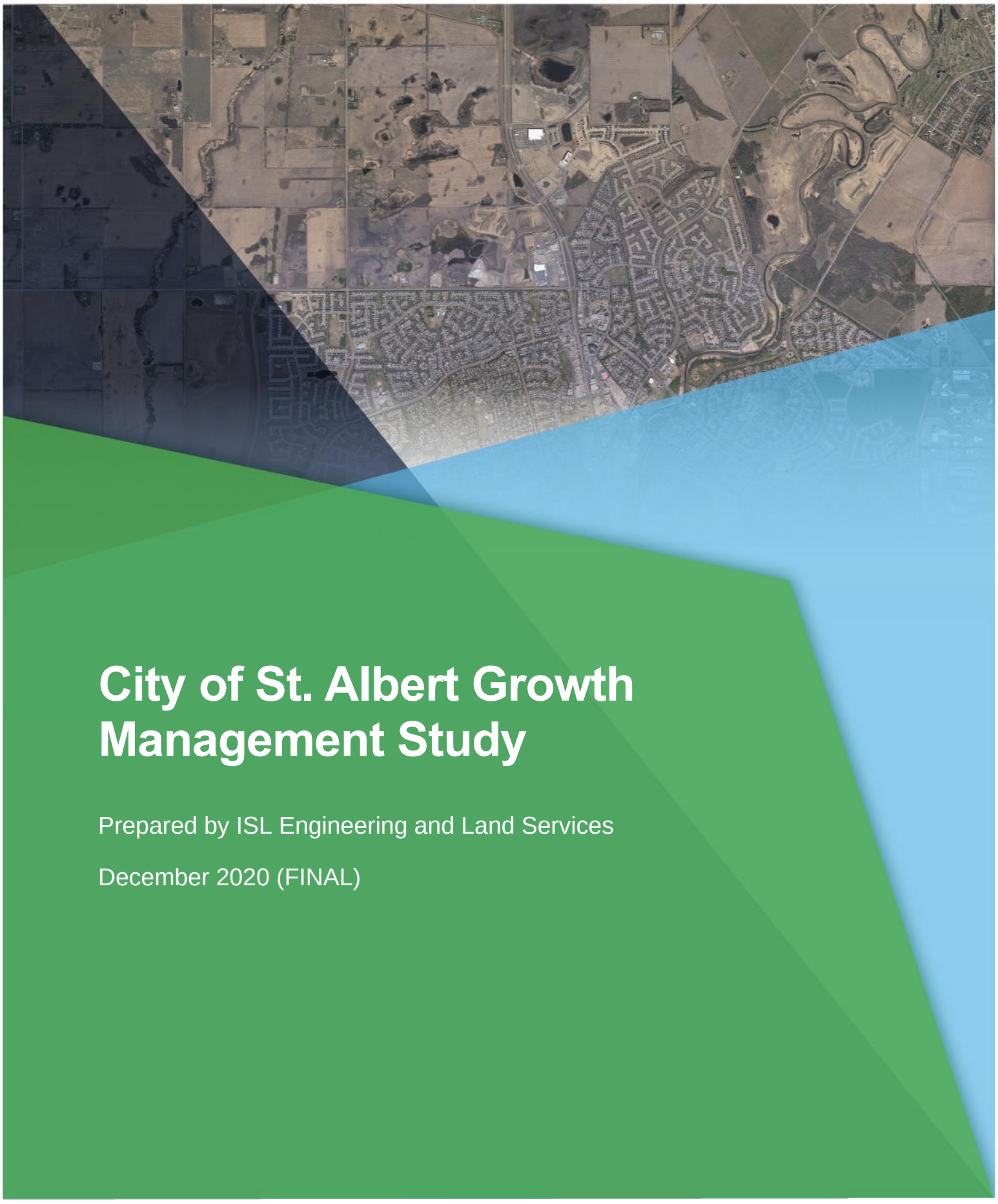
APPENDIX D
2020 Growth Management Study

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City of St. Albert Growth Management Study

Prepared by ISL Engineering and Land Services

December 2020 (FINAL)

Table of Contents

1.0 Introduction 7

1.1. Historical Municipal and Growth Context 7

1.2. Recent Intermunicipal Collaboration on Annexation 9

1.3. Study Area 12

1.4. Growth Management Study Principles 12

2.0 Historical Growth and Demographics 15

2.1. City of St. Albert Population Growth 15

2.2. Demographics 18

3.0 Growth Projections 23

3.1. Edmonton Metropolitan Region Growth Projections 23

3.2. Growth Management Study Projections 23

4.0 Status of City Lands 32

4.1. Land Supply Analysis 32

4.2. Estimated Years to Land Supply Depletion 34

4.3. Historical Land Absorption Analysis 35

4.4. Residential Lands 36

4.5. Commercial Lands 36

4.6. Industrial Lands 37

4.7. Institutional Lands 37

5.0 Study Area Analysis 38

5.1. Topography 38

5.2. Hydrography 38

5.3. Ecological Considerations 39

5.4. Energy Considerations 41

5.5. Transportation Considerations 41

5.6. Infrastructure Servicing Considerations 43

5.7. Overall Serviceability Considerations 45

5.8. Historical Considerations 46

5.9. Agricultural Considerations 47

5.10. Land Use and Development Considerations 47

5.11. Ownership and Fragmentation Considerations 50

6.0 Growth Assumptions 51

6.1. Average Household Size 51

6.2. Residential Intensification 51

6.3. Residential Density 51

6.4. Net Developable Overheads 52

6.5. Relationships of Residential to Other Core Land Uses 53

6.6. Municipal Assessment Split 53

6.7. Market Allowance 54

7.0 Land Requirements 55

8.0 Recommended Annexation Area 56

8.1. Northeast Area 57

8.2. Northern Lights Estates 58

8.3. Southwest Area 58

8.4. Agricultural Considerations 59

9.0 Annexation Area Negotiations 61

9.1. Preliminary Negotiated Annexation Area 61

9.2. Negotiated Annexation Area 61

9.3. Preliminary Land Use Breakdown 62

10.0 Staging 64

10.1. Agricultural Land Conversion Staging 64

10.2. Preliminary Development Staging 66

10.3. Associated Core Capital Plans 72

11.0 Summary and Conclusions 73

List of Maps

Following Page

Map D.1: Annexation History, 1899-1913 7
Map D.2: Annexation History, 1913-1949 7
Map D.3: Annexation History, 1949-1980 7
Map D.4: Annexation History, 1980-2007 7
Map D.5: Study Area (Maximum Potential Annexation Area) 12
Map D.6: Land Supply Status 32
Map D.7: Historical Land Absorption 35
Map D.8: Topography 38
Map D.9: Hydrography 38
Map D.10: Ecological Considerations 39
Map D.11: Energy Considerations 41
Map D.12: Transportation Servicing Concept 41
Map D.13: Transit and Access Considerations 42
Map D.14: Water Servicing Concept 43
Map D.15: Wastewater Servicing Concept 44
Map D.16: Stormwater Servicing Concept 44
Map D.17: Transportation Servicing Rankings 45
Map D.18: Water Servicing Rankings 45
Map D.19: Wastewater Servicing Rankings 45
Map D.20: Stormwater Servicing Rankings 46
Map D.21: Aggregated Servicing Rankings 46
Map D.22: Historical Resource Considerations 46
Map D.23: Agricultural Considerations 47
Map D.24: Land Use and Development Considerations 47
Map D.25: Ownership and Fragmentation Considerations 50
Map D.26: Recommended Annexation Area 56
Map D.27: Preliminary Negotiated Annexation Area 61
Map D.28: Negotiated Annexation Area 61
Map D.29: Preliminary Land Use Concept 62
Map D.30: Agriculture Conversion Staging Recommendation 64
Map D.31: Preliminary Development Staging 67
Map D.32: Core Capital Plan – Roads 72
Map D.33: Core Capital Plan – Water 72
Map D.34: Core Capital Plan – Wastewater 72
Map D.35: Core Capital Plan – Stormwater 72

List of Tables

Table D.1: City of St. Albert Boundary Adjustment History, 1899–2007 8
Table D.2: City of St. Albert Historical Population Growth, 1901–2018 15
Table D.3: St. Albert Historical Population Growth over Various Intervals, 1966–2016 18
Table D.4: Municipal Comparison of Demographic Characteristics 19
Table D.5: Gross Developable Land Supply 32
Table D.6: Breakdown of Absorbed Land Supply 33
Table D.7: Breakdown of Unabsorbed Land Supply 34
Table D.8: Land Supply Depletion Estimates from 2018 by Scenario 35
Table D.9: St. Albert's Historical Land Absorption, 1968–2017 36
Table D.10: Planned Density of Area Structure Plans under Development 52
Table D.11: Absorbed Residential and Non-Residential Land Supply 54
Table D.12: Land Requirements 55
Table D.13: Preliminary Land Use Breakdown of Negotiated Annexation Area 62
Table D.14: Estimated Annual Residential and Institutional Land Consumption 68
Table D.15: Estimated Annual Commercial Land Consumption 69
Table D.16: Estimated Annual Industrial Land Consumption 71

List of Figures

Figure D.1: Historical Population Growth, 1966–2018 17
Figure D.2: Age and Gender by Five Year Cohorts 20
Figure D.3: Place of Work of Employed Labour Force, 2011-2016 21
Figure D.4: Population History, 2001–2018, and Projections to 2071 25
Figure D.5: Population History and Midpoint Case Projection to 2071 26
Figure D.6: Persons <25 Years of Age, Historical and Projected, 2001–2071 27
Figure D.7: Persons 25 to 64 Years of Age, Historical and Projected, 2001–2071 28
Figure D.8: Persons 65+ Years of Age, Historical and Projected, 2001–2071 29
Figure D.9: Employment by Industry, Historical and Projected, 2017–2071 30
Figure D.10: Percent Share of Employment by Industry, Historical & Projected 2001–2071 31

Disclaimer

Due to rounding, numbers presented in the tables throughout this Growth Management Study report may not add up precisely to the totals indicated, and percentages may not precisely reflect the absolute figures for the same reason.

1.0 Introduction

1.1. Historical Municipal and Growth Context

The survey of the St. Albert Settlement, which occurred in 1882 and 1883, was registered in 1884. It established 15 river lots on the south side of the Sturgeon River and another 46 river lots to the north side of the Sturgeon River and Big Lake. The St. Albert Settlement survey was extended to include additional lands in 1885. The first townsite plan was registered on both sides of the Sturgeon River in 1887. Following over a decade of growth, portions of River Lots 23 through 27 north of the river and River Lots 52 and 53 south of the river were incorporated as the Village of St. Albert on December 7, 1899.

