



LEDUC
COUNTY

Central Nisku Area Redevelopment Plan

January 2025



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1 Introduction

1.1 Purpose

A Local Area Redevelopment Plan (LARP) provides a land use and development policy framework to accommodate new and future growth while supporting existing economic activities in the plan area over the next 30-year horizon. The Central Nisku LARP describes locational advantages of the area, services, transportation, and servicing requirements needed to support existing and future development.

The plan shows how overarching policy from the Leduc County Municipal Development Plan (MDP), the Nisku Major Employment Centre Area Structure Plan (Nisku MEC ASP), the Leduc County Land Use Bylaw, and other applicable policy are grounded and integrated into the LARP policy structure to support existing business and foster future economic activities in Central Nisku. It also articulates how future growth in the plan area will be integrated with surrounding land uses and economic activities. When adopted by Leduc County, it will provide guidance for the future redistricting and subdivision applications within the plan area, both in terms of organization and design.

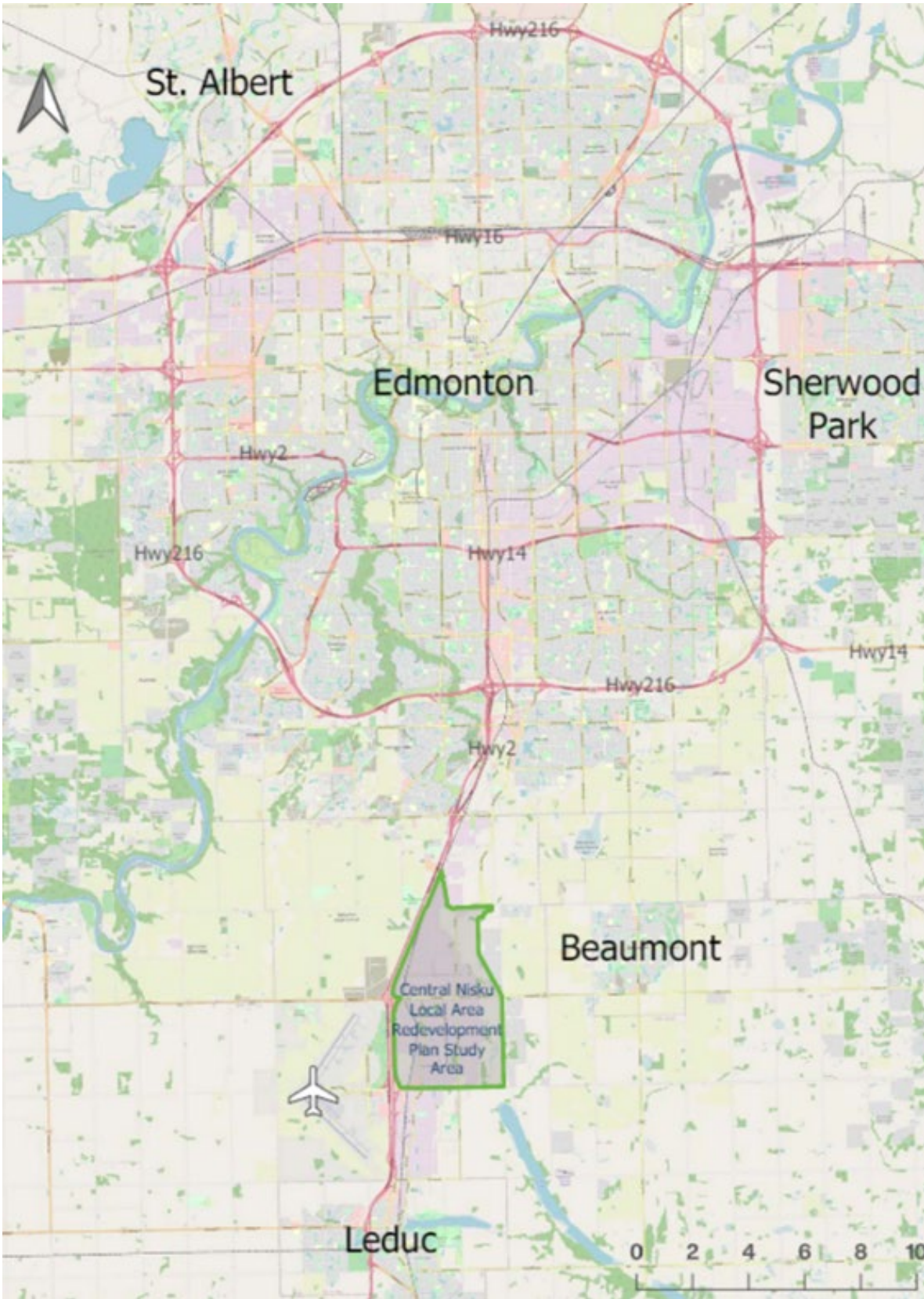
1.2 Location and Boundaries

The Central Nisku LARP is located in the Nisku Industrial Business Park of Leduc County within the Province of Alberta, approximately 3 km south of the boundary with the City of Edmonton. The Cities of Beaumont and Leduc are in the surrounding areas of the Central Nisku LARP area. The regional location of the plan area is south of Edmonton and north of the City of Leduc, as seen in **Exhibit 1: Regional Context of the Central Nisku Local Area Redevelopment Plan**.

The plan area encompasses a total of approximately 2,176 hectares (5,384 acres) including all parts of the following legal land areas: E14-50-25-W4M, 13-50-25-W4M, 18-50-24-W4M, E23-50-25-W4M, 24-50-25-W4M, 19-50-24-W4M, E26-50-25-W4M, 25-50-25-W4M, E/SW30-50-24-W4M, SE35-50-25-W4M, 36-50-25-W4M, W/NE31-50-24-W4M and E6-51-24-W4M.

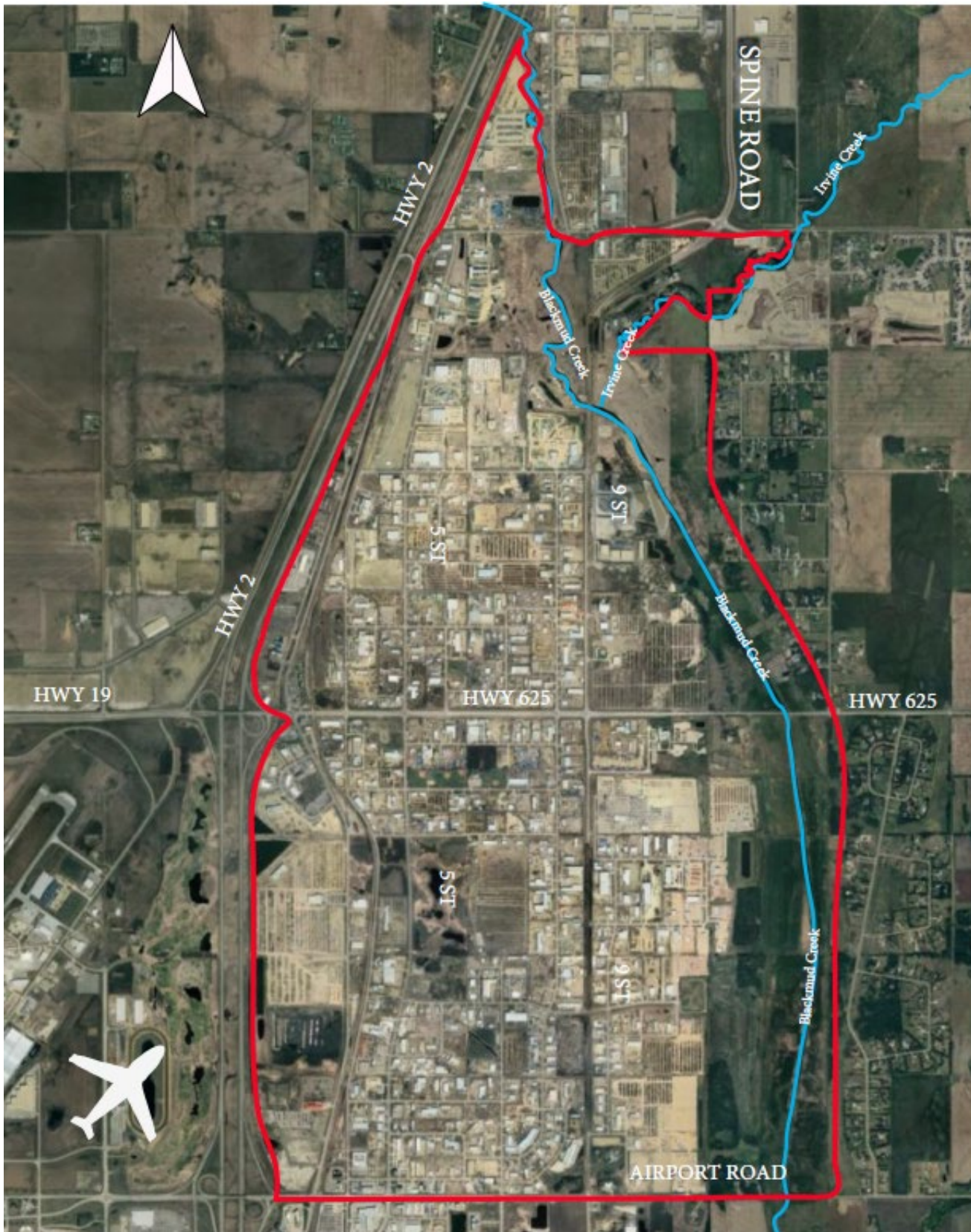
The plan area for the Central Nisku LARP includes approximately 2,178 hectares (5,384 acres) located on the eastern side of Highway 2, bordered to the north by Township Road 504A, Airport Road/TR 502 to the south, and Blackmud Creek to the east, as shown in **Exhibit 2: Central Nisku Local Area Redevelopment Plan Area**. The southern half of the park is located opposite the Edmonton International Airport. The south boundary at Airport Road/TR 502 is also a boundary between Leduc County to the north and City of Leduc to the south; with Leduc County continuing south of Airport Road, east of 9 Street.





► **Exhibit 1: Regional Context of the Central Nisku Local Area Redevelopment Plan**





► **Exhibit 2: Central Nisku Local Area Redevelopment Plan area**





1.3 Vision

Informed by community and stakeholder input, the vision for the Central Nisku LARP is as follows:

“Central Nisku is the core area of Leduc County’s main employment centre that fosters innovation in industrial, manufacturing and commercial activities while protecting and enhancing the environmental value of Blackmud Creek. The area provides advanced technological connectivity and a variety of people-centered amenities with economic ties that extend beyond the Edmonton Metropolitan Region to the rest of the world.”

1.4 Plan Objectives

Discussions held with Leduc County Council, the County Administration team, stakeholders and property owners in the plan area, as well as residents in the adjacent areas to the east of the plan area informed the planning process for the Central Nisku LARP from the start. The vision statement introduced earlier in this document was developed with the feedback received from all who participated in the multiple engagement opportunities provided.

Four main pillars that will guide future growth and development in the plan area have been established to capture the goals and objectives identified through stakeholder and public engagement. The four redevelopment pillars are:

Economic Competitiveness & Growth

To ensure the plan area is competitive and experiences economic growth by attracting businesses, it will be crucial to maintain fiscal competitiveness of the Central Nisku area. It will be imperative for the County to pursue required capital investments and improvements with fiscal responsibility in mind, leverage required area improvements concurrently with redevelopment initiatives and advance a cost-balancing investment program. The Central Nisku LARP will capitalize on existing plan features and economic activities by establishing strategic development nodes to foster development and innovation.

Integrated Transportation Network

The plan area is advantageously located within major air, rail, and road networks providing key connectivity to regional, national, and international destinations. As a key intermodal transportation hub, it will be vital to preserve and advance key transportation infrastructure, including high-load corridors and rail spurs, within the plan area to support industrial and business activities.

Additionally, providing connectivity within the plan area and to surrounding areas (i.e., City of Beaumont, City of Leduc, and The Vistas) is a priority. New opportunities through the implementation of a Pedestrian Network and improvements to transit access will be established to provide active and transit transportation mode opportunities.





Enhanced Public Realm and Plan Identity

Improving the overall look and feel of the plan area is a priority and will be accomplished by strategically focusing on quality placemaking strategies to establish an enhanced public realm. Further, to define a new identity for Central Nisku that reflects the intended future vision will be accomplished by improving key gateways to the plan area, incorporating wayfinding signage, and improving streetscape and urban design features in strategic locations.

Environmental Stewardship

Growth and development in the plan shall proceed within a framework that prioritizes the protection and restoration of green spaces and environmental areas, particularly the floodplain along Blackmud Creek and Irvine Creek, and promotes a commitment to sustainable development practices including Low Impact and Net Zero development. Additionally, the plan aims to formalize a naturalized stormwater management systems that incorporates low-impact development features and leveraging existing low-lying areas into an area-wide system that allows for restoration of natural areas. Lastly, definition and protection of flood-prone areas along Blackmud Creek to foster restoration of riparian areas is important.

1.5 Public Participation

The path for future growth and development of the plan area has been informed by dialogue with Leduc County Council and Administration, local area stakeholders, business owners and residents. Due to the COVID-19 pandemic, in-person engagement sessions were not permitted during the first engagement period in 2021, resulting in public engagement being completed through online tools. Due to a significant lapse in time since the first engagement period, a second engagement period took place in 2024, to ensure the public and the business community are aware of the plan and that any new feedback is captured.

1.5.1 First Engagement Period

The first engagement period, which consisted of an online survey and an online engagement session was held in Spring 2021. This session informed the design of development scenario options and refined the vision for the plan area. Input and comments provided through the engagement activities are summarized as follows:

- The strengths of the area are its location, connectivity, and business diversity.
- A key weakness is the poor visual appearance of the area, with the public perception that beautification will be vital in the future, if it is balanced with a competitive tax rate.
- Bike paths and trails offer an important amenity to include in the plan area.
- Recreation and commercial were identified as high-priority land uses to add to the area.
- Enhancing bus stops and increasing connections to surrounding communities was seen as important.
- Most concerns regarding future development centred around air and noise pollution, tax increases, and decreased property values.





Following the first engagement period, three (3) development scenarios were created, with accompanying examples of amenities. In Fall 2021, these scenarios were presented to County Staff and the public in two (2) separate online engagement sessions to gather feedback. A second online survey was also made available to gather feedback from those unable to attend. The following feedback was used to further refine the vision and development scenarios:

- The vision should have a more environmental focus and should look to have a more global reach.
- There should be a buffer between the residential area and the industrial areas on the east side of the study area to mitigate noise and pollution.
- Include more business incubation areas.
- Blackmud Creek needs to be protected from development.
- The trails and bike paths should connect to the wider community.
- Preferred amenities were generally modest and easily integrated into the existing community (e.g. storm ponds and naturalized areas).

1.5.2 Second Engagement Period

The second engagement period took place in the Winter of 2024 and consisted of an in-person Open House and an online survey for the members of public who could not attend or those wishing to leave additional feedback. The Open House was a drop-in style event held at the Leduc County Business and Entrepreneur Centre, featuring visual display boards describing the plan. The boards included details such as the vision of the plan, public realm enhancement strategies, summary of development nodes, proposed land uses, and overview of infrastructure. Staff was also available to answer questions and have discussions with participants (of whom there were approximately 15). The feedback received at the Open House has been summarized below. Some of the feedback is conflicting, as members of the public showcased a diverse set of concerns and desires for the area:

- Concerns over current districts changing – staff confirmed that district changes can only take place during the redistricting process.
- Concerns regarding noise and light pollution affecting residential areas to the east of Nisku.
- Various improvements throughout the plan area should be phased out and not completed all at once.
- Important to maintain the existing roadway network and prioritize the Highway 19 interchange in future road improvement plans.
- General support for the diversification of land uses in the area, with some expressing concerns over the addition of new land uses impacting the maintenance of the current tax base.
- Support for acknowledging and outlining fire flow deficiencies in the area, and concerns over the impact of power-heavy businesses (such as data centres) on the quality of power and internet services.
- Opposition to change due to Nisku’s history as a “blue collar” industry.



- Some expressed support of the walkway network, while others expressed concerns over pedestrian network connections between the industrial area and residential to the east. Preference to keep the walkways along Blackmud Creek for local residents.
- Other feedback, such as making aesthetic improvements to the plan area to attract new businesses, and concerns over the ability to enforce future Bylaw infringements.

In addition to the Open House feedback, the online survey received five responses which have been summarized below:

- The survey participants included one landowner and one business owner in the area, one participant who works in the area, and two participants who neither work or live in the area.
- Regarding the proposed land uses in development nodes based on service types, one participant noted no concerns, two noted non-support, and two participants did not respond. The non-support included the following rationale:
 - Current businesses not conforming to proposed districting, resulting in potential loss of property values.
 - Development nodes should be more inclusive throughout, and not separated by service types.
 - The entire Nisku area should focus on the trades and not be diversified.
- Regarding the staging for developing Enhanced Landscapes and Gateways, participants did not note any concerns or preferences.
- General concerns over tax increases and job losses as some of the current industrial businesses will be “zoned out”.

The feedback from the Open House has resulted in the addition of a general plan for the Pedestrian Network implementation and prioritization areas. It was determined that the vision of the plan area was generally in alignment with the feedback received during the second engagement period.

2 Policy Framework

2.1 Alberta Municipal Government Act

Area redevelopment plans are regulated under Section 634 and 635 of the Municipal Government Act. It states that an area redevelopment plan must describe the objectives of the plan and how they are proposed to be achieved, the proposed land uses for the redevelopment area, if a redevelopment levy is to be imposed and the reasons for imposing it, and any proposals for land acquisitions for municipal use, school facilities, park and recreation facilities or any other purposes the council considers necessary.

Local area structure plans or redevelopment plans build on what has been outlined in the major area structure plans, providing more specific detail and information about the plan growth and development within the area. The Nisku Major Employment Centre Area Structure Plan outlines the guiding policies for this local area redevelopment plan.



2.2 Alberta Land Stewardship Act

The Land Stewardship Act is the enabling legislation for the Land Use Framework.

2.2.1 Land Use Framework

The Land Use Framework was adopted in 2008 by the Government of Alberta and established the underlying approach to regional planning.

The framework contains seven strategies, one of which is to create regional land use plans that apply to seven greater watersheds within the province. Each regional plan will be unique according to the local context and will provide the basis for land use decision-making in the region. All authorities, plans and policies must be consistent with this plan. Two regional plans have been approved by the Minister of Municipal Affairs (South Saskatchewan and Lower Athabasca) and are in force and effect Leduc County is a part of the North Saskatchewan Region Plan Area, which is in development.

2.2.2 North Saskatchewan Region Plan

The purpose of regional planning is to support the numerous policies and strategies that guide natural resource development, support economic growth, and protect the environment. Regional plans will integrate these policies and strategies at the regional level and provide the policy direction and clarity for decision makers at the federal, provincial, and local levels.

The North Saskatchewan Region is located in central Alberta and has approximately 85,780 square kilometres, or just under 13 per cent of Alberta's total land base. The region is bordered by Saskatchewan to the east, British Columbia to the west, the Upper Athabasca and the Lower Athabasca regions to the north and the South Saskatchewan and Red Deer regions to the south. The region has a large and diverse landscape, which contains the Rocky Mountains, rolling foothills and prairie parkland.


The North Saskatchewan Region Plan covers municipal jurisdictions that are part of the river's watershed. This includes sixteen rural municipalities (Counties and Municipal Districts), the urban municipalities within their boundaries, and the City of Edmonton. While the North Saskatchewan Region Plan remains in development, it will, upon approval by the Minister of Municipal Affairs, provide high level direction for regional land use and decision-making.

2.3 Edmonton Metropolitan Region Growth Plan

The Edmonton Metropolitan Region Growth Plan, approved in 2017, provides policies to guide growth in the Edmonton Metropolitan Region Board (EMRB) through guiding principles. Leduc County is a member municipality of the EMRB. The guiding principles of the growth plan are to promote global economic competitiveness and regional prosperity; protect natural living systems and environmental assets; integrate land use and infrastructure; achieve compact growth that optimizes the infrastructure investment; ensure effective regional mobility; and ensure the wise management of prime agricultural resources.

2.4 Airport Vicinity Protection Area

The Edmonton International Airport Vicinity Protection Area Regulation 55/2006 regulates land use surrounding airports to limit the impacts resulting from aircraft flying over communities as they arrive or depart. The majority of the plan area falls within the AVPA and is located within the NEF 25 contour. A small portion of the western part of the plan area is located within the



NEF 30 contour. In this regard, restrictions on land uses are minimal except for campground uses, which is not contemplated within the plan area.

2.5 Intermunicipal Planning

While not a statutory plan, Leduc County, the City of Edmonton, and the City of Beaumont entered into agreement to work together to address growth along their shared boundaries. The Intermunicipal Planning Framework guides existing and future land use, transportation, water, wastewater, and stormwater servicing across the municipal boundaries.

2.6 Leduc County Plans

2.6.1 Leduc County Municipal Development Plan

The Central Nisku LARP is located within the Nisku Area of the Leduc County Municipal Development Plan (MDP). The MDP provides direction for the Nisku Area's growth by promoting a concentrated and diverse mix of responsible and sustainable development. Specifically, the objectives of the MDP for the Nisku Area are:

2.6.2 Nisku Major Employment Centre Area Structure Plan

Adopted in September of 2021, the Nisku Major Employment Centre Area Structure Plan follows the general direction laid out by the overarching policy framework and provides further detail on the policy intent for the Central Nisku LARP plan area. Specific for the LARP, identified in the Nisku MEC as Central Nisku, the following are observed in this plan:

Priority Development Objectives:

- To encourage the development, expansion, and support of current and future energy, light industrial, commercial, retail, and hospitality sectors.
- To promote, diversify and optimize underutilized brownfields and vacant parcels in order to maximize the floor area ratios within the Nisku Central area.
- To encourage the relocation of outdoor storage uses to other planned areas of the County as defined by the Municipal Development Plan.

