

East Telford Lake Area Structure Plan

January 2019

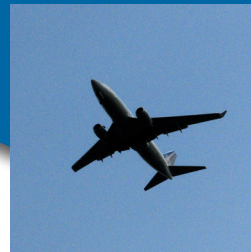
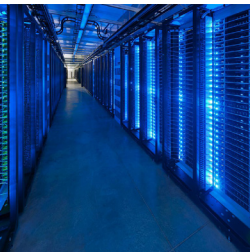
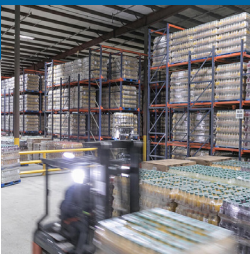


TABLE OF CONTENTS

1.0	Introduction	1
1.1	Purpose	1
1.2	Stakeholder & Public Engagement Process	3
1.3	Interpretation.....	3
2.0	Planning Context.....	4
2.1	Municipal Government Act.....	4
2.2	Edmonton Metropolitan Region Growth Plan	4
2.3	Edmonton International Airport Vicinity Protection Area Regulation.....	5
2.4	City of Leduc/Leduc County Intermunicipal Development Plan Bylaw No. 772-2011, As Amended.....	6
2.5	Municipal Development Plan, Bylaw 773-2011, As Amended.....	6
2.6	Aerotropolis Viability Study	7
2.7	Telford Lake Master Plan	11
2.8	Agricultural Impact Assessment.....	12
3.0	Existing Conditions.....	18
3.1	Existing Land Uses.....	18
3.2	Adjacent Land USEs.....	18
3.3	Natural Features	19
3.4	Telford Lake—Saunders Lake Corridor	21
3.5	Historic Resources.....	22
3.6	Environmental Assessment.....	22
4.0	Land Use Concept	23
4.1	Aero Employment & Flex Business Policy Areas Overview.....	25
4.2	Aero Employment	25
4.3	Flex Business	27
4.4	General Commercial	29
4.5	Urban Services	29
4.6	Environmental Reserve	30
4.7	Park	31
4.8	Agriculture	32
5.0	Transportation	33
5.1	Spine Road	33
5.2	Arterial & Collector Roadway Network.....	33
5.3	Local Roadways.....	34
5.4	Processional Routes	35
6.0	Servicing.....	35
6.1	Stormwater Management	35
6.2	Sanitary Sewer	36
6.3	Water Network	37

7.0 Implementation 38
7.1 Outline Plans 38
7.2 Land Use Bylaw 38
7.3 Staging..... 38
8.0 References 45

List of Tables

Table 1: Land Use Statistics..... 23

List of Figures

Figure 1: Location..... 2
Figure 2: AVS Priority Areas 8
Figure 3: Telford Lake Southern District Land Requirement Projections (2044) 10
Figure 4: Land Ownership 13
Figure 5: MDP Context 14
Figure 6: IDP Context 15
Figure 7: ASP Context..... 16
Figure 8: Existing Conditions 17
Figure 9: Land Use Concept 24
Figure 10: Transportation Plan 40
Figure 11: Stormwater Servicing..... 41
Figure 12: Sanitary Servicing..... 42
Figure 13: Water Servicing..... 43
Figure 14: Staging Plan..... 44

1.0 INTRODUCTION

1.1 PURPOSE

This Area Structure Plan (ASP) is meant to provide direction for the development of industrial, business, and other employment-generating uses in the area, in a manner that is consistent with the City of Leduc and County of Leduc Intermunicipal Development Plan (IDP), the City of Leduc Municipal Development Plan (MDP), and the Edmonton Metropolitan Region Growth Plan (EMRGP). This ASP also builds upon the opportunities and vision set out in the Aerotropolis Viability Study (AVS).

The plan encompasses approximately 430 hectares (ha) (1062 acres) and is located on the east side of the city, north and south of Telford Lake. The plan area is bounded on the north side by Township Road 500 (65 Avenue), on the east side by Range Road 245 (Spine Road), on the south side by Rollyview Road, and on the west side by Lions Park Road (Range Road 250) and, north of Telford Lake, the Lakeside Industrial ASP.

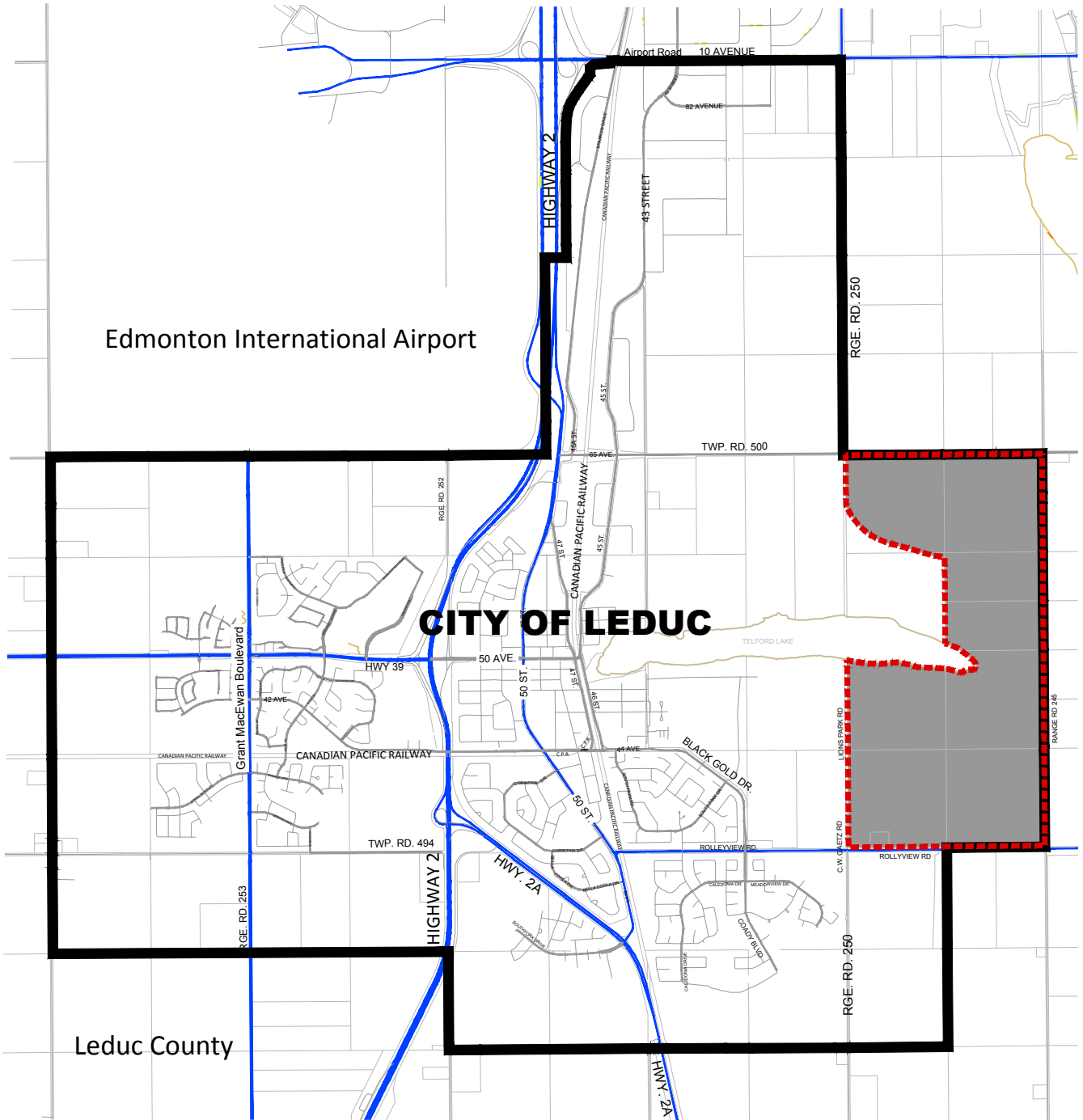
An ASP serves as a means of clarifying, communicating, and protecting the vision of future development for the plan area. The vision for the long-term future development of the lands in the plan area combines light industrial, office, and other business and employment uses, and serves to implement airport-connected development within the plan area. The ASP provides significant areas of public parkland around the lakeshore for recreation and environmental protection. The ASP also provides for the development of a municipal cemetery south of the lake. The following points provide more detail:

- The East Telford Lake ASP acts as an important employment generator and is designed to attract and accommodate the types of industry identified through the Aerotropolis Viability Study.
- Telford Lake is an important feature within the community and the region. The lake and surrounding riparian area are protected from encroachment, provide public access and recreation opportunities, and provide a picturesque location for adjacent development. Careful consideration will be taken when planning near Telford Lake to avoid or minimize negative impacts due to development.
- The Spine Road is envisioned as the major north-south arterial roadway running east of, and parallel to, Highway 2. The Spine Road links major economic centres in the area, such as the Edmonton International Airport, Nisku Industrial Business Park, the City of Edmonton, and the City of Leduc, including East Telford Lake ASP.

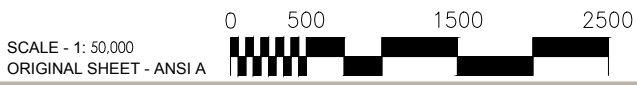


LEGEND

 PLAN AREA



V:\1161\lociva\1161106060\drawing_modal_files\planning\asp\loc_Map_telford_lake_29mar2018.dwg



September 7, 2018
1161 106060 KC

1.2 STAKEHOLDER & PUBLIC ENGAGEMENT PROCESS

The public and stakeholders, including area landowners, were involved in the preparation and review of the ASP at three main points during the planning process – initiation, plan development, and finalization. Engagement events included:

- Open House #1 (June 2017) – stakeholders and the general public were invited to review and discuss the background materials that were prepared, the connectivity between the plan area, the transportation network, and the EIA, and the opportunities and constraints that resulted.
- Open House #2 (November 2017) – the second open house centred around the presentation of the draft land use concept.
- Open House #3 (October 2018) – the third and final open house presented the preferred land use concept.
- In accordance with the *Municipal Government Act*, a public hearing was held to hear representations made by parties affected by the proposed bylaw.

1.3 INTERPRETATION

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

Policies are written using “shall,” “will,” “should,” or “may” statements, and can be interpreted as follows:

- A policy statement(s) containing “shall” or “will” denotes mandatory compliance or adherence to direction. Where a policy proves impractical, premature, unnecessary, or impossible, an amendment to the plan may be required.
- A policy statement(s) containing “should” is an advisory statement and indicates the preferred principle, policy, and/or implementation strategy. If the “should” statement is not followed because it is impractical, premature, unnecessary, or impossible, the intent of the policy may be met through other agreed-upon means.
- A policy statement(s) containing “may” denotes discretionary adherence or choice.

2.0 PLANNING CONTEXT

2.1 MUNICIPAL GOVERNMENT ACT

This ASP has been prepared in accordance with Part 17 of the *Municipal Government Act* (MGA). Per the MGA, an ASP must describe:

- the sequence of development proposed for the area;
- the land uses proposed for the area, either generally or with respect to specific parts of the area;
- the density of population proposed for the area either generally or with respect to specific parts of the area;
- the general location of major transportation routes and public utilities; and,
- may contain any other matters, including matters relating to reserves, as the council considers necessary.

The ASP must be consistent with the IDP in respect of land that is identified in both the ASP and the IDP. The ASP must also be consistent with the MDP.

2.2 EDMONTON METROPOLITAN REGION GROWTH PLAN

In October 2017, the Alberta government approved the Edmonton Metropolitan Region Growth Plan (EMRGP). The Growth Plan guides the daily work of the Edmonton Metropolitan Region Board (EMRB), ensuring decisions and programs are integrated to support the long term economic prosperity and quality of life for all citizens of the Edmonton Metropolitan Region.

The Vision and Growth Plan are shaped by seven overarching Guiding Principles:

1. Collaborate and coordinate as a Region to manage growth responsibly.
2. Promote global economic competitiveness and regional prosperity.
3. Achieve compact growth that optimizes infrastructure investment.
4. Ensure effective regional mobility.
5. Recognize and celebrate diversity of communities, and promote an excellent quality of life across the Region.
6. Wisely manage prime agricultural resources.
7. Protect natural heritage systems and environmental assets.

The East Telford Lake ASP supports the EMRGP and facilitates the following objectives:

- 1.1 – Promote global economic competitiveness and diversification of the regional economy.
- 1.2 – Promote job growth and the competitiveness of the Region's employment base.
- 1.3 – Enhance competitiveness through the efficient movement of people, goods and services to, from and within the Region.
- 2.1 – Conserve and restore natural living systems through an ecological network approach.

- 2.2 – Protect regional watershed health, water quality and quantity.
- 2.3 – Plan development to promote clean air, land and water and address climate change impacts.
- 2.4 – Minimize and mitigate the impacts of regional growth on natural living systems.
- 4.1 – Establish a compact and contiguous development pattern to accommodate employment and population growth.
- 4.6 – Prioritize investment and funding of regional infrastructure to support planned growth.
- 5.1 – Develop a regional transportation system to support and enhance growth and regional and global connectivity.
- 5.3 – Coordinate and integrate land use and transportation facilities and services to support the efficient and safe movement of people, goods and services in both urban and rural areas .
- 5.4 – Support the Edmonton International Airport as northern Alberta’s primary air gateway to the world.
- 6.2 – Minimize the fragmentation and conversion of prime agricultural lands for non-agricultural uses.
- 6.3 – Promote diversification and value-added agriculture production and plan infrastructure to support the agricultural sector and regional food system.

2.3 EDMONTON INTERNATIONAL AIRPORT VICINITY PROTECTION AREA REGULATION

The Province of Alberta’s Edmonton International Airport Vicinity Protection Area Regulation (EIAVPA; AR 55/2006) identifies a range of limits on development to address the functional requirements and noise impacts of airport operations. Specific to the plan area, the EIAVPA identifies Noise Exposure Forecast (NEF) contour areas, within which various types of development should be restricted.

The majority of the plan area is affected by the overlay in one of the following contour areas: NEF 25-30, NEF 30-35, and NEF 35-40. These contour areas have increasing restrictions on the types of land uses that are permitted to be located within them. Examples of restricted uses include residences and campgrounds, churches, day cares, schools, and spectator sports facilities.

This ASP recognizes that a restriction on sensitive land uses is required to protect the continued successful operation of the Edmonton International Airport. To conform with the AVPA, this plan carefully considers the NEF contour lines when allocating land uses. As a result, a majority of the plan is designated for industrial type uses, and residential uses are completely omitted.