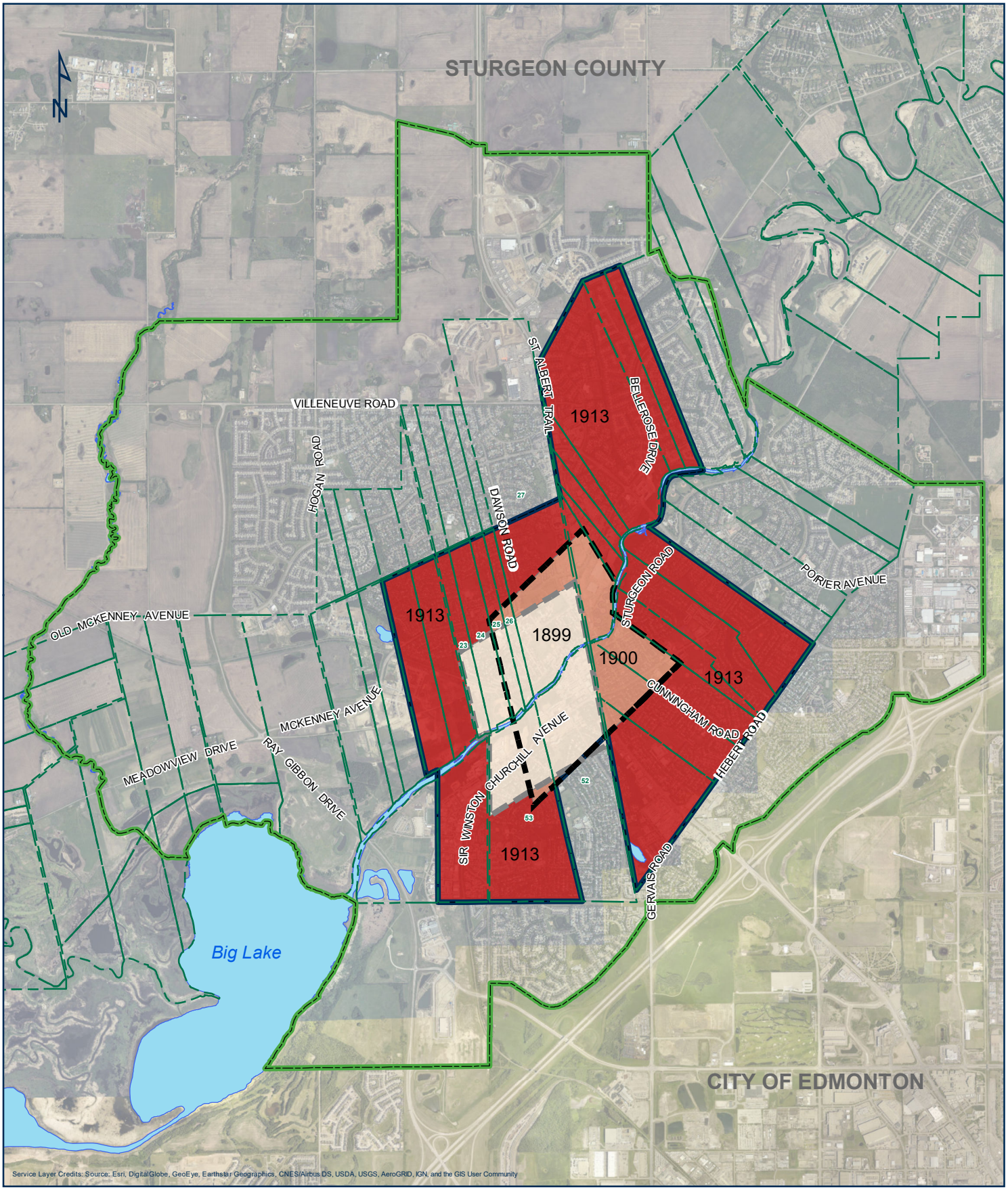
St. Albert's population was first officially recorded as 472 in the 1901 Census of Canada. Continued growth contributed to its subsequent incorporation as a town on September 1, 1904. Over the ensuing 40 years, the Town of St. Albert's population grew from 543 in 1906 to 804 in 1946. The economic boom that followed the discovery of oil near Leduc in 1947, coupled with the emergence of a commuter lifestyle within the Edmonton region, saw the Town grow by 64% over ten years to 1,320 according to the 1956 federal census.

In anticipation of significant growth in the foreseeable future, St. Albert incorporated as the New Town of St. Albert on January 1, 1957. The purpose of this incorporation was to access provincial financing to accommodate the growth under the authority of the *New Towns Act*. After repaying money advanced by the provincial government, St. Albert reverted to town status on July 3, 1962. During that period, its population quadrupled to 5,249.

St. Albert's rapid growth persisted during its second stint as a town. Over the next 15 years, its population nearly quintupled to 25,523 in 1977, incorporating as the City of St. Albert on January 1, 1977. Over the subsequent 14 years, the City's population doubled to 53,081 in 2001. The City has since grown to 66,082 according to the 2018 municipal census.

1.1.1. Boundary Adjustment History

Over its 121 years of incorporated history, the municipal boundary of St. Albert has been adjusted on 24 occasions as presented in Table D.1. This includes twelve annexations (in 1913, 1951, between 1961 and 2000, and between 1986 and 2007), one annexation concurrent with a status change (in 1957), nine withdrawals of lands (between 1920 and 1949), and two boundary adjustments that featured both annexations and withdrawals of land (in 1900 and 1982). The historical boundary adjustments are illustrated in Maps D.1 through D.4.



City of St. Albert
Cultivate Life

St. Albert Settlement Survey
Village Incorporation (1899)
Town Incorporation (1904)
1913 Town Boundary
Current City Boundary

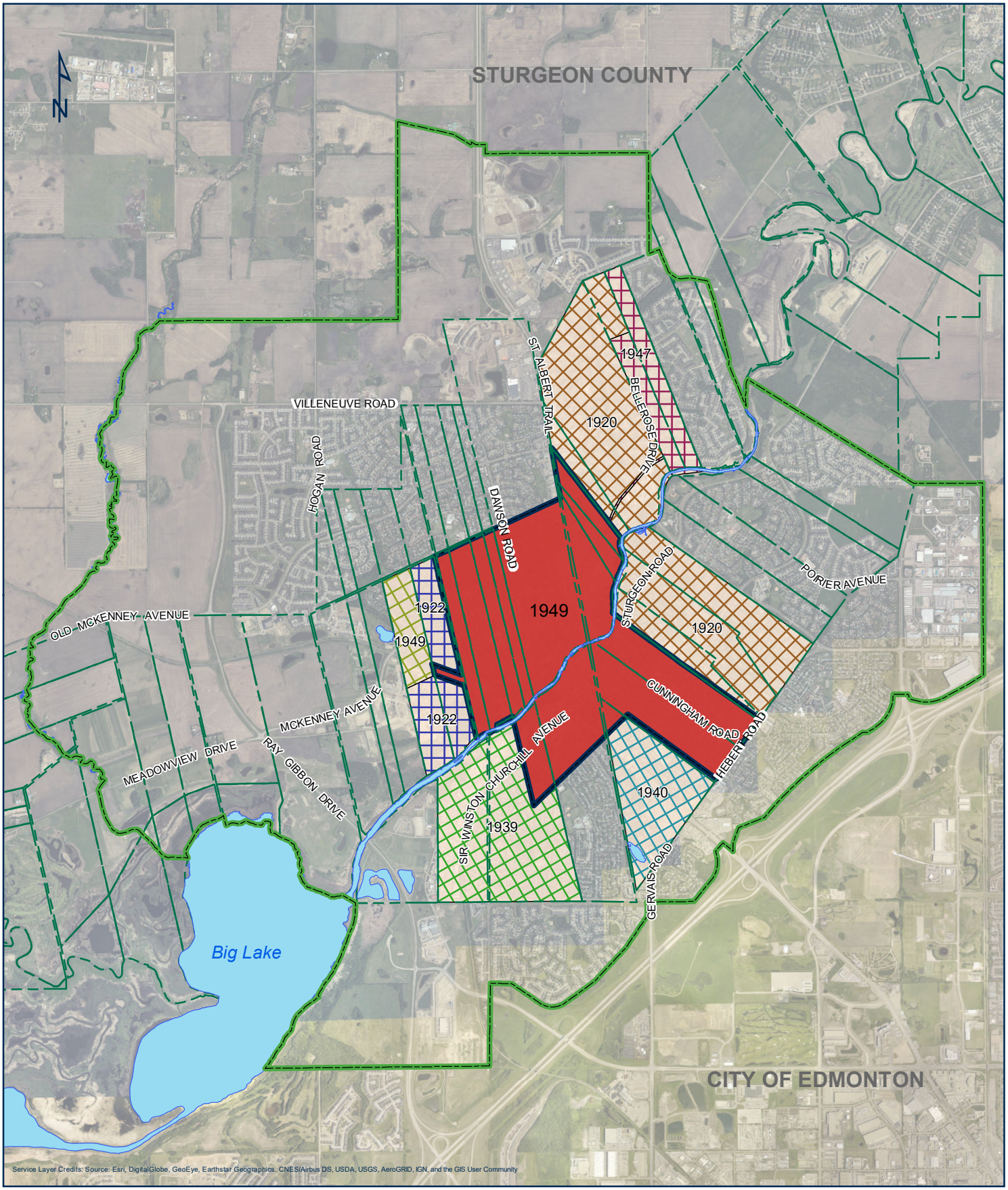
1899 Incorporation
1900 Alteration
1913 Annexation

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.1: ANNEXATION HISTORY, 1899-1913



City of St. Albert
Cultivate Life

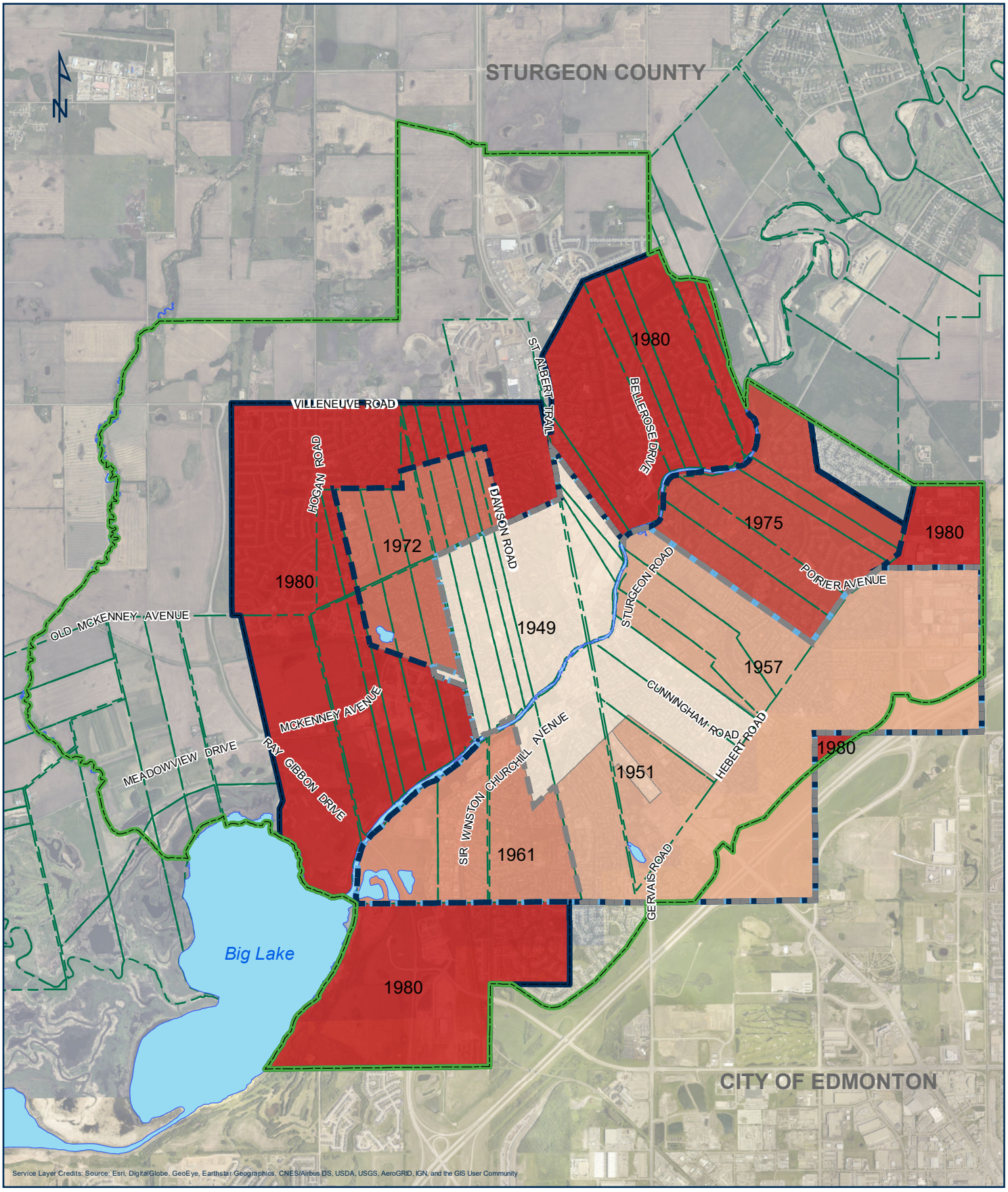
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- St. Albert Settlement Survey
- 1949 Town Boundary
- Current City Boundary
- 1913 Town Boundary
- 1920 Withdrawal
- 1922 Withdrawal
- 1939 Withdrawal
- 1940 Withdrawal
- 1947 Withdrawal
- 1949 Withdrawal
- 1949 Town Boundary

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.2: ANNEXATION HISTORY, 1913-1949