Design Objectives:

- To encourage compatible developments, which support the sharing of information, products, and supply chain linkages in the plan area.
- To mitigate or eliminate noise, odour, light, and industrialized sights using design standards and techniques.
- To ensure new developments are compatible with adjacent land uses and municipalities.
- To encourage connections through designated trails, sidewalks, open spaces and to use a variety of transportation methods to provide linkages for employees, residents, and visitors.
- To ensure that current and future developments adhere to the architectural and landscaping guidelines within nodal areas (as determined in LASP's or LARP's), areas adjacent to other municipalities, major arterial roadways, and highways.



Priority Development Policies:

- Diversification of industrial development opportunities within the Central Nisku area shall be supported.
- In addition, infill development and the development of brownfield or underutilized properties is encouraged; and compatible developments, which could support the sharing of information, products, and linkages, is also highly encouraged.

Design Policies:

- Industrial or commercial development shall follow the architectural and landscape design guidelines within the Central Nisku Local Area Redevelopment Plan. Key nodes and areas may include but are not limited to; Highway 2, the Nisku Spine Road/ 9 Street, 20 Avenue (Highway 625 or Township Road 504), Airport Road (Township Road 502), Sparrow Drive, and 30 Avenue (Township Road 510).
- Parcel size and land use districts may be flexible to the needs of development and market demands as long as the uses are compatible with one another and meet safety and engineering standards.
- Walkable connections such as sidewalks and designated trails shall be considered as well as public transportation linkages and connections in new developments and redeveloping areas to provide connectivity to key areas for employee's enjoyment and community development.
- The use of buffers or transitional land uses shall be required to minimize conflicts between industrial and residential developments.
- All future or altered structures, parking lots and buffer/transitional areas shall conform to Leduc County architectural and landscaping guidelines. Specifically, in cases in which developments face or abut residential uses, consultation shall occur with adjacent residences and Leduc County prior to development occurring.
- Commercial and retail services are encouraged in high-visibility areas and shall have access to local and major transportation networks. Developments in these areas shall have higher site and landscaping standards.

2.6.3 Leduc County Land Use Bylaw

The Leduc County Land Use Bylaw (LUB) was approved in 2008 to provide an implementation framework for the development of lands within the County's control. The LUB establishes the Development Authority for the County and provides procedures for appealing a decision of the Development Authority to the Subdivision and Development Appeal Board. The LUB contains general and specific development regulations for uses, natural resource and environmental areas, and ancillary development including signage.

The Central Nisku LARP proposes a generalized land use mix that allows the pursuit of development for existing and future economic sectors while easily aligning with existing land use districts contained within the LUB.





2.6.4 Leduc County Investment Readiness and Implementation Strategy

Leduc County's Investment Readiness and Implementation Strategy (IRIS) was completed between 2019 and 2021. The project's main goal was to create an economic and planning strategy to assess the County's investment readiness and competitiveness and provide clear direction for future growth and employment in crucial areas of rural development, agriculture, commercial and industrial growth within Leduc County. With the phase out of coal-fired electrical generating plants, there was an urgent need for economic diversification opportunities.

The project was divided into two phases. Phase I of the study included a detailed land use analysis, a high-level marketing strategy informed by economic analysis and a summary report of findings and recommendations. Phase II of IRIS utilized the analysis and strategies developed in Phase I to further develop specific land use, environmental and economic policies and procedures to ensure the County is ready for future investment, subdivision, and development.

Key general recommendations from the study relevant for the context of the Central Nisku LARP include:

- Update Leduc County's Land Use Bylaw
- Advance the expansion of the Spine Road in the County's Capital Plan
- Identify infill or intensification opportunities within the Nisku Business Park

Regarding the last point, research conducted to complement the IRIS study led to a list of vacant and underutilized properties in and near the Nisku Business Park. Underutilized properties were identified as properties with large outdoor storage components that could be subdivided or could form part of a future land assembly project. Overall, 168 properties were identified within the Nisku and surrounding area. Most properties are within the Central Nisku plan area and are serviced. The range of properties range from 0.6 acres to 137 acres, with all lots totaling approximately 753 hectares (1,860 acres).

The Central Nisku LARP builds on the findings and recommended approach of the IRIS study.

2.6.5 Leduc County Transportation Master Plan

The Leduc County Transportation Master Plan, approved in 2024, provides direction for addressing the growth of transportation infrastructure over the next 25 years. The TMP guides continued residential, industrial, and commercial development by promoting alternatives to vehicle use and facilitates economic opportunities by encouraging the effective and efficient movement of people and goods.

- A set of policies, strategy recommendations, and identified transportation network improvements are outlined in the TMP; those that will influence the future growth of the Central Nisku LARP include, but are not limited to:
- Support of local and regional transportation initiatives and partnering with Edmonton International Airport (YEG), the province and neighbouring municipalities.
- Support mobility choices for workers within the Nisku Business Park and develop a form of public transit that best fits the needs of Leduc County residents and businesses.

- Introduction of a nodes and corridors structure plan to establish key linkages between employment centres, YEG, park & ride, regional transportation facilities and other destinations.
- Support, enhance and protect the current high-load corridor within Nisku and on the provincial highway network.
- Support intermodal transportation hubs to create connectivity between different modes of transportation that allow goods and cargo to move seamlessly from one mode to another. The hubs are where different modes of transportation (both public and private) come together including air, rail and roads to create connections to the greater Edmonton region.
- Leduc County shall develop roadway improvements to facilitate goods movement while still promoting sustainable and connected multi-modal transportation hubs.
- Encourage new and future developments to have internal connectivity during the planning process to support a County-wide trail network.
- Engage with surrounding local communities and YEG to develop a transit priority corridor as part of the long-term vision supporting the East Vistas community and the Nisku Business Park.

2.6.6 Leduc County Recreation and Parks Master Plan

The Leduc County Recreation and Parks Master Plan (RPMP), approved in 2023, aims to strengthen and build the County's existing parks network and delivery structure. The purpose is to facilitate a future where Leduc County invests in parks and recreation so residents and visitors can be more active and connected to each other, their community and nature.

The plan provides recommendations which aim to:

- Enhance service delivery capacity
- Expand diversity of recreation opportunities for residents and visitors
- Identify strategies to enrich regional and community partnerships
- Promote Stewardship of natural assets
- Empower the community to work together to improve the well-being of all

2.6.7 Additional Studies relevant for the Central Nisku LARP

In addition to the above, other plans, strategies, and studies informed the preparation of the Central Nisku LARP including the Aerotropolis Viability Study, the Blackmud Creek Area Structure Plan, Blackmud/Whitemud Surface Management Plan, and Leduc and Nisku Wildlife Corridor Studies.



3 Plan Area Context

The Central Nisku Local Area Redevelopment Plan (Central Nisku LARP) area includes 2,178 hectares (5,384 acres) located at the heart of the Nisku Major Employment Centre Area Structure Plan (Nisku MEC ASP) and represents nearly 60% of the MEC ASP area. As such, the Central Nisku LARP plays a key role in providing the appropriate setting and policy framework to foster economic and employment growth for the future of Leduc County.

The Central Nisku area represents the core industrial node for Leduc County and offers excellent locational advantages to provide goods and services at the local, regional, national, and global scales. Located within the Edmonton Capital Region, Central Nisku has immediate access to the Edmonton International Airport, to one of Canadian Pacific Railroad's main lines in Alberta and to Alberta's main north-south transportation corridor Queen Elizabeth II Highway (Highway 2) and regional and local area road networks.

Traditionally oriented to the oil and gas industry, Central Nisku has diversified over the years and today has a strong mix of businesses in various industries, including among other energy, manufacturing, agri-food, transportation and logistics, and rental and leasing. It is this continued industrial transformation that creates the opportunity for Leduc County to pursue the preparation of the Central Nisku LARP.

Initially developed in 1972 by the Sparrow family, the Nisku Industrial Park forms the core of the plan area, becoming a leading service centre in the Edmonton Metropolitan Region and one of the largest industrial/business parks in Western Canada. The business park is currently home to approximately 610 businesses that employ about 11,000 people, mostly in the following industries: energy, manufacturing, agri-food, transportation and logistics, rental and leasing, and others.

The business park is approaching maturity amid a changing business environment and a gradual but committed transitioning off coal-centered energy generation, thus the timely response by Leduc County to re-envision the future of the Central Nisku area.

3.1 Topography

Most of the Central Nisku LARP plan area exhibits an undulating, high relief landform with a limiting slope of 4%. The overall topography of the area shows a higher elevation on the southern portion of the plan area, sloping towards the north in general direction towards the North Saskatchewan River. Blackmud Creek flows from south to north with Irvine Creek draining from northeast to southwest until its confluence with Blackmud Creek in the northeast portion of the plan area. Irvine Creek is surrounded by a valley ranging from 4.5m to 7.0m in height. There is an unnamed watercourse/ditch bordering the west side of the Central Nisku LARP plan area that flows from south to north with its maps ditches and drainages generally flowing from east to west into the unnamed creek.

3.2 Geotechnical and Hydrology

The Central Nisku LARP is located in the middle of the North Saskatchewan River watershed. The North Saskatchewan River is a major glacier-fed watercourse located north of the plan area flowing through the City of Edmonton with an overall drainage area of 57,000 km² within the Province of Alberta alone.



The overall surface hydrology of most of the plan area has been altered by agricultural and industrial development, highway and road construction and urbanization over time. Underground and above ground storm and sewer infrastructure have been installed, and lands have been subject to historical agricultural drainage practices and grading/recontouring for industrial, commercial, residential and roadway development.

There are several waterbodies and watercourses mapped within the plan area, including Blackmud Creek, Irvine Creek, three unnamed creeks, and one unnamed waterbody. However, some of these features were noted as no longer being present during the spatial analysis conducted in the preparation of this plan.

There are multiple water well drilling reports for within and surrounding the plan area. As per the Leduc County Regional Groundwater Assessment Report (1999), the vast majority (91%) of the wells drilled were for domestic/stock purposes. Approximately 42% of the wells were completed in bedrock aquifers (with the majority of bedrock aquifers in Leduc County being located in the Horseshoe Canyon formation, the focus of the plan area). The remaining 58% of groundwater wells were drilled into surficial aquifers.

3.3 Existing Land Uses

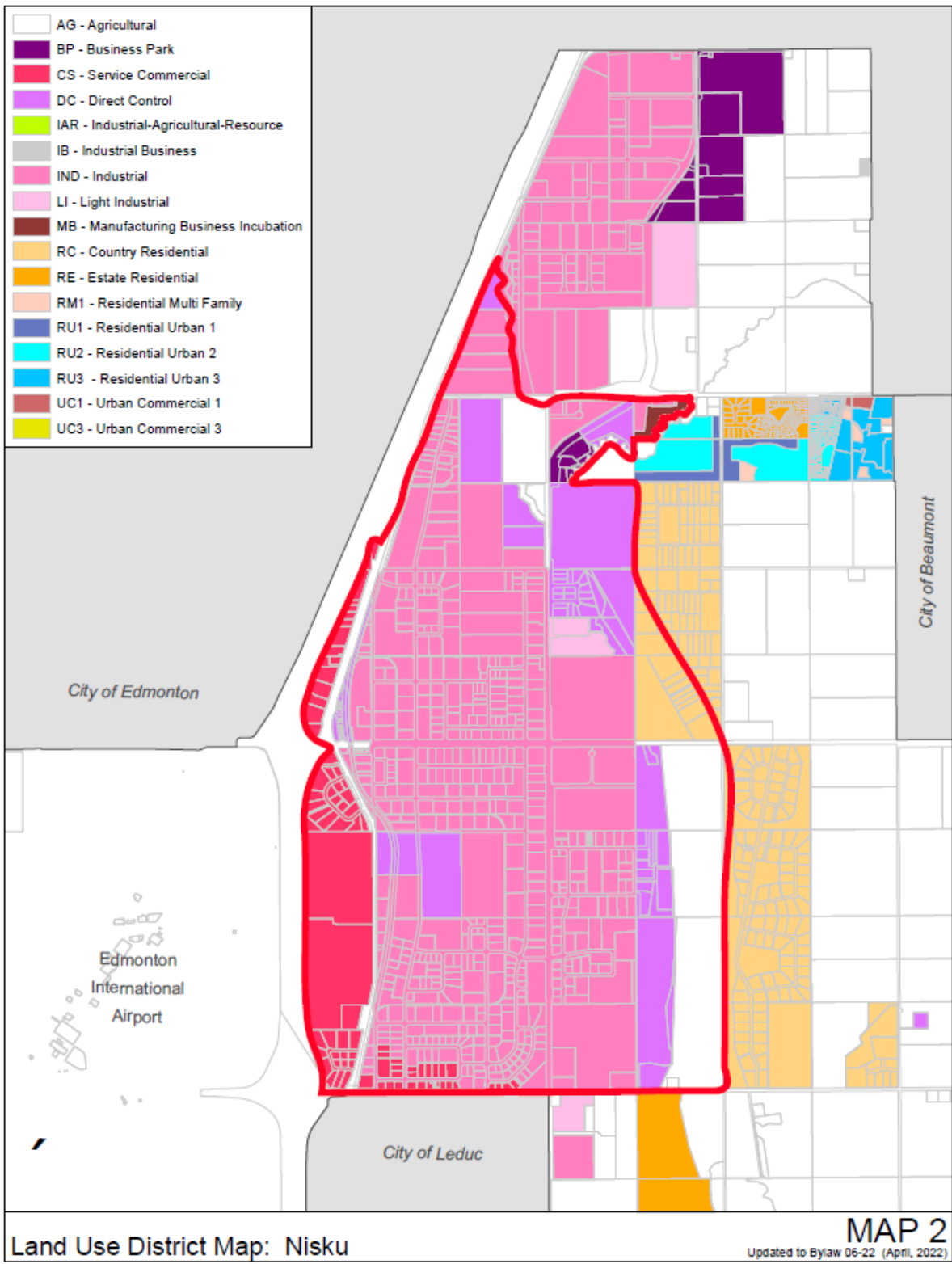
Land within the Central Nisku LARP plan area consist mostly of industrial and commercial land uses, with smaller portions of the plan area zoned for agricultural and residential uses (**Exhibit 3: Existing Land Uses**).

A significant portion of the plan area is zoned as Direct Control districts with no apparent consistent criteria for such designation. Smaller pockets of business park and manufacturing and business incubation uses are located along the northern edge of the plan area.

Most of the remaining natural areas and flood plain are associated with the Irvine Creek and Blackmud Creek ravine areas but zoned inconsistently as agricultural lands, direct control or residential.

FINAL DRAFT





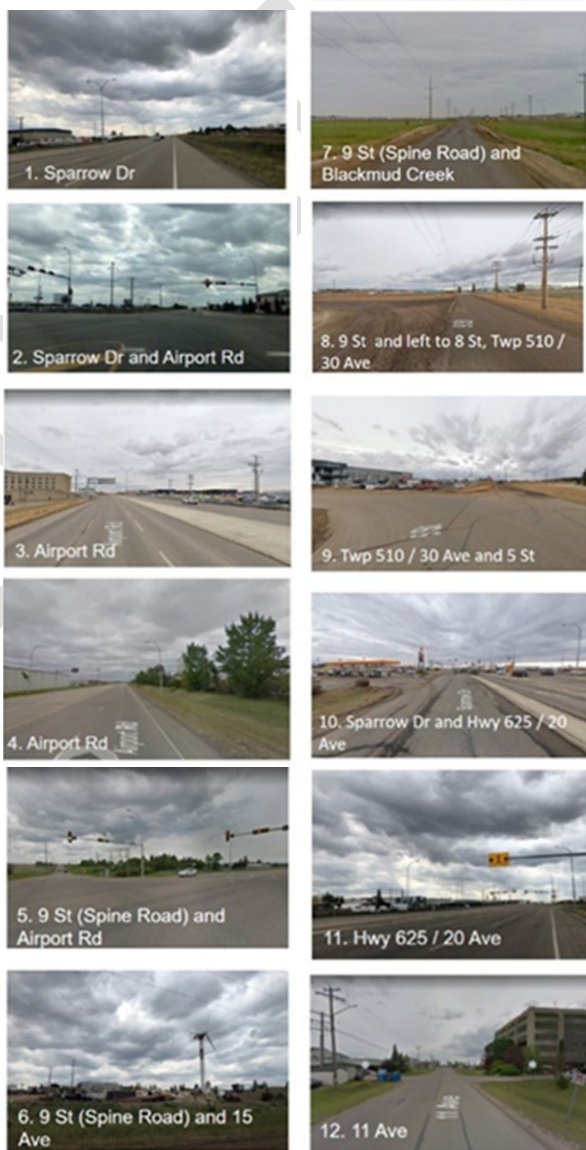
► **Exhibit 3: Existing Land Uses**





3.4 Existing Urban Character

At 2,178 hectares (5,384 acres) the plan area for the Central Nisku LARP is large and generally lacking a distinct urban identity. Although functional to support existing industrial activities and well connected to the regional transportation network (air, road, and rail), the absence of urban design to human scale is clearly palpable in the existing context of the plan area, which leads to a lack of a sense of place despite having over 11,000 people working in the plan area. Sample images of various locations within the plan area shown in **Exhibit 4: Existing Urban Context** provide a general sense of the look and feel of the area.



► **Exhibit 4: Existing Urban Context**





With few exceptions, existing development in the plan area is characterized by large laydown yards and unpaved surface parking lots facing most highways and roads delimited by chain link fence with limited or no screening. Large industrial equipment and machinery, bulk containers, vehicles, and manufacturing materials are easily visible throughout the plan area. Aside from a few 5-storey hotels, 1- to 2-storey motels that mostly back onto Airport Road, and the 5-storey Leduc County Centre on 5 Street and 11 Avenue, most existing buildings are large 1- and 2-storey warehouses located towards the rear of sites.

Although generous setbacks are observed along local area roads these are mostly storm water ditches with naturally occurring grasses, with no sidewalks or rustic pathways and rare landscaping accents facing the public realm. Wayfinding is reduced to essential street name and traffic signs, with business identification signage and property numbering varying significantly throughout the area.

3.5 Adjacent Land Uses

As the core of the Nisku employment area, the Central Nisku LARP plan area is mostly surrounded by compatible employment uses in adjacent areas. Adjacent lands to the north include business parks within Leduc County with an increasing focus on transportation and logistics operations, in addition to agricultural lands.

The Edmonton International Airport (EIA) is the main employment and service center to the west of the Central Nisku LARP plan area, divided in some degree by Highway 2. There is an opportunity for increasing industrial and commercial interaction with the EIA lands in the future through the two key connectors between these areas: Airport Road and Highway 625.

South of the Central Nisku LARP area there is a gradual transition into industrial lands within the City of Leduc which seem to complement the industrial and commercial character of Airport Road. To the west and south of the Central Nisku LARP plan area there are also agricultural lands still in production.

The context of adjacent land uses is somewhat different to the east of the Central Nisku LARP plan area where estate country residential uses located in The Vistas neighbourhood, east of Blackmud Creek. Although these residential uses are located outside of the plan area, the planning process for the Central Nisku LARP has acknowledged the need to accommodate a gradual transition from industrial uses at the core of Central Nisku to business park settings, agricultural lands and natural areas that can provide some buffer to residents east of Blackmud Creek.

3.6 Existing Infrastructure

3.6.1 *Transportation*

Road Network

The plan area is well served by provincial, county, and local roadways. Two (2) provincial highways service the plan area: Level 1 Highway (Highway 2 corridor) along the east border of the plan area and a Level 2 Highway (Highway 625). Level 1 Highways are intended to move people, goods, and services inter-provincially and internationally, while Level 2 Highways serve as standard arterial corridors and provide for intra-provincial movement of people, goods, and services. Highway 625 and Airport Road are also classified as high-load corridors. In the plan





area, County Main Roads provide connections to primary and secondary provincial highways; these include 30 Avenue and Airport Road.

Rail Network

Within the plan area, there are three (3) rail spurs that serve existing businesses. These rail spurs connect to the Canadian Pacific Kansas City Railway that provide access to regional, national, and international rail networks thus widening business opportunities for existing and future businesses that require rail transport for goods to and from the area. As such, it is important for the long-term competitiveness of Central Nisku to preserve and maintain rail corridor rights-of-way to ensure a safe and productive multi-modal integration with other transportation modes in and around the plan area.

Air

The Edmonton International Airport (EIA) is located west of the plan area on the west side of Highway 11, which provides access to regional, national, and international markets. The plan area is connected to the EIA, campus and area businesses by direct road connections via 20 Avenue and Airport Road.

