discretionary use development permit applications, in the boundary interface area:
    - i. That are not compliant with the Framework,
    - ii. That are not compliant with an adopted area structure plan, or
    - iii. Where no area structure plan currently exists; and,
  - d. Road closure bylaws and resource extraction applications within the boundary interface area.

- 2. Referrals will be sent to all Partner Municipalities for Municipal Development Plans, as well as Intermunicipal Development Plans, Area Structure Plans, Local Area Structure Plans, Neighbourhood Structure Plans, and Outline Plans in the Study Area of the Framework. All other referrals will only be sent to the municipality that could be directly impacted.
- 3. Referral response timelines are agreed as follows:
  - a. Municipal Development Plans and amendments 28 calendar days prior to first reading;
  - b. Referral responses for all other referrals 21 calendar days; and,
  - c. If required and by mutual agreement, a review period extension can be established with explicit timelines.
- 4. Referral responses are expected to focus on how the proposed plan/application may affect the Study Area from the perspective of cross-boundary matters, and direct impacts or alignment with the Framework. Where appropriate, the Approving Municipality will clearly outline expectations for comments to address specific matters that they may have identified as having a potential cross-boundary impact.
- 5. Referral responses will be taken into consideration prior to a decision being rendered.
- 6. If no response is received by the referral timeline, lack of response will be considered to be no objection from the Responding Municipality.
- 7. Referrals will be sent by email to the appropriate referral contacts for each municipality.
- 8. The Partner Municipalities agree to refer other plans, studies, or applications that may fall outside the Study Area or the boundary interface area if, in their opinion, the proposed plan, study, or application may have a cross-boundary impact on the Study Area.

#### 7.2.2. Plan Review and Amendment

- The Partner Municipalities agree to a mandatory initial review of the Framework in 5 years. The Framework reviews will be undertaken by the Intermunicipal Administrative Committee. Subsequent reviews are recommended to occur every 5 years or at the request of any Partner Municipality.
- 2. The Cost Sharing Plan should be reviewed as part of the Framework review, and updated as required. The Partner Municipalities agree that when significant development approvals are provided in the Study Area and greater certainty of infrastructure requirements and timelines are known, the information provided as part of these development approvals may trigger a review of the Cost Sharing Plan.
- 3. All aspects of the Framework will be reviewed for updates, including mapping and policy objectives, with all agreed-upon revisions being updated during the review process timeline.
- 4. Any Partner Municipality may propose amendments to the Framework at any time. All proposals shall include a rationale for the proposed amendment, as well as suggested changes that may be considered by the Intermunicipal Administrative Committee.

- 5. The Framework will be reviewed by each individual Partner Municipality following the approval of any new regional plan or Municipal Development Plans. Should the Partner Municipality determine the Framework should be revised, that Partner Municipality may propose amendments through the Intermunicipal Administrative Committee.
- 6. Partner Municipalities may choose to propose an amendment that originates from a non-Partner Municipality source. However, non-partners cannot directly request amendments.
- Should the Province suggest amendments to the Framework, the Intermunicipal Administrative Committee members will immediately request an Intermunicipal Administrative Committee to consider the proposed amendment.
- 8. Should other stakeholders directly identified in the Framework (Alberta Transportation, Alberta Environment and Parks, ACRWC, CRSWSC, or EPCOR) have suggested amendments, the request will be sent in writing to the applicable municipality. The applicable municipality's administration determines whether the amendment will be referred to the Intermunicipal Administrative Committee. All proposals shall include a rationale for the proposed amendment as well as suggested changes that may be considered by the Intermunicipal Administrative Committee.
- 9. Amendments to the Framework only come into effect when approved by all Partner Municipalities through a Memorandum of Agreement.
  - a. Section 7.2.2(9) does not apply where the Intermunicipal Administrative Committee have agreed to:
    - i. Alter the citation and title of the Framework and the numbering and arrangement of its provisions, heading title and maps;
    - ii. Make a change, without materially affecting the Framework principle or substance:
      - 1. To correct clerical, technical, grammatical, or typographical error(s); and,
      - 2. To more clearly communicate the meaning of the Framework.

#### 7.2.3. Intermunicipal Planning Framework Cancellation

- 1. In the event a Partner Municipality wishes to cancel the Framework, any Partner Municipality, through a Council resolution, can notify the other Partner Municipalities of the decision to cancel the agreement. The cancellation notice must include the rationale and requires a notification period of 6 months.
- 2. The Partner Municipalities agree that prior to sending the cancellation notification, at least one meeting with the Intermunicipal Administrative Committee and one with the Intermunicipal Oversight Committee must be held to discuss the reason for the tentative cancellation notice and discuss any go forward steps.
- 3. Subsequent to the cancellation notice, the Partner Municipalities may engage in a mediation process to resolve any issues.