2.4 CITY OF LEDUC/LEDUC COUNTY INTERMUNICIPAL DEVELOPMENT PLAN BYLAW NO. 772-2011, AS AMENDED

In the Fall of 2007, the Councils of the City of Leduc and Leduc County agreed to the collaborative preparation of the Joint Sustainable Growth Study and an Intermunicipal Development Plan (IDP). The Guiding Principles are regional in scope and are based upon five Sustainability Pillars:

- Smart Growth
- Creating Vibrant Communities
- Environmental Stewardship
- Economic Development
- Responsible Governance

In 2017, the IDP was amended to facilitate the business-based land use policies along the east side of the City and around the County's Saunders Lake. The East Telford Lake ASP is located within policy areas B (Saunders/Telford Lake Business) and G (Southeast Business Industrial).

The general purpose and intent of the Saunders/Telford Lake Business Policy Area B is to provide for high quality business, light industrial, and office development with complimentary commercial uses north of Saunders Lake.

Southeast Business Industrial Policy Area G, located south of Telford Lake, is meant to provide for commercial, office, business, and light industrial development. Given servicing constraints, this area is not expected to be developed within the 35-year time horizon of the IDP.

2.5 MUNICIPAL DEVELOPMENT PLAN, BYLAW 773-2011, AS AMENDED

In April 2012, the City of Leduc approved the MDP (Bylaw 773-2011). The MDP was subsequently amended in January 2015 (Bylaw 870-2014) and August 2017 (Bylaw 934-2016). The City of Leduc MDP provides a long-term vision and policy direction for growth and development in the city. The MDP determines where growth is most feasible based on such factors as infrastructure, sustainable growth principles, and economic development opportunities. The MDP also addresses the environment; the economy and tourism; social wellness and safety; recreation and culture; governance; and the administration, monitoring, and implementation of the MDP policies.

Several land use policy area designations are identified within the ASP area – Telford Lake Commercial, Office, Light Industrial, and Business Park; Transitional Industrial Use; Open Space and Greenways; and Riparian Areas (see Figure 5: MDP Context).

Telford Lake Commercial, Office, Light Industrial, and Business Park uses are to be developed along the north and south sides of Telford Lake, to ensure the compatibility of development with adjacent parks and natural areas, and to mitigate environmental and visual impacts on Telford Lake and the surrounding riparian areas. The MDP also directs these areas to incorporate low-impact stormwater

management practices, and to exceed the architectural, urban design, and landscape architecture standards typically required for light industrial development. Industrial and business park developments shall be in accordance with the City of Leduc approved statutory plans and the Land Use Bylaw.

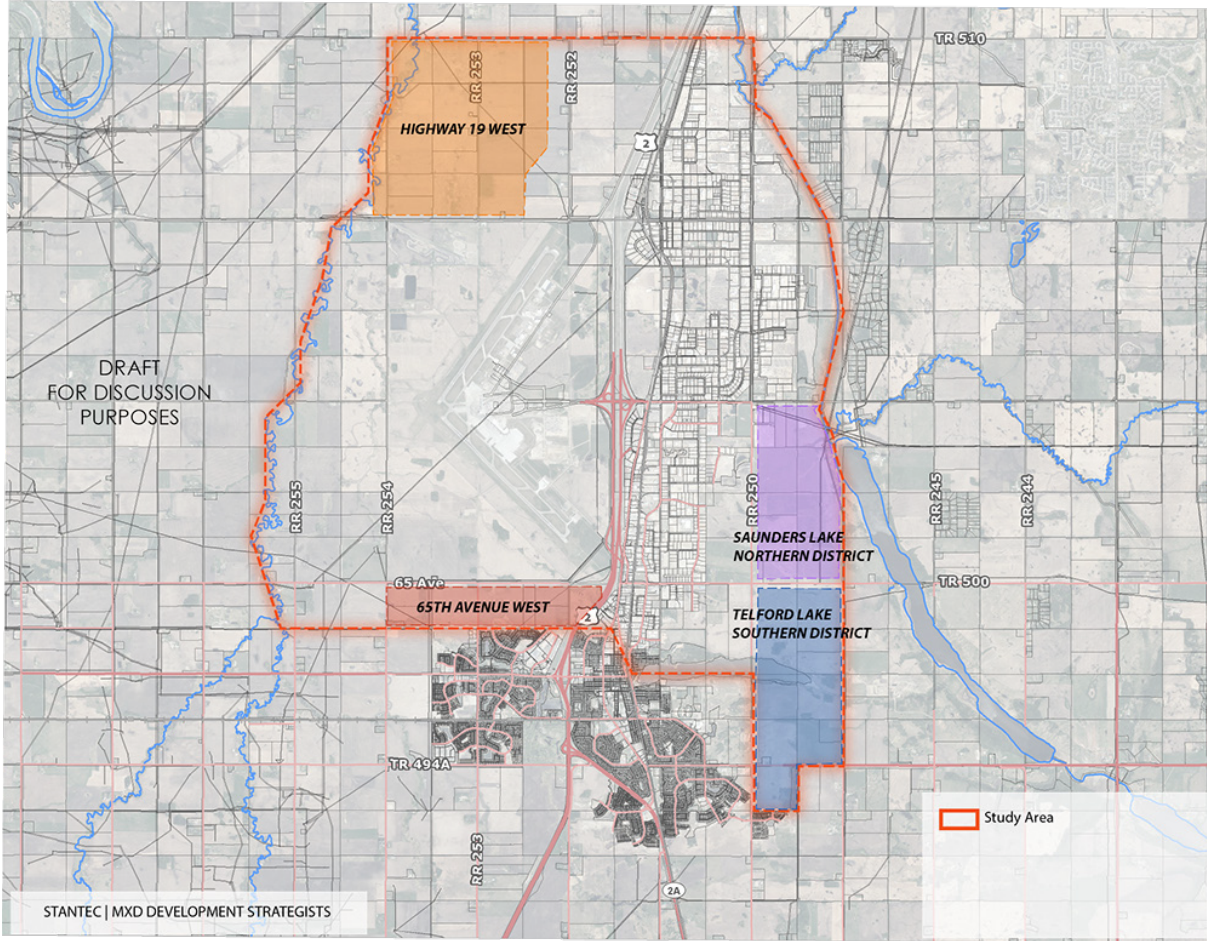
2.6 AEROTROPOLIS VIABILITY STUDY

2.6.1 AVS History

An Aerotropolis Viability Study (AVS) was completed in 2015 that focused on employment growth areas in the City of Leduc and Leduc County, surrounding the Edmonton International Airport (EIA). There were four priority areas targeted for future commercial and industrial growth, totaling 950 ha (2,345 acres) of primarily developable greenfield land (see Figure 2: AVS Priority Areas). They were as follows:

- Highway 19 West
- Saunders Lake Northern District
- Telford Lake Southern District
- 65th Avenue West

Figure 2: AVS Priority Areas



Source: Aerotropolis Viability Study, 2015

Since the completion of the study, the Telford Lake Southern District priority area was spatially amended. The quarter section south of Rollyview Road was removed from the priority area and is being planned by a third party. This quarter section is not included in the planning process for the East Telford Lake ASP. The Telford Lake Southern District also contains the Lakeside Industrial Area Structure Plan which was approved in 2014. The Lakeside Industrial ASP is located immediately east of the Harvest Industrial Park ASP area and includes 55 ha (136 ac) of land within the Telford Lake Southern District boundaries.

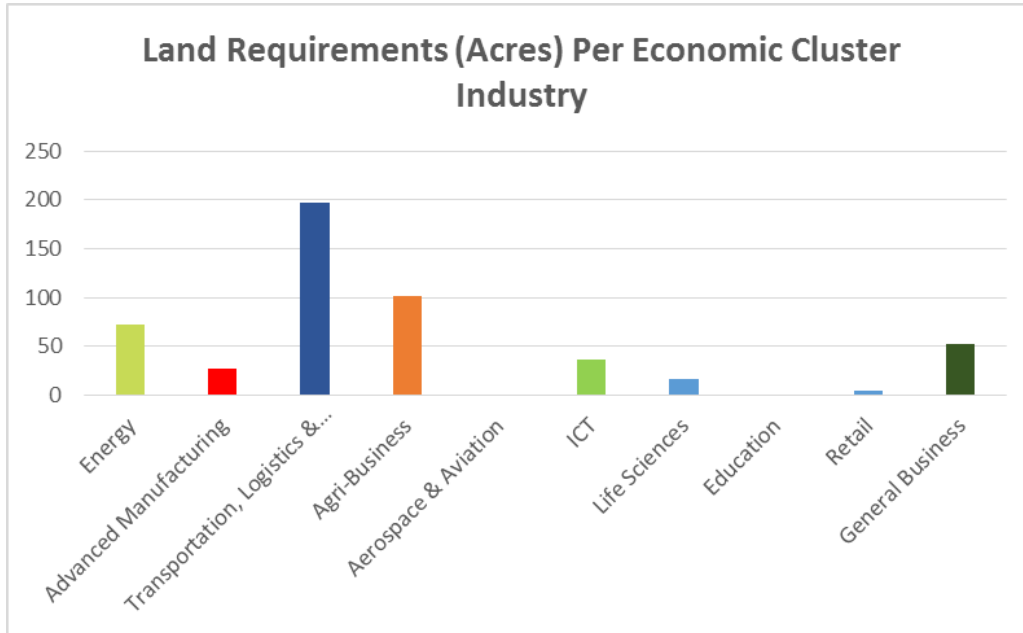
A key focus of the study was to determine and recommend a variety of economic clusters that would have the potential feasibility to grow and be successful within the study area. An economic cluster occurs when companies from the same industry gather in a close spatial setting, which generates a variety of benefits. These benefits include sharing information, generating regional and international competitiveness, and being near a workforce that has a similar skillset. Eight economic clusters were investigated:

- Aerospace & Aviation
- Energy
- Agri-business
- Transportation, Logistics, & Distribution
- Information Communication Technology (ICT)
- Advanced Manufacturing
- Life Sciences
- Education

Each economic cluster was analyzed to determine its potential success for growth in the Leduc area based on how well it was already established, future job growth in the province and Edmonton Metropolitan Region, potential future labour available through the post-secondary education system, provincial and national competition, transportation networks, and the ability to leverage EIA as a key connectivity point. Upon analysis of the economic clusters, they were allocated spatially across the four priority areas. Two economic clusters - transportation & logistics, and agri-business – were viewed as the most viable for the Telford Lake Southern District, to produce long-term employment growth in this specific area of the City of Leduc. The Telford Lake Southern District was described in the study as a “hub for transportation & logistics, and agri-business, along with several other related clusters such as ICT and Life Sciences”.

7,428 direct new jobs were planned over a thirty-year year horizon (2014 to 2044), spread across energy, advanced manufacturing, transportation & logistics, and agri-business, along with a small amount in ICT and life sciences. Jobs were also placed in a cluster identified as “general business”, which could be any jobs indirectly related or non-related to the clusters under study. Development typologies were identified for the specific clusters, and high-level land-use recommendations were made based on the clusters and their associated typologies.

Figure 3: Telford Lake Southern District Land Requirement Projections (2044)



Source: *Aerotropolis Viability Study, 2015*

Three catalytic projects were identified for the Telford Lake Southern District, to enable and induce future development within their respective clusters. They were as follows:

- Cold Chain Logistics Hubs
- Agri Food Processing Complex & Business Park
- Lakefront Corporate Park

Lastly, a general phasing strategy was determined based on collaboration with the Joint Infrastructure Master Plan and Service Evaluation (JIMPSE) team; where a parallel study was being conducted. The phasing strategy utilized expertise in servicing and transportation to understand the most viable way to begin development in the Telford Lake Southern District. It was decided that it would be most optimal to begin development at the intersection of 65th Avenue and Range Road 250. Over time, development would be built in a southerly and southeast fashion. Phase one was noted to focus on energy, transportation & logistics, agri-business, and advanced manufacturing. As the area built-out and established an address, further economic clusters could be enabled such as ICT, life sciences, and general business (focused in a campus office setting). Furthermore, should other servicing alternatives become viable, the phasing of development may have to be reviewed.

2.6.2 AVS Review

The 2015 study was reviewed during this ASP process to analyze directions and recommendations that are still applicable, along with those that require updates and further exploration. Throughout the ASP planning process, the foundational planning, economic, and development principles that were

recommended in the AVS were considered, and their current validity confirmed based on the changing economic landscape that has occurred in Leduc and Alberta since 2015.

Based on the research conducted through a Regional Economic Development Analysis, and an Economic Diversification Analysis, several key items were determined:

- A large spike in the office vacancy rate over the past several years in the Edmonton Metropolitan Region may prohibit the construction of a Lakefront Corporate Park. A Lakefront Corporate Park should still be considered over a medium to long term phasing schedule, but possibly at a smaller-scale than previously planned.
- Industrial space has continued to be a strong performer from a leasability standpoint in the Edmonton Metropolitan Region, even through an economic downturn.
- Flex industrial / flex commercial space has become a preferred choice of development for many developers and end-user tenants. There may be a greater opportunity for flex space moving forward. Flex industrial and flex commercial space allows for a multitude of uses and tenants to work in synergy with each other.
- The four core economic clusters identified in the 2015 study for the Telford Lake Southern District are viable and have great potential for the East Telford ASP.
- The ICT cluster has better validity to be included within the primary economic clusters of agri-business, advanced manufacturing, and energy, rather than a standalone cluster.
- The sub-sector of agricultural-biotech within the life sciences cluster has better validity to be included within the agri-business cluster (described as “ag-tech”). Other life science sub-sectors such as medical devices, research and development, and pharmaceuticals, would be more optimally located closer to EIA, at the 65th Avenue West priority area.
- The phasing diagram depicted in the AVS for the East Telford ASP Area may require alteration due to varying availability of utilities, including sanitary servicing. The first phase of development will occur where access to sanitary servicing is provided.

These themes were considered and applied in the planning process for the East Telford ASP.

2.7 TELFORD LAKE MASTER PLAN

The Telford Lake Master Plan provides a comprehensive plan and strategy for development and management of Telford Lake and the lands that surround it (ISL Engineering, 2010). The five key objectives of the Telford Lake Master Plan are:

- Environmental Protection – protect water quality, habitat and vegetation for visitors and wildlife.
- Multiway and Trails – provide for the extension of the multiway network around the lake.
- Recreation Open Space and Facilities – define and create a series of recreation facilities around the lake.
- Paddling Venue – provide a plan for the establishment of Telford Lake as a regional paddling centre.
- Land Acquisition – define land acquisition requirements and the mechanisms for these acquisitions.

The Master Plan recognizes that lands required to accommodate park facilities are typically acquired through environmental and municipal reserve dedication. To acquire land for both environmental protection of the shoreline, and to accommodate the multiway corridor, the Plan recommends that the City take a minimum 10 m strip of environmental reserve, plus a 20 m strip of municipal reserve around the lake. Some of the key recommended program features for the ASP include:

- Protecting and maintaining lake fringe vegetation and habitat.
- The provision of a 3 m wide asphalt multi-use trail (multiway) around the lake, including rest nodes and viewpoints.
- Provide access to the north shore and parking.
- Provide opportunities to develop a future trail to link Telford Lake to Saunders Lake.