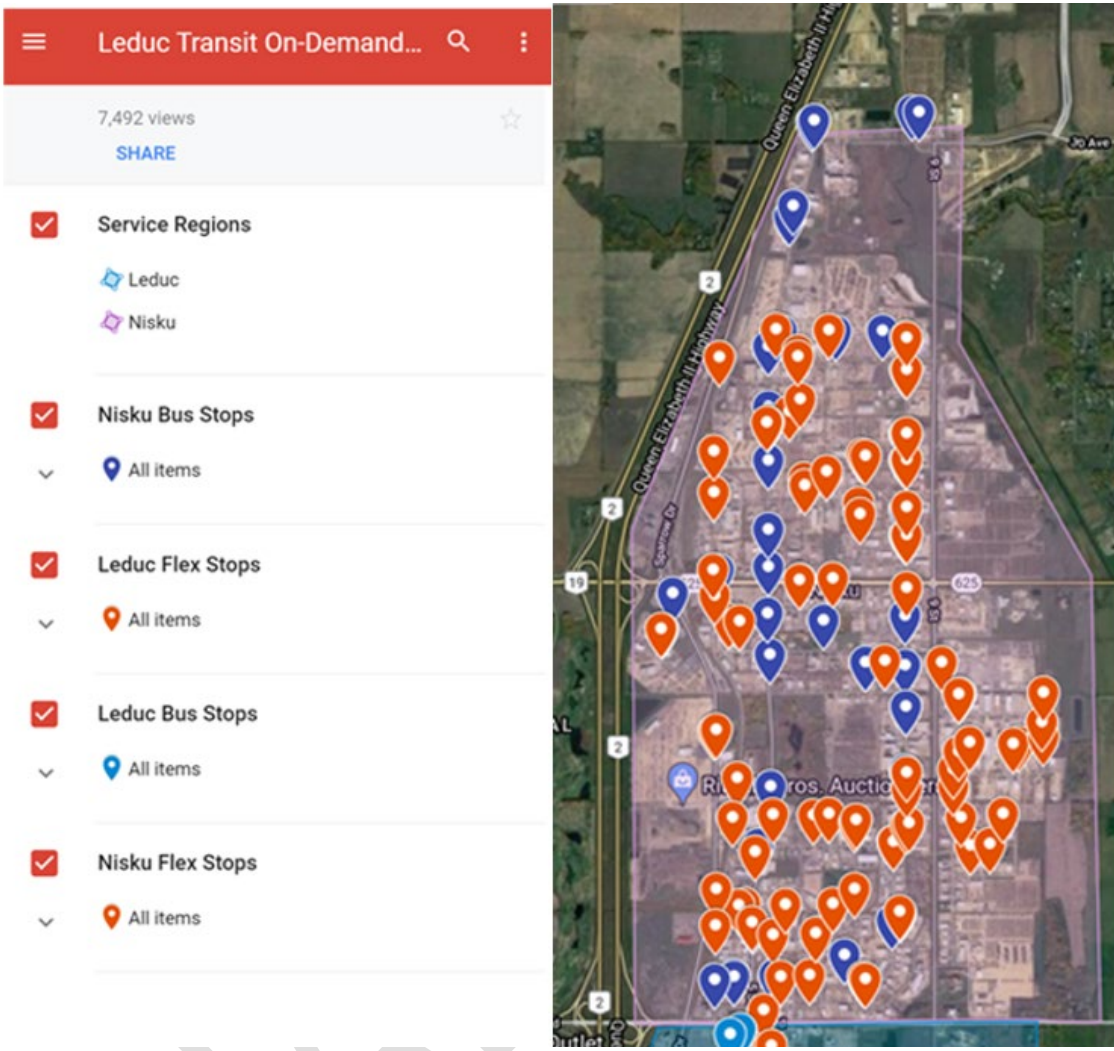
Transit

The plan area has regular and on-demand transit service provided by Leduc Transit Routes 1 and 10, through a partnership between Leduc County and the City of Leduc, as well as by private providers to select destinations within the plan area. Formal and flex bus stops are widely distributed throughout the business park, providing transit connections to adjacent areas including the Edmonton International Airport, the City of Edmonton and around Nisku and Leduc. Only formal bus stops provide bus shelters and concrete boarding pads.

In addition to transfer connections with other regional transit routes and fare-free services to the EIA and area, transit service includes Park 'n Ride lots that offer free parking for Leduc Transit users from various off-site locations.

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► **Exhibit 5: Transit Stops and Service Locations**

3.6.2 Water & Sanitary Systems

Water

A Growth Capacity Study was prepared by WSP in 2023 to assess the capacity of Nisku’s existing wastewater and water distribution systems under current and future development scenarios (existing, redevelopment, and redevelopment plus new growth) to identify opportunities to efficiently support future growth. The redevelopment scenario is in alignment with the Central Nisku LARP.

Within the plan area, there are two pump houses, the East and West pump houses, which each contain three domestic pumps and one fire flow pump, for a total of eight pumps. There are two existing reservoirs within Nisku, which are owned and controlled by the CRSWSC for the purposes of regional scale balancing. Currently, the East Reservoir has 8,800 m³ of storage and the West Reservoir has 4,545 m³. The combined total storage of both reservoirs is 13,345 m³. Based on the County’s criteria for reservoir storage, there is adequate capacity for development under the Central Nisku LARP.





Sanitary

Leduc County has three sanitary sewer lift stations in Nisku. The north and south lift stations, located at the north end of Sparrow Drive and on Sparrow Drive south of Highway 625, respectively, are currently operating and the 9th Street lift station is planned to service future development.

The existing scenario assessed the current wastewater collection system under peak wet weather flow (PWWF) conditions. Model results indicated that the existing system generally performs to the required level of service, and that majority of the system has capacity for significant new growth and redevelopment.

For wastewater collection under the redevelopment scenario (Central Nisku LARP) an assessment of capacity based upon redevelopment plans was updated to apply an increased sanitary generation rate of 20,000 L/ha/day and an inflow and infiltration allowance of 0.28 L/s/ha to vacant and underutilized parcels. The system was assessed under peak wet weather flow (PWWF) conditions, and model results indicated performance issues in some parts of the system, primarily in sections with the largest redevelopment areas. Key issues were reviewed further, and three potential upgrades were developed, including cost estimates. In four areas, existing sewers will require upgrades to increase capacity and improve overall system performance.

3.6.3 Stormwater Management

Stormwater management is currently managed through a series of private and public stormwater ponds, wetlands, and open channel ditch networks along roadways, through public easements and across public lots. The stormwater runoff is ultimately discharged to Blackmud Creek. Stormwater drainage relies solely on gravitational drainage; no underground stormwater infrastructure or lift stations currently exist.

The Stormwater Management Study by Arcadis (2024) notes there are no problem areas with respect to drainage or flooding. The 2014 Nisku Flood Hazard Study for Blackmud Creek did note flood lines intruding into private properties along the north edge of the Central Nisku LARP boundary.

3.6.4 Shallow Utility Services

Telus provides telecommunication services to the plan area; however, the area has limited broadband internet service. There are three (3) telecommunication towers within the plan area; two (2) owned by Telus and one (1) owned by Rogers.

A Regional Broadband Strategy report was completed for Leduc County in 2021 to provide and quantify the options available to enhance broadband service availability and to examine partnership options available. Broadband servicing options were examined for the Central Nisku area.

Policy:

The County shall implement a broadband services strategy to establish a competitive broadband service environment within the plan area to support existing businesses and future growth in the plan area.





3.6.5 Oil & Gas Infrastructure

The plan area is serviced by Apex Utilities Inc. for natural gas and Fortis Alberta for power. Within the plan area there are several abandoned and miscellaneous wells. A small portion of these wells contain sour gas. Reclamation of wells is regulated by Alberta Energy Regulator.

Policy:

Opportunities for alternative energy sources, including solar and geothermal, is encouraged to reduce dependency on existing utility infrastructure.

3.7 Existing Environmental Features

3.7.1 Environmentally Significant Areas

The areas of SW31-50-24-W4M and SE19-50-24-W4M are provincially classified as environmentally significant areas (ESAs). These areas are located along the eastern border of the plan area and overlap the riparian areas of Blackmud Creek. In the Leduc County Environmentally Significant Areas Study and Nisku Wildlife Corridor Report, the ESAs are more largely defined. The Leduc County Land Use Bylaw (2020) land use maps do not include Blackmud Creek within Environmental Reserve lands as it is no longer in its naturalized state, however, is a candidate for reclamation.

3.7.2 Wetlands and Water Courses

A search of the Alberta Merged Wetland Inventory Index on the Government of Alberta's (2021) GeoDiscover Map Viewer indicated the potential presence of marsh and open water wetlands throughout the plan area. These potential wetlands were generally associated with mapped watercourses and drainage ditch areas identified within the plan area. No fen or bog wetlands were indicated to potentially be within the plan area. Most wetlands in the plan area are estimated to be Class D wetlands, the lowest valued class.

3.7.3 Soil and Vegetation

The plan area is within the Thick Black/Dark-Gray-Gray Soil one of Central and East Central Alberta. (Soil Correlation Area 10; Agroclimate 2H, 3H). The majority of the area is described as containing miscellaneous undifferentiated mineral occurring on various disturbed lands, which indicates that the soils do not have a strong contrast between the dominant and co-dominant soil types found in the plan area.

Most of the soils within the plan area are classified as Anthroposolic soils, which represent soils that have been greatly modified and/or constructed by human disturbances. These disturbed soils may contain significant modified, removed and/or replaced soil layers and structures, drainages processes and/or additives (artifacts, contaminants, etc.).

There are no identified sensitive or non-sensitive element occurrences, as well as no federally listed vegetation species within the Schedule 1 of the Species at Risk Act within the plan area.

Vegetation within the treed areas within the plan area consist primarily of common species including Trembling Aspen (*Populus tremuloides*) and Balsam Poplar (*Populus balsamifera*), with shrubby understory vegetation of rose (*Rosa spp.*) and Red-osier Dogwood (*Cornus stolonifera*), as well as various forbs and graminoids including clovers (*Trifolium sp.*, *Melilotus spp.*), native grasses (*Poa spp.*, *Carex spp.*, *Bromus spp.*) and asters (*Aster spp.*).



Wetland vegetation in the area may be expected to include Bebb's Willow (*Salix bebbiana*), Basket Willow (*Salix viminalis*), Cattail (*Typha latifolia*), sedges (*Carex spp.*), duckweed (*Lemna sp.*) filamentous green algae (*Cladophora sp.*) and native red and horsetails (*Equisetum sp.*). These common species could be anticipated to be present within the remaining drainage areas, wetlands, and riparian areas in and surrounding Blackmud Creek Valley and Irvine Creek Valley and their associated tributaries.

3.7.4 Wildlife

There are no species present in the plan area that are listed as 'Species at Risk' under the Federal *Species at Risk Act*. While no documented occurrences of sensitive features are noted within the assessment area, recent studies support that the Blackmud Creek Valley area may have potential connection and influence on the Beaver Hill Biosphere. The Beaver Hill Biosphere has documented occurrences of Great Blue Heron, Piping Plover, and Trumpeter Swan nesting locations and is a regionally recognized ESA.

Within the Nisku Wildlife Corridor there has been partial destruction of riparian habitats, which have a great value to environmental significance and support a great level of biodiversity. Many natural habitats that occur within the riparian areas are fragmented in the plan area, thus limiting their function as a wildlife corridor. The plan area overlaps with some provincial species management ranges including Grassland and Parkland (Central) Natural Region, Sensitive Raptor Range (Bald Eagle), Sharp-tailed Grouse Survey Area, and Other Sensitive and Endangered Species Area.

3.7.5 Historic Resources

The Listing of Historical Resources (Alberta Culture, Multiculturalism and Status of Women 2020) has identified potential historic resources valued at HRV5a to be within several quarter sections within the plan area. Based on these criteria, the potential historical resources within the plan area are currently classified as archeological with a low level of protection. HRV1 is awarded the highest level of protection and HRV5 the lowest.

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4 Land Use Concept

The land use concept is the strategic coordination within the plan area of future land uses. It illustrates the proposed land use pattern and presents the type of activities that will be enabled in the future. The land use concept is the visual outcome of the planning process which is presented in text with supporting maps and other graphics. The land use concepts will demonstrate how the proposed development will integrate with existing and planned development of adjacent lands as well as the compatibility of land use patterns to minimize risks to public safety and health.

4.1 General Land Use Objectives

Through multiple conversations held during the planning process and consideration of objectives outlined in the Leduc County plans and strategies, the following design considerations were identified to guide the gradual transformation of Central Nisku in the years to come.

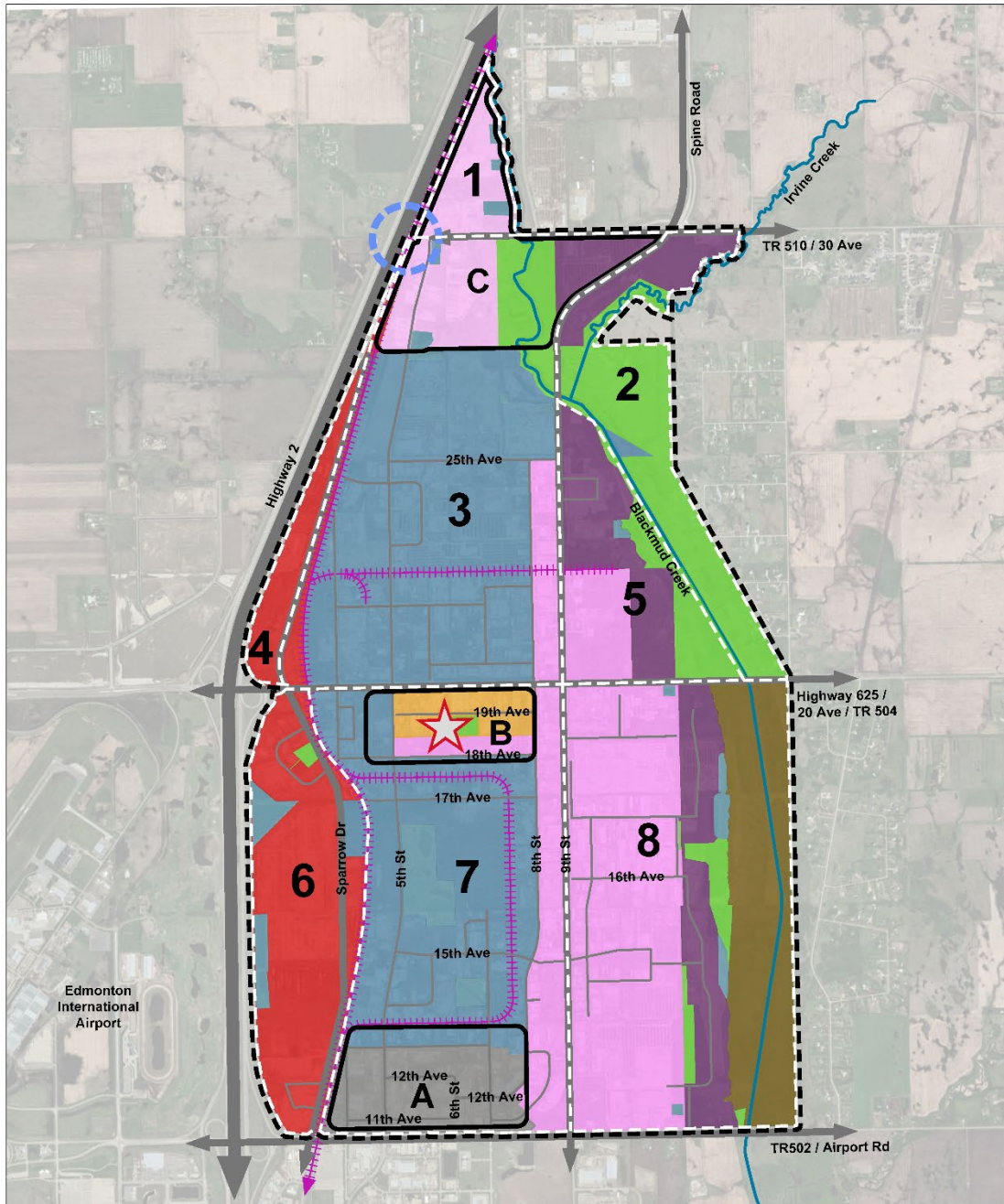
4.1.1 Incorporate and Conserve Plan Area Attributes and Advantages

The plan area has distinct locational, infrastructure, economic, fiscal, and natural advantages that should be conserved and enhanced to achieve a comprehensive sustainable development program to meet the intended vision for the area. The contextual setting of Central Nisku allows for the emergence of an innovative business park increasingly connected to new economic opportunities locally, nationally, and internationally. Increased diversification from an economic platform mostly oriented to the oil and gas industry towards a wider set of innovative economic sectors is achievable by responsibly building on what is existing while accommodating new opportunities.

4.1.2 A People-Centered Focus: Open Space, Trails, and Recreation

Central Nisku already receives over 11,000 people daily from various locations around Alberta, Canada, and the world. Yet, the existing urban context is hardly welcoming for a people-centered environment. Thus, the aspiration for an enhanced urban streetscape that provides a reinvigorating local identity and a safe and inviting public realm with wider opportunities to easily enjoy open space, trails and recreation areas is a clear directive for the transformation of the plan area. Creating a sense of place in strategic locations marked by high-quality urban design at a human scale can provide the elements for a more appealing business campus setting. High quality public spaces and assets can be a catalyst for economic growth by attracting businesses, employees, and visitors.





LEGEND

Plan Boundary	Business Park	Blackmud Flood Plain	Watercourse
Development District Boundary & Number	Business & Hospitality	Storm Water Management Ponds	Industrial Hub
Development Node Boundary	Business Incubation	Arterial & Collector Road Network	Proposed Future Interchange
Core Industrial	Highway Commercial	Local Road Network	
Light Industrial	Parks & Open Space	Rail Network	

Exhibit 6: Land Use Concept





4.1.3 Fostering Innovation and Economic Vitality

Central Nisku plays a key role in the economic and employment activity of Leduc County and is a natural location to advance the competitiveness of the Edmonton Metropolitan Region. As such, the plan area is open to new business ventures that are looking for a strategic location in central Alberta amidst a business-supportive policy framework. Central Nisku LARP is already home to some innovative companies in various economic sectors and the policy approach of this plan is to foster their growth and multiplication in the area. Improvements in new-era information and communication technologies (ITCs) and deployment of smart city tools can heighten the attractiveness of Central Nisku for businesses and a younger, tech-oriented labour force in years to come.

4.1.4 Transition and Compatibility with Surrounding Uses

The industrial setting that characterizes the Nisku Business Park has provided operational functionality to established business over the decades, but the mostly open yard areas have created concerns for adjacent neighbourhoods as country residential areas have increased to the east of the business park. Specifically, discussions have focused on mitigation measures for noise, odor, dust, and overall appearance of facilities in the business park and for the introduction of land use and development guidelines that can buffer these externalities from spilling over Blackmud Creek to the Vistas area. Complementary to the above, there is a desire for an increase in safe connectivity alternatives to facilitate area mobility for workers and residents alike.

4.1.5 Environmental Enhancement and Climate Resilience

The natural features occurring in and around the plan area require protection and enhancement to replenish their environmental functions and anchor a more sustainable growth path in the future. Riparian areas along watercourses and waterbodies like Blackmud Creek, Irvine Creek and other unnamed drainage channels can be improved and supported by a network of low impact development approaches to create an area-wide storm water management system. Adequate landscaping in and around large industrial sites can contribute to a healthier local setting and increasing treed areas can create greenhouse gas (GHG) sinks while improving the look and feel of Central Nisku.

4.2 Plan Area Structure

The urban structure and framework for the plan area has been formed around three (3) tiers of designations to carry out the vision and principles of the Central Nisku LARP and to respond to the economic competitiveness and employment objectives within the planning policy context. This framework structure and policy for the plan area will be based on:

- Districts
- Land Use Designations
- Strategic Development Nodes

Together, these three tiers will define and transform the plan area to respond to pillars that will guide the future development for Central Nisku. Overall, the focus remains on key economic sectors highlighted in Leduc County's Municipal Development Plan and underscored in the Investment Readiness and Implementation Strategy: energy, manufacturing, agribusiness, transportation and logistics, and rental and leasing.





This proposed development approach seeks a mix of land uses that responds to plausible development intensities and urban character that could be achieved under a responsible balance between capital improvements and anticipated uplift in the fiscal base to maintain sustainable development while keeping the Nisku Business Park fiscally competitive in the region. Additionally, capacity of the servicing infrastructure (i.e., water, wastewater, stormwater, and power networks) will inform the development intensities that can be feasibly supported in the different districts of the plan area.

A strategic approach with focused capital improvement efforts will be required given the scale and vastness of the plan area. Such an approach would allow the scheduled enhancement of specific gateways, nodes and corridors based on redevelopment initiatives that respond to the revised policy framework, gradually conveying the overall transformative program and allowing for synergies with development projects. In this context, the establishment of the Development Nodes identified, particularly creating attractive people-oriented streetscapes that foster revitalization and intensification, can create a renewed identity of the plan area and foster the momentum necessary to attract new investment into Central Nisku.