City of St. Albert
Cultivate Life

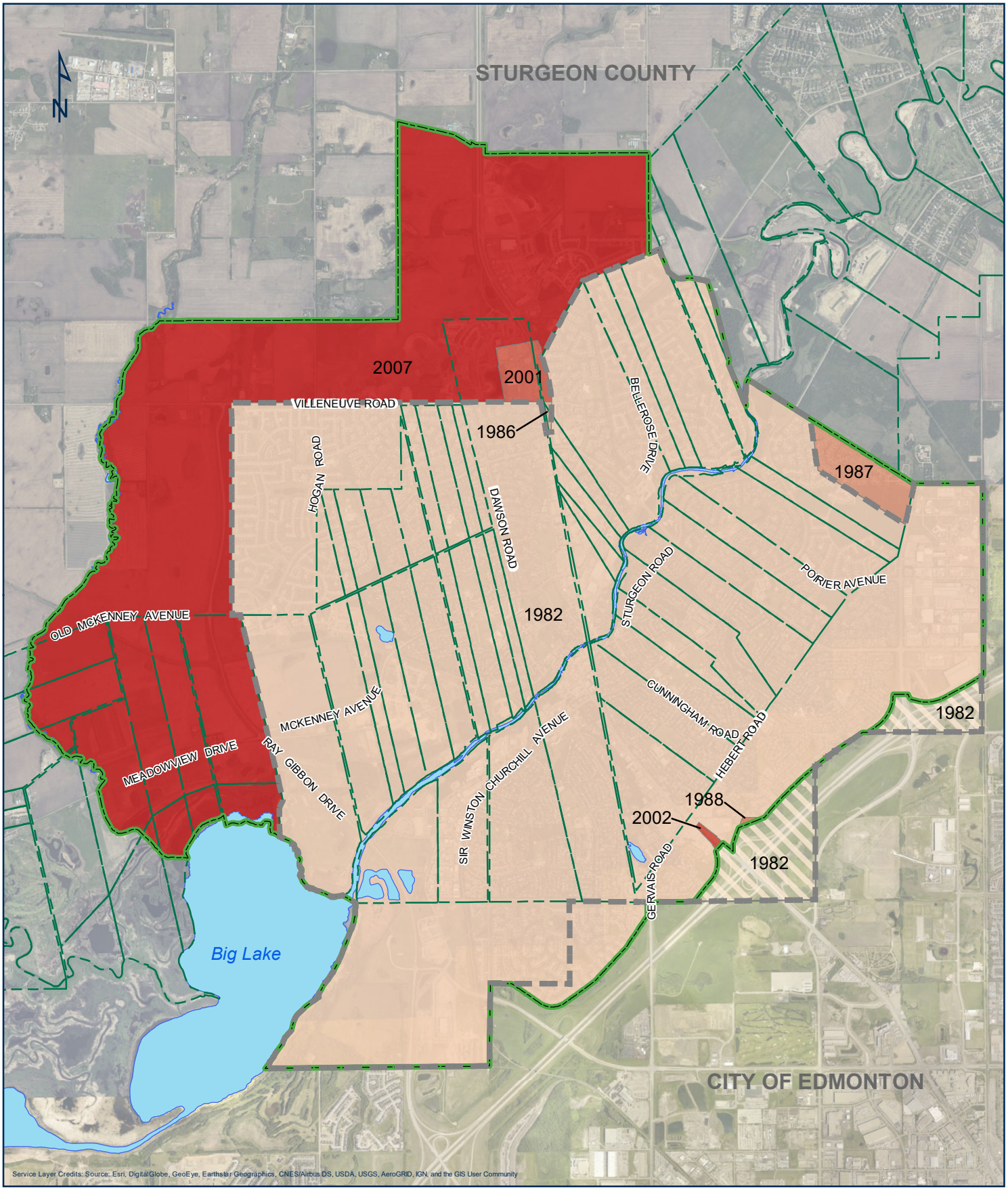
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- St. Albert Settlement Survey
- New Town Incorporation (1957)
- Return to Town Status (1962)
- City Incorporation (1977)
- 1980 Town Boundary
- Current City Boundary
- 1949 Town Boundary
- 1951 Annexation
- 1957 Annexation
- 1961 Annexation
- 1972 Annexation
- 1975 Annexation
- 1980 Annexation

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.3: ANNEXATION HISTORY, 1949-1980



City of St. Albert
Cultivate Life

St. Albert Settlement Survey
1980 City Boundary
Current City Boundary
1982 Withdrawal
1982 Annexation
1986 Annexation
1987 Annexation
1988 Re-Annexation
2001 Annexation
2002 Re-Annexation
2007 Annexation

0 0.2 0.4 0.8 1.2 1.6 km

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.4: ANNEXATION HISTORY, 1980-2007

Table D.1: City of St. Albert Boundary Adjustment History, 1899–2007

No.	Effective Date	Adjustment Type	Area Before (ha)	Area After (ha)	Difference in Area (ha)
—	December 7, 1899	Incorporation (Village)	0.0	196.7	196.7
1	June 26, 1900	Withdrawal and Annexation	196.7	248.0	51.3
—	September 1, 1904	Incorporation (Town)	248.0	248.0	0.0
2	October 25, 1913	Annexation	248.0	1,278.2	1,030.2
3	April 15, 1920	Withdrawal (River Lots 47 and 48)	1,278.2	1,180.6	-97.6
4	April 15, 1920	Withdrawal River Lots 31 and 32 and northern portion of River Lot 33)	1,180.6	995.1	-185.5
5	April 15, 1920	Withdrawal (River Lot 46)	995.1	915.3	-79.8
6	May 1, 1922	Withdrawal (southern portion of River Lot 21)	915.3	889.6	-25.7
7	June 5, 1922	Withdrawal (River Lot 22)	889.6	844.6	-45.0
8	January 1, 1939	Withdrawal (River Lot 54 and majority of River Lot 53)	844.6	665.4	-179.2
9	January 1, 1940	Withdrawal (majority of River Lot 51)	665.4	575.2	-90.2
10	January 1, 1947	Withdrawal (River Lot 34 and remainder of River Lot 33)	575.2	513.4	-61.8
11	January 1, 1949	Withdrawal (remainder of River Lot 21)	513.4	481.4	-32.0
12	August 15, 1951	Annexation	481.4	492.8	11.4
13	January 1, 1957	Incorporation (New Town) with Annexation	492.8	1,303.2	810.4
14	December 30, 1961	Annexation	1,303.2	1,550.0	246.8
—	July 3, 1962	Incorporation (Town)	1,550.0	1,550.0	0.0
15	August 1, 1972	Annexation	1,550.0	1,752.6	202.6
16	January 1, 1975	Annexation	1,752.6	2,045.9	293.3
—	January 1, 1977	Incorporation (City)	2,045.9	2,045.9	0.0
17	January 1, 1980	Annexation	2,045.9	3,597.6	1,551.7
18	January 1, 1982	Withdrawal (transferred to the City of Edmonton) and Annexation	3,597.6	3,526.9	-70.7
19	March 20, 1986	Annexation	3,526.9	3,529.2	2.3
20	January 1, 1987	Annexation	3,529.2	3,571.9	42.7
21	December 31, 1988	Annexation	3,571.9	3,572.9	1.0
22	July 1, 2001	Annexation	3,572.9	3,598.7	25.8
23	January 1, 2002	Annexation	3,598.7	3,601.0	2.3
24	January 1, 2007	Annexation	3,601.0	4,974.2	1,373.2

1.2. Recent Intermunicipal Collaboration on Annexation

1.2.1. 2014 Memorandum of Understanding

Sturgeon County and the City of St. Albert signed a memorandum of understanding (MOU) on November 25, 2014, committing both municipalities to working together to enable cost-effective and mutually beneficial decision-making regarding growth and infrastructure, adhering to the policies and principles of the Capital Region Growth Plan (now Edmonton Metropolitan Region Growth Plan) and other regional and provincial directives. The MOU acknowledges that the City is better positioned to provide for development to urban standards, while the County is better suited to provide for the development and servicing of a lower density, rural form. Both municipalities agreed to seek a process that is respectful of landowners' rights and in which growth pays for itself, or the servicing costs are compensated by the benefitting parties. Finally, the MOU provides that development within the Priority Growth Area (PGA)[1] requires further statutory planning and joint approval of new multi-lot developments.

1.2.2. 2015 Joint Infrastructure Review

The Joint Infrastructure Review (JIR), undertaken in 2015 was part of a collaborative approach between the County and City to promote economic growth in the vicinity of their shared boundary. This study established a unified vision for the area, based on the following principles:

- Complying with legislative documents and approved statutory plans:
- Promoting economic growth and maximizing community benefits through a mix of land uses: and
- Protecting the existing land uses through a gradual densification approach.

The final unified vision for the study area included commercial, industrial, country residential, PGA residential, mixed density residential and mixed commercial and residential uses, as well as environmental reserves.

The JIR divided the study area into five sub-areas to analyze the current and planned infrastructure conditions and identify the infrastructure opportunities to achieve the vision. The study anticipated that full built-out of the study area will occur in an 80-year horizon and recommended the adoption of an adaptable servicing strategy that considers the change in technology and climate resiliency to meet the unique servicing needs of this area.

[1] PGAs were delineated by the former Capital Road Board (CRB) within its October 2009 Addendum to its 2009 Capital Region Growth Plan (CRGP). The CRB, which has since become the Edmonton Metropolitan Region Board (EMRB), adopted its 2016 Edmonton Metropolitan Region Growth Plan (EMRGP) in 2016 that replaced the 2009 CRGP. Approved by the Government of Alberta in 2017, the EMRGP replaced PGAs with a combination of the Metropolitan Area and Metropolitan Core policy tiers within its metropolitan regional structure. The intent of the 2014 MOU as it relates to PGAs is upheld through the Metropolitan Area policy tier in the 2016 EMRGP.

1.2.3. 2017 Joint Growth Boundary Study

The Joint Growth Boundary Study (JGBS) was conducted in 2016 and 2017 to assess the long-term growth needs of Sturgeon County and the City of St. Albert to inform the decision of whether to proceed with a consensual annexation. This study was based on the assumptions that:

- Amendments to both municipalities' statutory documents might be required to accommodate their long-term growth needs;
- A consensual and mutually beneficial annexation may be included as a growth option;
- The infrastructure framework be based on the Joint Infrastructure Review;
- The City will require an associated development levy strategy to fund the expansion of infrastructure; and
- The County has made efforts to prepare detailed plans for the areas along the north and east of the shared boundary.

The JGBS analyzed the short, medium, and long-term growth needs of both municipalities, and evaluated different options to address those needs, including intermunicipal planning and annexation. The process and results of the previous annexation were also weighed in order to learn from past experiences. The JGBS found that a boundary adjustment and a 20-year associated infrastructure financing plan were needed to fully address the City's residential expansion needs, and that a large annexation would be the most efficient and the best mechanism to achieve this purpose. This study identified a preliminary area for boundary adjustment but noted that further technical analyses would be required to determine the size and exact boundaries of the annexation area.

The JGBS also identified growth opportunities for the County, including Sturgeon Valley, ProNorth Industrial Park, the Northern Lights Estates ASP, and the University of Alberta Research Station lands. These areas were deemed to require further investigation and potentially future joint planning.

1.2.4. 2017 Memorandum of Agreement

Sturgeon County and the City of St. Albert signed a memorandum of agreement (MOA) on February 28, 2017, to begin negotiations on the adjustment of their shared boundary. The preamble of the MOA acknowledged the previous collaborative work that both municipalities had conducted, including the 2014 MOU and the JGBS. This preamble also included right growth principles agreed upon through the JGBS (listed below), recalled the motions passed by the Intermunicipal Affairs Committee (IAC) regarding the forthcoming annexation process, and confirmed the key strategic interests of each municipality in the context of boundary adjustment.

The MOA established an Annexation Negotiating Sub-Committee (ANSC) with a mandate to examine and discuss issues such as: annexation principles and timing; studies and information arising from the annexation application; public and stakeholder consultation; transition areas and planning guidelines for those areas; joint servicing options; the Sturgeon Valley Special Study Area; and other topics as determined by the IAC.

The MOA noted that the ANSC discussions were non-binding and the final decision-making authorities were the two municipal councils. Nevertheless, the MOA assigned the ANSC the responsibility to make recommendations about: the boundaries of the annexation area; compensation to Sturgeon County; planning and servicing of the annexation area; taxation matters; transportation impacts; and growth planning within transition areas. More specifically, these recommendations would have to be aligned with the City's commitment that upon the effective date of annexation, it would take responsibility for municipal servicing within annexed lands, protect impacted landowners from mill rate increases for a set period, and assess subdivision and development permit applications in accordance with Sturgeon County's MDP until its own MDP is updated to include annexed lands. This section also clarified that Sturgeon County was to retain the ProNorth Industrial Park.

The MOA established that the operating costs of the ANSC, including the fees for expert resources, the costs of hosting the meetings, and the expenses associated with required studies and engagement activities, were to be covered by the City of St. Albert. Finally, the MOA indicated that the IAC be the designated body for conflict resolution and be responsible for setting provisions to guarantee confidentiality and clarify correspondence information.

1.2.5. Right Growth Principles

Originally advanced in the 2017 JGBS, the following right growth principles were included in the MOA.