The Master Plan also provides a series of design guidelines for industrial development adjacent to Telford Lake. These include, but are not limited to, building orientation, on-site stormwater management, landscaping and screening, and site design.

2.8 AGRICULTURAL IMPACT ASSESSMENT

An Agricultural Impact Assessment (AIA) was prepared in support of the East Telford Lake ASP and submitted under a separate cover. The AIA estimates the impacts of the proposed ASP on current and future agricultural activities both within the ASP area and within 1 km surrounding it and makes recommendations for the mitigation of these impacts (Stantec, 2018). This assessment builds upon a previously completed Agricultural Baseline Assessment (Stantec, 2017).

Ultimately, the ASP does not provide for the continuation current agricultural uses within its boundaries. There will be a loss of approximately 397 ha (981 acres) of cultivation and 67 ha (166 acres) of pasture as this area is developed for non-agricultural purposes over time. It is expected that agriculture will continue as an interim use as the area develops, and that industrial/commercial value-added agriculture uses are encouraged to develop in the future.

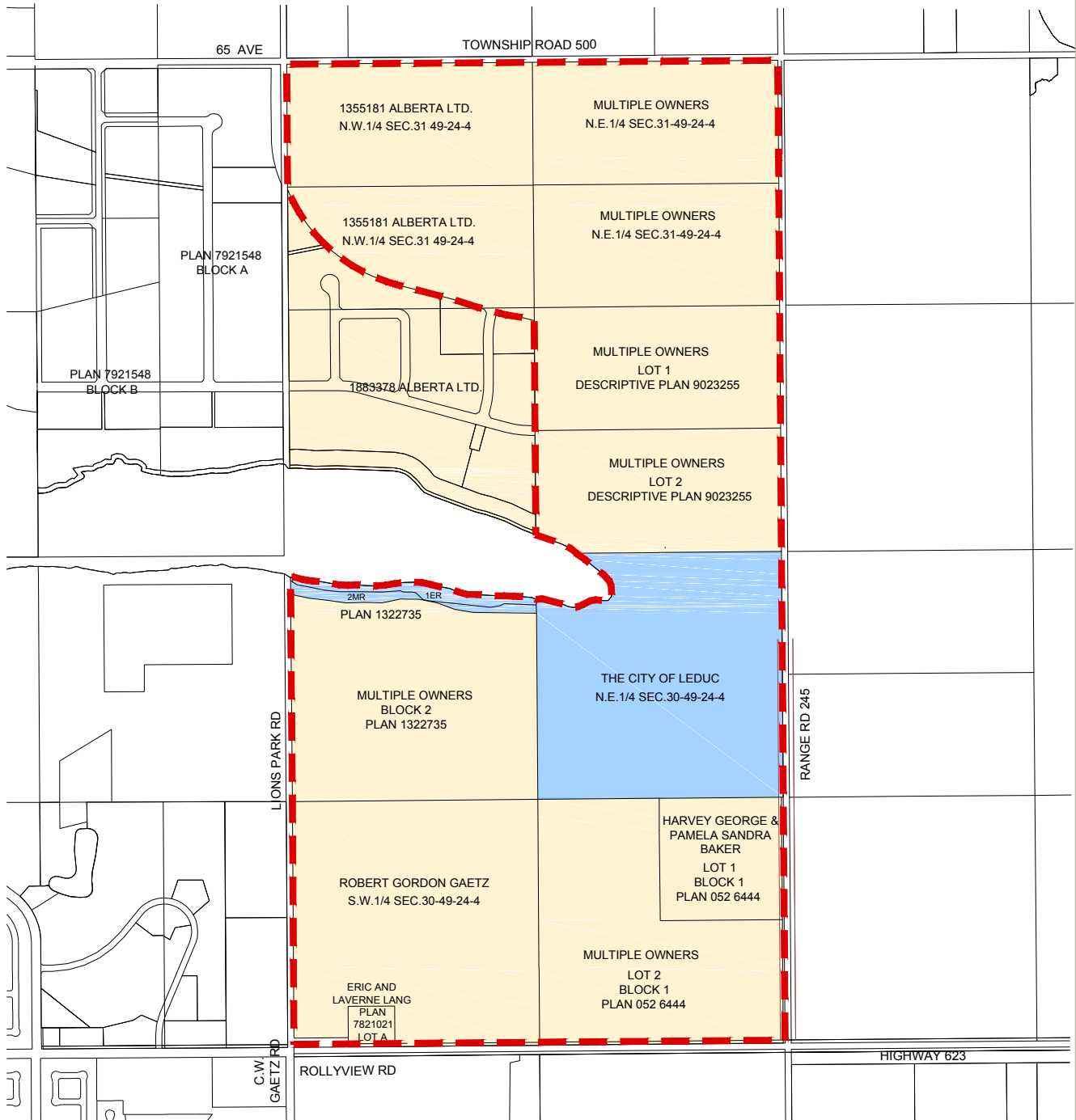
The following recommendations are intended to mitigate the agricultural impacts and minimize potential land use conflicts of the proposed East Telford Lake ASP:

- Agricultural lands and operations that are compatible with surrounding land uses within the proposed ASP should continue until land development is initiated, as designated in the approved East Telford Lake Area Structure plan.
- The City of Leduc and Leduc County continue to support changes in the Saunders Lake area that retain lands east of the lake for long-term agricultural use.
- The City of Leduc and Leduc County support the development of a hub for transportation and agri-business in the East Telford Lake ASP area, as identified in the Aerotropolis Viability Study for the area identified as the Telford Lake Southern District. This would include an Agri-Food Processing Complex and a Cold Chain Logistics hub for warehousing and distribution of perishables.



LEGEND

- PRIVATE LANDS
- PUBLIC LANDS



V:\1161\active\1161106060\drawing_model_files\planning\ASP\ASP_fellford_lake_07sept2018.dwg

SCALE - 1: 20,000
ORIGINAL SHEET - ANSI A



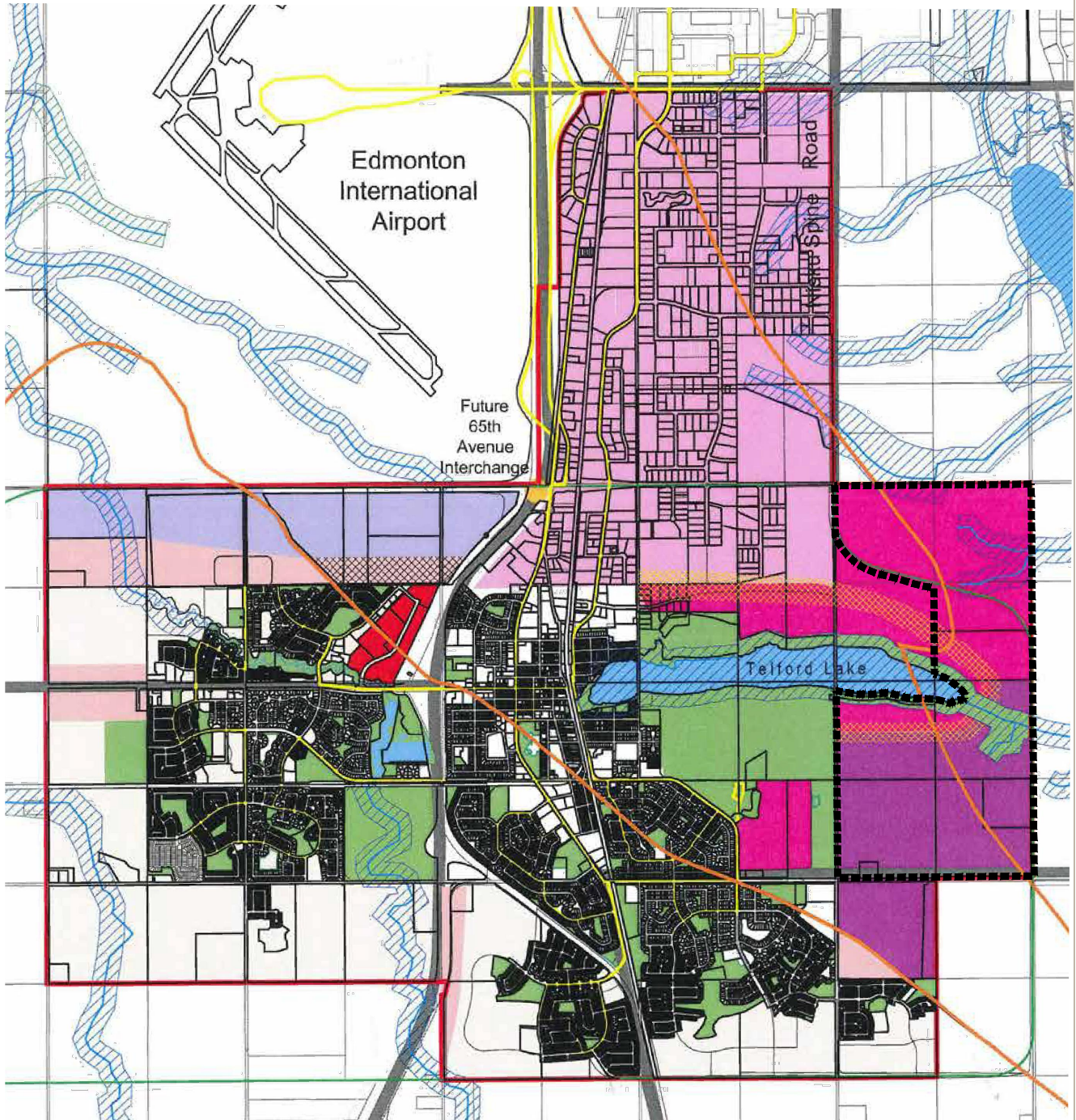
September 7, 2018
1161 106060 KC

FIGURE 5.0

MDP CONTEXT MAP



- Legend**
- City of Leduc Boundary (Effective Jan 1st, 2014)
 - Transitional Residential Mixed Use
 - Aerotropolis Business Industrial
 - Nisku/Leduc Business Industrial
 - Southeast Business Industrial
 - Telford Lake Commercial, Office, Light Industrial, and Business Park
 - Leduc Common
 - Open Space and Greenways
 - Approved / Future Residential ASPs
 - Water Bodies, Creeks and Rivers
 - Transitional Business Mixed Use
 - Transitional Industrial Use
 - Riparian Areas
 - Future Major Roadway (conceptual - refer to Figure 7)
 - Future Interchanges (conceptual)
 - C-Line Transit
 - N.E.F. 30 Contour
 - East Telford ASP Boundary



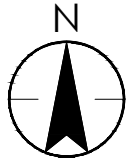
V:\1161\active\1161106060\drawing\modal_files\planning\asp\loc_Map_Telford_Lake_29mar2018.dwg

SCALE - 1: 50,000
 ORIGINAL SHEET - ANSI A

September 7, 2018
 1161 106060 KC

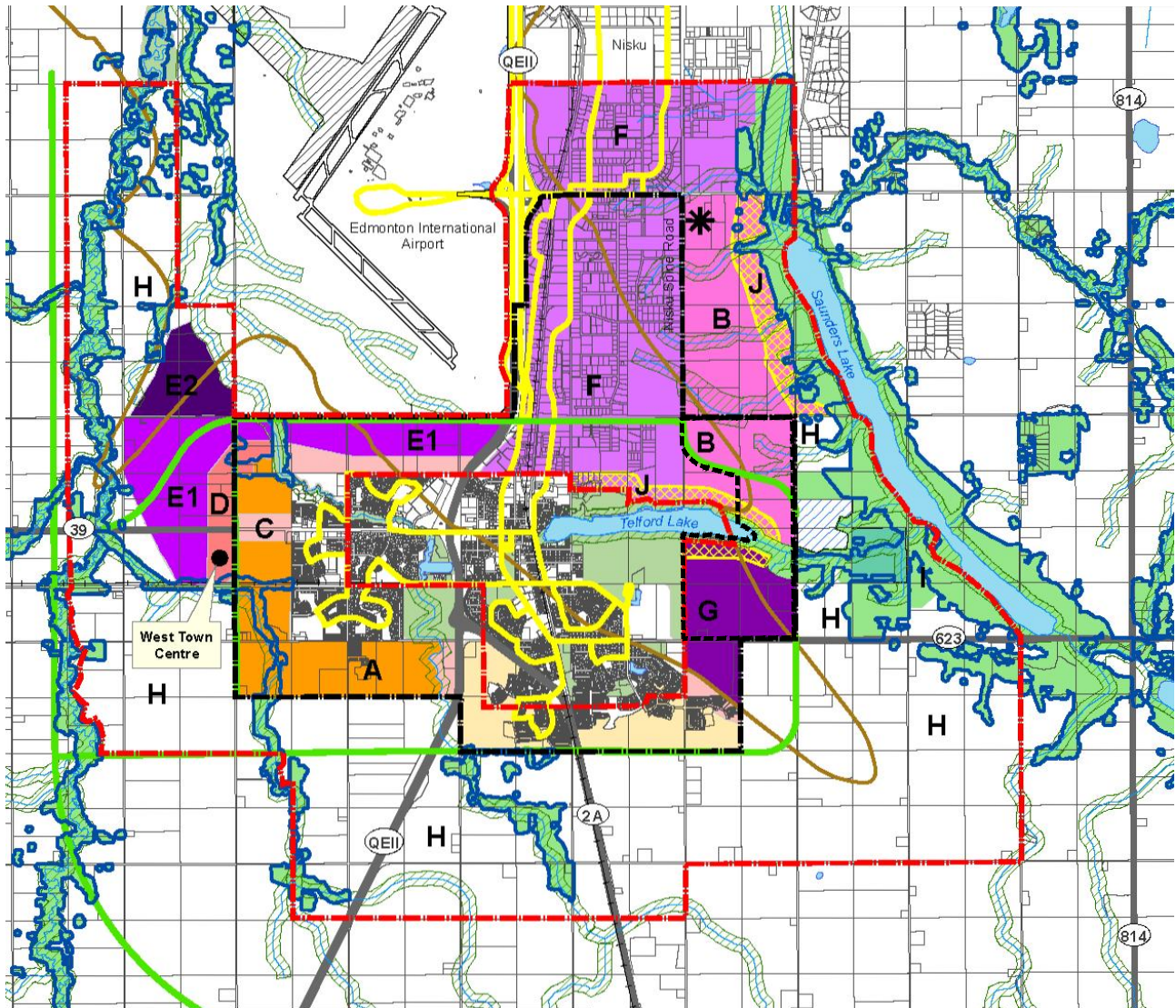
FIGURE 6.0

IDP CONTEXT MAP



Legend

- | | | |
|------------------------------------|--|-------------------------------|
| IDP Area Boundary | IDP Reserve and Referral Area | Railway |
| City of Leduc Boundary | Open Space and Greenways | Proposed Future Major Roadway |
| Primary Urban Residential Growth | Business to Greenways Transition | Runway |
| Saunders / Telford Lake Business | Future Runway & Clearance Zone | LeducTransit |
| Transitional Residential Mixed Use | Approved Residential ASPs | N.E.F. 30 Contour |
| Town Centres | Open Space | Creeks & Rivers |
| West Business Industrial | Regional Landfill Site (to be reclaimed as open space in the future) | Temporary Industrial Use |
| West Business Industrial Reserve | Regional Landfill Site (West Expansion Area) | East Telford ASP Boundary |
| Nisku/Leduc Business Industrial | Riparian Areas | |
| Southeast Business Industrial | Leduc County Environmental Study Area Boundary | |