#### 7.3. Conflict Resolution

Conflict can and will happen in any intermunicipal situation, and that is not 'negative'. Conflict highlights matters that are important to the parties. A good dispute resolution process creates the space to better understand what is important so that a mutually agreeable solution can be found. The Framework's dispute resolution process builds upon the ongoing collaborative approach developed by the Partner Municipalities and will be maintained through the Intermunicipal Administrative Committee. The intent is to provide forums with the appropriate parties at various decision-making levels to come to a resolution without requiring additional processes.

#### Policy Objectives:

#### 7.3.1. Conflict Resolution Process

- 1. The conflict resolution process applies to any plan or bylaw subject to the referral process, interpretation of the Framework, or the Cost Sharing Plan.
- 2. The Partner Municipalities have agreed to the following five step conflict resolution process:
  - a. Administrative Issue Identification;
  - b. Intermunicipal Oversight Committee Review;
  - c. Mediation Process;
  - d. Nonbinding Arbitration Process; and,
  - e. Appeal Process.
- 3. Each step will be completed within the timeline as outlined in *Table 2 Conflict Resolution Process.* The timeline for any stage can be extended by mutual agreement.

#### 7.3.2. Step 1: Administrative Issue Identification

- The Responding Municipality's administration provides written notice to the other Partner Municipalities identifying areas of disagreement. The Responding Municipality (or municipalities) will ensure the written notice includes complete information in the rationale provided.
- 2. The Approving Municipality's administration will undertake a technical evaluation of the rationale contained in the written notice and will provide any necessary comments to the Responding Municipality.
- 3. Intermunicipal Administrative Committee meeting(s) will be held to explore the concern and options. The Partner Municipalities will determine whether a proposal can be processed without being referred to the Intermunicipal Oversight Committee. It is also agreed that the Intermunicipal Administrative Committee will determine whether all Partner Municipalities will be active in the conflict resolution processes (affected municipalities), or if observer status will be provided.
- 4. In the event that the conflict cannot be addressed at the administrative level, any Partner Municipality may refer the written notice to the Intermunicipal Oversight Committee for review. Note: Each municipality will be responsible for determining the

degree of discretion delegated to each respective administration in the written notice review.

5. Once a dispute is identified through a written notice, no further action can be taken on the application or matter in dispute until resolution has been determined.

### 7.3.3. Step 2: Intermunicipal Oversight Committee Review

- 1. An Intermunicipal Oversight Committee meeting will be scheduled and the Intermunicipal Administrative Committee will attend with each municipality's administrations presenting their positions on the matter.
- 2. After consideration of the matter, the Intermunicipal Oversight Committee may:
  - a. Provide suggestions back to the Intermunicipal Administrative Committee with direction to make the matter acceptable to the impacted municipalities;
  - b. If possible, agree on a consensus position in support or in opposition to the matter; and,
  - c. Conclude that no initial agreement can be reached and that a mediation process will be undertaken.

## 7.3.4. Step 3: Mediation Process

- 1. The following will be required before a mediation process can proceed:
  - a. Formal agreement by the Intermunicipal Oversight Committee to participate in a mediation process and confirmation of affected municipalities actively participating in the mediation;
  - b. Engagement, at equal cost to the affected municipalities, of an impartial and independent mediator agreed to by the municipalities; and,
  - c. Approval by the municipalities of mediation schedule, including the time and location of meetings and a deadline for completion of the mediation process.
- 2. If agreed to by the municipalities, any members of the Intermunicipal Administrative Committee or administrative staff from any municipality who are not participating directly in the mediation process may act as information resources.
- 3. Confidentiality protocols and expectations will be mutually determined at the outset of the mediation.
- 4. At the conclusion of the mediation, the mediator will assist the municipalities draft their own memorandum of understanding that forms the basis of their agreement.
- 5. If a mediated agreement is reached, then that agreement will be referred to the Councils for action. The Councils will also consider the mediator's report and respective positions of the municipal administrations with respect to the mediated agreement. No mediated agreement will be binding on either municipal council and all mediated agreements will be subject to the formal approval of both Councils.
- 6. If a mediated agreement cannot be reached, then the arbitration process may be initiated.

#### 7.3.5. Step 4: Nonbinding Arbitration

- 1. The following will be required before an arbitration process can proceed:
  - a. Formal agreement by the Intermunicipal Oversight Committee to participate in an arbitration process for the affected municipalities;
  - b. Engagement, at equal cost to the affected municipalities, of an impartial and independent arbitrator agreed to by the municipalities; and,
  - c. Approval by the municipalities of an arbitration schedule, including the time and location of meetings and a deadline for completion of the arbitration process.
- 2. If agreed to by the municipalities, any members of the Intermunicipal Administrative Committee or administrative staff from any municipality who are not participating directly in the arbitration process may act as information resources.
- 3. Confidentiality protocols and expectations will be mutually determined at the outset of the arbitration.
- 4. At the conclusion of the arbitration, the arbitration decision will be provided through an order. Arbitration will generally be held in accordance with the Intermunicipal Collaboration Framework Regulation (Alberta Regulation 191/2017). Exceptions of note to this include: arbitration will be non-binding and arbitration costs will be shared equally among the affected municipalities.
- 5. If the matter is resolved during arbitration, a summary report is required to be provided by the Approving Municipality to the Intermunicipal Oversight Committee and Intermunicipal Administrative Committee.