- **Financial Responsibility:** Create a growth strategy that is fiscally responsible, equitable, and creates full cost recovery for new development. Continue to collaborate on joint provincial and federal grant programs to fund growth and development.
- **Infrastructure efficiency:** Work together to enable orderly and cost effective services to the mutual benefit of both communities.
- **Boundary Definition:** create growth boundaries that combine natural and man-made limits while respecting the rights of landowners.
- **Complete and Unique Communities in a Sub-Region:** Acknowledge that the City of St. Albert is in the best position to provide development and servicing for higher density urban form while Sturgeon County is in the best position for providing development and servicing of lower density built form that together provide a diverse and rich sub-region.
- **Community Character:** Create a growth strategy that respects the urban, rural and transitional characters and histories of the two communities.
- **Inform Regional Policy:** Plan within the PGA B growth boundary if possible, but also consider Capital Region Policy Amendments if necessary to plan for the right and responsible growth for both municipalities.
- **Time Horizon:** Extend the growth planning time horizon to align with the Capital Region Growth Plan and plan for periodic reviews that consider, among other things, delineation between rural and urban built form, especially in transition areas and municipal servicing requirements.
- **Joint Communication:** The City of St. Albert and Sturgeon County will jointly continue to communicate with the public regarding the progress of these collaborative efforts.

- **Environmental Sensitivity:** Conserve ecological systems, vistas and natural boundaries to create an even more integrated environmental system.

1.3. Study Area

The study area identified through the Joint Growth Boundary Study comprises lands in Sturgeon County located west, north, and east of the City as presented in Map D.5.

The study area extends west from the City boundary along Meadowview Drive to Range Road 261, then north to Township Road 554, then east to Range Road 252, and then south to the south bank of the Sturgeon River. South of the Sturgeon River, the study area is limited to River Lot 56, the St. Albert Cemetery, Poundmaker's Lodge Treatment Centres (Poundmaker's Lodge), and adjacent lands that are southwest of the Canadian National (CN) rail line (the Westlock Subdivision). The study area includes the Northern Lights Estates subdivision and excludes the ProNorth Industrial Park in accordance with the MOA. The study area is bisected by Highway 2 (St. Albert Trail) to the north and both Highway 633 (Villeneuve Road) and a second CN rail line (the Sangudo Subdivision) to the west.

Both the 127 Street extension and Ray Gibbon Drive conceptual alignments are important components of the study area's road infrastructure considerations. The extension of Ray Gibbon Drive is required to service future development in the north portion of the study area.

1.4. Growth Management Study Principles

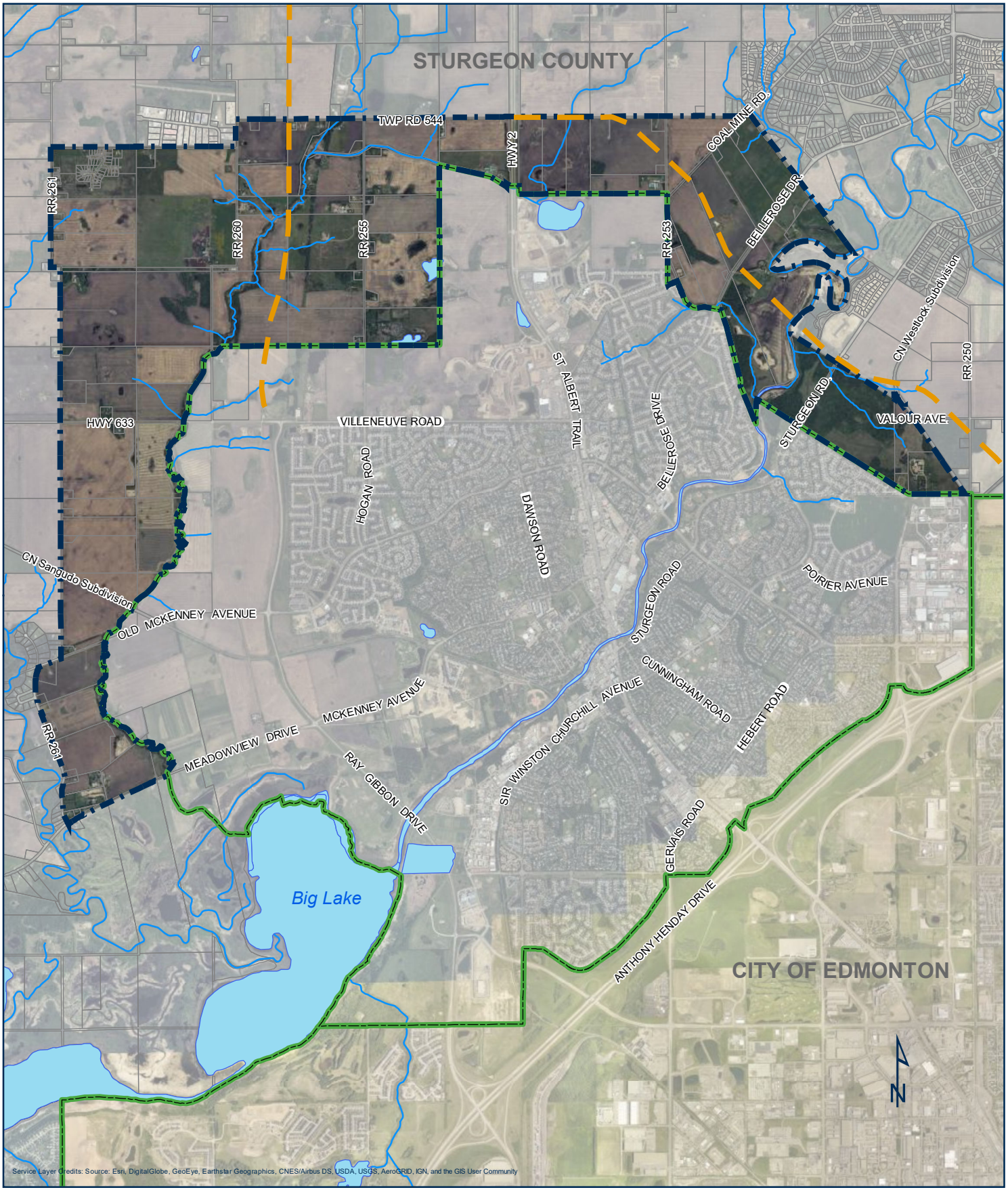
To guide the preparation of this Growth Management Study and the associated Financial Impact Assessment, a series of guiding growth principles were established to provide context for the investigation of future directions for the City's growth and options for how growth may be best accommodated. These guiding growth principles are listed below.

Collaboration and Agreement

1. The relationship of the City to its neighbouring municipalities in the Edmonton Metropolitan Region should be one of mutual respect and collaboration.

2. The future growth and planning needs of Sturgeon County will be accommodated in a manner that does not compromise the City's long-term growth over the next 50 years.

3. The City is committed to regional dialogue with Sturgeon County to respect the interests of existing communities and regional planning objectives regarding the Sturgeon Valley Special Study Area (SVSSA) Terms of Reference. The SVSSA includes lands (Area A) that overlap the Study Area subject to the Growth Study and associated technical studies.



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City of St. Albert Cultivate Life

- Municipal Boundary
- Maximum Potential Annexation Area (MPAA)
- Future Regional Road (conceptual)
- Parcel
- Watercourse
- Water Body

0 0.2 0.4 0.8 1.2 1.6 km

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.5: STUDY AREA (MAXIMUM POTENTIAL ANNEXATION AREA)

4. The City will share information arising out of the Growth Study with Sturgeon County. Further, any data sharing requests of the County from the City, the City will reciprocate this sharing by providing the City's equivalent data back to the County if requested.

5. Orderly, cost effective delivery of services, transportation linkages and efficient use of land are in the best interests of the City and Sturgeon County.
   a. The City will collaborate and coordinate with the County to enable orderly, cost effective delivery of services to the mutual benefit of the City and Sturgeon County.
   b. The City will enable timely, cost effective design and delivery of shared infrastructure for mutual benefit.

Land Need Based on Evidence-Based Analysis

6. Expansion of the City's boundaries must be determined in compliance with the intent of provincial legislation as well as the Annexation Principles established by the Municipal Government Board.

7. The City's Growth Management Study, its assumptions, and supporting technical studies will align with the Edmonton Metropolitan Region Growth Plan with greatest emphasis to those applicable to the Metropolitan Area policy tier and the City of St. Albert.

Environment

8. Lands identified for future urban expansion must be planned and designed to conserve ecological systems, vistas and natural boundaries to create an integrated ecological system.

Future Growth, Urban Form and Density (Development)

9. The City will provide for development and servicing of higher density urban built form as a natural extension of the City.

10. Future expansion areas should be identified that would enable future development of complete communities.

11. Development staging within greenfield areas identified for future urban expansion must:
    c. be contiguous with the City's built-up urban area and/or planned areas;
    d. be supported by realistic population and employment projections; and
    e. identify mitigation measures to extend the life of agricultural activities and minimize the impacts of urban growth on agriculture activities.

12. At minimum, future City growth should ensure an adequate supply of land for residential and non-residential purposes to meet population and employment projections, while also affording a further opportunity to increase non-residential tax revenue in proportion to residential tax revenue.

13. The City will identify future non-residential expansion areas that could accommodate development of a wider than traditional range of industrial opportunities and employment supportive uses that align with regional strengths and local sector composition and optimize opportunities in industrial sub-markets.
14. The City's non-residential expansion areas should also be sufficient to support the City's growing knowledge-based economy and expanding prestige industrial land needs, while also recognizing the City's evolving demographic and socio-economic attributes.

Fiscal Sustainability and Infrastructure Planning

15. Recommendations regarding future directions for growth must be supported by robust, quantitative analysis of future land uses, infrastructure and fiscal requirements to meet the City's needs.

16. The City must plan for increased employment within the City to help achieve City-wide economic and fiscal objectives.

17. The City's economic base must be stable and able to support the provision of municipal infrastructure.

18. The City will ensure future urban growth will be planned and developed in a manner that is consistent with the efficient, economic, and coordinated provision of municipal infrastructure.

19. Future urban expansion areas must be identified in proximity to existing and planned infrastructure in order to optimize opportunities to recover costs from benefiting lands.

20. City taxes must be applied fairly, consistently and equitably to all taxpayers to balance the needs and wants of the community, though it is acknowledged that owners of newly annexed lands may be subject to tax transitioning.

2.0 Historical Growth and Demographics

2.1. City of St. Albert Population Growth

Table D.2 presents the City's historical population growth according to federal census results since 1901 (refer to the rows in grey), and municipal census results since 1954. Overall changes, average annual growth rates and average growth in people per year between federal and municipal censuses are presented.

Table D.2: City of St. Albert Historical Population Growth, 1901–2018

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population[2]	Change Over Period	Average Annual Growth[3]	Average People per Year	Population	Change Over Period	Average Annual Growth[2]	Average People per Year
1901	472		—	—	—				
1906	543		15.0%	2.8%	14				
1911	614		13.1%	2.5%	14				
1916	655		6.7%	1.3%	8				
1921	800		22.1%	4.1%	29				
1926	684		-14.5%	-3.1%	-23				
1931	825		20.6%	3.8%	28				
1936	811		-1.7%	-0.3%	-3				
1941	697		-14.1%	-3.0%	-23				
1946	804		15.4%	2.9%	21				
1951	1,129		40.4%	7.0%	65				
1954						1,329	—	—	—
1956	1,320		16.9%	3.2%	38				
1957						1,850	39.2%	11.7%	174
1958						1,947	5.2%	5.2%	97
1959						2,201	13.0%	13.0%	254
1960						3,190	44.9%	44.9%	989
1961	4,059		207.5%	25.2%	548	3,940	23.5%	23.5%	750
1962						5,249	33.2%	33.2%	1,309
1963						6,880	31.1%	31.1%	1,631
1964						8,583	24.8%	24.8%	1,703

[2] Revised population counts are due to boundary adjustments occurring between federal censuses. For example, in 2011, Statistics Canada revised its 2006 population count for the City to reflect the City's boundary change resulting from its 2007 annexation.
[3] Compounded average annual growth rates.