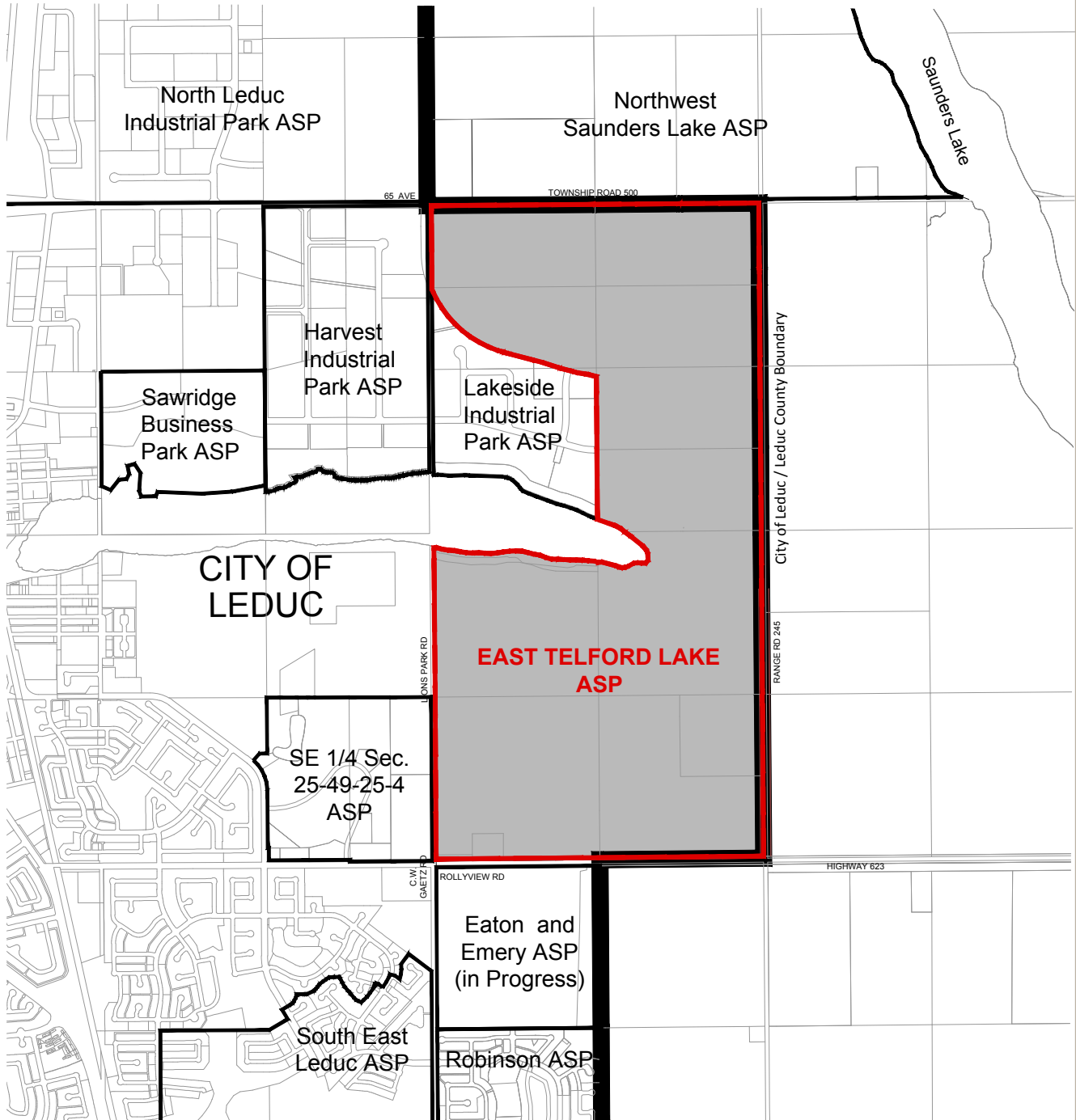
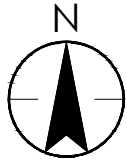
V:\1161\Active\1161106060\drawing_model_files\planning\asp\loc_Map_Telford_Lake_07jan2018.dwg

SCALE - 1: 100,000
ORIGINAL SHEET - ANSI A

January 7, 2019
1161 106060 KC

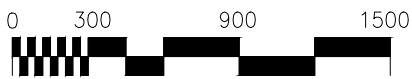
FIGURE 7.0

ASP CONTEXT MAP



V:\1161\active\1161106060\drawing_model_files\planning\ASP\ASP_EastTelfordLake_07sept2018.dwg

SCALE - 1: 30,000
ORIGINAL SHEET - ANSI A



September 7, 2018
1161 106060 KC

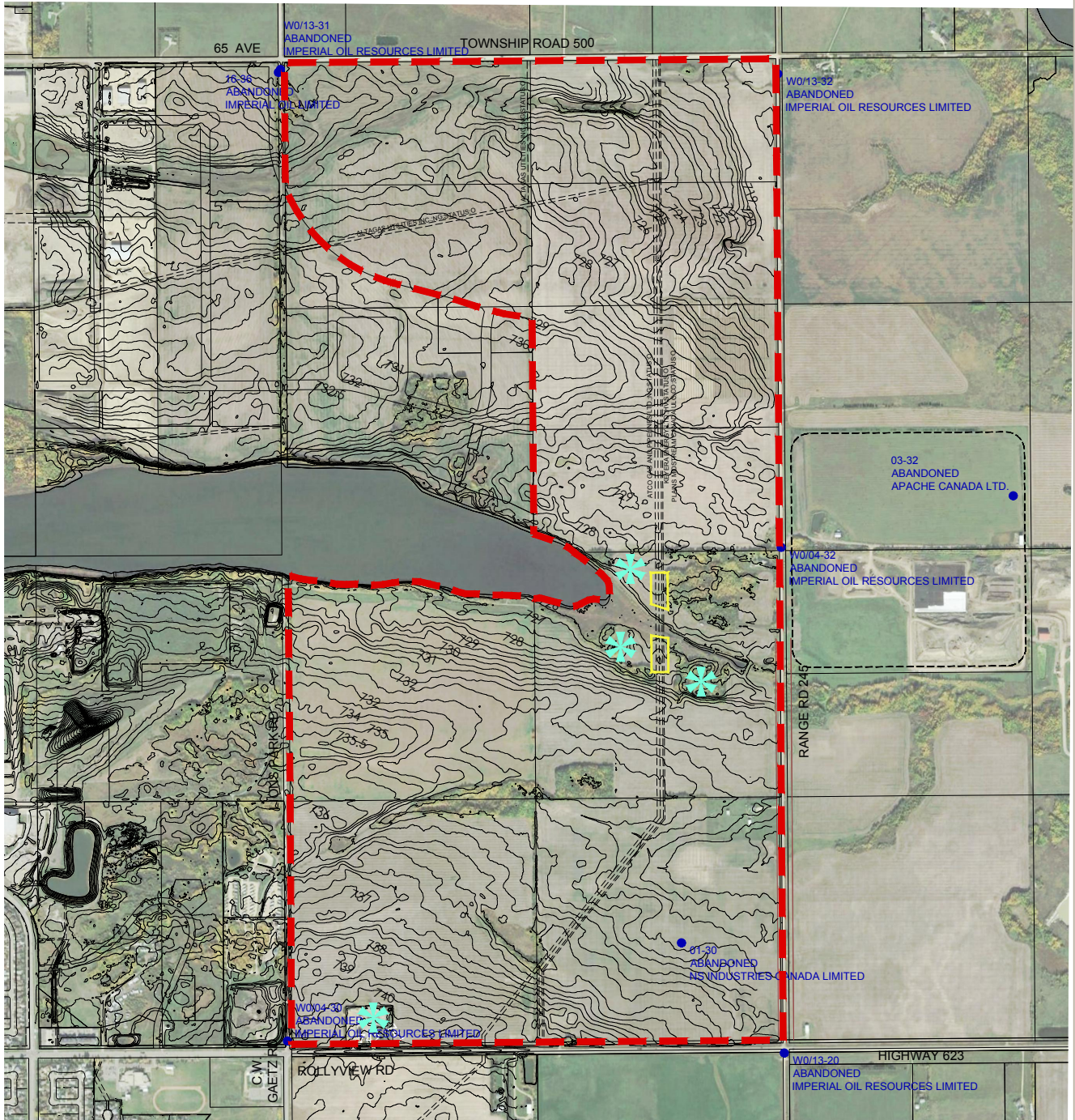
FIGURE 8.0

EXISTING CONDITIONS

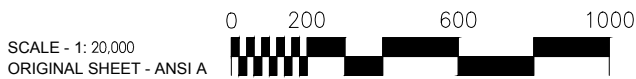


LEGEND

- CONTOURS
- EXISTING PIPELINES
- EXISTING OIL AND GAS WELLS
- REGIONAL LANDFILL SITE
- APPROX. LOCATION OF HISTORICAL STRUCTURES
- ARCHAEOLOGICAL SITE BOUNDARY



V:\1161\active\1161106060\drawing_model_files\planning\ASP\ASP_telford_lake_12dec2018.dwg



December 12, 2018
1161 106060 KC

3.0 EXISTING CONDITIONS

3.1 EXISTING LAND USES

Most lands within the East Telford ASP are used for agriculture and are actively under cultivation (see Figure 8: Existing Conditions). Two residences are present – one in the southwest, and one in the south quarters of section 30.

As of 2018, the area was designated as UR (Urban Reserve), with the exception of small areas designated as ERD (Environmental Restricted Development), and GR (General Recreation). The Telford Industrial Overlay applies to an area south of Telford Lake.

3.2 ADJACENT LAND USES

3.2.1 Current Land Uses

Lands to the northwest are a mix of agricultural and industrial land uses. Lands to the north are in agricultural use. To the east, lands are also predominantly agricultural and include a landfill. Under the Subdivision and Development Regulation, lands adjacent to landfill sites are subject to additional development restrictions. Lands to the south are agricultural. To the southwest, lands are a mix of recreational and agricultural land uses with residential areas beyond. Current land ownership is shown in Figure 4: Land Ownership.

3.2.2 Planned Land Uses

Plans are in place for approximately half of the lands adjoining the plan area. These include Harvest Industrial Park ASP and North Leduc Industrial Park ASP to the northwest, and the Northwest Saunders Lake ASP - focused on industrial development - to the north in Leduc County (see Figure 7: ASP Context).

Lands to the east and southeast do not have ASPs in place, but are identified in the Leduc-Leduc County IDP as (H) IDP Reserve and Referral Area, and (I) Open Space and Greenways.

Lands to the southwest are predominantly developed for recreational and residential land uses, with portions of the adjacent lands being considered for a mixture of commercial and industrial lands uses as part of a proposed plan amendment for the SE ¼ Sec 25-49-25-4 ASP, as well as future employment lands immediately south of Rollyview Road.

3.3 NATURAL FEATURES

3.3.1 Topography and Soils

The topography of the site is generally described as a mixture of flat, undulating, and depressional. The surficial geology in the area is predominantly described as glacial till deposit overlying bedrock. The glacial till generally contain unsorted clay, silt, pockets of sand and gravel, cobbles and boulders. Locally, it may contain blocks of bedrock, stratified sediments, or lenses of glaciolacustrine and/or glaciofluvial sediments. Throughout much of the study area the till is between 5 to 10 m thick; however, areas of relatively thin till might also occur.

The near-surface bedrock geology is the Horseshoe Canyon Formation of Late Cretaceous age. The Horseshoe Formation consists primarily of fine- to very fine grained, feldspathic sandstone interbedded with siltstone, bentonitic mudstone, carbonaceous mudstone and laterally continuous coal seams. Based on a review of the Alberta Energy Regulator online Coal Mine Map Viewer, no coal mines were identified within the footprint of the site.

Based on a review of previously completed geotechnical studies in the areas, the watertable is within 3 m below ground surface but with groundwater level readings as deep as 5.2 m below ground surface. The watertable elevations were also highly variable but seem to correlate with the lake water level and other major drainage features. However, it should be noted that groundwater levels are expected to fluctuate seasonally and affected by site use, adjacent site use, and during or following significant precipitation events.

A desktop geotechnical report (Stantec, 2017) providing various land use and construction considerations for developments within the East Telford ASP was submitted under a separate cover.

3.3.2 Biophysical Assessment

A desktop Biophysical Assessment was prepared to support the preparation of the East Telford Lake ASP (Stantec, 2017). The ASP contains various wetlands, ephemeral field drainages, and tree stands. A portion of Telford Lake is located in the central portion of the plan area, and three main drainage channels are present that have been modified by ditching. The Biophysical Assessment identifies natural features and prioritizes the features in the context of the ASP. The report also outlines the further studies that should be conducted.

This desktop study was supplemented by a survey of the bed and shore of Telford Lake. The site walk was completed with an Alberta Land Surveyor (ALS) and a Professional Biologist (P. Biol.), to assist with vegetation identification and defining the location where the influence of water from Telford Lake has caused a distinct change in vegetation community.

The following recommendations regarding retention and general development considerations are provided:

3.3.2.1 Telford Lake

Telford Lake and the adjacent riparian, wetland, and woodland vegetation should be maintained. The temporary/seasonal wooded deciduous swamp east of Telford and adjacent agricultural land should be considered for retention and enhancement.

Based on the desktop review of the Telford Lake Biophysical Assessment (Spencer, 2010), and the bed and shore survey, it is recommended that a 10 m ER buffer be applied to the bed and shore line, or where slopes were greater than 25%. In addition, a 50 m MR buffer was applied to the outside of the 10 m ER are to allow for the construction of a multiway and also provide additional setback between development and Telford Lake to meet the recreational and ecological objectives. This allows for a total ER/MR setback of approximately 60 m around Telford Lake.