4.3 Districts

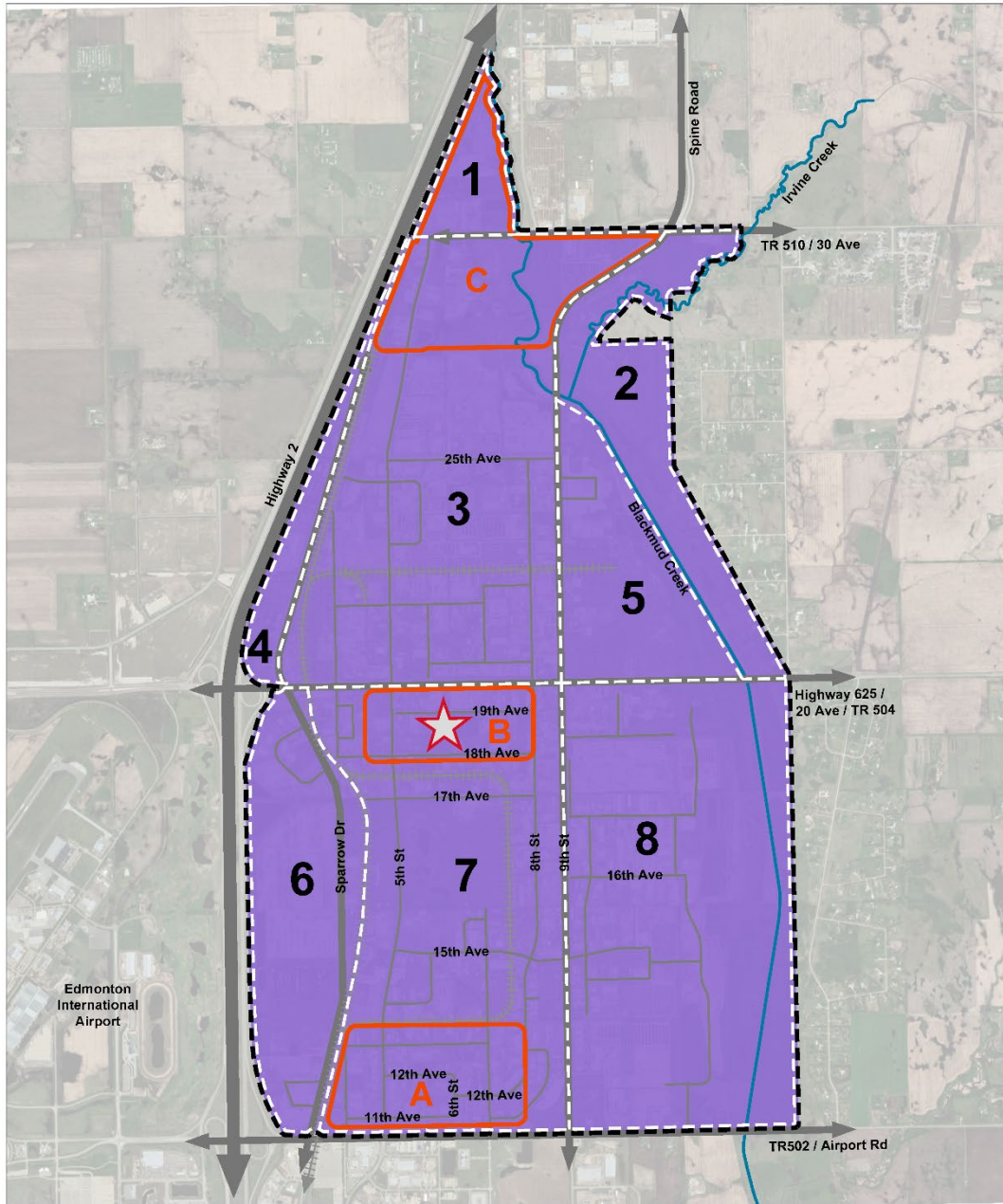
Districts in the plan area have been formed based on geographic boundaries, including major roadways and watercourses, as shown on **Exhibit 7: District Structure**. The key boundaries to these districts with a north-south alignment are given by Highway 2 and Canadian Pacific's main north-south railroad line along the west plan area boundary, and 9 Street/Spine Road Extension and Blackmud Creek on the east edge of the plan area. Similarly, following an east-west alignment, TR 510/30 Avenue on the northern edge, Highway 625/20 Avenue in the middle and Airport Road in the south define the boundaries for the planning districts.

Based on this urban structure, possibilities for differentiation of each district can be appreciated, as well as possibilities for synergies between districts and with surrounding areas. This planning approach is useful to recognize that transformation within the Central Nisku LARP area is unlikely to be uniform or comprehensive.

Rather, the anticipated economic transformation will likely be guided by individual business responses to emerging market opportunities and may not be specific to particular areas of Central Nisku.

The urban structure, along with capital investments in strategic locations, will likely play a role in creating a new urban setting that responds to appeal attributes desirable by younger generations coming into the labour force.





LEGEND

- | | | | | | |
|----------|-------------------------------|----------|---|--|-----------------------------------|
| | Plan Boundary | A | Development Node - Business & Hospitality | | Watercourse |
| | Development District Boundary | B | Development Node - Industrial Innovation | | Arterial & Collector Road Network |
| 6 | Development District Number | C | Development Node - Logistics & Distribution | | Local Road Network |
| | Development Node Boundary | | Industrial Hub | | Rail Network |

Exhibit 7: District Structure





4.3.1 District 1

Objective

To catalyze its close location to growing logistics and transportation activity north of the Central Nisku LARP area and adjacency to the expansion of the Spine Road, District 1 is intended to host a good portion of Development Node C – Logistics & Transportation. Vacant and underutilized parcels are encouraged to redevelop to support logistics and transportation uses.

Future Land Use & Opportunities

The guiding land use designations to be advanced are focused on light industrial activities. This is an initial step in advancing a transformative agenda for north Central Nisku in a district that has large tracks of land with immediate access to local and regional transportation networks to gradually support intensification of development. Additionally, a future proposed interchange for Highway 2 and TR 510 will increase and improve transportation access. Connectivity to District 1 can be emphasized through 4 and 8 Streets to foster interaction with the future extension of the Spine Road through TR510/30 Avenue. District 1 in combination with the northern portion of District 3 will form Development Node C, which is geared to warehouse distribution and logistics activities.

4.3.2 District 2

Objective

To support current initiatives to establish business incubation and innovation uses and to tie a country residential area closely to compatible development on adjacent lands to the east. The west portion of the District is characterized and bounded by natural areas and riparian areas of Blackmud Creek and Irvine Creek.

Future Land Use & Opportunities

Located in the northeastern edge of the Central Nisku area, District 2 is characterized by the confluence of Irvine Creek with Blackmud Creek, thus creating two clear natural boundaries for lands within it. Lands north of Irvine Creek has direct access to TR 510/30 Avenue, providing easy access to Spine Road. The lands in the northeast corner have existing land use designations in place and ongoing development initiatives geared towards business manufacturing and incubation that allow to further support such direction.

Furthermore, District 2 lands fall under the 25-30 Noise Exposure Forecast (NEF) contour of the Edmonton International Airport Vicinity Protection Area Regulation (EIAVPA, Province of Alberta 2006), for which restrictions are minimal except for campgrounds. Given this, development opportunities for lands south and east of Irvine Creek provide for country residential, which is already present adjacent to the east of the plan boundary in North Vistas.

4.3.3 District 3

Objective

To retain core industrial land uses characteristic of Central Nisku related to the energy sector while gradually facilitating the transition of outdoor storage and laydown yards out of Central Nisku and introducing broader Light Industrial and Core Industrial uses. As larger, underutilized parcels subdivide and redevelop, District 3 will take on a denser industrial and employment character.





Future Land Use & Opportunities

District 3 captures the existing industrial area, north of 20 Avenue/Highway 625, east of Sparrow Road, south of T 510/30 Avenue, and west of 9 Street, which provides the dominant industrial character for the northern portion of the plan area at 519 hectares (1,283 acres). The area is mostly designated as Core Industrial with a strip of land (on the west side of 9 Street) designated as Light Industrial. As the district contains several outdoor storage and module assembly yards, the traditional activities of the business park are expected to continue over the life of the LARP. District 3 contains rail infrastructure, including rail spurs, which will be promoted to attract new businesses that require rail access and to support the plan area as multimodal transportation hub. The expansion of Spine Road south of TR 510 into its alignment to 9 Street will support increased north-south traffic and likely spur development opportunities for lands facing 9 Street. The northern portion of District 3 together with District 1 will form Development Node C that is geared to warehousing, distribution, and logistics activities.

4.3.4 District 4

Objective

To foster the intensification of commercial uses with high visibility to Highway 2.

Future Land Use & Opportunities

District 4 is a narrow strip west of Sparrow Drive and north of the Highway 625/Highway 2 interchange. Lands within District 4 are accessed by a service road and are currently used for Highway Commercial-type development with some outdoor storage uses (e.g., recreation vehicle sales and storage). Over the life of the Central Nisku LARP continuation and intensification of Highway Commercial development is expected.

Sparrow Drive provides connections to District 6, which also has a highway commercial orientation. Together, Districts 4 and 6 will have a strategic function for the plan area as Central Nisku's main façade to Highway 2 and the Edmonton International Airport (EIA). Enhanced landscaping and architectural design will become important elements to advance the intended transformation of the plan area.

Existing development that provides support services to EIA will be permitted to continue operations, while new support services will be located in other Districts, where appropriate.

4.3.5 District 5

Objective

To gradually introduce light industrial and business park land uses that act as a transition and buffer from core industrial uses to the west from country residential uses east of Blackmud Creek and the plan area.

Future Land Use & Opportunities

District 5 includes lands north of Highway 625/20 Avenue and east of 9 Street, through to the Blackmud Creek corridor. The future land use is expected to be a combination of Light Industrial, concentrated at the 20 Avenue and 9 Street intersection, Business Park setback from the intersection along both 9 Street and Highway 625/20 Avenue, and Parks and Open





Space along the southeast portion of the creek corridor. The Parks and Open Space area is significant in size and thus provides the opportunity for larger recreational based uses such as sports fields and recreational buildings to support indoor year-round sports such as soccer, hockey, racket-based sports, etc.

The expansion of Spine Road south of TR 510 into its alignment to 9 Street will support increased north-south traffic and likely spur development opportunities for lands facing 9 Street. However, these will have to be managed to ensure adequate protection of Irvine Creek and its riparian edges, thus limiting the intensification potential for industrial or commercial uses.

4.3.6 District 6

Objective

To foster the intensification of commercial uses with high visibility to Highway 2 and stimulate exploration of alternative modes of transportation to provide access to the Edmonton International Airport.

Future Land Use & Opportunities

District 6 includes lands west of Sparrow Drive, between Airport Road and the Highway 625/Highway 2 interchange to the north. The lands give an opportunity for further Highway Commercial development, however existing service uses, such as off-site parking for the Edmonton International Airport, are expected to continue over the life of the plan. New development that provides support services for the airport will be located in other Districts, where appropriate.

Sparrow Drive provides connections to District 4, which has a highway commercial orientation. Together, Districts 4 and 6 will have a strategic function for the plan area as Central Nisku's main façade to Highway 2 and the Edmonton International Airport (EIA). Enhanced landscaping and architectural design will become important elements to advance the intended transformation of the plan area.

4.3.7 District 7

Objective

To advance the model transformation of Central Nisku in Development Nodes A (Business and Hospitality) and B (Industrial Innovation), gradually redefining the identity of Central Nisku as a business and innovation employment node for Leduc County.

Future Land Use & Opportunities

Like District 3, District 7 contains much of the existing businesses and storage facilities within the Plan Area. These operations are expected to continue within the Core Industrial lands. To advance and transform the plan area two development nodes are to be created. The Business and Hospitality Node (Node A) located in the south part of the District along Airport Road will underscore existing hospitality development in proximity to Edmonton International Airport. The Business Innovation Node (Node B) will be created at the north end of the district, on the south side of Highway 625/20 Avenue to establish an industrial hub for the plan area where business incubation and innovation uses will be located and fostered in an enhanced urban setting. Over time, connectivity between Development Nodes A and B through 5 Street could





lead to punctual redevelopment opportunities perhaps taking advantage of the proposed park areas and Pedestrian Network within the district. This redevelopment could lead an urban design transformation of the northern portion of District 7 to accommodate a more business industrial character that supports an enhanced public realm and pedestrian-friendly streetscape, improving the overall feel and identity of the plan area.

District 7 offers a variety of elements to support the potential emergence of a distinct urban character at a human scale. Similar in size to District 3, at approximately 522 ha (1,290 ac), District 7 remains quite a large area that requires a more refined urban design approach to gradually introduce the structure of an emerging business industrial community. Such a community can be structured around the gradual formalization of two distinct Development Nodes, A and B.

Both the Business Hospitality Node (Node A) and the Business Innovation Node (Node B) will be characterized by high quality urban design at the human scale to create a sense of place and a vibrant and attractive business innovation setting. Enhanced streetscaping through architectural and landscape guidelines will become important elements to advance the intended transformation that provides a reinvigorating local identity and a safe and inviting public realm with wider opportunities to easily enjoy open space, trails and active transportation modes.

4.3.8 District 8

Objective

To gradually introduce Light Industrial and Business Park land uses while retaining Agricultural lands along Blackmud Creek that act as a transition and buffer from core industrial uses to the west in District 7 to the country residential uses east of Blackmud Creek and the plan area.

Future Land Use & Opportunities

District 8 is in the southeast portion of the plan area, and includes lands north of Airport Road, east of 9 Street, west of the plan boundary, and south of Highway 625/20 Avenue. Proceeding westward from the east Plan Area boundary is a natural area and agricultural area surrounding Blackmud Creek, a strip of lands currently used for outdoor storage designated as Business Park, and existing industrial development on the east side of 9 Street designated as Light Industrial. The western edge of District 8 will benefit from the extension of the Spine Road which will support future intensification of industrial uses on properties fronting 9 Street. Locationally, District 8 provides opportunities to provide support uses for the EIA. The eastern half of the district offers an opportunity to explore alternative development approaches particularly to retain agricultural uses on lands along the western bank of Blackmud Creek.



4.4 Land Use Designations

The land use designation framework for the Central Nisku LARP builds upon existing land uses and industries, while integrating the vision and proposed direction for the plan area. The overarching goal is to foster a gradual intensification of employment uses and activities within the plan area as redevelopment and re-investment initiatives come to the forefront. The land use policy framework is intended to provide flexibility to property owners, business owners and County officials to adapt and respond to emerging market conditions in the coming years. The generalized land use framework for the Central Nisku LARP plan area is shown in **Exhibit 6: Land Use Concept**.

Overall, the focus remains on key economic sectors highlighted in Leduc County's Municipal Development Plan and underscored in the Investment Readiness and Implementation Strategy: energy, manufacturing, agri-business, transportation and logistics, and rental and leasing. It also advances an initial characterization of the Development Nodes identified in the Section 4.5.

General Policies

- Provide for a mix of uses, services, and amenities to serve the needs of employees and visitors, where appropriate. These supportive uses shall be located on the ground floor, where located in a multi-storey building.
- New heavy industrial uses shall be prohibited in the plan area due to offsite impacts. Existing heavy industrial operations are permitted to continue to operate in accordance with the Leduc County Land Use Bylaw, until the use ceases to exist.
- Encourage the clustering and co-location of compatible businesses that support the sharing of information, products and linkages to resources and transportation networks.
- Redevelopment, subdivision, and infill of brownfields or under-utilized properties and the reuse of structures is encouraged to support new uses and development over time.
- Development located within 95 m of a rail corridor right-of-way:
 - Should not include sensitive land uses, which may be adversely impacted by railway operations; and
 - May require a Development Viability Assessment or a Site Specific Risk Assessment to identify risks and mitigation.
- Promote sustainable practices and reduce environmental impacts by integrating building and site sustainability measures such as Low Impact Development (LIDs), energy-efficient lighting, solar panels, sustainable building materials, and green building design standards to minimize the plan area's carbon footprint and environmental impacts.

4.4.1 Core Industrial

The Core Industrial area will provide for a range of industrial uses in an industrial park setting that have low to moderate impacts on adjacent land uses. Generally, impacts or nuisances do not extend beyond the boundaries of the site. The Core Industrial area will be located centrally to the plan area and will be buffered by Light Industrial and Business Park land uses to mitigate potential impacts from resulting nuisances to more sensitive land uses. This area also provides for the accommodation of commercial uses that support industrial uses.



Objectives:

- Accommodate and provide for industrial uses that generally create nuisances, such as noise, light, dust, and traffic, to allow for a range of economic opportunities.
- Enhance and maintain rail infrastructure and strategically locate businesses that require rail spur connections adjacent to the rail line to leverage the plan area's transportation connectivity to regional, national, and international markets via rail.
- Provide varying building typologies to diversify economic development opportunities and provide flexibility that can respond to market conditions over time.
- Provide high quality landscape and architectural design along major roadways including Sparrow Drive, 5th and 8th Streets, Highway 625/20 Avenue, and TR 502/Airport Road, and within Development Node A and B.

Policy:

- a. Single-use, large-scale warehouse and logistics uses shall not be permitted.
- b. Commercial and service uses intended to serve the plan area's employees are discouraged. These uses should alternatively be located within the Highway Commercial, Business & Hospitality, Business Incubation, and Business Park land uses.
- c. All future uses, development, and business operations that do not require rail access should be encouraged to be located on lands other than where rail access is provided. These lands should be restricted for uses and business operations that require direct access to and use of rail infrastructure.
- d. Screening, landscaping, setbacks, or other development controls shall be incorporated into the site design to reduce and mitigate the impact of site nuisances to adjacent properties and land uses.
- e. Encourage uses with nuisances that occur outdoors, including light, dust, noise, and traffic, to locate in the Core Industrial area.

4.4.2 Light Industrial

The Light Industrial area provides for indoor industrial or manufacturing activities where nuisances are limited to and maintained indoors. The Light Industrial area provides a transition and buffer from the Core Industrial area to the Business Park area and areas with more sensitive land uses including the Parks and Open Space and Residential areas.

Objectives:

- Act as a transition and buffer between the Core Industrial land uses and sensitive land uses, such as Agricultural and Residential land uses.
- Provide varying building typologies to diversify economic development opportunities and provide flexibility that can respond to market conditions over time.
- Provide high quality landscape and architectural design along major roadways including 9 Street/Spine Road extension, Highway 625/20 Avenue, and TR 502/Airport Road.





Policy:

- a. Existing businesses, operations, and development within the Light Industrial designation shall be permitted to continue to operate in accordance with the Leduc County Land Use Bylaw, until the operation ceases to exist.
- b. Light Industrial land uses shall be permitted.
- c. Potential nuisances, such as noise, light, dust, and odor, shall be maintained and mitigated indoors.
- d. Agribusiness and uses that provide added value to agricultural crops that are grown locally, regionally, and nationally shall be permitted in the Light Industrial area. Value added agriculture is recognized as enhancing the potential of a raw product through a particular production process.
- e. Outdoor storage shall be minimized. Any outdoor storage shall be visually mitigated through appropriate screening and landscaping, to the satisfaction of the County.
- f. Light industrial uses that are visible from major roadways, including Highway 2, 9th Street, Airport Road, and 20 Avenue shall provide a higher standard of site, building, and landscaping design.
- g. Parcels adjacent to environmental features, including Blackmud and Irvine Creeks, shall be required to conduct appropriate technical studies to determine the limits of development and to identify environmental features.
- h. Development is prohibited within the 1:100 year floodplain.
- i. The provision of landscaping along the 1:100 year floodplain is encouraged to prevent development from encroaching into the floodplain and to provide a visual buffer of development from Blackmud Creek.
- j. During the subdivision process, lands located within the 1:100 floodplain or within a natural drainage course shall be dedicated to the County as Environmental Reserve.

4.4.3 Business Park

The Business Park area is intended to support commercial, business, and innovation enterprises, such as tech-based firms. This area is characterized by a park-like setting with elevated building, site, and landscape design that provides for light industrial business, office, commercial and service uses. It is envisioned to consist of low-rise office buildings, light industrial businesses, warehousing, and small-scale indoor manufacturing. Uses generally have no or minimal nuisances or impacts to adjacent land uses.

Objectives:

- Provide opportunities for employment and business uses that have no or minimal nuisances and are compatible with adjacent environmental, residential, and other sensitive land uses.
- Incorporate and enforce environmental standards and regulations to mitigate potential impacts of Business Park uses to the adjacent Black Creek and associated environmental areas.





- Act as a buffer between sensitive land uses and industrial land uses. This area serves to act as a buffer and transition between Core Industrial uses and the Parks and Open Space, Agricultural, and Residential uses.
- Establish a setting with a high quality public realm, landscaping, and urban design.
- Provide varying building typologies to diversify economic development opportunities and provide flexibility to respond to market conditions.

Policy:

- a. Development in the Business Park area shall be subject to a higher standard of design criteria and development controls to establish an area with elevated design in terms of site, building and landscape design.
- b. Development and future uses that result in noise, odor, dust, light, and other nuisances outside of an enclosed building shall not be permitted, with exception to the movement of goods in and out of enclosed buildings. Any manufacturing, fabrication, assembly, testing of goods, and similar activities are required to be completed in an enclosed building.
- c. Commercial and service uses that are intended to serve employees within the plan area shall be permitted. These uses should be incorporated into developments in a manner that is minor, such as locating these uses on the ground-level of office buildings. Employment uses should be the primary use.
- d. Single-use, large-scale warehouses/logistics buildings shall not be permitted.
- e. Development is encouraged to accommodate multiple uses within a single building or on single site. Development on a site for a single tenant is discouraged or should be designed to have the ability to be modified to allow for multiple uses based on the needs of the end use.
- f. Office and commercial uses shall be located in portions of a building that front or face a public roadway, while heavier employment uses should be located at the side or rear of lots to reduce the visual impact from the street and to encourage multimodal transportation modes.
- g. Outdoor storage is prohibited within the Business Park area.
- h. Parcels adjacent to environmental features, including Blackmud and Irvine Creeks, shall be required to conduct appropriate technical studies to determine the limits of development and to identify environmental features.
- i. Development is prohibited within the 1:100 year floodplain.
- j. The provision of landscaping along the 1:100 year floodplain is encouraged to prevent development from encroaching into the floodplain and to provide a visual buffer of development from Blackmud Creek.
- k. During the subdivision process, lands located within the 1:100 floodplain or within a natural drainage course shall be dedicated to the County as Environmental Reserve.





4.4.4 Business and Hospitality

The Business & Hospitality area will provide for hospitality development including hotels, restaurants, convention centres, commercial retail, service commercial uses, and other related uses. This area will capitalize on its proximity and relationship to the Edmonton International Airport and Highway 2 via Airport Road.