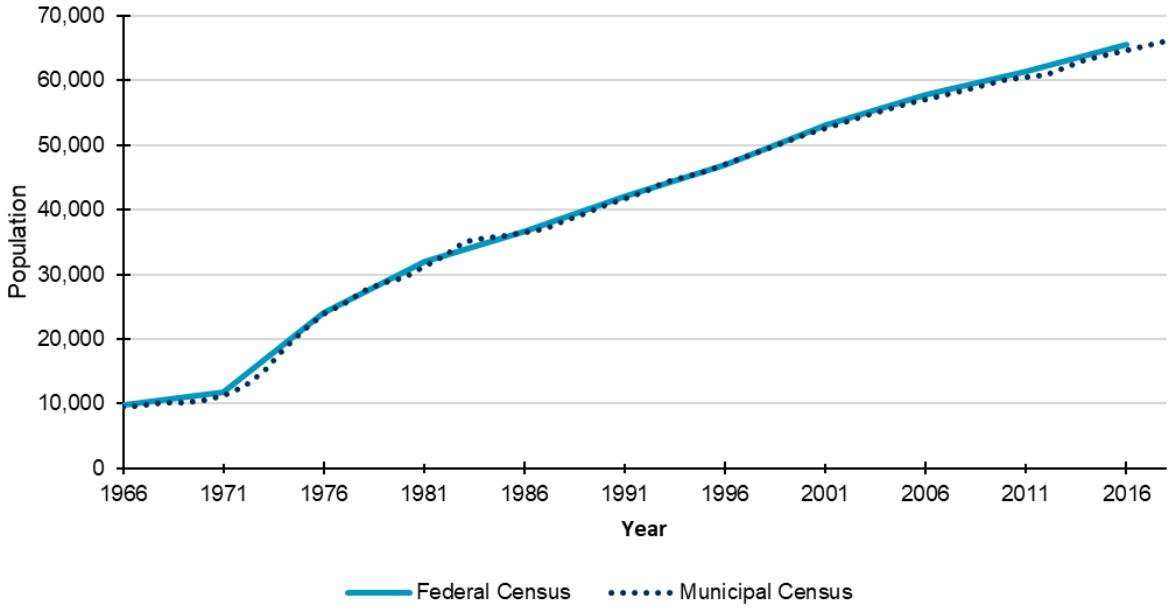
Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population[2]	Change Over Period	Average Annual Growth[3]	Average People per Year	Population	Change Over Period	Average Annual Growth[2]	Average People per Year
1965						9,070	5.7%	5.7%	487
1966	9,736		139.9%	19.1%	1,135	9,426	3.9%	3.9%	356
1967						9,828	4.3%	4.3%	402
1968						10,243	4.2%	4.2%	415
1969						10,191	-0.5%	-0.5%	-52
1970						10,530	3.3%	3.3%	339
1971	11,800	11,829	21.2%	3.9%	413	11,249	6.8%	6.8%	719
1972						12,637	12.3%	12.3%	1,388
1973						15,088	19.4%	19.4%	2,451
1974						18,395	21.9%	21.9%	3,307
1975						21,342	16.0%	16.0%	2,947
1976	24,129	24,227	104.0%	15.3%	2,466	23,905	12.0%	12.0%	2,563
1977						25,543	6.9%	6.9%	1,638
1978						27,408	7.3%	7.3%	1,865
1979						28,718	4.8%	4.8%	1,310
1980						29,512	2.8%	2.8%	794
1981	31,996	31,957	32.1%	5.7%	1,573	31,180	5.7%	5.7%	1,668
1982						32,982	5.8%	5.8%	1,802
1983						35,032	6.2%	6.2%	2,050
1984						35,529	1.4%	1.4%	497
1985						35,897	1.0%	1.0%	368
1986	36,710		14.9%	2.8%	943	36,453	1.5%	1.5%	556
1987						37,008	1.5%	1.5%	555
1988						38,318	3.5%	3.5%	1,310
1989						39,388	2.8%	2.8%	1,070
1990						40,707	3.3%	3.3%	1,319
1991	42,146		14.8%	2.8%	1,087	41,745	2.5%	2.5%	1,038
1992						42,852	5.3%	2.6%	1,073
1993						44,195	5.9%	2.9%	1,225
1995						45,895	3.8%	1.9%	850
1996	46,888		11.3%	2.2%	948				
1998						49,243	7.3%	2.4%	1,116
2000						51,716	5.0%	2.5%	1,237
2001	53,081		13.2%	2.5%	1,239				
2003						54,588	5.6%	1.8%	957
2005						56,310	3.2%	1.6%	861
2006	57,719	57,764	8.7%	1.7%	928				

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population[2]	Change Over Period	Average Annual Growth[3]	Average People per Year	Population	Change Over Period	Average Annual Growth[2]	Average People per Year
2008						58,501	3.9%	1.3%	730
2010						60,138	2.8%	1.4%	819
2011	61,466		6.4%	1.3%	749				
2012						60,944	1.3%	0.7%	403
2014						63,255	3.8%	1.9%	1,156
2016	65,589		6.7%	1.3%	825	64,645	2.2%	1.1%	695
2018						66,082	2.2%	1.1%	719

Source: Statistics Canada (1901–2016), Alberta Municipal Affairs (1954–2018) and ISL

Figure D.1 illustrates the City's historical population growth over the past 52 years since 1966.

Figure D.1: Historical Population Growth, 1966–2018



Source: Statistics Canada (1966–2016), Alberta Municipal Affairs (1966–2018) and ISL

The following are key observations from Table D.2 and Figure D.1.

- Over the course of its history, St. Albert has grown from a population of 472 in 1901 to 66,082 in 2018.
- As of 2018, the City has:
  - tripled its population since 1975 when it recorded a population of 21,342 – an increase of 44,740; and
  - more than doubled its population since 1982 when it recorded a population of 32,982 – an increase of 33,100.
- Between the federal censuses conducted between 1966 and 2016, the City's average annual growth rate has varied between 1.3% and 15.3%.
- Over the past 50 years, the City experienced its highest growth between 1971 and 1981 when it averaged an increase of 2,020 people per year.
- Since 1981, the City has experienced average increases of 921 people per year.

Table D.3 presents the City's growth rates since 1966 from its federal and municipal census counts, over various intervals ranging from 10 to 50 years.

Table D.3: St. Albert Historical Population Growth over Various Intervals, 1966–2016

Federal Census				Municipal Census			
Interval (Year Range)	Change Over Period	Average Annual Growth[4]	Average People per Year	Interval (Year Range)	Change Over Period	Average Annual Growth[3]	Average People per Year
50 (1966-2016)	574%	3.9%	1,117	50 (1968-2018)	545%	3.8%	1,117
40 (1976-2016)	171%	2.5%	1,034	40 (1978-2018)	141%	2.2%	967
30 (1988-2016)	79%	2.0%	963	30 (1988-2018)	72%	1.8%	925
20 (1996-2016)	40%	1.7%	935	20 (1998-2018)	34%	1.5%	842
10 (2006-2016)	14%	1.3%	787	10 (2008-2018)	13%	1.2%	758

Source: Statistics Canada (1966–2016), Alberta Municipal Affairs (1968–2018) and ISL

2.2. Demographics

2.2.1. Demographic Characteristics

Table D.4 presents various demographic characteristics of St. Albert from 2016 and compares them with the same for seven other municipalities in the Edmonton Metropolitan Region (EMR) including Edmonton, Beaumont, Fort Saskatchewan, Leduc, Spruce Grove, Strathcona County, and Sturgeon County. With the exception of Sturgeon County and Strathcona County, the municipalities selected are primarily urban in nature.

[4] Compounded average annual growth rates.

Table D.4: Municipal Comparison of Demographic Characteristics

Demographic Characteristic	St. Albert	Edmonton	Beaumont	Fort Saskatchewan	Leduc	Spruce Grove	Strathcona County	Sturgeon County
Median Age of Population	40.7	35.7	33.2	34.4	35.0	34.0	40.1	39.0
Average Family Size of Census Families	3.0	2.9	3.2	2.9	2.9	3.0	3.0	3.0
Average Persons in Private Households	2.7	2.5	3.1	2.6	2.6	2.7	2.7	2.9
Total Occupied Private Dwellings	23,955	360,825	5,635	9,260	11,320	12,555	35,565	6,870
Low Density Residential Dwellings[5]	19,130	205,080	4,970	7,160	8,385	9,895	31,555	6,855
Higher Density Residential Dwellings[6]	4,825	155,745	655	2,105	2,925	2,650	4,015	15
Percent Low Density Residential Dwellings	79.9%	56.8%	88.2%	77.3%	74.1%	78.8%	88.7%	99.8%
Percent Higher Density Residential Dwellings	20.1%	43.2%	11.6%	22.7%	25.8%	21.1%	11.3%	0.2%
Average Household Total Income in 2015 ($)	153,694	112,619	151,781	131,917	117,024	121,915	170,067	172,312

Source: Statistics Canada (2016)

The comparison of demographic characteristics in Table D.4 reveals that St. Albert has:

- the highest median age of population;
- the second-highest average family size of census families (tied with Spruce Grove, Sturgeon County, and Strathcona County);
- the third-highest average number of persons in private households (tied with Spruce Grove and Strathcona County);
- the fourth-highest percentage of low-density residential dwellings;

[5] Consists of single detached housing, semi-detached housing and movable dwellings as defined by Statistics Canada.
[6] Consists of all other residential housing structure types as defined by Statistics Canada in the 2016 federal census.

- the fourth-lowest percentage of high-density residential dwellings; and
- the third-highest average household total income in 2015 of all private households.

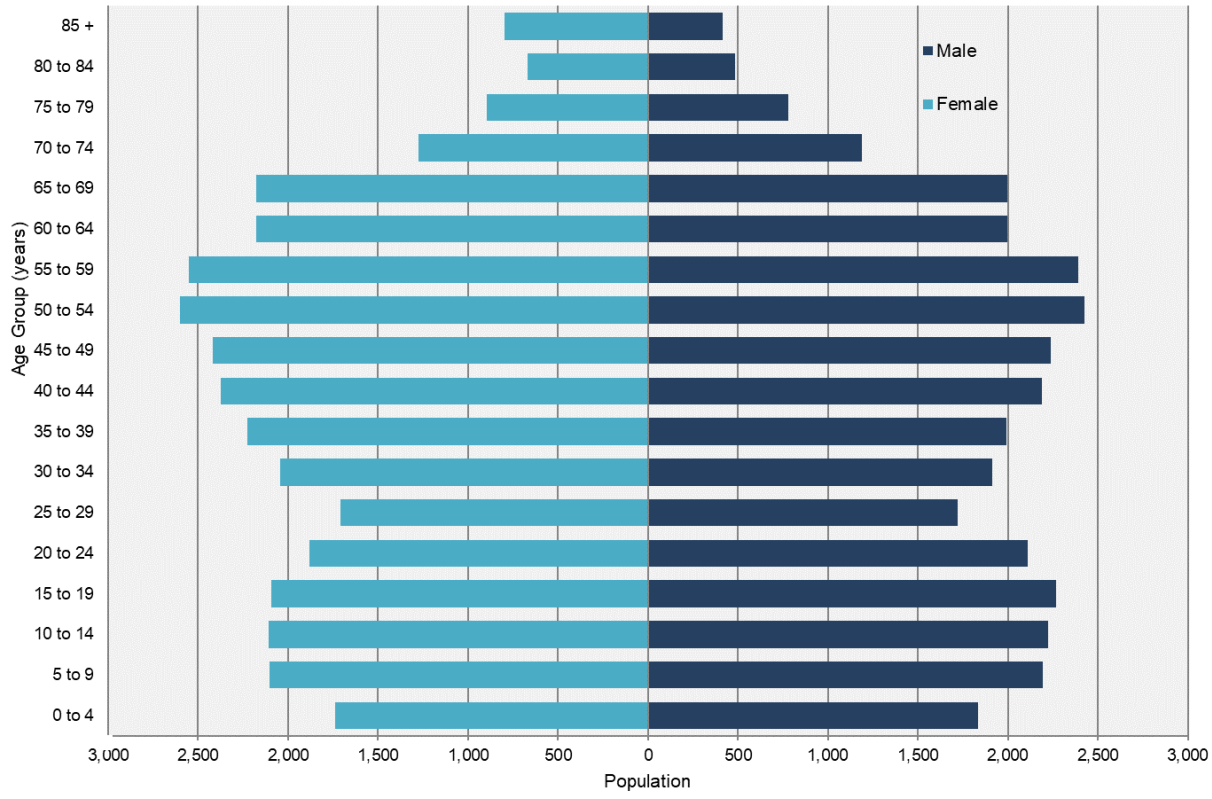
These observations are also indicators that the City is an aging community with a mature population and has traditionally attracted families with higher incomes seeking low density residential housing.