3.3.2.2 Drainage Channels

Two existing drainage channels – one in the north, associated with the Harvest Industrial Park, and the other to the south – were reviewed and considered for retention. The Harvest Industrial Park drainage channel is not recommended for long-term retention, as its hydrological function can be incorporated into the East Telford stormwater management system over time. The south channel features an area of wetland and woodland habitat, and is recommended for retention for the purposes of both hydrological function and wildlife habitat/movement.

3.3.2.3 South Wetland

A wetland located in the south portion of the ASP area is considered for retention. This temporary/seasonal wetland is one of the larger wetlands in the ASP area and contains a variety of vegetation types.

3.3.3 Environmentally Significant Areas

An Environmentally Significant Areas Study was prepared for the City of Leduc by Fiera Biological Consulting Ltd. in 2017. The study inventoried and assessed the significance of natural areas in the City, as well as to identify natural areas that qualify as Environmentally Significant Areas (ESAs). Three ESAs were identified within the ASP area:

3.3.3.1 ESA#1 – Telford Lake

ESA #1 includes Telford Lake and the riparian and upland habitats surrounding the lake. This ESA provides important habitat for waterfowl, shorebirds, and aquatic mammals and songbirds. Telford Lake is ecologically and hydrologically connected to Saunders Lake to the east, which has been identified an Environmentally Significant Area by Leduc County (Fiera Biological, 2015). Control of invasive weeds is noted as a key management consideration.

3.3.3.2 ESA #5

Located south of Telford Lake within Section 30, this area includes an upland forest patch and two wetland habitats, including a large swamp wetland, which is a unique habitat type in the City.

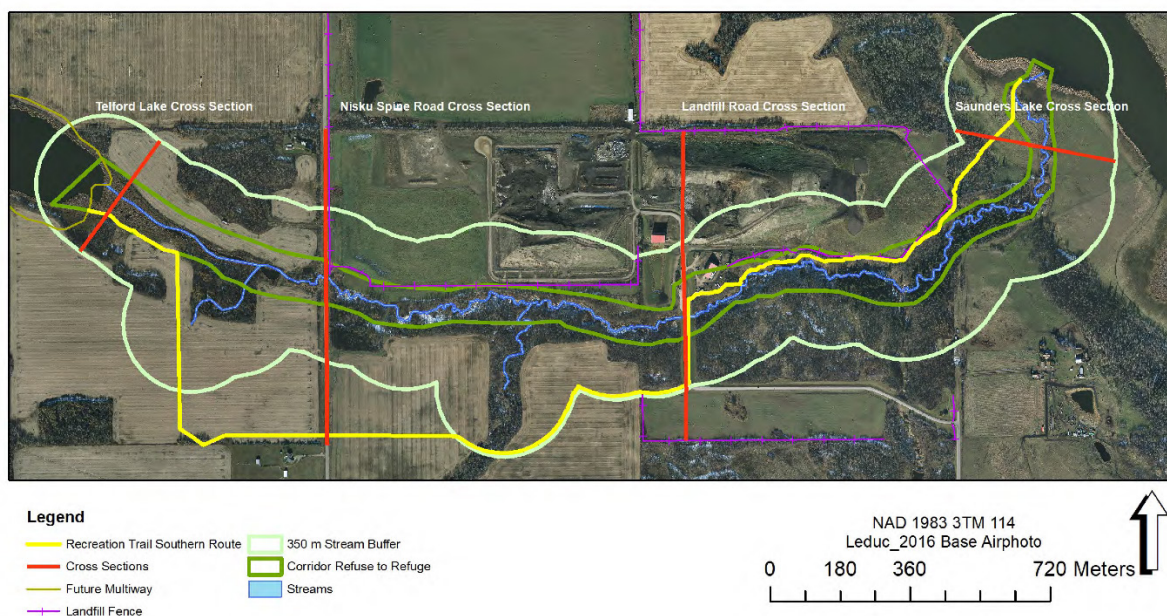
This ESA is important for local connectivity due to its proximity to other ESA habitats, particularly for songbirds, waterfowls and mammals. Activities such as removing ditches that drain the wetland complex, weeding, and establishing development setbacks are recommended.

3.3.3.3 ESA #8

ESA #8 consists of a large forest stand and wetland complex is located at the east end of Telford Lake, within 60m of the north shore of the Lake. The Fiera study recommends weeding, and restoration activities such as removal of old buildings and fences, to improve the overall condition of this ESA. In addition, the lands that connect ESA #8 to Telford Lake should be retained as a (restored) natural area or semi-natural Park space, to improve the existing ecological connection.

3.4 TELFORD LAKE—SAUNDERS LAKE CORRIDOR

From both an ecological and recreational perspective, the corridor between Telford Lake and Saunders Lake is recognized as an important feature. The City of Leduc and Leduc County engaged students from the University of Alberta Urban and Regional Planning program to evaluate the feasibility of creating a wildlife corridor and trail system between the east shore of Telford Lake and the west shore of Saunders Lake (Dragon et al. 2018). This study will inform future work to select and implement the Telford Lake—Saunders Lake strategy.



Above: Telford Lake—Saunders Lake Wildlife Corridor and Preferred Recreation Trail Option

3.5 HISTORIC RESOURCES

A Statement of Justification for *Historic Resources Act* Requirements was submitted to Alberta Culture and Tourism in support of the ASP. As a result, a Historical Resources Impact Assessment for archaeological resources is required prior to the initiation of any land disturbance activities. The assessment is to target undisturbed areas of moderate/high archaeological potential, areas with potential for deeper sedimentation, and areas where historic structures may be present.

3.6 ENVIRONMENTAL ASSESSMENT

A desktop Phase I Environmental Site Assessment (ESA) was prepared to identify areas of potential concern within the ASP area that may require further assessment (Stantec, 2017).

The presence of two pipeline corridors impacted planning and design of the ASP. The north-south corridor carrying high vapour pressure products, crude oil and natural gas, while the the east-west corridor carries natural gas and will be protected and incorporated into the overall design of the ASP. There may be an opportunity to relocate the natural gas lines within future roadways and further investigation may be warranted.

Well sites, test holes, residential/commercial structures and equipment, and septic fields may pose environmental concern and should be further investigated. Any water wells should be decommissioned according to protocols, and development adjacent to oil wells and pipeline corridors should follow setbacks and development protocols.

3.6.1 Pipelines

Three natural gas pipelines are present in the north portion of the plan area, running east-west. Three other pipelines carrying high vapour pressure products, crude oil and natural gas transect the plan area north-south.

3.6.2 Well Sites

The presence of a historical well located in the southeast portion of the plan area presents a high potential environmental concern. Several historical test holes located in 04-30-049-W4 and 13-31-049-W4 also present a high potential environmental concern. The well and test holes should be assessed for subsurface impacts.

3.6.3 Other

The ESA identified a residential/commercial property with equipment storage located in the southwest corner of the plan area that is of moderate concern, and should be investigated for potential environmental concerns. Septic systems associated with residences should be investigated and confirmed, and ultimately decommissioned according to protocols.

4.0 LAND USE CONCEPT

The East Telford Lake ASP area will accommodate the development of primarily industrial and commercial uses, consistent with the EMRGP, IDP, MDP, and the AVS. Figure 9: Land Use Concept shows the conceptual land use allocations, major roadway alignments, and other features such as stormwater management facilities and retained natural areas. The approximate area of each land use is shown in the table below.

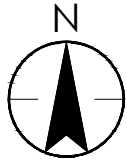
Table 1: Land Use Statistics

Land Use	Area (ha)	% GA
	Area (ha)	% GA
Gross Area	430.4	100%
Environmental Reserve*	12.4	3%
	Area (ha)	% GDA
Gross Developable Area	418.0	100%
Aero Employment	199.2	48%
Flex Business	76.7	18%
General Commercial	14.4	3%
Urban Services	16.2	4%
Park	32.5	8%
SWMF	28.3	7%
Public Utility	10.0	2%
Arterial Roadway	24.2	6%
Collector Roadway	16.4	4%

**Includes areas designated as "Potential Environmental Reserve", which will be further assessed and dedicated at the time of subdivision.*

FIGURE 9.0

LAND USE CONCEPT



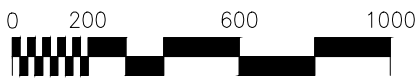
LEGEND

- FLEX BUSINESS
- AERO EMPLOYMENT
- GENERAL COMMERCIAL
- URBAN SERVICES
- ENVIRONMENTAL RESERVE
- POTENTIAL ENVIRONMENTAL RESERVE
- PARK
- STORM WATER MANAGEMENT FACILITY
- UTILITY ROW
- ASP BOUNDARY



V:\1161\active\1161106060\drawing_model_files\planning\ASP_fairford_lake_12dec2018.dwg

SCALE - 1: 20,000
ORIGINAL SHEET - ANSI A



December 12, 2018
1161 106060 KC

4.1 AERO EMPLOYMENT & FLEX BUSINESS POLICY AREAS OVERVIEW

The Aero Employment and Flex Business Land Use Areas in the East Telford Lake ASP have similar goals regarding the promotion of advancing the targeted development and employment. The Aero Employment and Flex Business Land Use Areas differ regarding their built-form. The Aero Employment Area promotes single-use buildings such as light industrial, manufacturing, warehousing, logistics, and other large-scale typologies. The Flex Business Area policies are in place to create a form of development that encourages a wide range of uses that can include but is not limited to office, light assembly and manufacturing, product testing, storage, and distribution. The Flex Business Area will provide the City with a softer form and smaller scale of development in areas that abut uses that are frequented by residents and visitors such as Telford Lake, the future multi-use trail, Leduc Lions Campground, and future residential development to the south of the ASP area.

4.2 AERO EMPLOYMENT

A range of light industrial, manufacturing, logistics and warehousing uses can be developed in the Aero Employment area. These uses are less intensive and produce fewer nuisance factors than medium industrial. To accommodate the phasing of development within the Aero Employment area, existing rural land that is designated as Aero Employment can be used for interim agricultural uses. This includes growing agricultural crops for food production and pharmaceutical uses in outdoor or indoor greenhouse settings. Live animal production such as ranching or livestock should not be permitted due to the Aero Employment lands being an urban use. Interim agricultural uses should focus on specialty crops that can be processed in nearby facilities.

Development is encouraged to be at a high standard to create an attractive environment for the end-user tenants of the area. Development that creates an attractive built environment for end-user tenants that correspond with recognized airport connected development and its component sectors such as advanced manufacturing, agri-business, and high-end energy should be encouraged within the Aero Employment area.

These developments can include, but are not limited to, light industrial and manufacturing operations, logistics operators, e-commerce distribution centres, storage warehouses, cold-chain facilities, cargo handling, freight forwarders, shippers, and other transportation infrastructure. Marketing that promotes airport connected development themes should be considered by developers.

An agri-food processing complex or agri-business hub is a viable strategy to implement and develop, and should be encouraged. Developers can work alongside the City to promote the co-location of agri-business companies within the Aero Employment area.

In addition to the manufacturing, refinement, and processing of goods, this area provides for distribution connectivity between the City of Leduc and Edmonton International Airport, enabling the movement of goods between the City of Leduc, the rest of the Edmonton Metropolitan Region, and global markets. Through marketing, developers can promote a logistics hub or an Airport Connected

Logistics District that enables the co-location of a variety of activities centres around the distribution of goods and freight.

Land uses are subject to specific zoning regulations within the City's Land Use Bylaw.

4.2.1 Policy

- A. Any use that creates a nuisance factor outside an enclosed building shall not be permitted within the Aero Employment area, aside from the movement of goods in and out of enclosed buildings. Any manufacturing, fabrication, assembly, testing of goods, and similar activities is required to be completed in an enclosed building.
- B. All permitted uses shall be housed within an enclosed building, except for parking, loading facilities, and the temporary short-term storage of goods for the manufacturing process.
- C. Long-term outdoor storage shall not be permitted in the Aero Employment area.
- D. Complementary uses that correspond with development typologies outlined in the Aerotropolis Viability Study and those that will support the light industrial and manufacturing sector to flourish in the City of Leduc will be permitted in the Aero Employment area, as permitted under the Land Use Bylaw.
- E. Land uses that allow for agri-food processing and packaging shall be allowed in this area, as permitted under the Land Use Bylaw.
- F. Land uses that facilitate the implementation of an agribusiness hub within the Aero Employment area shall be allowed, as permitted under the Land Use Bylaw.
- G. Interim agricultural uses such as cropping shall be permitted in this area until the land is required for development.
- H. Uses that provide added value to the agricultural crops that are grown locally, regionally, and nationally shall be permitted. Value added agriculture is recognized as enhancing the potential of a raw product through a particular production process.
- I. Land uses that allow for the efficient and reliable movement of goods shall be permitted in this area.
- J. Due to the advancement of added-value in the logistics industry, uses that allow for light manufacturing tasks such as light assembly, customization, testing, inspection, and quality control of goods shall be permitted in this area.
- K. Appropriate landscaping and screening shall be used to enhance important locations such as at roadway entrances to the plan area, and corner lots within the development. Additional landscaping to that normally required in business and industrial areas by the City of Leduc

Land Use Bylaw shall be provided on corner sites, with additional requirements identified in zoning, to be defined at the Outline Plan stage.

- L. Where a proposed industrial or commercial use is located on a site adjacent to a non-industrial or non-commercial use or district, the City of Leduc may require mitigation of potential development impacts on the adjacent lands. This may include, but is not limited to, noise attenuation, landscaping, setbacks and buffers, and site design.

4.3 FLEX BUSINESS

A range of office and flex business park uses can be developed in the Flex Business area of the ASP. Development is becoming more flexible in nature, with end-user tenants requiring a variety of uses for their operations. The Flex Business area allows for developments that do not fit a typical single-use model. Each building can be distinct in design, due to flexibility built into the design to ensure that functions within the building can change over time to meet changing market conditions and the needs of end-user tenants. Buildings may be developed in a way that end user tenants are able to have office operations, light industrial uses, and storage/warehouse space in one seamlessly connected building envelope. Similarly to the Aero Employment area, an agribusiness cluster or hub is a viable use that can be implemented and is encouraged. Higher density employment uses are encouraged in this area. Land uses are subject to specific zoning regulations within the City's Land Use Bylaw.

4.3.1 Policy

- A. Medium industrial uses are prohibited in the Flex Business area.
- B. Developments are encouraged to be constructed in a fashion that enables the building(s) to be capable of housing a wide range of uses. Single purpose buildings must have the ability to be altered to allow for multiple uses based on the needs of the end user tenant.
- C. Single-use, large-scale warehouses and logistics buildings are not permitted in the Flex Business area.
- D. Developments that include multiple uses within a singular building or multiple connected buildings such as office, laboratories, product testing, light assembly, storage, warehousing, and distribution shall be allowed, as permitted under the Land Use Bylaw.
- E. Office uses shall be located in the front of buildings that face a public roadway, while light assembly, storage and warehousing, and distribution may operate on the side or back of lots.
- F. All permitted uses shall be housed within an enclosed building, except for parking, loading facilities, and the temporary short-term storage of goods for the manufacturing process.
- G. Long-term outdoor storage shall not be permitted in the Flex Business area.