Objectives:

- Provide commercial and service uses that meet the daily needs of employees and visitors to the plan area.
- Create a sense of place marked by high quality urban design at a human scale to establish a welcoming, comfortable, and inviting hospitality and business setting that stimulates economic growth by attracting visitors. The integration of public amenity spaces, multimodal transportation modes, and varying land uses will establish an activated public realm.

Policy:

- a. Development shall site buildings near the front property line with entrances at-grade and oriented towards the road to activate the public realm and establish human scaled streetscapes.
- b. Adjacent sites with complimentary land uses should consider establishing complimentary access easements to facilitate and provide direct connections between different uses for pedestrians, cyclists, and vehicles.
- c. Establish indoor and outdoor amenity spaces, such as plazas and landscaped areas, providing opportunities for gathering and relaxation.
- d. Commercial uses shall be located along an arterial or collector road to ensure visibility and access.
- e. Commercial uses should be accessible by multiple modes of transportation, including car, transit, bike, and walking.
- f. Development shall achieve high standard of urban design in alignment with the landscape and architectural guidelines.
- g. Landscaping and screening shall be used to limit the visibility of garbage and loading areas to adjacent development.
- h. Outdoor storage is not permitted.





4.4.5 Business Incubation

The Business Incubation area provides for business, innovation, and entrepreneurship uses. These uses are characterized by office and indoor, low-impact industrial or manufacturing, service based, and commercial retail uses. The most common types of businesses using incubator services are light manufacturing, information, technology, and service businesses and/or those developing new products or engaged in research and development of a product. To support an incubation hub, amenity and collaborative spaces and a mix of commercial and light industrial uses will be integrated throughout the area. The provision of amenity spaces leads to better employee well-being, increased productivity, a stronger sense of community, and opportunities for collaboration between sectors.

Objectives:

- Encourage the transition of existing uses to business incubation or supportive uses over time.
- Create a local business environment where employees can collaborate, conduct research, and develop products to promote economic growth, innovation, and entrepreneurship.
- Establish an enhanced and vibrant business setting through urban streetscaping, public amenity spaces, and high quality urban design to attract and retain innovative economic sectors and business ventures, and to promote the transition from an industrial character to an elevated business.
- Provide multimodal transportation modes with an emphasis on creating a walkable and pedestrian friendly environment. Access to the Pedestrian Network will provide broader connections within and outside the plan area.
- Promote economic growth and sector diversification in Central Nisku by supporting business incubation and innovation uses to establish a competitive economic innovation hub.
- Provide capital improvements and investments including advanced broadband infrastructure and services.
- Provide varying building typologies to diversify economic development opportunities and provide flexibility to respond to market conditions.

Policy:

- a. New or redevelopment of sites should provide outdoor or indoor public spaces that provide amenities, places to gather, and opportunities for future events such as markets of company events, to promote and enhance the public realm and attract prospective tenants or employees.
- b. Commercial development in the Industrial Hub should consist of small- and medium-format retail uses and be located at ground level.
- c. Access to the Pedestrian Network may be incorporated to promote passive recreation opportunities and active transportation connections within the plan area and to surrounding areas for employees and visitors.
- d. Uses that create adverse impacts and nuisances such as noise, odor, dust, among others, are prohibited.





4.4.6 Highway Commercial

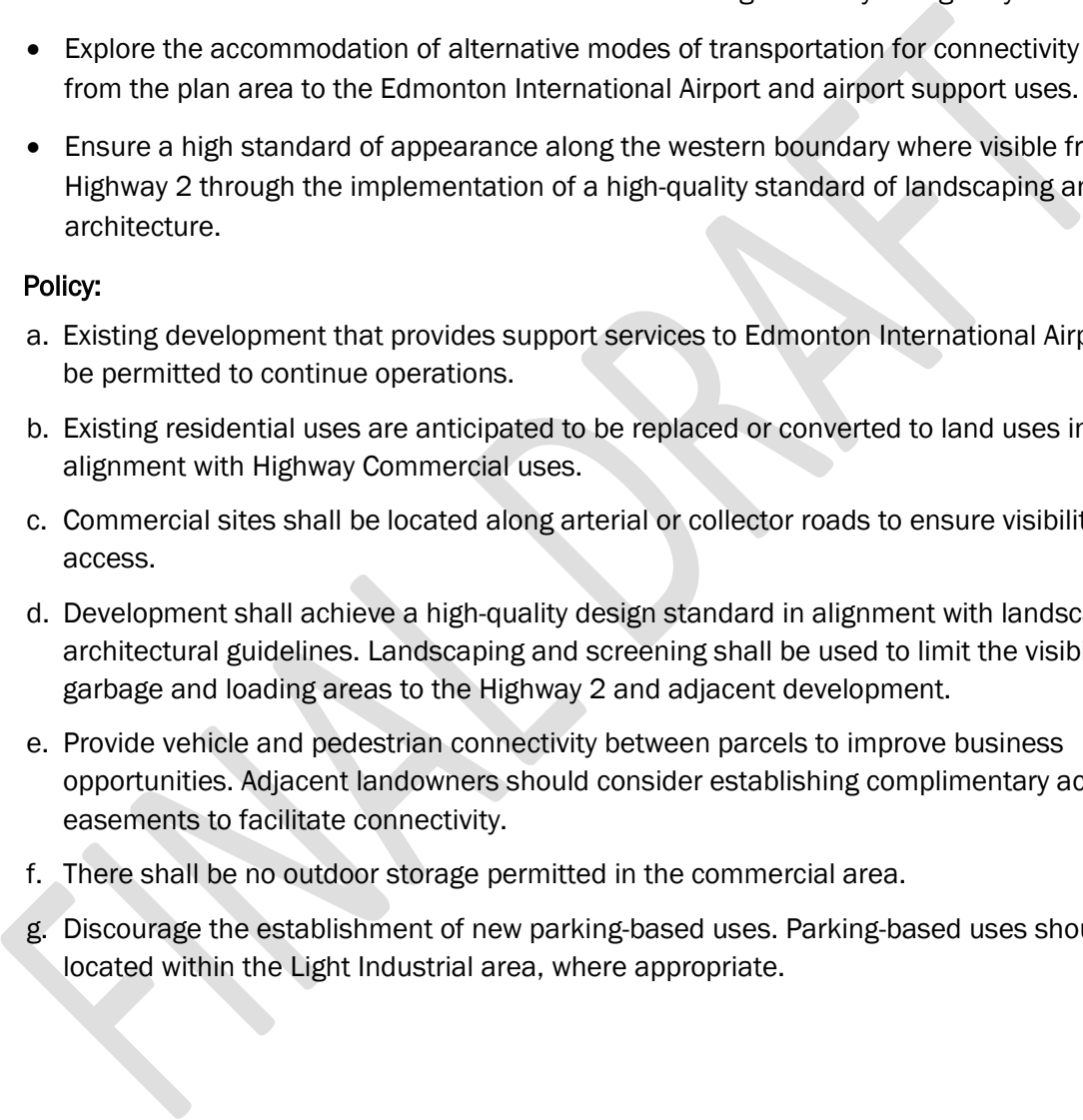
The Highway Commercial area will provide a range of commercial, retail, support services, and tourist uses for the travelling public along Highway 2 and those travelling through the Edmonton International Airport. These uses include service stations, restaurants, and hotels for example.

Objectives:

- To foster the intensification of commercial uses with high visibility to Highway 2.
- Explore the accommodation of alternative modes of transportation for connectivity to and from the plan area to the Edmonton International Airport and airport support uses.
- Ensure a high standard of appearance along the western boundary where visible from Highway 2 through the implementation of a high-quality standard of landscaping and architecture.

Policy:

- a. Existing development that provides support services to Edmonton International Airport shall be permitted to continue operations.
- b. Existing residential uses are anticipated to be replaced or converted to land uses in alignment with Highway Commercial uses.
- c. Commercial sites shall be located along arterial or collector roads to ensure visibility and access.
- d. Development shall achieve a high-quality design standard in alignment with landscape and architectural guidelines. Landscaping and screening shall be used to limit the visibility of garbage and loading areas to the Highway 2 and adjacent development.
- e. Provide vehicle and pedestrian connectivity between parcels to improve business opportunities. Adjacent landowners should consider establishing complimentary access easements to facilitate connectivity.
- f. There shall be no outdoor storage permitted in the commercial area.
- g. Discourage the establishment of new parking-based uses. Parking-based uses should be located within the Light Industrial area, where appropriate.





4.4.7 Parks and Open Space

The Parks and Open Space area provides for public parks and recreation areas to meet active and passive recreational, and leisure pursuits and needs. These include environmental features such as creeks, water bodies, treed areas, and Environmentally Significant Areas (ESA). This area will be characterized by naturalized areas, sports fields, stormwater ponds, and trails. Trails associated with the County Pedestrian Network will be located within the plan area to provide connections to parks and other destinations, active recreation, and transportation opportunities, and to trails that connect with areas outside of the plan area.

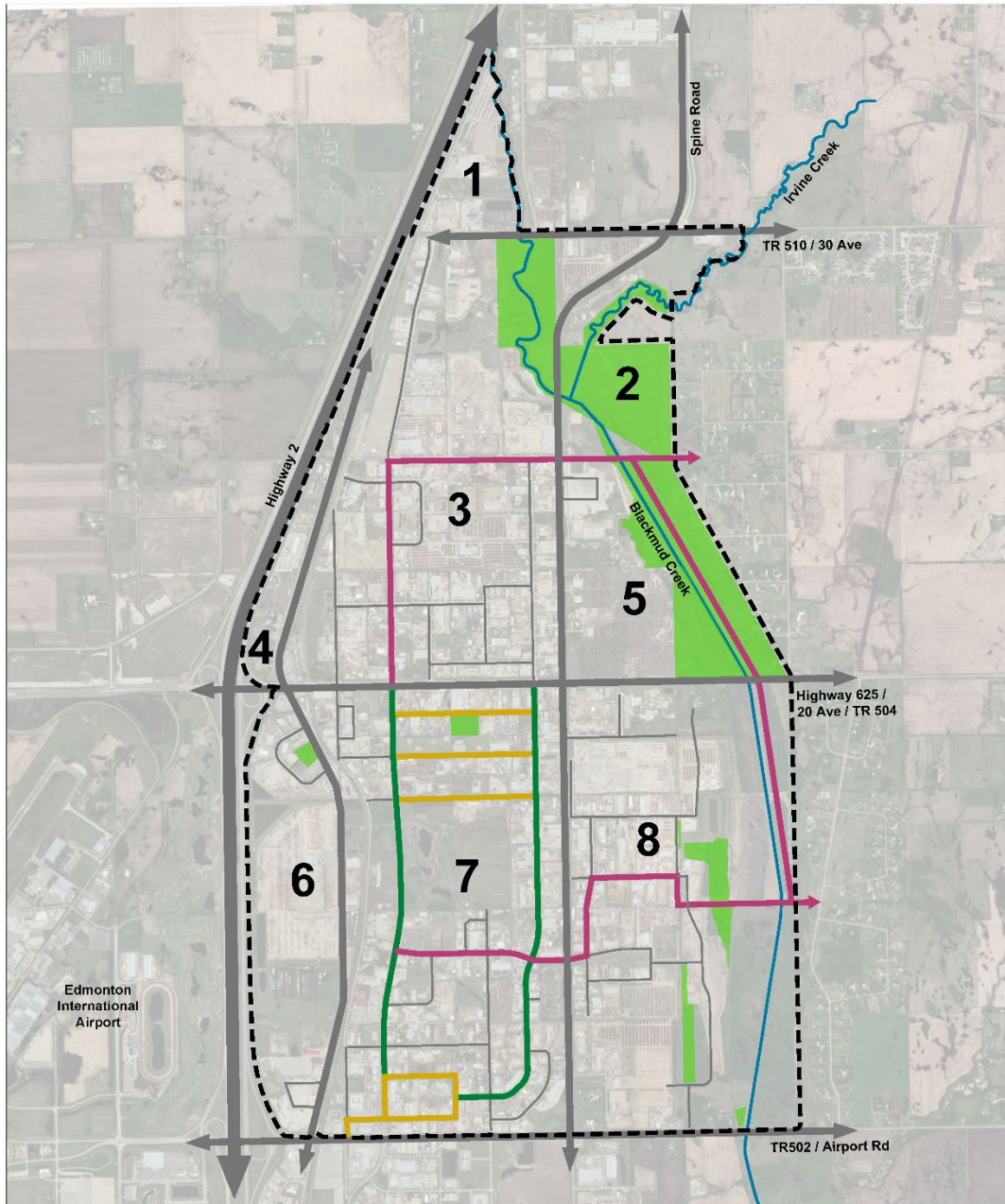
Objectives:

- Protect and restore environmental features and areas within the plan area and minimize the impacts of development on environmentally significant areas.
- Ensure watercourses, waterbodies, wetlands, and habitat adjacent to development are protected where possible. Setbacks to the Blackmud and Irvine Creek floodways and floodplains shall be established per the Leduc County Environmentally Significant Areas Study.
- Provide recreational opportunities through pedestrian linkages, environmentally significant areas, open spaces, designated trails, wildlife corridors, and recreation areas.
- Conserve high quality riparian habitat. Restoration of riparian habitats that been impacted or impaired is a priority along Blackmud Creek will be prioritized to ensure there is no further degradation to the Strawberry Watershed.

Policy:

- a. A Pedestrian Network may be provided as outlined on **Exhibit 8: Open Space**.
- b. The County should explore opportunities to acquire and develop Municipal Reserve parcels in the plan area for recreational purposes or as naturalized open spaces.
- c. Compliance to the Leduc County's Environmentally Significant Areas Study, Nisku Wildlife Corridor Report, and Leduc Wildlife Corridor Study shall be addressed when new parks, open spaces, network trails, subdivision and development projects are proposed.
- d. The protection of natural areas and environmentally significant areas shall be through environmental reserve, municipal reserve, and conservation reserve dedication or easements. Municipal reserve shall not be given for utility corridors, public utility lots, or drainage channels.
- e. At the time of municipal reserve dedication, the County should consider opportunities to receive cash-in-lieu for reserve dedications within the plan area, or a combination of cash-in-lieu and land in accordance with the County's Reserve Policies. Any decision for cash-in-lieu shall take into consideration the policies and intent of this plan. The County may consider a land swap if strategically situated to protect and conserve natural assets within the plan area.





LEGEND

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|--|-------------------------------|----------|-----------------------------|--|-----------------------------------|
| | Plan Boundary | 6 | Development District Number | | Watercourse |
| | Long Term Pedestrian Network | | Parks & Open Spaces | | Arterial & Collector Road Network |
| | Mid Term Pedestrian Network | | Local Road Network | | |
| | Short Term Pedestrian Network | | | | |

► **Exhibit 8: Open Space**





4.4.8 *Blackmud Creek Floodplain Area*

The Blackmud Creek Floodplain area provides for floodplain protections with the opportunity for low impact agricultural operations and agriculture-related uses. These lands will be preserved for agricultural purposes until agricultural production is no longer viable and as deemed appropriate by Leduc County. The Blackmud Creek Floodplain Area can be identified as a future study area.

Objectives:

- Encourage the development of agribusiness and value-added agriculture.
- Maintain agricultural land uses adjacent to the west bank of Blackmud Creek.
- Establish a buffer between Residential uses to the east and Business Park uses to the west.
- Establish the Blackmud Creek Floodplain Area lands as a potential study area in the future to assess the feasibility of agricultural uses long-term, when agricultural production is no longer viable.

Policy:

- a. Agricultural uses shall be supported in the areas identified as Blackmud Creek Floodplain Area on **Exhibit 6: Land Use Concept**. This area corresponds to the 1:100 year floodplain boundary. Development in this area is restricted due to the potential for flooding.
- b. The County shall encourage sustainable and environmentally responsible agricultural practices.
- c. Best management practices are encouraged when agricultural lands are adjacent to environmentally significant areas such as Irvine and Blackmud Creeks. Value-added agriculture and agri-business development is encouraged within the plan area.
- d. Allow current lands uses that comply with existing Land Use Bylaw regulations and this LARP to continue.
- e. Conversion of agricultural lands to non-agricultural uses, other than those permitted in the Land Use Bylaw shall be prohibited. The County shall review the ultimate development potential the Agricultural lands at the next review of the LARP, or at any time the County deems it appropriate to designate a future land use concept for this area. At such time, when agricultural uses are no longer feasible, an Agricultural Impact Assessment shall be completed to support the conversion.
- f. Passive outdoor recreation uses not adversely affected by flooding, including parks, may be considered on a discretionary basis. Any permanent buildings associated with such uses shall be located above the 1:100 floodplain.





5 Strategic Development Nodes

Strategic Development Nodes are central areas that are focused on a specific economic sector within Central Nisku that capitalizes on existing infrastructure and the future vision for the area to foster innovation and economic growth, thus attracting investment. The strategic development nodes are centred around Business & Hospitality, Business Innovation, and Logistics & Distribution sectors and services.

The urban structure described above provides a general framework for the structuring of policy approaches tailored to the internal dynamics of each node. This approach is geared towards focusing transformative efforts on strategic locations that can build on what is existing and ongoing, thus creating positive momentum with private initiatives to gradually introduce a more urban and people-centered environment in the existing industrial setting.

5.1 Node A: Business and Hospitality

This Node is located in the southern area of District 7, north of Airport Road between Sparrow Drive and 8th Street, and south of the rail line located between 13 Avenue and 14 Avenue. Development Node A will be anchored by uses dedicated to specific services for travelers and business uses. There is a cluster of hotels and restaurants on the SW portion of the District close to Airport Road and 5 Street as well as the location of the Leduc County Centre at 5 Street and 11 Ave.

Objectives:

- Create a vibrant business environment that fosters entrepreneurship, investment, and job creation by providing suitable infrastructure and amenities.
- Enhance visitor experience by offering a diverse range of hospitality services, including accommodations, dining options, commercial and service uses, entertainment venues, and recreational facilities.
- Support the growth and sustainability of local businesses by providing opportunities for retail, dining, entertainment, and tourism-related enterprises to thrive and contribute to the local economy.
- Ensure accessibility and connectivity within the Node area by implementing efficient transportation networks, pedestrian-friendly pathways, and convenient parking facilities to accommodate both visitors and employees.
- Maintain high standards of landscape and urban design outcomes to create a welcoming and sustainable destination that attracts both businesses and visitors for the long term.

5.2 Node B: Business Innovation

Development Node B is geared to accommodate an industrial hub for the plan area where business incubation and innovation are located and fostered in an enhanced urban setting. The industrial character of the area will remain and transform overtime as new business ventures explore synergies and locational opportunities provided in Central Nisku. The Business Innovation Node is the focal point of industrial and employee-intensive areas. Services and amenities anchor it and are complemented by smaller industrial parcels for innovation, industrial and commercial products, and processes.





Objectives:

- Foster innovation by creating an environment conducive to innovation by providing affordable space and resources for startups and entrepreneurs to develop and refine their ideas.
- Promote and encourage collaboration among businesses by designing shared spaces and amenities that facilitate interaction and knowledge exchange.
- Stimulate economic growth by attracting and retaining businesses, generating employment opportunities, and fostering a thriving entrepreneurial ecosystem through designing a high-quality public realm and built environment and providing amenities and services for employees and visitors.
- Enhance and develop infrastructure tailored to the needs of businesses, including access to high-speed internet, flexible workspace options, and supportive services.
- Implement sustainable practices in the design and operation of the incubation space, including energy efficiency, waste reduction, and multi-modal transportation options, to minimize environmental impact and promote long-term viability.

5.3 Node C: Logistics and Distribution

The Logistics and Distribution Node is geared to support warehouse distribution and logistics activities, and intermodal transportation facilities. Node C's location both within the Edmonton Region and adjacency to the CANAMEX Corridor, a significant transportation route that connects Canada, the United States, and Mexico, provide a tremendous opportunity for the Node to become a key intermodal transportation hub to support the movement of goods regionally, nationally, and internationally via road, rail, and air connections. This is supported by the Node's strategic location in proximity to a major provincial highway, the Edmonton International Airport, and Canadian National rail lines. Primary access will be dependent on the local road network prior to reaching the regional network. As an intermodal transportation hub, Node C will provide connectivity between different modes of transportation allowing goods to move between different transportation modes seamlessly.

Objectives:

- Establish this Node as a key intermodal transportation hub in the regional, provincial, federal, and international transportation network by leveraging its location and proximity to the Edmonton International Airport, Queen Elizabeth II Highway, and Canadian National rail line and spurs.
- Optimize the movement of goods through efficient logistics and distribution networks to enhance supply chain effectiveness and reduce transportation costs.
- Provide efficient movement of goods by improving transportation infrastructure and connectivity within the designated area, including roads, rail connections, and freight facilities, to facilitate seamless movement of goods to and from distribution centers.
- Support economic growth and job creation by attracting logistics and distribution companies, fostering innovation, and stimulating infrastructure investment in the Node area.





6 Transportation

The overall transportation network as shown in **Exhibit 9: Transportation Network** outlines how existing and proposed improvements to the transportation network will support development and growth in the plan area over the next 30-year period. **Exhibit 9** outlines the locations of the major road network, local road network, rail line corridors, and the Pedestrian Network, which collectively support local and broader connectivity within and beyond the plan area and further support the plan area as an intermodal transportation hub in Leduc County.

6.1 Plan Area Access and Broader Road Network

The Central Nisku LARP area is well integrated into the regional and provincial highway and road network, with primary access through Highway 2, Highway 625/Township Road 504/20 Avenue, Township Road 502/Airport Road, and Township Road 510/30 Avenue.