#### 7.3.6. Step 5: Appeal Process

- In the event that the arbitration process does not resolve the conflict, or if the timeline exceeds the maximum agreed upon conflict resolution timeline, the Approving Municipality may pass a bylaw to implement the proposal (e.g. a land use bylaw amendment or an Area Structure Plan).
- 2. If the Approving Municipality passes a bylaw to implement the proposal, then the Responding Municipality may appeal that action to the Municipal Government Board under the provisions of Section 690 of the *Municipal Government Act*.

Table 2 Conflict Resolution Process

Action	Timeline for Completion
Step 1: Administrative Issue Identification	30 calendar days, or extended through mutual agreement
Step 2: Intermunicipal Oversight	30 calendar days, or extended through
Committee Review	mutual agreement
Step 3: Mediation Process	Flexible but must enable completion within the ultimate conflict resolution timeline
Step 4: Nonbinding Arbitration	Flexible but must enable completion within the ultimate conflict resolution timeline
Ultimate conflict resolution timeline to complete Step 4	1 year plus 1 month
Step 5: Appeal Process	As per the Municipal Government Act

## 8. Glossary

This report uses planning, legal and governance terminology found and defined in the Municipal Government Act, the Growth Plan, the Edmonton Municipal Development Plan, the Beaumont Municipal Development Plan, and the Leduc County Municipal Development Plan. In addition to those definitions, the following terms are defined for the purposes of this report.

Aesthetic(s) - the appearance of the visual elements of development such as design, materials, landscaping and siting.

**Agriculture (Land Use)** - lands to be retained in agricultural production or undeveloped, with limited fragmentation and conversion to non-agricultural land use opportunities in the long term.

**Approving Municipality** - the municipality carrying out a referral, undertaking an approval process or a proposed interpretation of the Framework.

**Boundary Interface** - the lands within 0.8 km of a shared municipal boundary in the Study Area.

Buffer - a designated area surrounding a development, land use or feature that is intended to either:

- a) minimize the impacts from the development, land use or feature on surrounding areas; or
- b) protect the development, land use or feature from external impacts.

Constraints - limitations or restrictions.

Core - the central or most important part of something.

**Country Residential (Land Use)** - low-density residential developments that are typically not connected to municipal services, rather these lots are serviced with private, on-site water wells or cisterns, and septic or pump-out sewage systems.

**Employment (Land Use)** - municipally serviced, non-residential lands that supports regionally significant businesses and economic activities. This land use may also include neighbourhood level commercial businesses and other appropriate services to support the businesses and employees located in this regional centres.

**High Aesthetic Standard(s)** - the outcome of enhanced attention to the physical (design, materials, landscaping and siting) components of a development when compared with a basic development.

**High Load Corridor** - a set of highways within Alberta which accommodates extremely high or wide loads.

Hub - the effective centre of an activity, region, or network.

Land Use Compatibility/Incompatibility - land uses that are able/unable to exist or occur together without conflict.

**Major Regional Arterial** – these roadways provide key access through the Study Area and are regionally significant beyond the Study Area boundaries. These are roadways that will typically have six or more lanes of traffic, with interchanges at regional highways.

**Minor Regional Arterial** – these roadways are regionally significant, especially for travel movements within the Study Area, and the primary purpose of the roadways are to provide access to end

destinations. As opposed to the Major Regional Arterials, which provide better accommodation of through travel movements, these roadways typically provide four lanes of traffic.

Node - a central or connecting point.

**Preservation** - the protection of cultural assets, natural systems or cultural landscapes from loss or damage.

Partner Municipalities - The City of Beaumont, the City of Edmonton and Leduc County.

**Regional Collector** – this type of roadway is for local access to areas, providing connections to Major and Minor Arterial roadways. While these roadways are typically planned for four lanes of traffic, it is more likely that they would remain as two-lane facilities for the timelines of the Study.

**Responding Municipality** - the municipality that is replying to a circulation from another municipality, and/or provides written notice to the other Partner Municipalities identifying areas of disagreement and initiating the conflict resolution process.

Separation - a situation in which two or more things are separated from each other.

**Study Area** - the designated portions of land within the three Partner Municipalities (Beaumont, Leduc County and Edmonton) that are the subject of the joint planning study undertaken by this Intermunicipal Planning Framework. The boundary of the Study Area is identified in Figure 1.

**Transition** - any change in land use from one general type of use to another within a neighbourhood or between neighbourhoods.

**Urban Residential (Land Use)** - municipally serviced, predominantly residential lands. Urban Residential may also include neighbourhood level commercial uses, institutional uses, and other services required to support an urban population.

**Wayfinding** - the process or activity of determining one's position and planning and following a route or path.