- H. Land uses that facilitate the implementation of an agribusiness hub within the Flex Business area shall be permitted.
- I. Interim agricultural uses such as cropping shall be permitted in this area until the land is required for development.
- J. Uses that provide added value to the agricultural crops that are grown locally, regionally, and nationally shall be permitted. Value added agriculture is recognized as enhancing the potential of a raw product through a particular production process.
- K. Developments that are adjacent to, or located in close proximity to, natural features such as Telford Lake, or any greenways and bike paths, should be designed in an attractive manner.
- L. Setbacks from the lot line to the building along the primary roadway and primary entrance to the building shall be attractively landscaped to create a pleasing visual environment.
- M. Development in the Flex Business area shall be in accordance with the regulation of the Land Use Bylaw, to ensure architecture, urban design, and landscaping of a high standard.
- N. Convenience commercial uses, which are primarily intended to serve employees within the Flex Business area may be considered at the discretion of the City of Leduc.
- O. Appropriate landscaping and screening shall be used to enhance important locations such as at roadway entrances to the plan area, and corner lots within the development. Additional landscaping to that normally required in business and industrial areas by the City of Leduc Land Use Bylaw shall be provided on corner sites, with additional requirements identified in zoning, to be defined at the Outline Plan stage.
- P. Where a proposed industrial or commercial use is located on a site adjacent to a non-industrial or non-commercial use or district, the City of Leduc may require mitigation of potential development impacts on the adjacent lands. This may include, but is not limited to, noise attenuation, landscaping, setbacks and buffers, and site design.

4.4 GENERAL COMMERCIAL

The ASP designates two areas – one in the north portion and one in south portion – as General Commercial. These areas are intended to allow for the development of commercial uses that serve the employees in the Aero Employment and Flex Business areas, as well as the travelling public. Appropriate uses will be set out by regulations within the Land Use Bylaw and may include retail stores, eating and drinking establishments, business support services, service stations, personal, professional, financial, and office services.

4.4.1 Policy

- A. General commercial uses shall be permitted in general conformance with locations shown with Figure 9: Land Use Concept
- B. Appropriate landscaping and screening shall be used to enhance important locations such as roadway entrances to the plan area, and corner lots within the development. Additional landscaping to that normally required in business and industrial areas by the City of Leduc Land Use Bylaw shall be provided on corner sites, with additional requirements identified in zoning, to be defined at the Outline Plan stage.

4.5 URBAN SERVICES

The land use concept designates an area within NE ¼ Sec. 30-49-24-W4, south of Telford Lake, as Urban Services, which is intended to accommodate a municipal cemetery (see Figure 9: Land Use Concept). The City of Leduc's cemetery system is running out of capacity. A new cemetery needs to be constructed and be operational within the next two to three years in order to continue serving Leduc and Leduc-area families for the next 25 years and beyond. The cemetery concept master plan and detailed designs for the first phase of cemetery development were underway at the time this ASP was being written.

The vision for the proposed cemetery is a memorial parkland landscape. The design uses bold landscape features including sculptural landform and woodland buffer planting to create sacred burial areas that are innovative and unique, to meet the standard of place-making expected by the City of Leduc. The new cemetery lands will function as a parkland for the living and will form a new part of the overall green infrastructure and amenity assets of the City.

4.5.1 Policy

- A. The development of a cemetery, and related uses, shall be permitted under the Urban Service designation.
- B. An appropriate buffer shall be provided between the cemetery uses and any industrial or commercial land uses. The buffer should consist of a landscaped separation space, with such

features such as trees, shrubs or other vegetation, berms, hedges, or decorative walls or fencing.

- C. Pedestrian and other active modes of travel through the Urban Services area should be considered.

4.6 ENVIRONMENTAL RESERVE

Environmental Reserve (ER) will be dedicated to protect the area around Telford Lake, and other natural features designated for retention. An approximately 10 m wide ER buffer will be established around Telford Lake, based on a legal survey conducted by an Alberta Land Surveyor (ALS), with the assistance of a qualified environmental scientist.

The City of Leduc is actively engaging landowners to dedicate ER prior to subdivision of the parent parcel due to development, to expedite environmental protection of Telford Lake and facilitate the expansion of the recreational multiway project. Should this early dedication be unsuccessful, the City of Leduc will take ER at the first subdivision and any parcel.

Other candidates for ER dedication, as identified in the Biophysical Assessment, will be further assessed and dedicated at the time of subdivision. The natural area located in the south portion of the plan area, is one area that is expected to be partially dedicated as ER.

4.6.1 Policy

- A. Delineation and dedication of an approximately 10 m wide ER setback from the surveyed bed and shore of Telford Lake will occur at the time of subdivision, or prior, subject to separate agreements between the City of Leduc and landowners.
- B. Delineation and dedication of other ER features identified in Figure 9: Land Use Concept will occur at the time of subdivision.
- C. Wherever possible, development impacts to wetland features not taken as ER should be minimized. Where impacts cannot be avoided, compensation will be provided for damage or loss pursuant to the provisions of the Alberta *Water Act* and Wetland Policy.
- D. The provision of recreation facilities within environmental reserve should be avoided where adjacent municipal reserve is available.
- E. A wildlife corridor study shall be completed prior to the approval of any outline plan for NE ¼ Sec. 30-49-24-W4 and Lot 2, Plan 9023255, or prior any further design work for the Spine Road, or at the discretion of the City of Leduc. The corridor study will be developed in partnership with the Leduc County.

4.7 PARK

Park space, dedicated as Municipal Reserve (MR), in the East Telford Lake ASP is allocated to accommodate several purposes: protecting Telford Lake and its eastern drainage course, including a weir and associated riparian area; preserving and protecting the tree stand and wetland in the south of the plan area; providing recreation and education opportunities; and providing habitat and space to move for wildlife.

A strip of land of approximately 50 m wide will be provided adjacent to the Environmental Reserve dedication surrounding Telford Lake and its easterly drainage channel. This area will be used to extend the ecological buffer surrounding the lake, and to allow for the development of limited public recreation infrastructure. Where possible, this area will remain in its natural state, and be remediated where required.

A key feature of this portion of Telford Lake is the extension of the Telford Lake Trail (Telford Lake Master Plan [TLMP], 2010). This 3.0 m asphalt trail (or multiway) would connect to the western portions of the Trail on both the north and south sides of the lake. Trail links to this multiway trail will be established. This will provide pedestrians with access throughout the plan area and the citywide system. In the future, a trail could also be developed linking into a regional trail system to the east, and to Saunders Lake. The TLMP also recommends the development of rest nodes, interpretive viewpoints, boardwalks, and a bird blind. The specific strategy for pedestrian connections and routes shall be determined at the Outline Plan Stage.

The City of Leduc may also consider the development of a staging and/or day use area within this park space, depending on requirements, and availability of land.

4.7.1 Policy

- A. Dedication of an approximately 50 m wide Municipal Reserve open space adjacent to the 10 m Environmental Reserve setback from the surveyed bed and shore of Telford Lake shall occur at the time of subdivision, or prior, subject to separate agreements between the City of Leduc and landowners.
- B. The City of Leduc will require the full 10% MR dedication, whether that is provided as land, cash-in-lieu of land, or a combination thereof, as deemed appropriate by the City of Leduc and in accordance with the MGA. The specific strategy for dedication of Municipal Reserve shall be determined at the Outline Plan stage.
- C. Developments adjacent to the Telford Lake Park space shall provide pedestrian/active transportation access at intervals of approximately 400 m.
- D. Tree stands within MR lands will be preserved and may be enhanced where funding is available. The City may consider the use of Municipal Reserve to acquire tree stands, to be determined at Outline Plan stage.

- E. Public open spaces, trails, and natural areas within the Park designation shall be planned and managed to protect and enhance features such as natural vegetation, habitat, soil, groundwater, and surface water.
- F. Park areas shall remain generally in a natural state, with exceptions for development related to or supporting recreation (e.g. multiway, trails, staging areas, access for boating, nature interpretation sites, and picnic sites).
- G. A wildlife corridor study shall be completed prior to the approval of any outline plan for NE ¼ Sec. 30-49-24-W4 and Lot 2, Plan 9023255, or prior any further design work for the Spine Road, at the discretion of the City of Leduc. The corridor study will be developed in partnership with the Leduc County.

4.8 AGRICULTURE

As indicated in Section 2.8 Agricultural Impact Assessment, while no long-term agricultural uses are contemplated in the East Telford Lake ASP, existing agricultural uses are expected to continue until lands are otherwise required to accommodate planned development. Ranching or livestock raising should be discouraged due to potential incompatibility with adjacent land uses. Interim agricultural uses producing specialty crops that have the ability to be processed in nearby facilities should be encouraged.

4.8.1 Policy

- A. Existing agricultural activity shall be permitted to continue as an interim use as set out by the regulations in the Land Use Bylaw (Urban Reserve district).
- B. The raising of livestock should be discouraged where adjacent to lands that do not permit agriculture as a use.

5.0 TRANSPORTATION

An overall transportation network has been established to accommodate the proposed land uses in this ASP and is shown in Figure 10: Transportation Plan. The ASP establishes approximate alignments for arterial and collector roadways, while local roadways are to be identified by Outline Plans.

A Transportation Impact Assessment was prepared in support of the ASP, and was submitted under separate cover (Stantec, 2018). The TIA establishes background traffic conditions in the vicinity of the proposed ASP, estimates the magnitude and characteristics of traffic generated by at full ASP build out, evaluates the impacts of vehicular traffic generated by the proposed development on the adjacent roadway network, and provides recommendations for appropriate roadway improvements.

5.1 SPINE ROAD

The Spine Road, which will link Range Road 245 and 250, and whose alignment passes through the plan area, is a major transportation corridor linking the East Telford area to the Edmonton International Airport and to other major economic centres in the region. The Spine Road is ultimately envisioned as an 80 km/h, 6-lane, semi-urban, expressway (McElhanney, 2010). Site access separation from an existing or future signalized intersection is to be maximized adjacent to the Spine Road.

5.1.1 Policy

- A. A minimum 800 m intersection spacing requirement should be maintained along the Spine Road. Intersections will only be permitted with other arterial roads or with collector roads. No new intersections with local roads or direct access to adjoining lands will be permitted.
- B. Prior to detailed roadway design or construction, an assessment of wildlife movement, and determination of the impact of the Spine Road, will be required. The City of Leduc may require mitigation methods, such as a wildlife passage, structure, or other such features, be incorporated into the design.

5.2 ARTERIAL & COLLECTOR ROADWAY NETWORK

The Telford Lake ASP identifies a series of internal collector roadways intended to accommodate vehicular traffic generated by the proposed land uses and allow for the future provision of public transit. Beyond the Spine Road and Rollyview Road, no additional arterial roadways are anticipated. These roads are ultimately to be built out as six- and four-lane divided arterials, respectively.

A Transportation Impact Assessment (TIA), submitted under separate cover, provides recommendations for roadway geometries and signalization for both the 10-year and 20-year horizons (Stantec, 2018).

5.2.1 Policy

- A. Arterial and collector roadways within the East Telford Lake ASP shall be developed in general accordance with Figure 10: Transportation Plan.
- B. Arterial and collector roadways north of Telford Lake will be designed to a rural standard, unless otherwise specified in roadway planning studies, or where they tie into existing urban standard roadways.
- C. Arterial and collector roadways south of Telford Lake will be designed to an urban standard, unless otherwise specified in roadway planning studies.
- D. As development occurs, the City of Leduc will review opportunities and requirements for public transit. Arterial and collector roadways may, at discretion of the City, be designed to accommodate transit routes and stops. Locations of transit stops and routes will be determined at the Outline Plan stage.
- E. Outline plans shall identify sufficient road right of way to accommodate the roadway requirements identified in the East Telford Lake TIA, or through functional plans. If modifications to roadway standards are required, cross sections shall be approved by the City of Leduc.

5.3 LOCAL ROADWAYS

Requirements for local roadways will be determined at the Outline Plan stage.

5.3.1 Policy

- A. Local roadway alignments will be identified at the Outline Plan stage and will be designed and developed to a rural standard, in accordance with the City of Leduc Minimum Engineering and Design Standards.
- B. Local roadway alignments will be identified at the Outline Plan stage and will be designed and developed to an urban standard, in accordance with the City of Leduc Minimum Engineering and Design Standards.
- C. Local roadways north of Telford Lake will be designed to a rural standard, unless otherwise specified in roadway planning studies, or where they tie into existing urban standard roadways.
- D. Local roadways south of Telford Lake will be designed to an urban standard, unless otherwise specified in roadway planning studies.

5.4 PROCESSIONAL ROUTES

In order to reflect the character of the routes into the Urban Services Area (municipal cemetery) as areas of solemn reflection and respect, to provide space for ‘decompression’, and to differentiate them from other exclusively industrial/commercial areas, alternative design standards may be applied to applicable Processional Routes.

5.4.1 Policy

- A. Notwithstanding Policies 6.2.1 (B) and 6.3.1 (A), roadways indicated in Figure 10: Transportation Plan as Processional Routes, shall be designed constructed, to the satisfaction of the City of Leduc, to ensure their intended function and character. Other roadways, including local roadways, may be identified at the Outline Plan stage.

6.0 SERVICING

A Servicing Study outlining the stormwater, sanitary, and water systems for the ASP area, was prepared and submitted under separate cover (Stantec, 2018). This section provides a description of the conceptual servicing schemes, and provides policy direction. All water, sanitary and storm servicing plans will need to be confirmed at subsequent design stages.

6.1 STORMWATER MANAGEMENT

Figure 11: Stormwater Servicing shows the proposed stormwater servicing plan. Several stormwater management facilities (SWMFs) are identified based on the existing topography and drainage patterns and the land use and transportation designs. The location and configuration of the proposed stormwater management facilities will be further refined based on the detailed drainage area grading and internal roadway network requirements.

The north area of the East Telford Lake ASP is proposed to be developed to rural standards while the south area is proposed to be developed to urban standards. The conveyance system within each drainage basin will need to be designed based on the local roadway configuration and site grading requirements.

As shown on Figure 11: Stormwater Servicing, three outfalls are proposed to service the ASP area. It is proposed that the south ETL area will be drained to Telford Lake through the two proposed outfalls. For the north ASP area, one outfall is proposed through a tributary located on a privately-owned parcel in the County discharging to Saunders Lake. This cross-boundary drainage will require intermunicipal and/or owner approval. Alternatively, a piped outlet discharging directly to Saunders Lake could be constructed along Township Road 500. Draining the north ETL area to Telford Lake would require pumping and is not recommended.