The City's demographic characteristics appear to be most similar to those of Spruce Grove, Fort Saskatchewan, and Leduc on the basis of family size, average persons per household, and proportion of low to high residential dwellings. The City's average household total income is most similar to Beaumont. Overall, the City's demographic characteristics and proportions are most similar to Spruce Grove, with the exception of its higher median age and average household income.

2.2.2. Age and Gender

Figure D.2 presents the age and gender of the City's population in five-year cohorts based on the 2016 federal census.

Figure D.2: Age and Gender by Five Year Cohorts



Source: Statistics Canada (2016)

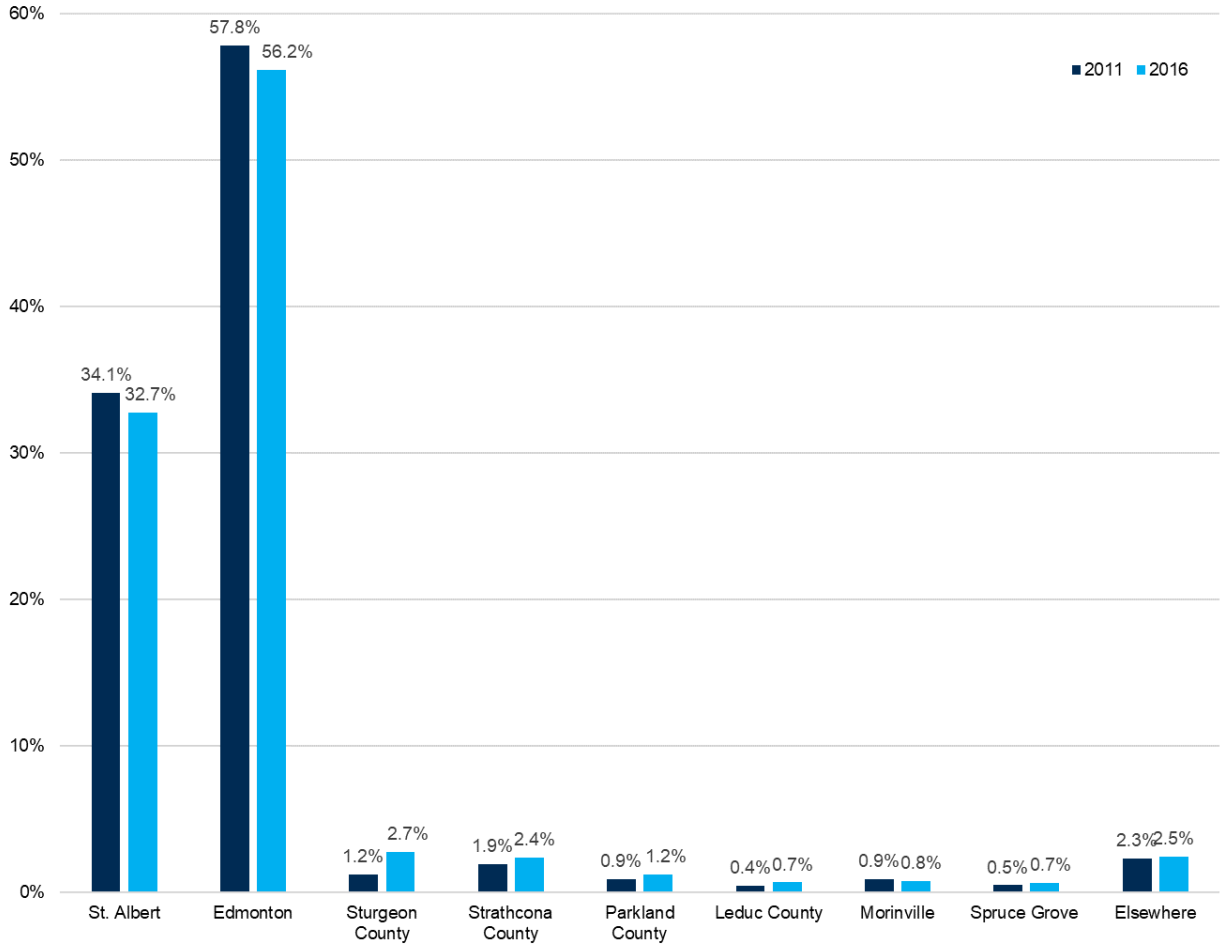
The following are key observations from Figure D.2.

- The City has two population bubbles – the three age cohorts between the ages of 5 through 19 and the three cohorts between the ages of 45 through 59 – which suggests the City has an aging population and attracts mature adults with young children.
- The City's population is relatively evenly distributed between the 0 and 59 age cohorts, demonstrating a stable population with a high median age.

2.2.3. Place of Work of the Employed Labour Force

Figure D.3 presents the usual places of work for the City's employed labour force aged 15 years or older from the 2011 National Household Survey and 2016 Census.

Figure D.3: Place of Work of Employed Labour Force, 2011-2016



Source: Statistics Canada (2011 and 2016)

The following are key observations from Figure D.3.

- Most of St. Albert's employed labour force commutes to work destinations outside the City, with the majority (56.2%) working in Edmonton.
- 32.7% of the City's employed labour force worked in St. Albert, down from 34.1% in 2011.
- Of those that commute to work destinations outside the City:
  - 56.2% worked in Edmonton in 2016 (down slightly from 57.8% in 2011);
  - 2.7% worked in Sturgeon County in 2016 (up from 1.2% in 2011);
  - 2.4% worked in Strathcona County in 2016 (up from 1.9% in 2011);
  - 1.2% worked in Parkland County in 2016 (up from 0.9% in 2011);
  - 0.7% worked in Leduc County in 2016 (up from 0.4% in 2011);
  - 0.8% worked in Morinville in 2016 (down slightly from 0.9% in 2011);
  - 0.7 % worked in Spruce Grove in 2016 (up from 0.5% in 2011); and
  - 2.5% worked elsewhere in 2016 (up from 2.3% in 2011).

3.0 Growth Projections

3.1. Edmonton Metropolitan Region Growth Projections

The Edmonton Metropolitan Region Growth Plan (EMRGP) has published two sets of population projections and one set of employment projections for 24 municipalities in the Edmonton Metropolitan Region (EMR). The projections are for a 30-year timeframe where 2014 is the base year and 2044 is the horizon year.

Under the EMRGP Low Case, St. Albert is projected to grow to an estimated population of 90,100 by 2044, up 40% from 64,300 in 2014. Comparatively, a population of 118,000 is estimated in the EMRGP High Case, up 84% from 2014. The projected employment in the City associated with the EMRGP High Case is 35,437 jobs, up 68% from 21,140 jobs in 2014.

3.2. Growth Management Study Projections

Metro Economics was retained by ISL on behalf of the City in the summer of 2018 to develop independent demographic and economic projections to 2070. The City is adjacent to the City of Edmonton and due to its commuting flows, it forms part of the Edmonton census metropolitan area (CMA). The Edmonton CMA is closely approximated by Census Division (CD) 4811 in the Province of Alberta.

3.2.1. Historical Population Growth

Further to Section 2.1, according to the 2016 federal census the City's population grew at an average annual compounded growth rate of 1.7 percent over the two-decade span from 1996 to 2016. This is slightly slower than the 2.2 percent annual growth pace achieved by CD 4811 as a whole.[7]

As of 2016, St. Albert accounted for 4.6 percent of the total population of CD 4811. Over the 1996 to 2006 span, the City's population grew at the same pace as CD 4811, but over the 2006 to 2016 period fell slightly below that of the Edmonton CMA.

3.2.2. Population Projections for Census Division 4811

In developing total population projections to 2070 for the City, the latest population projections for Alberta and CD 4811 from Alberta Treasury Board and Finance (ATB&F) were obtained.

[7] According to the 2018 municipal census, the population of the City reached 66,082, up from a total of 64,645 according to the municipal count in 2016, or by 1.1 percent per year. It should be noted that the federal census has consistently counted more people in the City than the municipal census, which is largely due to the mandatory and voluntary response natures of federal and municipal censuses respectively. The difference reached 944 in 2016. If that difference holds through to 2018, the federal census-based estimate for 2018 should be 67,026.

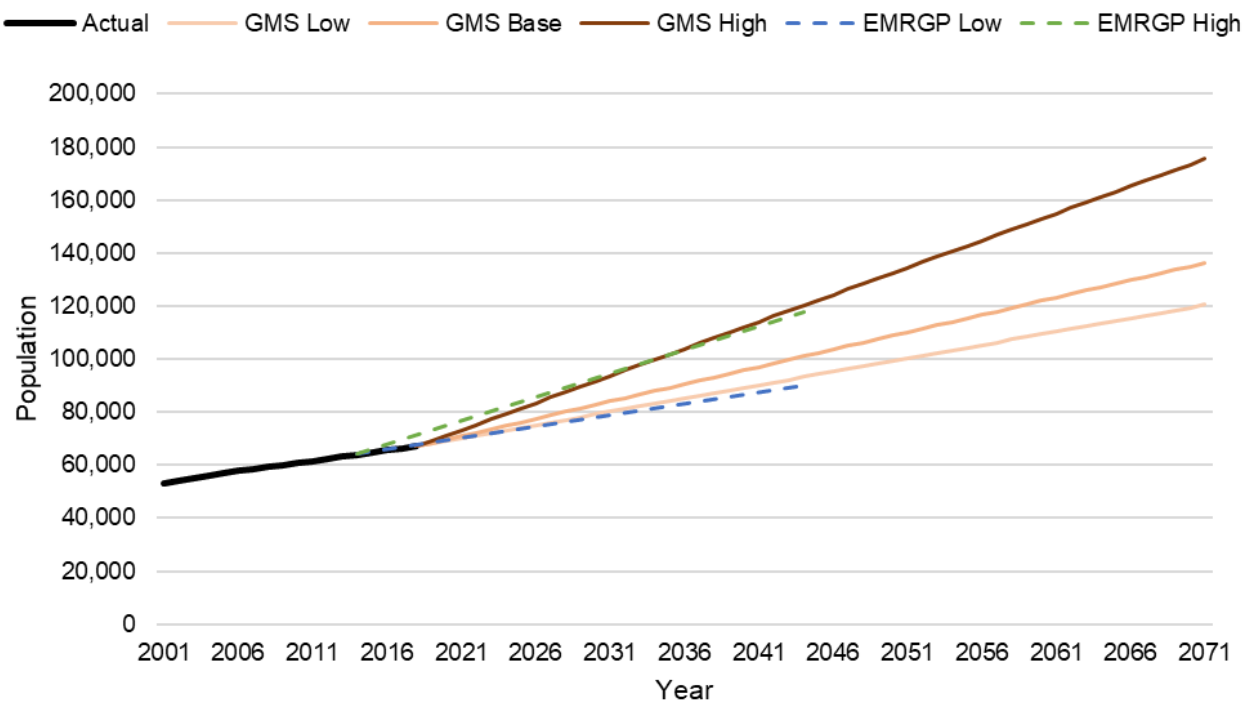
Base, High and Low total population projections were developed using the following methodology:

- ATB&F Base, Low and High projections of the total population of CD 4811 based on the recent 2016 federal census were collected. These projections extend to 2041.
- The ATB&F population projections for CD 4811 were translated to census-based estimates.
- The total population of CD 4811 from 2041 to 2070 was projected for each of the Base, High and Low Cases by assuming that annual growth from 2041 to 2070 will match the annual pace projected by ATB&F for the span from 2036 to 2041.
- This procedure resulted in projections of total population growth for CD 4811 of 1.3 percent per year for the Base Case, 1.8 percent for the High Case and 1.1 percent for the Low Case.
- It was assumed each of the 50 municipalities that make up CD 4811 will maintain their share of population (on average in 2011 and 2016) over the entire projection horizon. This means St. Albert will maintain a 4.9 percent share of CD 4811's population. These assumptions imply, of course, that the City will grow each year at the projected pace of the extended ATB&F projections for CD 4811 to 2070.
- The 2018 municipal census count of 66,082 was adjusted upwards to 67,025 for the tendency of the City's municipal census to run lower than the results of the federal census.

3.2.3. GMS Low, Base and High Case Population Projections

Figure D.4 shows the implied projection alternatives to 2071 for the City against history back to 2001. The horizon of 2071 is solely included in the figures to enable presentation of full five-year intervals. The projections show that St. Albert's population reaches 135,003 in 2070 in the GMS Base Case, 173,385 in the GMS High Case, and 119,442 in the GMS Low Case.

Figure D.4: Population History, 2001–2018, and Projections to 2071



Source: Statistics Canada 2001 to 2016 and Metro Economics 2017 to 2071

In comparison with the EMRGP projections, by 2044:

- the GMS Low Case is trending just over 3,000 people above the EMRGP Low Case for St. Albert;
- the GMS Low Case is trending nearly 1,700 people below the EMRGP Low Case for Sturgeon County; and
- the GMS High Case is trending just over 2,000 people above the EMRGP High Case for St. Albert.