Regional and local roads servicing the plan area can be broadly classified as follows:

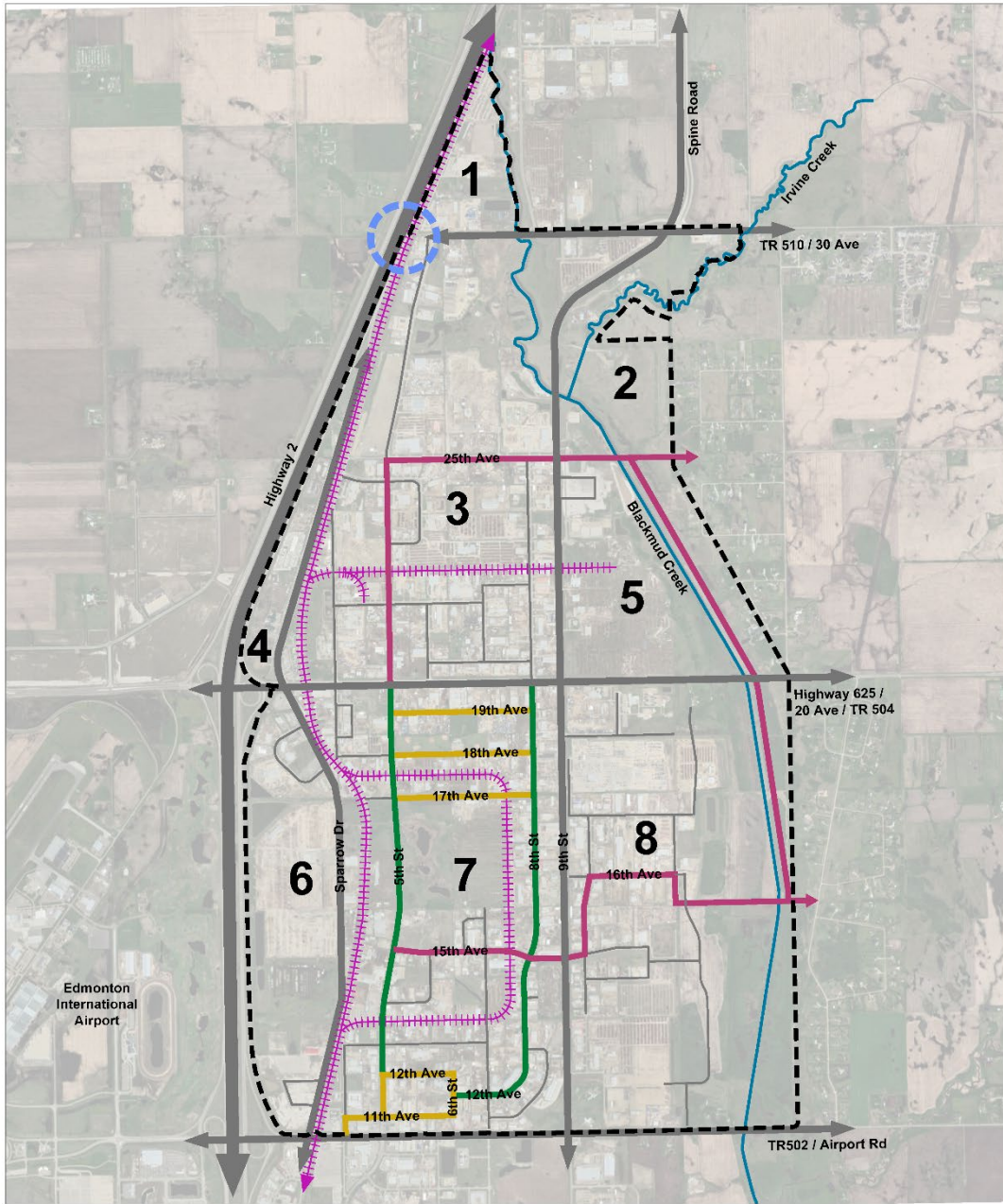
- **Provincial Highways:** the plan area is serviced by one Level 1 Highway (Highway 2 corridor) along the east border of the plan area and a Level 2 Highway (Highway 625/or20 Avenue). Level 1 highways are intended to move people, goods and services inter-provincially and internationally while Level 2 Highways serve as standard arterial corridors and provide for intra-provincial movement of people, goods and services. Highway 625 and Airport Road are also classified as high-load corridors.
- **County Main Roads:** major County roads that connect Primary and Secondary Provincial Highways, like 30 Avenue and Airport Road.
- **Special Purpose Roads:** roads that provide connections between County Main Roads, the Provincial Highway System and other Special Purpose Roads. All roads within the plan area have this classification.

Maintaining the operational functionality of provincial highways and County main roads, as well as servicing the plan area is critical for the long-term competitiveness of Central Nisku. Similarly, the completion of the Spine Road expansion, particularly from 30 Avenue to 20 Avenue, is anticipated to stimulate economic growth in Central Nisku by providing a north-south connector alternative to Highway 2.

6.2 Internal Road Hierarchy

The local road network connects the different districts within the plan area, with Sparrow Road and 9 Street acting as the key north-south axis. The key piece of road infrastructure that will improve accessibility to the area is the southern extension of the Spine Road from TP 510/30 Avenue to TP 502/Airport Road, following the 9 Street alignment. With the Spine Road expansion completed within the plan area, the road hierarchy of 9 Street will be upgraded to reflect the increased capacity and function of the Spine Road as a connector to surrounding areas.





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|---|-----------------------------------|---|-------------------------------|---|-----------------------------|
|  | Plan Boundary |  | Mid Term Pedestrian Network |  | Proposed Future Interchange |
|  | Arterial & Collector Road Network |  | Short Term Pedestrian Network | 6 | Development District Number |
|  | Local Road Network |  | Rail Network | | |
|  | Long Term Pedestrian Network |  | Watercourse | | |

► **Exhibit 9: Transportation Network**



6.3 Internal Mobility and Connectivity to Adjacent Areas and County-wide Transit System

Central Nisku currently receives over 11,000 people daily from various locations around Alberta, Canada, and the world. Yet, the existing urban context is hardly welcoming for a people-centered environment. Thus, the aspiration for an enhanced urban streetscape that provides a reinvigorating local identity and a safe and inviting public realm with wider opportunities to easily enjoy open space, trails and recreation areas is a clear directive for the transformation of the plan area.

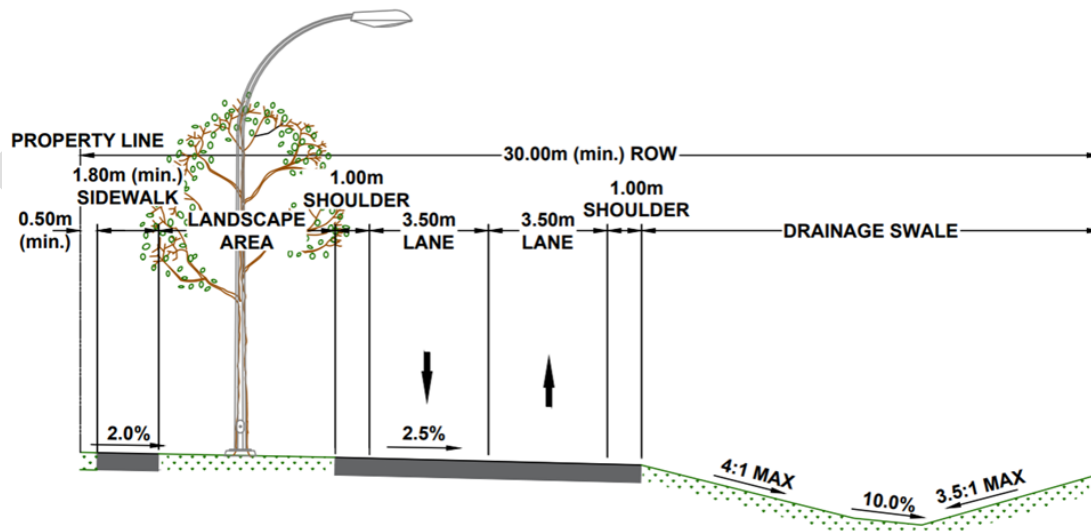
Active transportation connections within the plan area and with adjacent areas were identified as a priority item through the consultation with stakeholder and community groups. As noted above, the existing road network lacks provision of sidewalks or rustic pathways and their inclusion may require the introduction of a hybrid cross section to provide safe pathways for alternative mobility modes.

6.4 Active Mobility Network

Given that all roads internal to the Nisku Business Park are classified as special purpose roads and have a rural cross section, advancing active transportation modes to safely foster internal mobility options will involve incorporating sidewalks and/or pathways in combination with ditches. This can be accommodated through adding facilities near the property lines bordering the right-of-way. Another alternative is a hybrid cross section which includes introducing an urban cross-section on one side of the road, with a boulevard and sidewalk/pathway, and retaining a rural cross-section on the other side of the road. The hybrid cross-section has the advantage of the improved aesthetic on one side while maintaining the cost-efficiency of the rural cross-section with a ditch.

A conceptual cross section to accommodate active transportation within the study area's road system is shown in **Exhibit 10: Conceptual Road Cross Section for Active Mobility Roads**.

Roads identified as Main Active Mobility Network, on **Exhibit 9**, have been designated to accommodate the hybrid road cross section as shown in **Exhibit 10**. These roads are located in Development Nodes A and B to provide local pedestrian connections throughout the nodes to support activity in these areas.



► **Exhibit 10: Conceptual Road Cross Section for Active Mobility Roads**



6.5 Pedestrian Network

The development of a Pedestrian Network system within the plan area facilitates connections to destinations within the plan area including the parks and open spaces and development nodes, and to surrounding areas such as The Vistas and naturalized areas along the Blackmud and Irvine Creeks. The Pedestrian Network will consist of mixed-use trails that accommodate walkers, runners and cyclists of all ages and abilities.

Through these connections the trails will provide opportunities for active transportation, recreation, and connections to parks and open spaces. The Pedestrian Network has been developed with consideration of highways and high load corridors, existing right-of-way conditions (i.e., roads with ditches and no sidewalks or shoulders), and future open space opportunities along the Blackmud and Irvine Creeks to ensure the safety of pedestrians and cyclists. These multi-use pathways are identified as the Pedestrian Network on **Exhibit 8: Open Space**, which provides a conceptual approach to accommodate multi-use pathways in the plan area.

Policy:

- Wayfinding and signage shall be implemented along the Pedestrian Network and throughout the plan area to inform users of trail locations, connections, destinations, safety recommendations, and rules.
- The pathway shall be designed to ensure accessibility for all users and with an appropriate width to accommodate bi-directional movement.
- The County should review the potential to incorporate non-motorized trails on the existing and future rights-of-ways in the Plan area.

6.6 Public Transit

Transit service is a priority on connectivity to Nisku as an employment center and transit service plans for the region are reflected in the Integrated Regional Transportation Master Plan (IRTMP), although the formalization of a transit priority corridor is yet to be defined.

Based on Figure 10 an excerpt from the IRTMP – EMRB (May 2021) of the 2024 Leduc County Transportation Master Plan (TMP), shows planned future transit priority corridors along Highway 2 going through the Nisku Area from Edmonton to the City of Leduc. Another route is from 50 Street NW coming from Edmonton into the Beaumont area, that leads into the County main roads of Nisku. The routes will serve as a connection between Edmonton and Edmonton International Airport, Beaumont, Nisku, East Vistas, and Leduc.

Policy:

- Street furniture and transit shelters should be provided at appropriate locations along existing transit routes to encourage transit ridership.
- Connections between transit stops, public sidewalks, private walkways and building entrances should be coordinated to provide safe pedestrian paths between transit and destinations.



7 Utilities

A Growth Capacity Study was prepared by WSP in 2023 to assess the capacity of Nisku’s existing wastewater and water distribution systems to identify opportunities to support future growth. Different future development scenarios (existing, redevelopment, and redevelopment plus new growth) were assessed. The redevelopment scenario corresponds with the Central Nisku LARP.

Policy:

- a. The County shall review the existing Greater Nisku and Area Offsite Levy Bylaw to ensure that the infrastructure recommendations outlined in the Growth Capacity Study (WSP, 2023) can be accomplished.
- b. All development will be required to contribute to the installation and expansion of county water and sewer upgrades. Contributions will be determined at the time of subdivision and/or re-development as outlined in the County’s Offsite Levy Bylaw.

7.1 Water

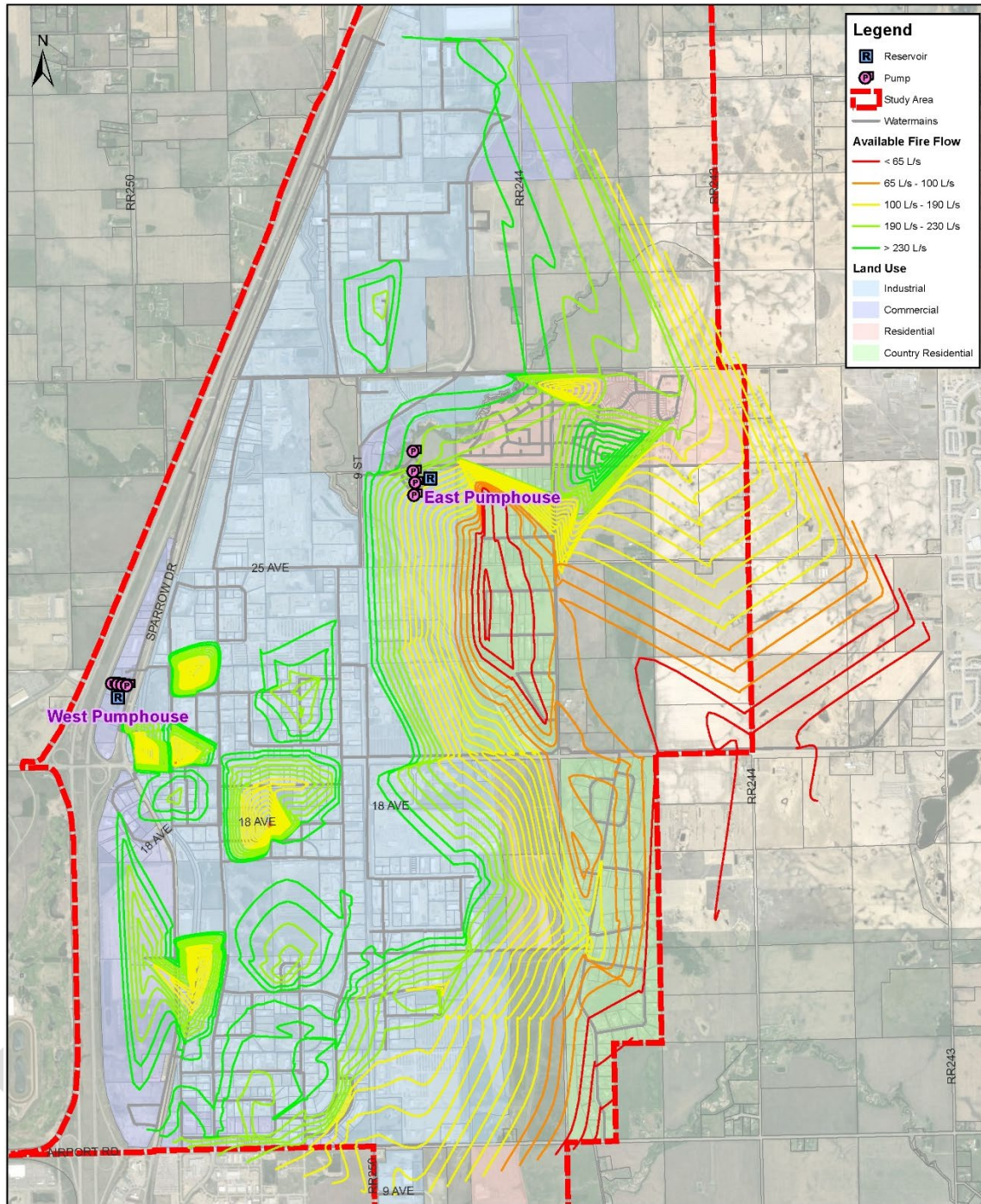
Largely the limiting factor for growth is fire flows. The available fire flow for each development scenario identified several fire flow deficiencies throughout the system, particularly in the east and southwest areas of the plan. Available fire flows area are shown in **Exhibit 11: Redevelopment Available Fire Flow Coincident to Maximum Day Demand**. Several system improvements have been recommended to meet the minimum requirements from the County. To support development, a combination of watermain upgrades and new pipes to complete system loops have been recommended. The results of the pumping capacity analysis suggest that the current pumphouses are adequate and will accommodate all future forecasted growth.

The table below is derived from the Growth Capacity Study (WSP, 2023) summarizing system improvements recommended to be conducted to provide adequate fire flows to impacted areas. Locations of the listed upgrades are shown in **Exhibit 12: Redevelopment System Improvements**.

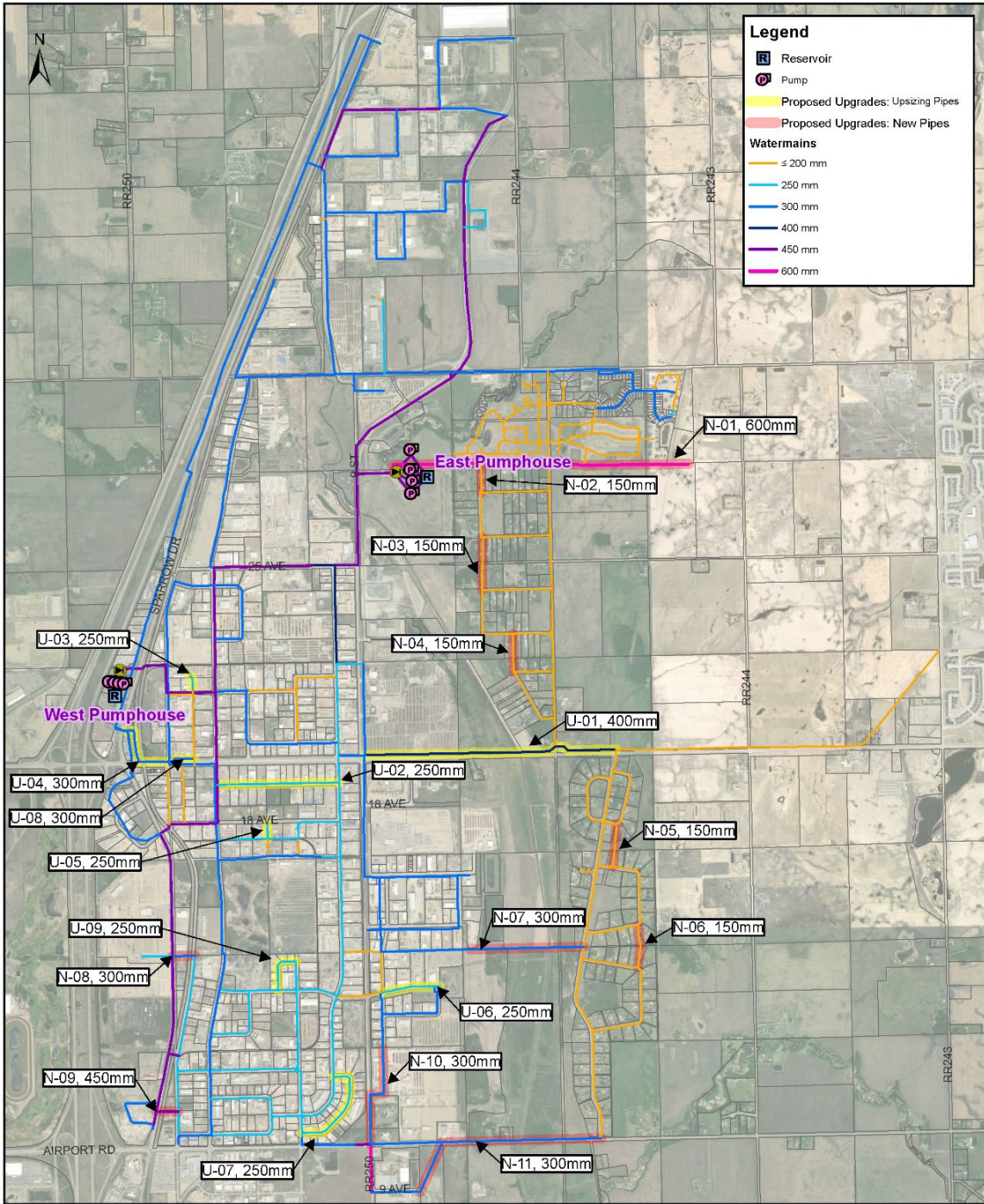
ID	UPGRADE	LAND USE	EXISTING SIZE (MM)	LOCATION	SIZE (MM)	LENGTH (M)
N-01	New	Residential	-	South of Irvine Creek development	600	2603
N-02	New	Residential	-	Linking Beau Vista Blvd proposed 600mm WM south of Irvine Creek development	150	247
N-03	New	Residential	-	Linking Beau Vista Blvd to Davison Dr	150	443
N-04	New	Residential	-	Linking Davison Dr to Beau Vista Dr	150	319
N-05	New	Residential	-	Linking Kayda Vista Dr to Linda Dr	150	361
N-06	New	Residential	-	Linking Linda Dr to Brenda Dr	150	354
N-07	New	Residential	-	Linking watermain on 10 St to Range Road 244A between 15 Ave and 16 Ave	300	954
N-08	New	Industrial	-	From Sparrow Dr to 4 St at Township Road 503	300	189
N-09	New	Industrial	-	From Sparrow Dr to 4 St near Airport Rd	450	186
N-10	New	Industrial	-	10 St to 12 Ave, 12 Ave from 9 St to 10 St and 9 St from 12 Ave to Airport Rd	300	921
N-11	New	Industrial	-	Airport Rd 9 St to Range Rd 24A and 9 Ave to Airport Road	300	1793
U-01	Upsize	Residential	200	Highway 625 from 9 St to Range Road 245	400	2135
U-02	Upsize	Industrial	200	19 Ave from 5 St to 8 St	250	1023
U-03	Upsize	Industrial	150	End of pipe off 22 Ave between 4 St and 5 St	250	139
U-04	Upsize	Industrial	150	East Ave from Sparrow Dr to Highway 625	300	627
U-05	Upsize	Industrial	150	End of pipe off 18 Ave between 5 St and 8 St	250	128
U-06	Upsize	Industrial	200	15 Ave from 10 St to 12 St	250	491
U-07	Upsize	Industrial	200	Along 8A St	250	853
U-08	Upsize	Industrial	150	East Ave from Sparrow Dr to Highway 626	300	190
U-09	Upsize	Industrial	200	6 St and 15A Ave to 7 St	250	370