Stormwater management in the Urban Service (Cemetery) area requires more detailed design, however as the runoff volume and corresponding storage volumes are relatively small, it may drain directly to Telford Lake or combined with the proposed SWMF to the east. The Harvest Industrial Park area currently drains through two existing drainage channels through the East Telford Lake ASP area. With the proposed development, the existing drainage channels will be eliminated, and therefore drainage is proposed to be rerouted through the 65 Avenue / Twp. Rd. 500 ditch.

6.1.1 Policy

- A. Prior to any development and in conjunction with the development of Outline Plans for any portion of the plan area, detailed engineering reports must be prepared by the proponent and accepted by the City of Leduc.
- B. Stormwater management facilities shall be in general accordance with the servicing scheme shown in Figure 11: Stormwater Servicing.
- C. Low Impact Development stormwater management techniques should be incorporated into roadway and site design.
- D. The City may consider innovative servicing and utility technologies if they are proven to be equally or more efficient, cost-effective, aesthetically acceptable, and environmentally beneficial than existing technologies, and if they will result in long-term economic, social, and environmental benefits to the community. Innovative servicing must be sustainable in the long term and cannot increase liability or maintenance for the City of Leduc, on an objective quantitative basis, to be considered.

6.2 SANITARY SEWER

The proposed sanitary system for the East Telford Lake ASP is to be serviced by an existing Alberta Capital Region Wastewater Commission (ACRWC) sanitary trunk sewer at Airport Road.

Most of the East Telford Lake ASP area, including the entire area to the north of the lake, and a portion of the area south of the lake, is proposed to be serviced by a Stage 1 lift station located in the northeast part of the ASP as shown on Figure 12: Sanitary Servicing. The Stage 1 lift station and forcemain would discharge to existing/proposed sanitary sewers through the Leduc Energy/Business Park development.

With limited available capacity in the existing sewer system, some southern portions of the ASP area as well as a large service area (~29 quarter sections) south of the East Telford Lake ASP area will be serviced by a Stage 2 lift station and forcemain to route the balance of projected flow through the County of Leduc directly into the ACRWC system.

6.2.1 Policy

- A. Prior to any development and in conjunction with the development of Outline Plans for any portion of the plan area, detailed engineering reports must be prepared by the proponent and accepted by the City of Leduc.
- B. The City may consider innovative servicing and utility technologies if they are proven to be equally or more efficient, cost-effective, aesthetically acceptable, and environmentally beneficial than existing technologies, and if they will result in long-term economic, social, and environmental benefits to the community. Innovative servicing must be sustainable in the long term and cannot increase liability or maintenance for the City of Leduc, on an objective quantitative basis, to be considered.

6.3 WATER NETWORK

The proposed water servicing plan generally conforms to the proposed servicing plan in the City of Leduc Water Master Plan. The proposed water distribution system is shown in Figure 13: Water Servicing. The proposed distribution system alignments follow arterial and collector roadways. During subsequent development design stages, some watermain alignments may be shifted to local roads to allow servicing of parcels fronting local roads.

6.3.1 Policy

- A. Prior to any development and in conjunction with the development of Outline Plans for any portion of the plan area, detailed engineering reports must be prepared by the proponent and accepted by the City of Leduc.
- B. Services shall be constructed with appropriate oversizing to accommodate future development within the plan area, as identified in detailed engineering reports, as well as future offsite development, if feasible and as required by the City of Leduc.

7.0 IMPLEMENTATION

The implementation of this plan may require amendments to the Land Use Bylaw to create or modify land use districts or overlays to support implementation of the policy directions of this plan.

Outline Plans will be required prior to redistricting and subdivision to ensure that sub-areas are planned to an appropriate level of detail.

Within this plan area, the City of Leduc will require development proponents to assume financial responsibility for the extension of all required municipal utility services, including any initial capital cost. In accordance with the provisions of the *Municipal Government Act*, the City will endeavour to ensure that development proponents receive appropriate compensation from future benefiting developments as they occur, either through the establishment of a levy, cost sharing arrangements, or some combination thereof.

7.1 OUTLINE PLANS

7.1.1 Policy

- A. Prior to the approval of redistricting or subdivision that would allow development to proceed, detailed Outline Plans shall be prepared by the applicant and accepted by the City of Leduc. The City, at its sole discretion, may waive the requirement for an Outline Plan.
- B. Outline Plans shall be consistent with the East Telford Lake ASP, and with all adjacent Outline Plans.

7.2 LAND USE BYLAW

7.2.1 Policy

- A. Amendments to the Land Use Bylaw may be required to ensure that development occurs as envisioned in the East Telford Lake ASP. The City of Leduc shall be responsible for initiating the amendment process.

7.3 STAGING

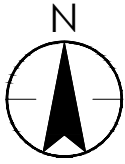
Development is anticipated to begin in the north of the ASP area, and proceed south and west, as services are extended as indicated in Figure 14: Staging Plan. In general, development will proceed in a manner that is contiguous, logical, and economical with respect to municipal servicing.

Development of individual phases may vary from the actual outline plan, redistricting and subdivision applications, depending on market demand and the aspirations of respective landowners. Should sufficient demand warrant, or engineering design be made more efficient, portions of separate phases may be developed concurrently.

Per Section 5.8 of the IDP, future development within Policy Area G (located south of Telford Lake) is not expected to occur within the 35-year time horizon of the IDP. However, development of the cemetery (Urban Services) may proceed in advance of the full availability of municipal services.

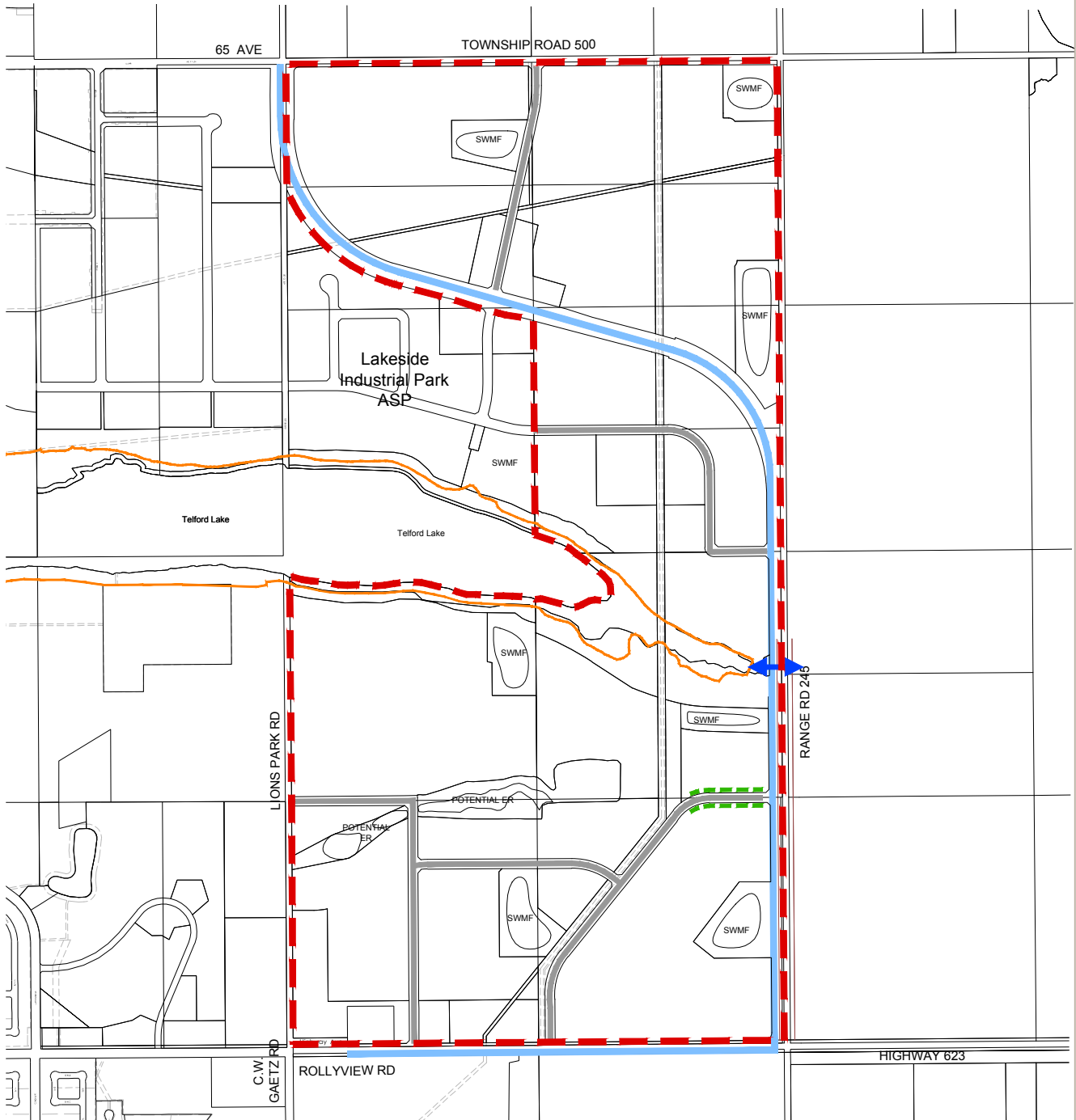
FIGURE 10.0

TRANSPORTATION



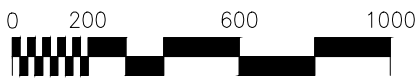
LEGEND

- COLLECTOR ROADWAY
- ARTERIAL ROADWAY
- PROCESSIONAL ROUTE
- ASP BOUNDARY
- FUTURE WILDLIFE PASSAGE (CONCEPTUAL LOCATION)
- MULTIWAY



V:\1161\active\1161106060\drawing\modal\area_planning\ASP_Telford_Lake_12dec2018.dwg

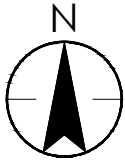
SCALE - 1: 20,000
ORIGINAL SHEET - ANSI A



December 12, 2018
1161 106060 KC

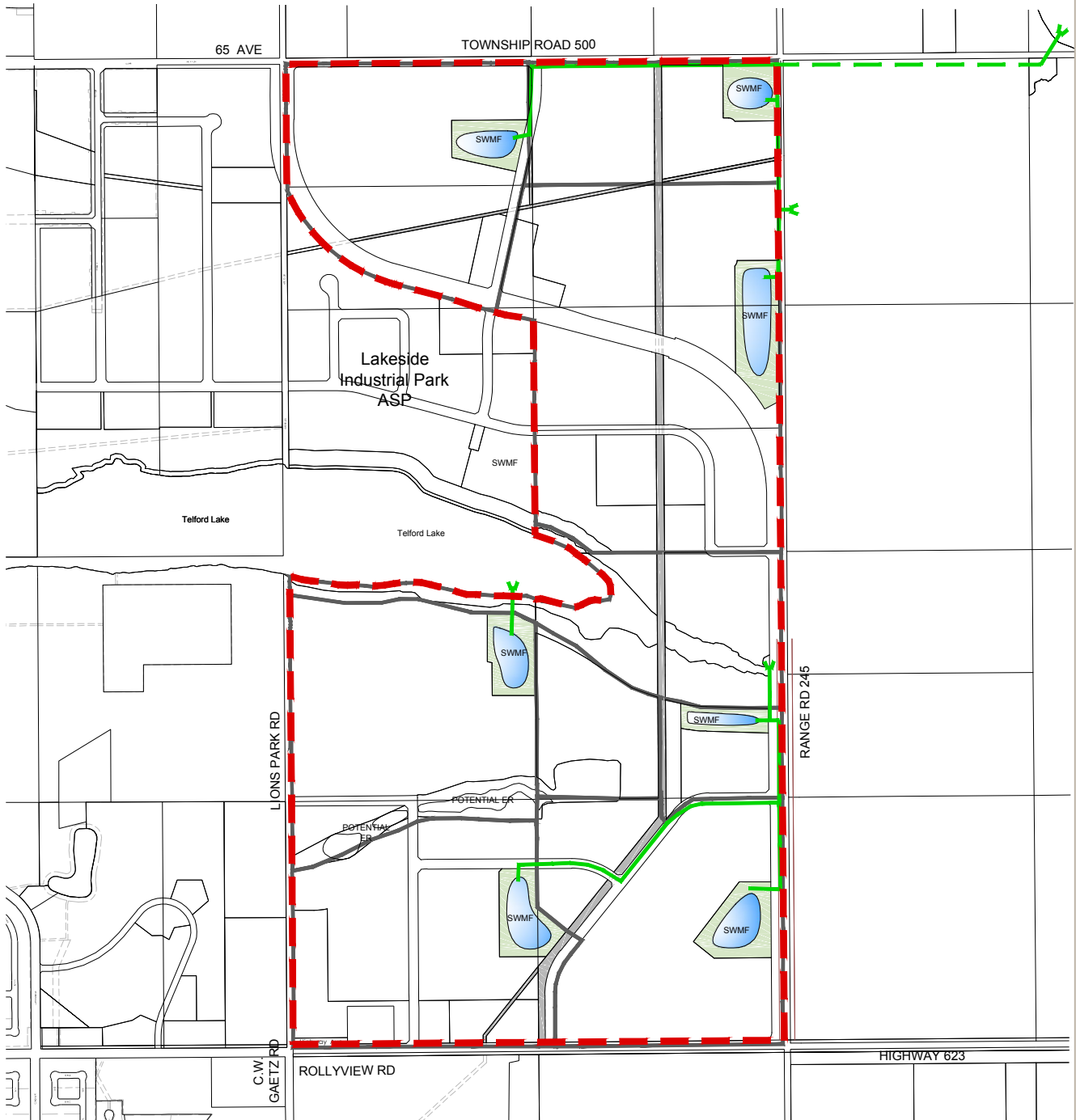
FIGURE 11.0

STORMWATER CONCEPT



LEGEND

- STORM WATER MANAGEMENT FACILITY
- ALTERNATIVE STORM OUTFALL PIPE TO SAUNDERS LAKE
- PROPOSED STORM OUTFALL PIPE
- PROPOSED STORM CATCHMENT BOUNDARY
- PROPOSED STORM OUTFALL
- ASP BOUNDARY



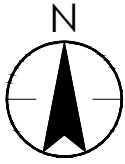
V:\1161\active\1161106060\drawing_model_files\planning\ASP\ASP_Telford_Lake_12dec2018.dwg