In growth studies prepared for other municipalities in the EMR to facilitate their recent or pending annexations, the City of Edmonton used an amended EMRGP High Case scenario while Spruce Grove used a Medium-High Case that trended along the EMRGP High Case. Beaumont and Fort Saskatchewan each used Medium Case scenarios that trended just above or below the midpoints of the EMRGP Low and High Cases.

3.2.4. Adjustments to the Employment by Place of Work Projections

With the assistance of Watson & Associates Economists Ltd., the projections for employment by place of work were adjusted upwards gradually over time reaching a total addition of 3,500 jobs by 2071. This adjustment reflects the strong employment growth projected for the whole Edmonton CMA coupled with the reality that St. Albert is positioned to accommodate more employment lands than implied by the initial Base Case projection as employment land supply in northwest Edmonton diminishes in the future.

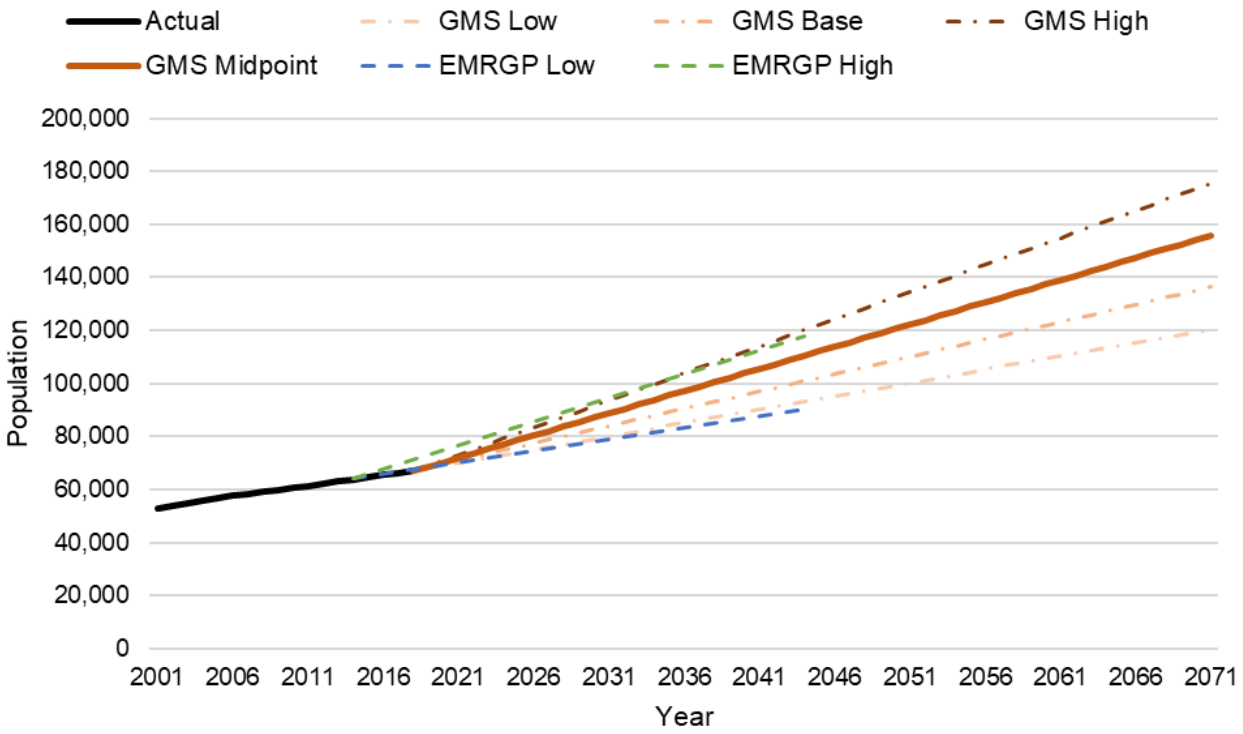
3.2.5. The Midpoint Case Projection

While the GMS High Case is possible for the City, the amount of residential competition within the EMR, and competition particularly with Sturgeon County given the advancement of future urban residential development within the Sturgeon Valley Special Study Area, could hinder full realization. Concurrently however, the GMS Base Case scenario is likely to be too conservative in determining 50-year land requirements for an annexation. It is best practice to plan for a greater potential for growth to avoid initiating another annexation in the short to medium-term.

As there is a desire by both the County and the City to achieve municipal boundary stability for the medium to long-term, the City sought a Midpoint Case projection scenario for the purpose of determining 50-year land requirements. The Midpoint Case is recommended for the determination of land requirements as it is a realistic and reasonable population projection that defers the need for another annexation well into the medium-term, or longer in the event St. Albert grows more slowly.

Figure D.5 presents the Midpoint Case projections in relation to the other projections for the City.

Figure D.5: Population History and Midpoint Case Projection to 2071

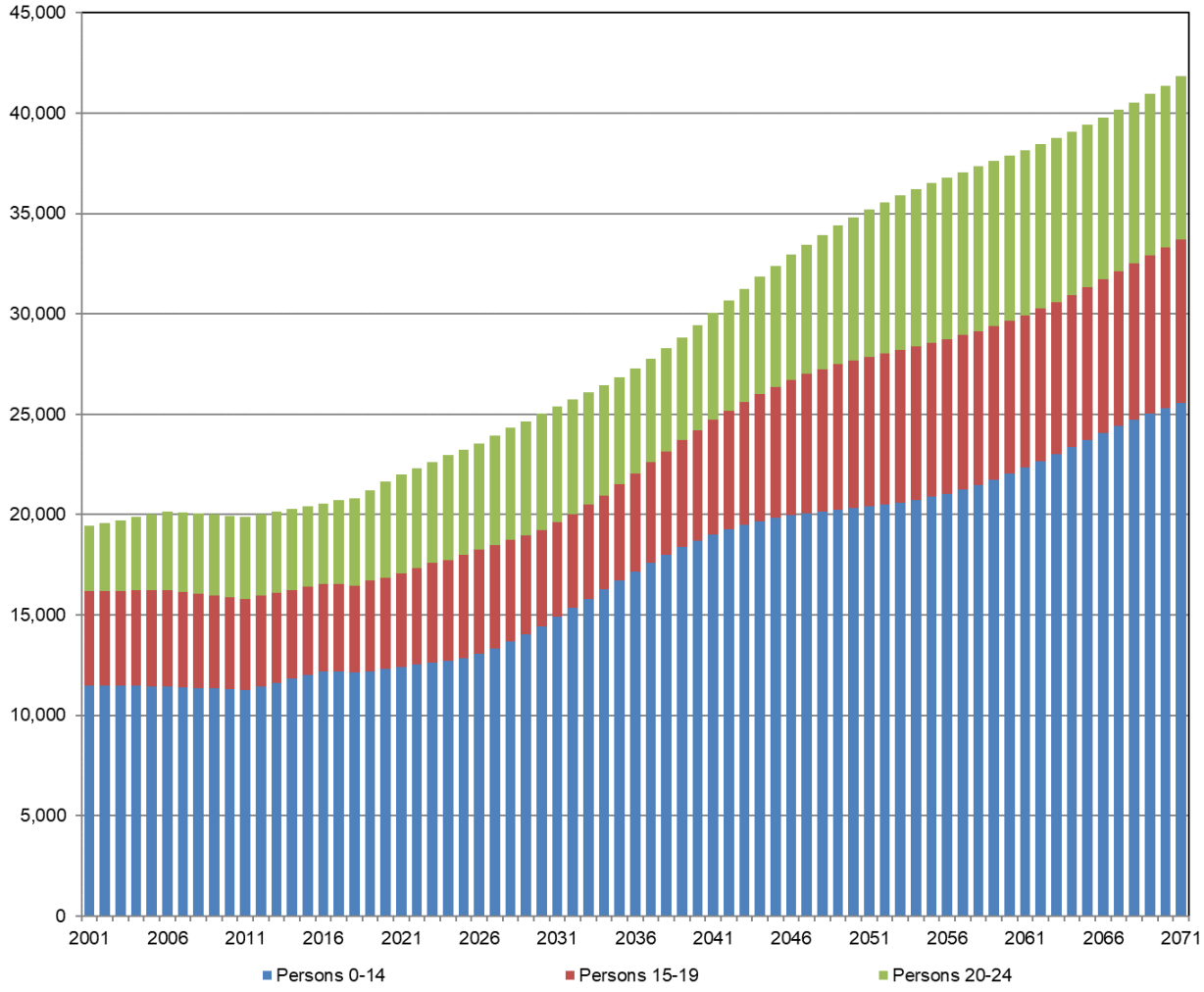


Source: Statistics Canada 2001 to 2016 and Metro Economics 2017 to 2071

Under the Midpoint Case, St. Albert's population reaches 154,125 in 2070, an increase of 87,100 people or 130% from the estimated 2018 population of 67,025. In comparison with the EMRGP projections, by 2044 the GMS Midpoint Case is trending 6,525 people above the midpoint between the EMRGP Low and High Cases.

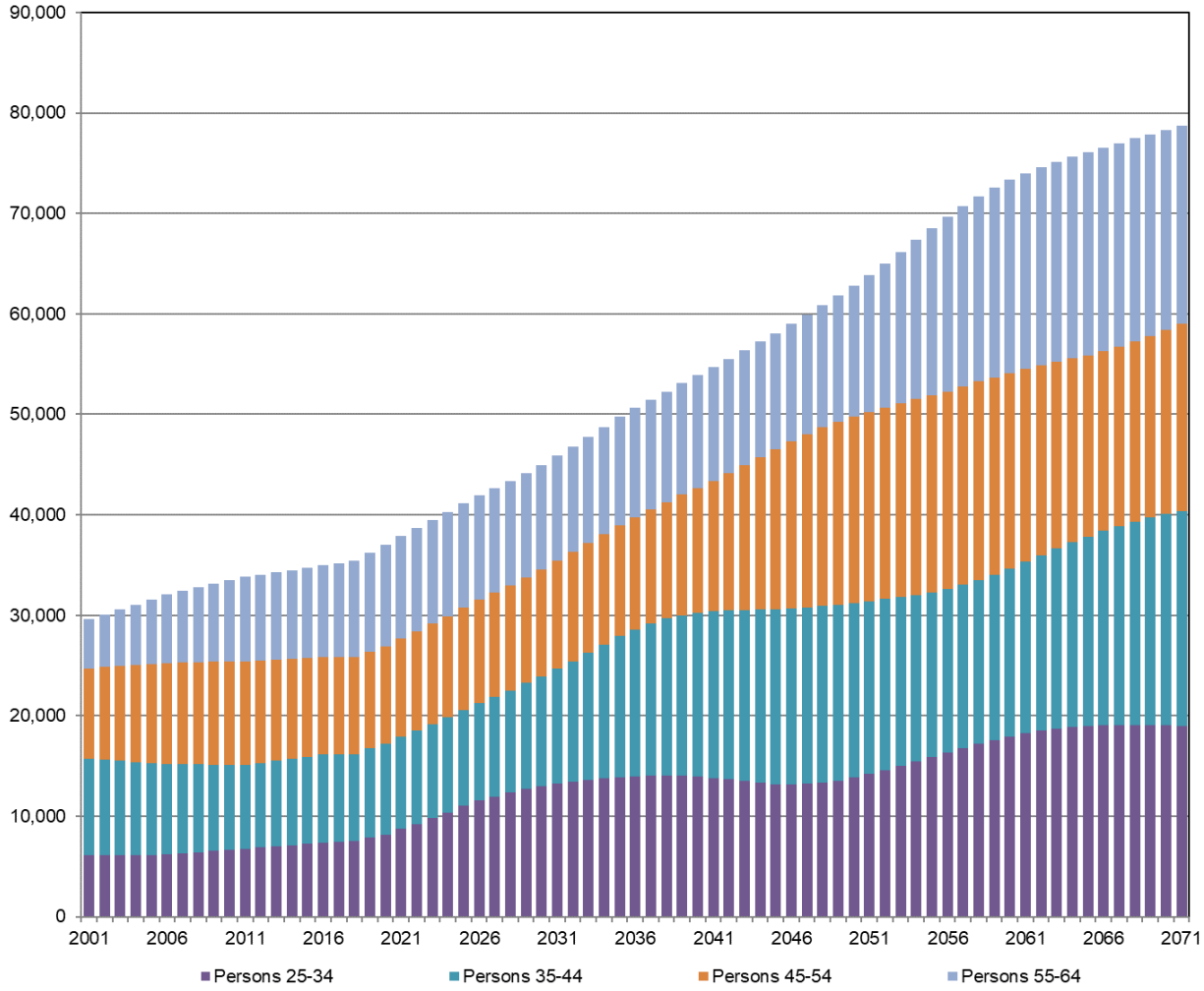
The following Figures D.6 through D.10 summarize the recommended Midpoint Base Case projections for the City.