► **Table 1: Fire Flow System Improvement Recommendations (Nisku Growth Capacity Study, WSP 2023)**



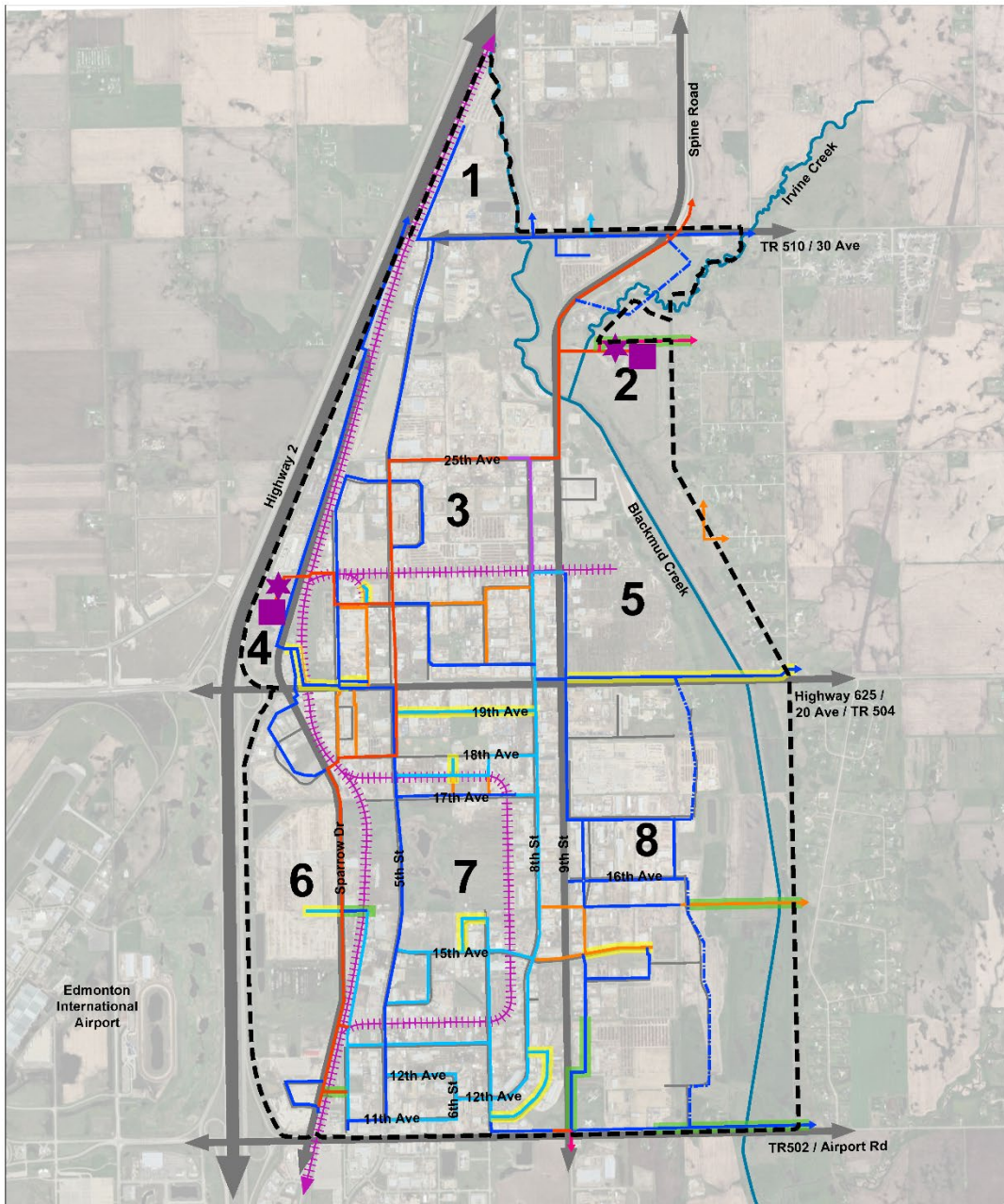


► **Exhibit 11: Redevelopment Available Fire Flow Coincident to Maximum Day Demand (Nisku Growth Capacity Study, WSP 2023)**



► **Exhibit 12: Redevelopment System Improvements (Nisku Growth Capacity Study, WSP 2023)**





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| Plan Boundary | Existing 200 m Watermain | Existing 600 m Watermain | Pumphouse |
| Arterial & Collector Road Network | Existing 250 m Watermain | Future 300 m Watermain | Watermain Continues out of Boundary Area |
| Local Road Network | Existing 300 m Watermain | Proposed Pipe Upsizing | Watercourse |
| Rail Network | Existing 400 m Watermain | Proposed New Pipes | |
| 6 Development District Number | Existing 450 m Watermain | Reservoir | |

Exhibit 12: Water Servicing





7.2 Wastewater

Leduc County has three sanitary sewer lift stations in Nisku. The north and south lift stations, located at the north end of Sparrow Drive and on Sparrow Drive south of Highway 625, respectively, are currently operating and the 9th Street lift station is planned to service future development.

The existing scenario assessed the current wastewater collection system under peak wet weather flow (PWWF) conditions. Model results indicated that the existing system generally performs to the required level of service, and that majority of the system has capacity for significant new growth and redevelopment.

For wastewater collection under the redevelopment scenario (Central Nisku LARP) an assessment of capacity based upon redevelopment plans was updated to apply an increased sanitary generation rate of 20,000 L/ha/day and an inflow and infiltration allowance of 0.28 L/s/ha to vacant and underutilized parcels. The system was assessed under peak wet weather flow (PWWF) conditions, and model results indicated performance issues in some parts of the system, primarily in sections with the largest redevelopment areas. Key issues were reviewed further, and three potential upgrades were developed, including cost estimates. In four areas, existing sewers will require upgrades to increase capacity and improve overall system performance.


7.3 Stormwater Management

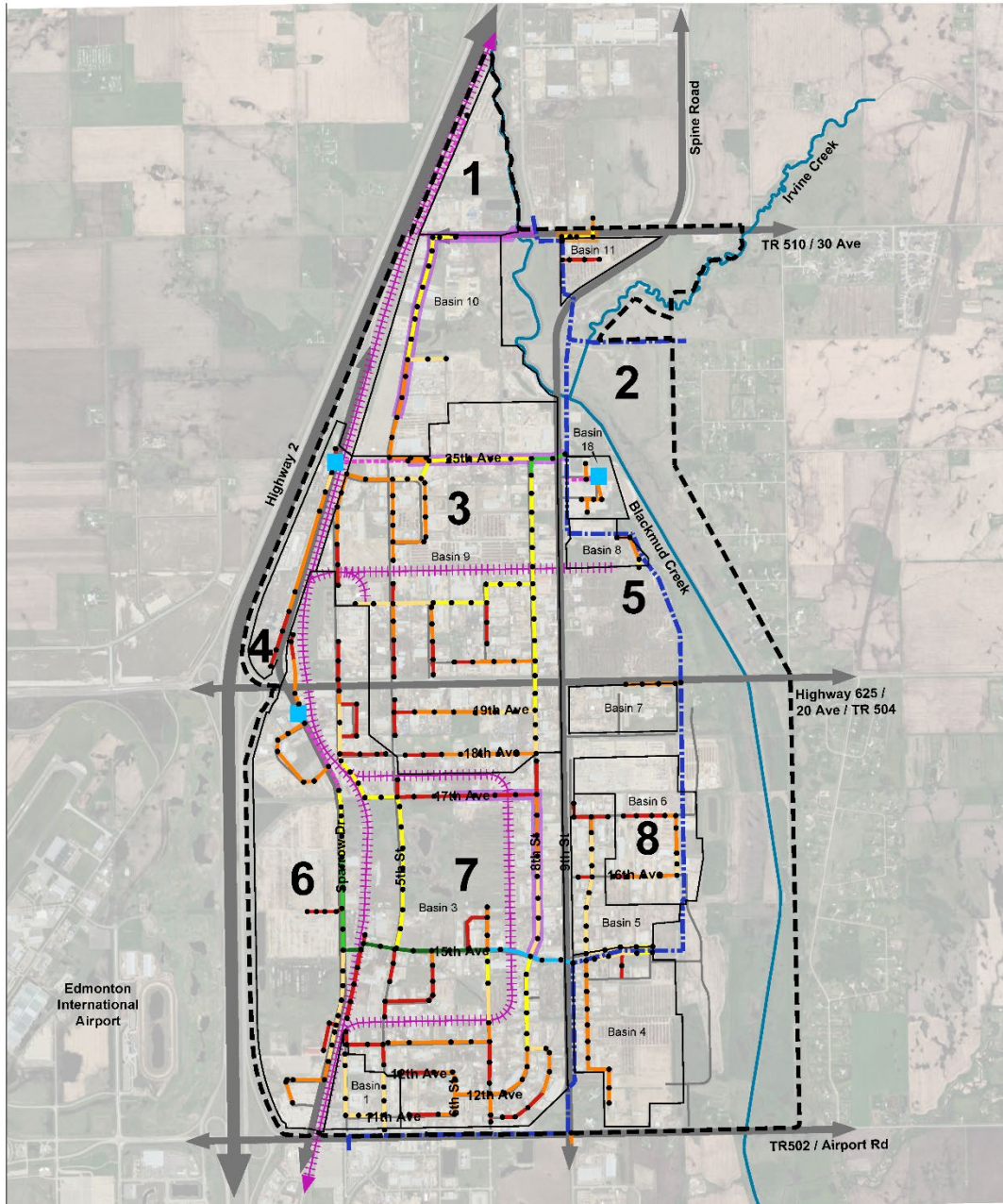
A Stormwater Management Study (Arcadis, 2024) was completed to analyze the existing stormwater management condition of the plan area and the impacts of this Central Nisku LARP. Stormwater runoff generated in the Central Nisku area is managed through series of private and public ponds, wetlands, and an open channel ditch network along roadways, through public easements, and private lots which ultimately discharge to the Blackmud Creek northward. The stormwater drainage relies solely on gravitational drainage; no known underground stormwater infrastructure or lift stations currently exist.

No noted problem areas from the Leduc County were identified with respect to drainage and flooding. The 2014 Nisku Floor Hazard Study for Blackmud Creek did note flood lines intruding into private properties along the north edge of the Central Nisku LARP boundary.

Policy:

- a. Post-development flows for infill and redevelopment shall maintain pre-development flows.
- b. Existing natural features such as wetlands, riparian areas along creeks, and low elevation areas should be preserved for stormwater management.
- c. Design stormwater management facilities as naturalized landscapes where feasible to enhance the plan area's aesthetics and biodiversity.
- d. The County should obtain detailed stormwater pond information and complete further analysis to assess the impacts of additional development, connections between ponds, and downstream impacts.

- 
- e. To maintain groundwater infiltration, landowners should consider minimizing hard surfaces where possible, and maximize opportunities for landscaping, permeable surface and paving materials and using green technologies such as low impact development where possible.
 - f. The County shall explore and establish private drainage easements or public utility lots, where drainage channels exist on private lands that contribute to the plan area's stormwater management and conveyance routes.
 - g. Ensure that future development does not remove water drainage channels during construction and post-development. A stormwater management brief will be required be submitted at the time of development that outlines how pre-development drainage channels have been maintained or re-routed to ensure the integrity of the drainage network is maintained.
 - h. Require development to consider and protect existing high value wetlands and minimize negative impacts on water quality and wetland habitat vegetation.
 - i. Existing wetlands should be avoided for alteration where possible. If avoidance is not achievable, then further wetland assessment and mitigation per County standards and Provincial regulations shall be completed. Alteration to wetlands is required to proceed through the provincial regulatory permitting process.
 - j. Stormwater management considerations could be incorporated into innovative wetland design concepts.
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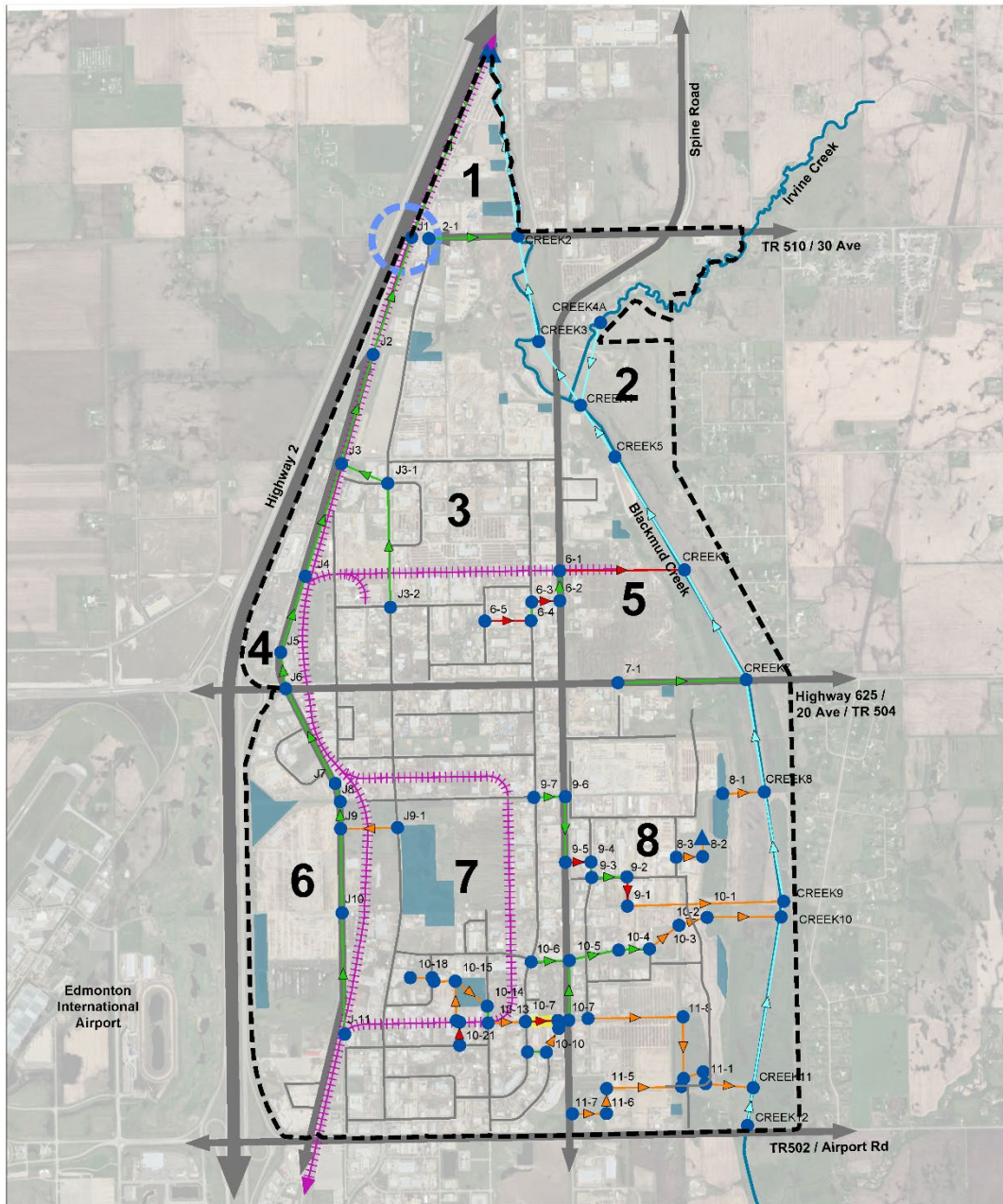


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Plan Boundary	Existing 200 m Gravity Sewer	Existing 600 m Gravity Sewer	Manholes
Arterial & Collector Road Network	Existing 250 m Gravity Sewer	Existing 750 m Gravity Sewer	Sewer Basins
Local Road Network	Existing 300 m Gravity Sewer	SERTS Line	Proposed New Growth
Rail Network	Existing 375 m Gravity Sewer	Pressure Mains	Proposed Redevelopment
6 Development District Number	Existing 450 m Gravity Sewer	Lift Stations	Watercourse

Exhibit 13: Sanitary Servicing





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| Plan Boundary | Private Route Conduit | Proposed Private Route Conduit from Ditch | Storm Water Management Pond |
| Arterial & Collector Road Network | Roadway Conduit | Junction | Watercourse |
| Local Road Network | Creek Conduit | Outfall | Proposed Future Interchange |
| Rail Network | Ditch Conduit | 6 Development District Number | |

Exhibit 15: Storm Servicing





8 Landscape and Urban Design

High quality landscape and urban design principles establish development expectations, provide direction critical to the success of Central Nisku as redevelopment of site in the Plan Area occurs over time. The implementation of these policies should guide and provide for design flexibility and the opportunity for creativity and innovation for both the public and private realm. The following landscape and urban design objectives and policies are intended to assist in the aesthetic quality of Central Nisku, protect and enhance the environmental value of Blackmud Creek, and support implementing a variety of people-centred amenities.


Objectives:

- Create a strong and identifiable image for the Plan area by enhancing the character and quality of the built environment.
- Encourage greening strategies and robust landscape treatments for public and private property.
- Encourage spaces for social and physical activity through the provision of enhanced public and private realm.
- Minimize the impact of development on the environment and improve the quality of the environment in the area through sustainable development practices.
- Support efficient and convenient multi-modal connections.
- Integrate and support new development through urban and landscape design.
- Create attractive gateways at strategic locations through well designed entry features, signage, and landscaping.

8.1 Urban Design Policy

- a. Provide for high quality architectural and site development to establish an elevated public realm within the development node areas, at key entry/gateway entrances and along key roadways identified in **Exhibit 16: Enhanced Landscapes and Gateways**.
- b. Key **Entry Features** should be developed with high quality landscapes, signage, and lighting adjacent to or on public roadways and located where identified in **in Exhibit 16: Enhanced Landscapes and Gateways**. The design of the gateway elements should consider location, scale, context with an emphasis on timeless design.
- c. Provide publicly accessible amenity spaces for employees and visitors located adjacent to the street to encourage activity and support the Active Mobility Network. Amenity spaces could include plazas, seating areas, or landscaped areas, and should incorporate paved walkways, seating, shade, lighting, and landscaping to create a comfortable and inviting environment.
- d. Encourage the development of outdoor amenity spaces on development sites for social interaction and other activities.



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- e. Entrances to offices or buildings should be visible from the street and accentuated through a combination of building articulation or architectural features, and soft and hard landscaping.
 - f. Parking, service, and loading areas shall be encouraged to be located indoors or at the rear or side of main buildings and shall be screened from view of public roads, highways, the Pedestrian Network, or parks and open spaces.
 - g. Location and screening of waste collection areas should be considered to minimize visual impacts.
 - h. Signage should be appropriately scaled and designed to integrate with and complement the character of the building, the site, and the area.

8.2 Landscape Policy

The following landscaping policies are intended to establish gradual enhancement of the public realm and visual identity within the Central Nisku LARP. Landscaping within the plan area not only serves to improve the overall look and feel of the plan area and public realm but also reduces urban heat island effects and mitigates airborne pollution and contaminants.