SCALE - 1: 20,000
 ORIGINAL SHEET - ANSI A

December 12, 2018
 1161 106060 KC

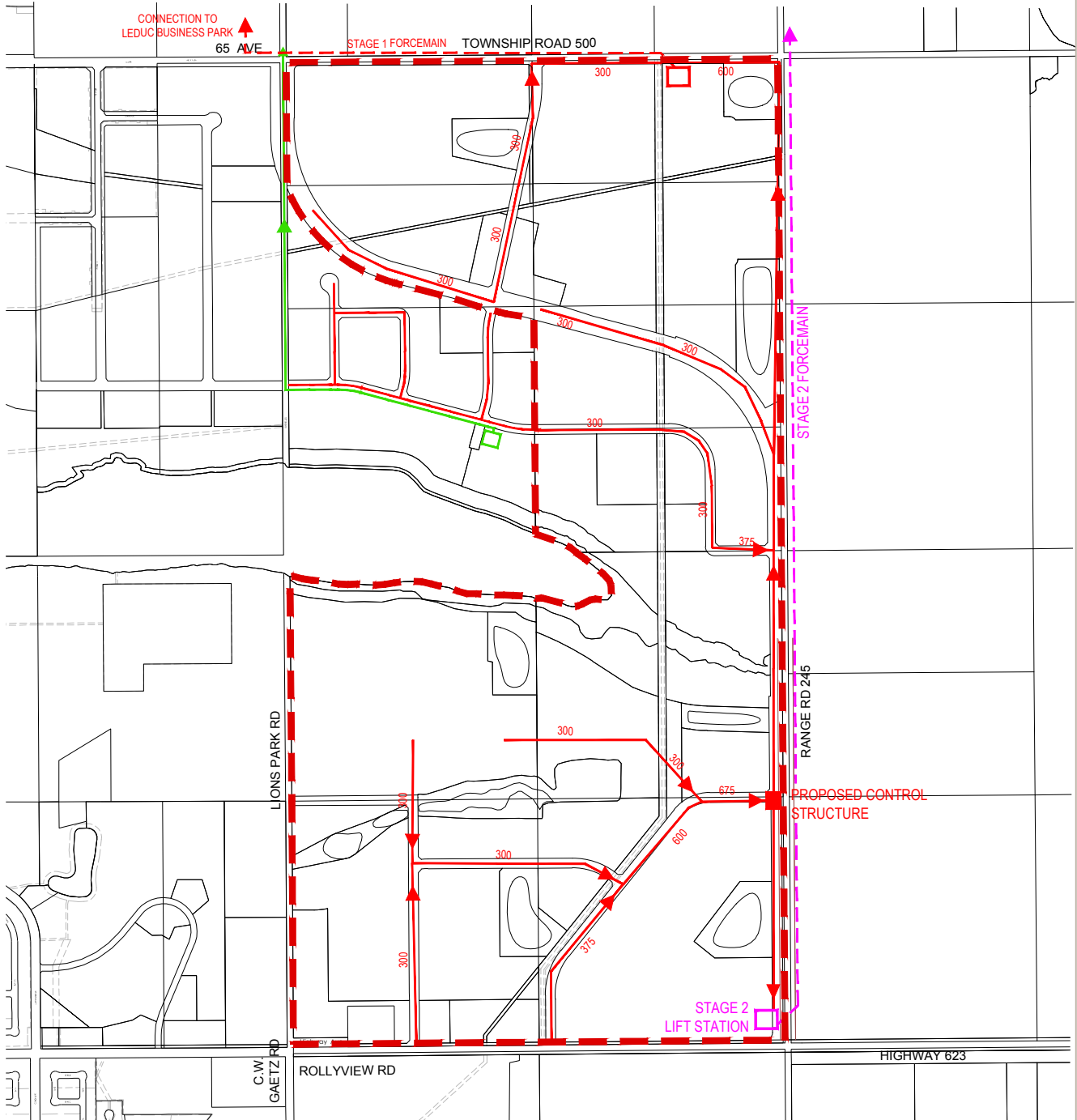
FIGURE 12.0

SANITARY SEWER CONCEPT



LEGEND

- PROPOSED SANITARY SEWER
- - - STAGE 1 SANITARY FORCEMAIN
- LIFT STATION
- 300 SEWER SIZE (mm)
- - - STAGE 2 SANITARY FORCEMAIN
- INTERIM SANITARY SEWER
- ASP BOUNDARY



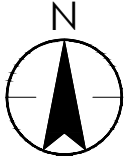
V:\1161\active\1161106060\drawing\modul_files\planning\ASP_ASP_telford_lake_12dec2018.dwg

SCALE - 1: 20,000
 ORIGINAL SHEET - ANSI A

December 12, 2018
 1161 106060 KC

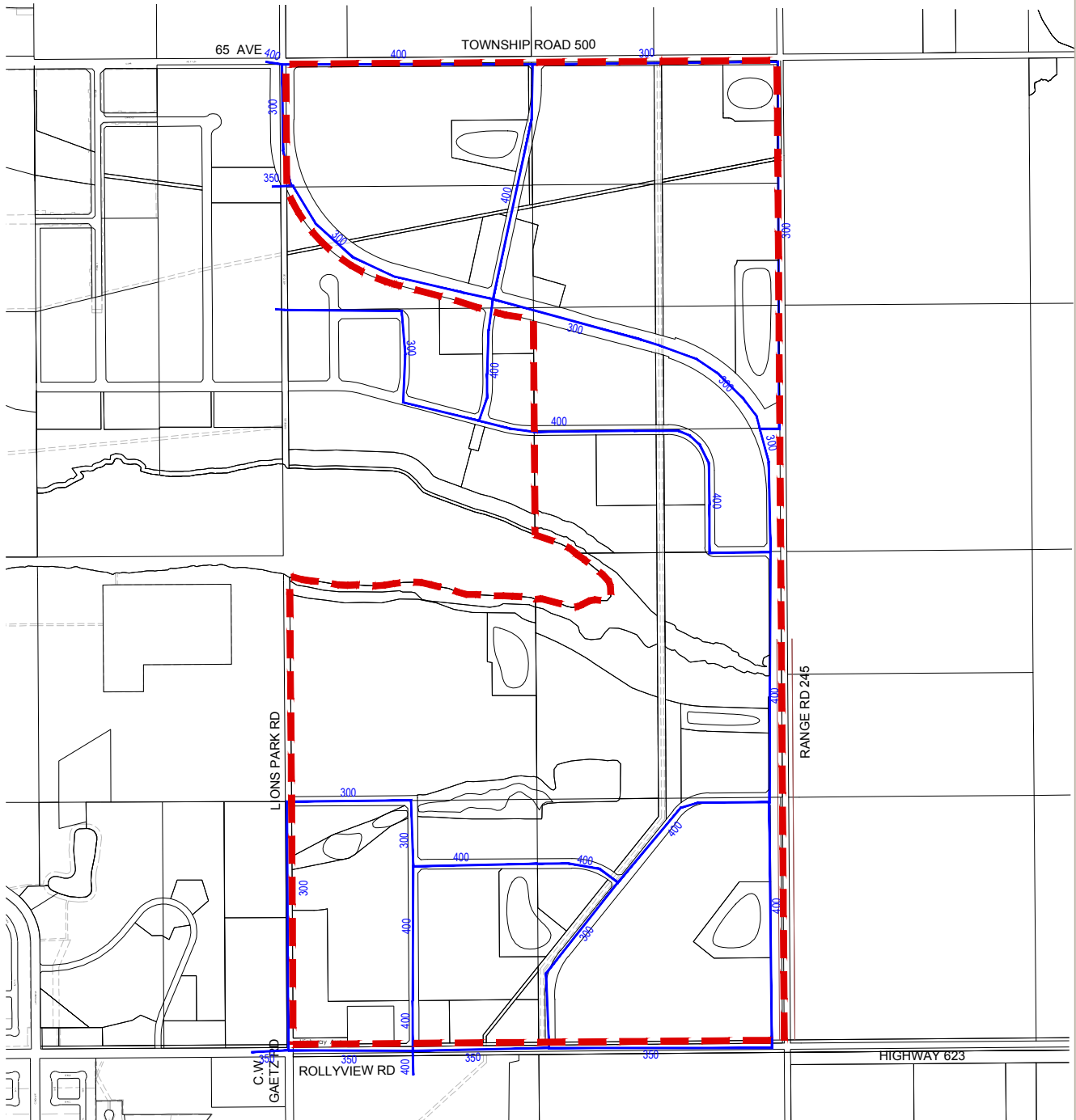
FIGURE 13.0

WATER NETWORK CONCEPT



LEGEND

- PROPOSED WATERMAIN
- 300 WATERMAIN SIZE (mm)
- - - ASP BOUNDARY



V:\1161\active\1161106060\drawing\modul_files\planning\ASP\Telford_Lake_12dec2018.dwg

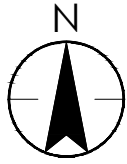
SCALE - 1: 20,000
ORIGINAL SHEET - ANSI A






December 12, 2018
1161 106060 KC

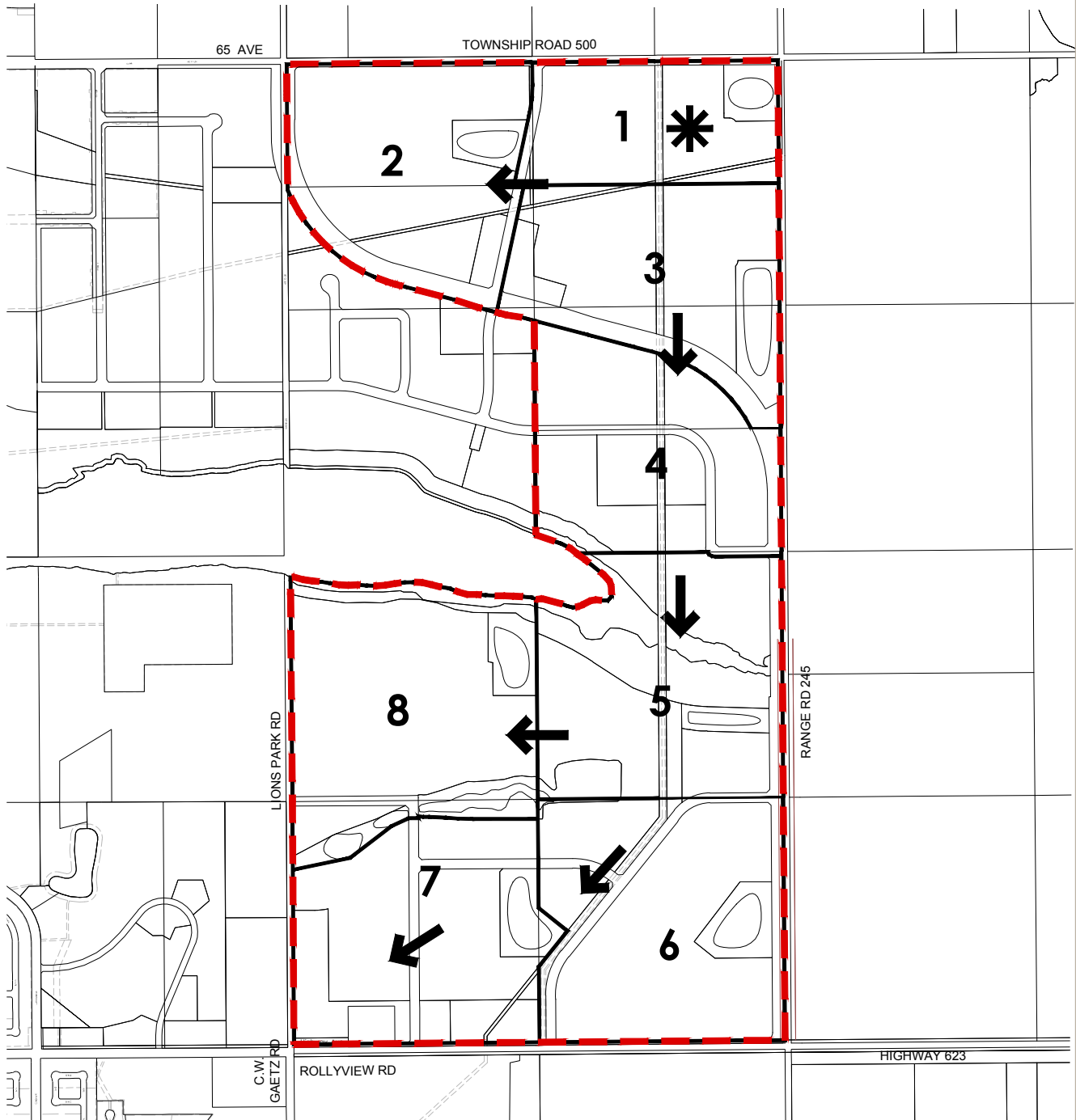
FIGURE 11.0

STAGING PLAN



LEGEND

-  INITIAL AREA OF DEVELOPMENT
-  INDICATES THE GENERAL DIRECTION OF DEVELOPMENT
-  ASP BOUNDARY



V:\1161\active\1161106060\drawing\modul_files\planning\ASP\1161\leduc_lake_12dec2018.dwg

SCALE - 1: 20,000
ORIGINAL SHEET - ANSI A



December 12, 2018
1161 106060 KC

8.0 REFERENCES

- Dragon, B. Farooqui, H., Patel, S. Stelfox, N. 2018. Leduc Wildlife Corridor Study. Prepared for City of Leduc, Leduc County, and Stantec Consulting Ltd. University of Alberta.
- Fiera Biological Consulting Ltd. 2017. City of Leduc Environmentally Significant Areas Study. Prepared for City of Leduc.
- Fiera Biological Consulting Ltd. Leduc County Environmentally Significant Areas. 2015. Prepared for Leduc County.
- ISL Engineering. 2010. Telford Lake Master Plan. Prepared for City of Leduc.
- McElhanney Consulting Services Ltd. 2010. Range Roads 245 and 250 Functional Planning Study. Prepared for Leduc County / City Of Leduc.
- MXD Development Strategists, Stantec Consulting Ltd. 2015. Aerotropolis Viability Strategy. Prepared for City of Leduc.
- Spencer Environmental Management Services Ltd. 2010. Telford Lake Master Plan: Biophysical Review of Sensitivities and Opportunities. Prepared for ISL Engineering, City of Leduc.
- Stantec Consulting Ltd. 2017. Agricultural Baseline Assessment – East Telford Lake Area Structure Plan. Prepared for City of Leduc.
- Stantec Consulting Ltd. 2017. East Telford Lake Area Structure Plan Biophysical Assessment 30-49-24 W4M and 31-49-24 W4M. Prepared for City of Leduc.
- Stantec Consulting Ltd. 2017. East Telford Lake ASP - Desktop Phase I Environmental Site Assessment
- Stantec Consulting Ltd. 2017. Geotechnical Desktop Study City of Leduc East Telford Lake Area Structure Plan. Prepared for City of Leduc.
- Stantec Consulting Ltd. 2018. Agricultural Impact Assessment – East Telford Lake Area Structure Plan. Prepared for City of Leduc.