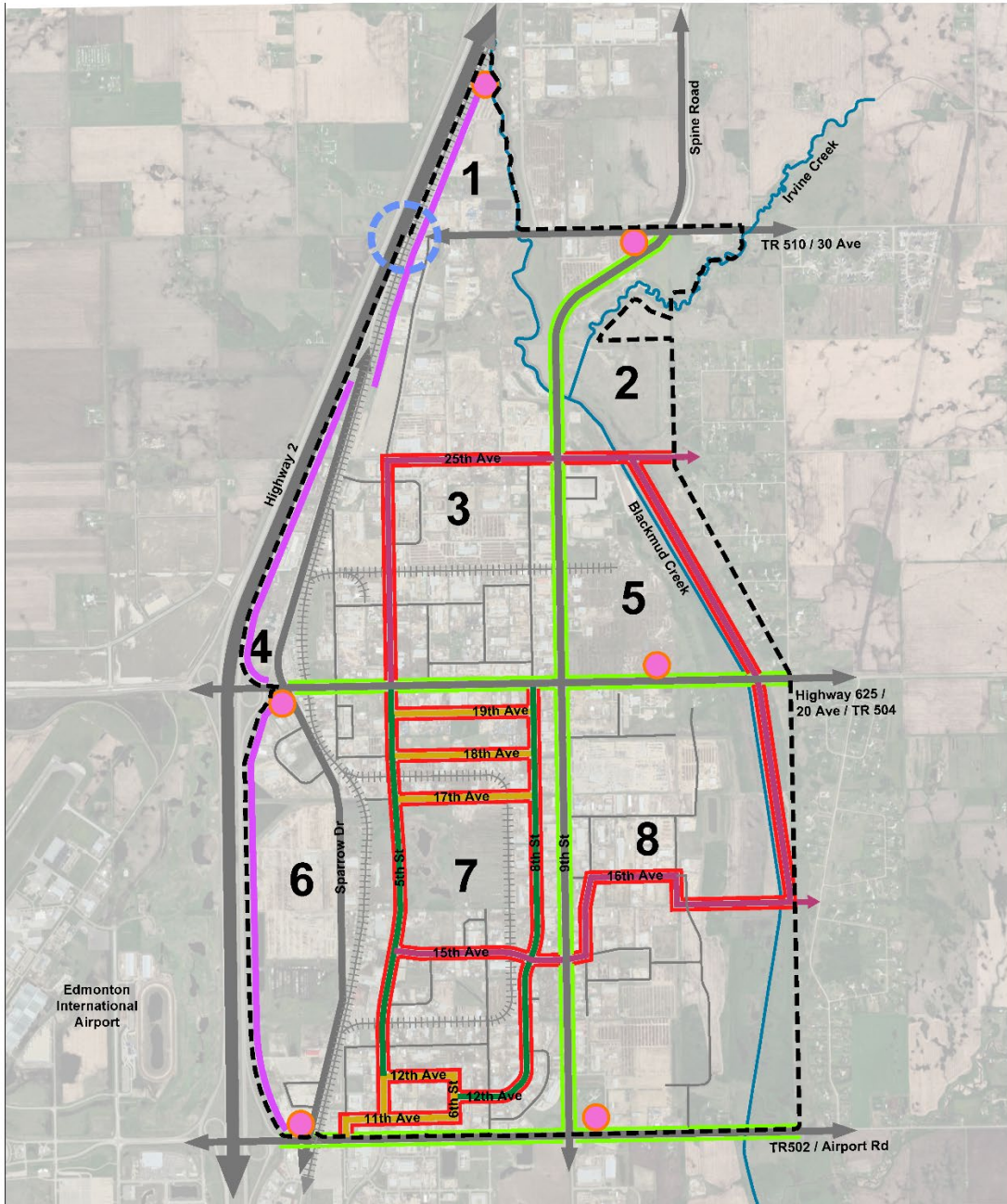
- a. Landowners are strongly encouraged to provide additional landscaping and tree plantings, where possible.
- b. When new development or redevelopment occurs, enhanced landscaping and site design should be provided, where appropriate.
- c. The County should provide landscaping within roadway ditches where no stormwater infrastructure (i.e., piping) exists and on other county-owned lands.
- d. Facilitate the efficient use of water through drought-adaptive or native landscape treatments
- e. Fencing should consider the overall aesthetic of the streetscape and the need for visual buffering. High quality, permanent materials should be used. If visible from the street, black coated chain-link fence is the minimum standard.
- f. The County should establish standard materials and street furniture (benches, trash receptacles, bike racks, wayfinding signage, lighting, etc.) specifications for the **Active Mobility Network** to create a singular identity to establish a sense of place and arrival at a destination in Development Nodes A and B. Street furniture should be located in strategic locations.
- g. Properties that are located along the Highway 2 corridor are required to provide a landscaped area between the corridor limits and site development per the Highway 2 Corridor Design Guidelines and the Nisku West ASP. The location of the landscape area is identified as **Highway Corridor Planting Setback** on **Exhibit 16: Enhanced Landscapes and Gateways**.
- h. Roads identified as **Major Road Enhanced Landscape** are those that are main transportation routes into and through the Plan Area. Landscaping shall be provided to enhance the aesthetics of the Plan Area.



- i. Connections identified as *Pedestrian Network within Road Enhanced Landscape*, as identified in **Exhibit 16: Enhanced Landscapes and Gateways**, is intended to have strategically located groupings of trees to provide an enhanced multi-use trail experience within the road right-of-way.
- j. Connections identified as *Pedestrian Enhanced Landscapes*, as identified in **Exhibit 16: Enhanced Landscapes and Gateways**, are those that are not located within a right-of-way or are located along Blackmud Creek. Buffer plantings with trees and shrubs shall be provided on both sides where the Pedestrian Network passes through to provide a consistent buffer on each side of the pathway. A mix of coniferous and deciduous trees and shrubs are encouraged.
- k. The County should create a strategy to develop enhanced landscape treatments on the east side of the Blackmud Creek corridor to enable early establishment of an enhanced landscape buffer in advance of future development.

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| Plan Boundary | Watercourse | Arterial & Collector Road Enhanced Landscape | Highway Corridor Planting Setback |
| Arterial & Collector Road Network | 6 Development District Number | Short Term Pedestrian Enhanced Landscape | Entry Feature |
| Local Road Network | Proposed Future Interchange | Mid Term Pedestrian Enhanced Landscape | |
| Rail Network | | Long Term Pedestrian Enhanced Landscape | |

► **Exhibit 16: Enhanced Landscapes and Gateways**



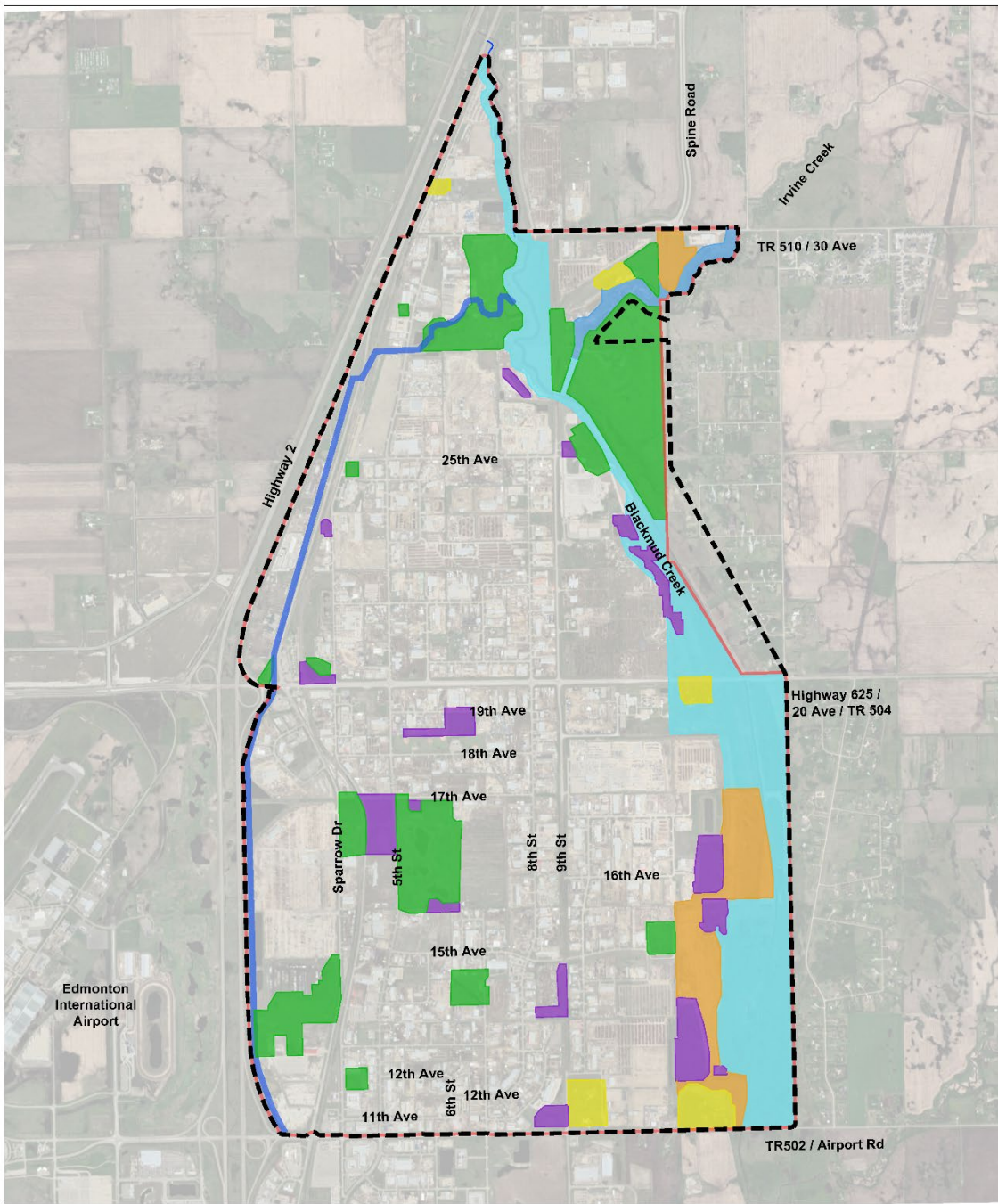


9 Environment

An Environmental Impact Assessment was prepared for the plan area (EnviroMak Inc., 2021). A number of key environmental features and natural areas were found, including creeks, unnamed watercourses, and wetlands and naturalized drainage features and agricultural lands, as shown on **Exhibit 17: Environmental Features**. The following environmental policies have been established to ensure that these features and areas are conserved and protected from land use activities within the Central Nisku LARP area.

Policy:

- a. Require developers in the plan area to meet the goals and strategies of the Leduc County and Nisku Wildlife Corridor Study, Environmentally Significant Areas Study, and Strawberry Watershed Riparian Area Assessment.
- b. Appropriate protection measures shall be considered and implemented to protect the environment at all stages of development, including site reclamation, construction, and daily operations. Such measures include for example, erosion and sediment controls, mitigation of contaminants, control of invasive species and noxious weeds, and mitigation of site nuisances (noise, odor, dust, etc.).
- c. Require landowners to manage and mitigate site and environmental nuisances, such as light, sound, dust, and noise pollution to acceptable levels. Adherence to federal and provincial policies related to air, soil, and water pollution standards shall be met.
- d. The protection of natural areas and environmentally significant areas shall be through Environmental Reserve, Conservation Reserve, or Municipal Reservice dedication.
- e. At the time of a Concept Plan or Subdivision application and where areas of environmental significance have been identified, the County should investigate establishing Environmental or Conservation Reserves and Environmental Reserve Easements to protect these areas.
- f. To retain the Nisku Wildlife Corridor, the County will work with landowners to conserve the natural areas that exist along this corridor during all stages of development, including re-naturalization of the Blackmud Creek 1:100 year floodplain to restore it to its nature state.
- g. During all stages of site construction, including site clearing, stripping, and grading, landowners should ensure that controls to minimize erosion and silt into existing watercourses and drainage systems are implemented.
- h. Landowners shall be required to implement on-site containment systems to minimize the seepage of oil, gas, and other contaminants and materials into the groundwater. Costs associated with containment systems will be borne by the landowner.
- i. Development shall appropriately be setback from Blackmud Creek, Irvine Creek, and any other watercourses, as determined through a Riparian Setback Matrix Model assessment undertaken by a qualified specialist.
- j. The location of development setbacks, 1:100 year floodplains and floodways and other natural constraints shall be established by a qualified professional to ensure public safety, conservation of the natural environment, and to safeguard aesthetic views. Recommendations of the Leduc County Environmentally Significant Areas Study shall be met.



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|  | Plan Boundary |  | Agricultural |  | Irvine Creek |
|  | Original CNLARP Study Area |  | Forested |  | Unnamed Mapped Watercourses |
|  | Commercial/Industrial |  | Blackmud Creek |  | Wetlands and Naturalized Drainage Features |
|  | Residential | | | | |

Exhibit 17: Environmental Features



10 Implementation

Implementation of this plan will occur through several processes, such as:

- Review of existing statutory and non-statutory plans within the Nisku MEC ASP ensuring alignment and consistency;
- The completion of new plans and policies to implement objectives of this plan;
- Land-use redistricting, subdivision, and development process; and
- Other statutory and non-statutory plans shall be referred to the appropriate municipalities for input and comments as per their Intermunicipal Development Plans, Intermunicipal Planning Frameworks and Accords.

New development shall proceed through subdivision, land-use redistricting and development application processes. Some developments may require a Concept Plan in support of subdivision, land-use redistricting or development application process to provide greater detail of the proposed development and/or subdivision.

Development(s) shall follow logical and sound development patterns that account for:

- Current and future transportation, communication, and other infrastructure plans as determined by Leduc County;
- Current and future County statutory and non-statutory plans; and
- Current and future requirements of health and safety regulations.

To accommodate subdivisions and/or developments that do not conform to the phasing plan, subject to the following criteria:

- a. Full municipal servicing;
- b. Compliance with all applicable transportation plans;
- c. Compliance with all Alberta Energy Regulation setback requirements and regulations and/or where on-site decommissioning or land reclamation has been completed, copies of reclamation certificates are provided;
- d. Compliance with all other federal, provincial, and County requirements; and
- e. Compliance with all policies of this area redevelopment plan.

All Concept Plan and Development permit applications may be subject to the following submission requirements, where applicable:

- f. Risk Assessment for all development within 30m of a rail corridor or rail spur;
- g. Noise Study for all development within 300m of a rail corridor or 75m of a rail spur;
- h. Vibration Study all developments within 75 m of the property line of a rail main line or spur line.
- i. All Concept Plan and Development Permit applications adjacent to rail right of way lands shall be circulated to the rail operator for review.
- j. All required technical studies, such as hydrogeological, biophysical, and environmental site assessments, shall be completed by a qualified professional.



10.1 Pedestrian Network and Beautification

There is a unique opportunity to expand the Pedestrian Network to support better accessibility and interconnectivity within the plan area, as well as encourage active modes of transportation. Subject to identifying investment opportunities, the development of the enhanced Pedestrian Network will also provide businesses with more access to amenities.

Upgrades will be generally phased according to market conditions; however, it is anticipated that initial phases will focus on connecting future transit stops to the transit network.

As upgrades continue to take place, the development and redevelopment of the Pedestrian Network will aim to attract new business development within the plan area.

The investment into standalone projects for the Pedestrian Network upgrades will be in accordance with this plan, with the County responsible for portions of the infrastructure upgrades.

10.2 Priority Growth and Redevelopment Opportunities Plan

In alignment with the Nisku Major Employment Centre Area Structure Plan (Nisku MEC ASP) and with the fiscal situation of Central Nisku, development phasing is anticipated to be gradually advanced within the Central Nisku LARP in response to redevelopment initiatives and the south extension of the Spine Road. Infrastructure and utility servicing networks will be upgraded as required and will support extension to the north and south areas adjacent to Central Nisku, with a particular focus on fostering redevelopment and improvements within the three identified development nodes.

The Central Nisku LARP area is primarily a built-up brownfield area providing infill intensification and redevelopment opportunities. Identification of vacant and underutilized properties in the plan area to support these opportunities. These properties currently have large outdoor storage components that could be subdivided or could form part of a future land assembly project. Most of these properties are already serviced and range from 0.6 acres to 137 acres in size, with all lots totaling approximately 753 hectares (1,860 acres).

Policy:

- a. Development and growth within this plan will generally follow **Exhibit 18: Priority Growth & Development Opportunities**.
- b. Whenever possible, redevelopment and intensification initiatives should be guided to the three development nodes identified in the plan. Road and utility buildout will be limited within the boundaries of this area, with streetscape and active mobility enhancements preferably within the three development nodes identified.

10.3 Detailed Planning and Construction

Detailed planning from Leduc County that builds upon the Central Nisku LARP vision and policies is required to implement, enhance, and update the plan area. Initiatives regarding infrastructure, stormwater management, and public realm enhancements have been identified within the Central Nisku LARP. To address these initiatives, it is advised that Leduc County complete the following future studies:





Stormwater Management

A detailed stormwater management study is advised to address the impacts of existing stormwater ponds and wetlands, and the County’s approach to private drainage patterns.

Utility Improvements Plan

To implement the findings in the WSP Utilities Capacity Study, the County will need to develop a strategy on how necessary upgrades and new infrastructure will be implemented to support new development and infill throughout the plan area. This work should be completed with the 2024/2025 comprehensive review of the Greater Nisku and Area Off-site Levy Bylaw.

Signage and Wayfinding

To support creating an identify and sense of place for the plan area and provide ease of access and visibility of companies and business for employees and visitors, a signage and wayfinding strategy should be developed. The signage and wayfinding strategy should address providing directional signage in strategic locations, feature key nodes, identify businesses, and establish cohesive branding for the plan area.

10.4 Interpretation

The boundaries and locations of any symbols or areas shown on the Central Nisku LARP exhibits shall be interpreted as conceptual and are approximate including, but not limited to, parks, road alignments and pathways, and will be verified at subsequent planning stage, unless otherwise specified in the document.

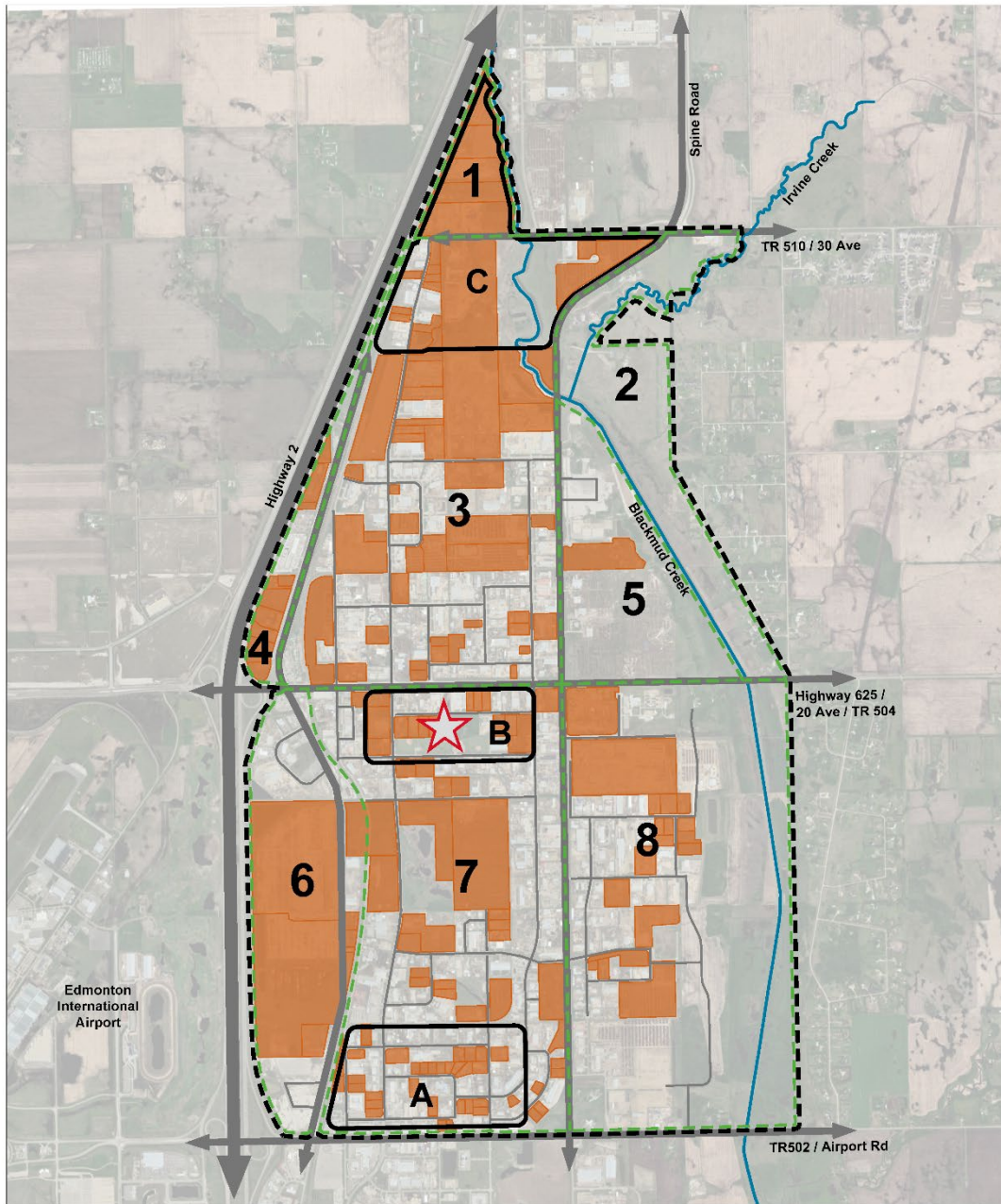
10.5 Requirements for Amendments to the Plan

The Central Nisku LARP outlines how the plan area will transform and develop over an extended period through a series of public and private sector initiatives. The time frame of this plan will be determined by the criteria for prioritizing and sequencing growth areas in response to public and private redevelopment and intensification initiatives.

The policies within the plan area will be monitored over time in relation to development trends and issues to ensure they remain current and relevant. Where determined necessary, these policies will be updated through the plan amendment process either generally or in response to a specific issue.

Amendments to the Central Nisku LARP involving text, objectives, or mapping shall be completed in accordance with the *Municipal Government Act*, Leduc County Municipal Development Plan, and all other applicable County bylaws, policies, plans, and strategies.





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|----------|-------------------------------|----------|---|--|-----------------------------------|
| | Plan Boundary | A | Development Node - Business & Hospitality | | Vacant & Underdeveloped Lots |
| | Development District Boundary | B | Development Node - Industrial Innovation | | Arterial & Collector Road Network |
| 6 | Development District Number | C | Development Node - Logistics & Distribution | | Local Road Network |
| | Development Node Boundary | | Industrial Hub | | Watercourse |

Exhibit 18: Priority Growth & Development Opportunities