Figure D.6: Persons <25 Years of Age, Historical and Projected, 2001–2071



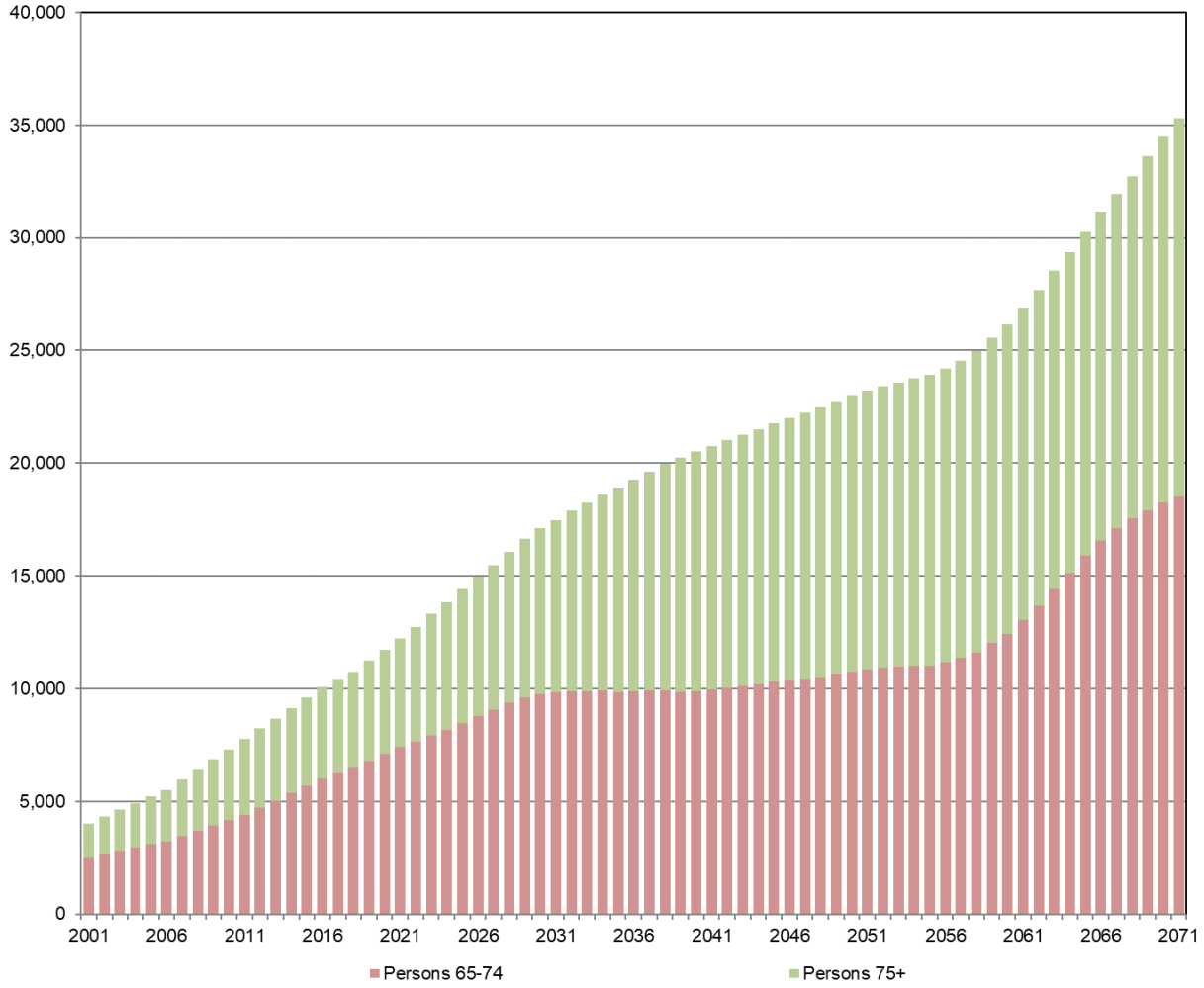
Source: Statistics Canada and Metro Economics

Figure D.7: Persons 25 to 64 Years of Age, Historical and Projected, 2001–2071



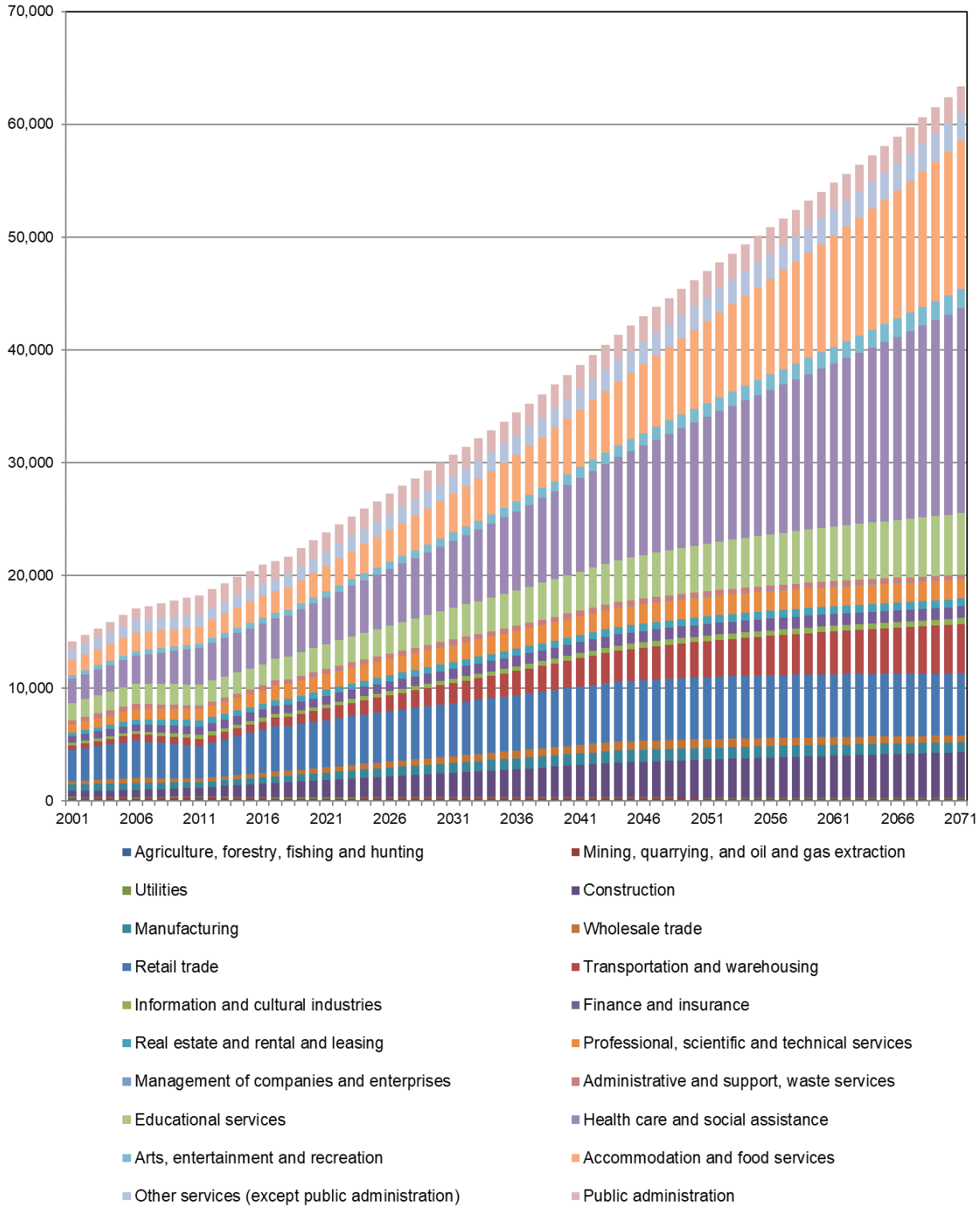
Source: Statistics Canada and Metro Economics

Figure D.8: Persons 65+ Years of Age, Historical and Projected, 2001–2071



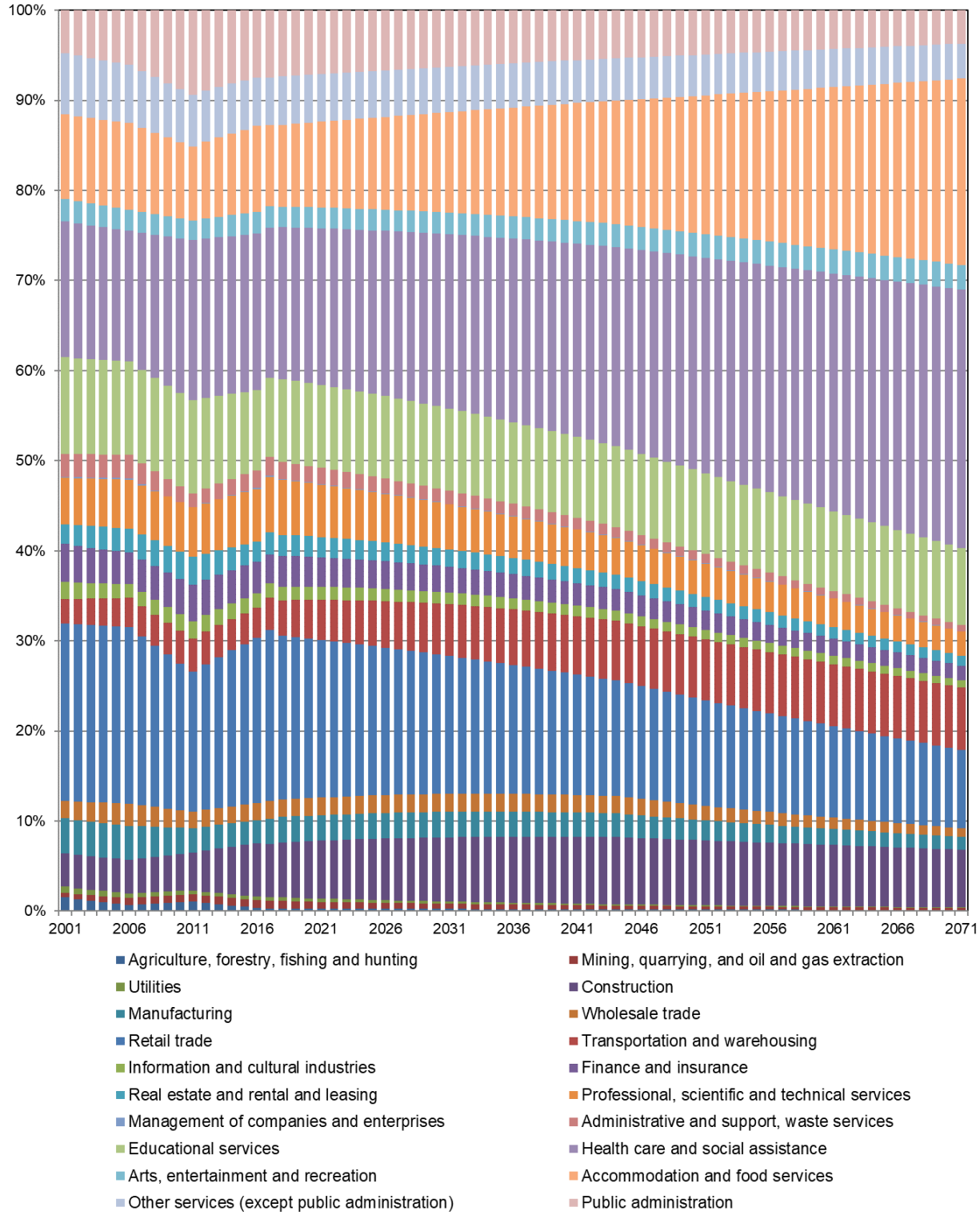
Source: Statistics Canada and Metro Economics

Figure D.9: Employment by Industry, Historical and Projected, 2017–2071



Source: Statistics Canada and Metro Economics

Figure D.10: Percent Share of Employment by Industry, Historical & Projected 2001–2071



Source: Statistics Canada and Metro Economics

4.0 Status of City Lands

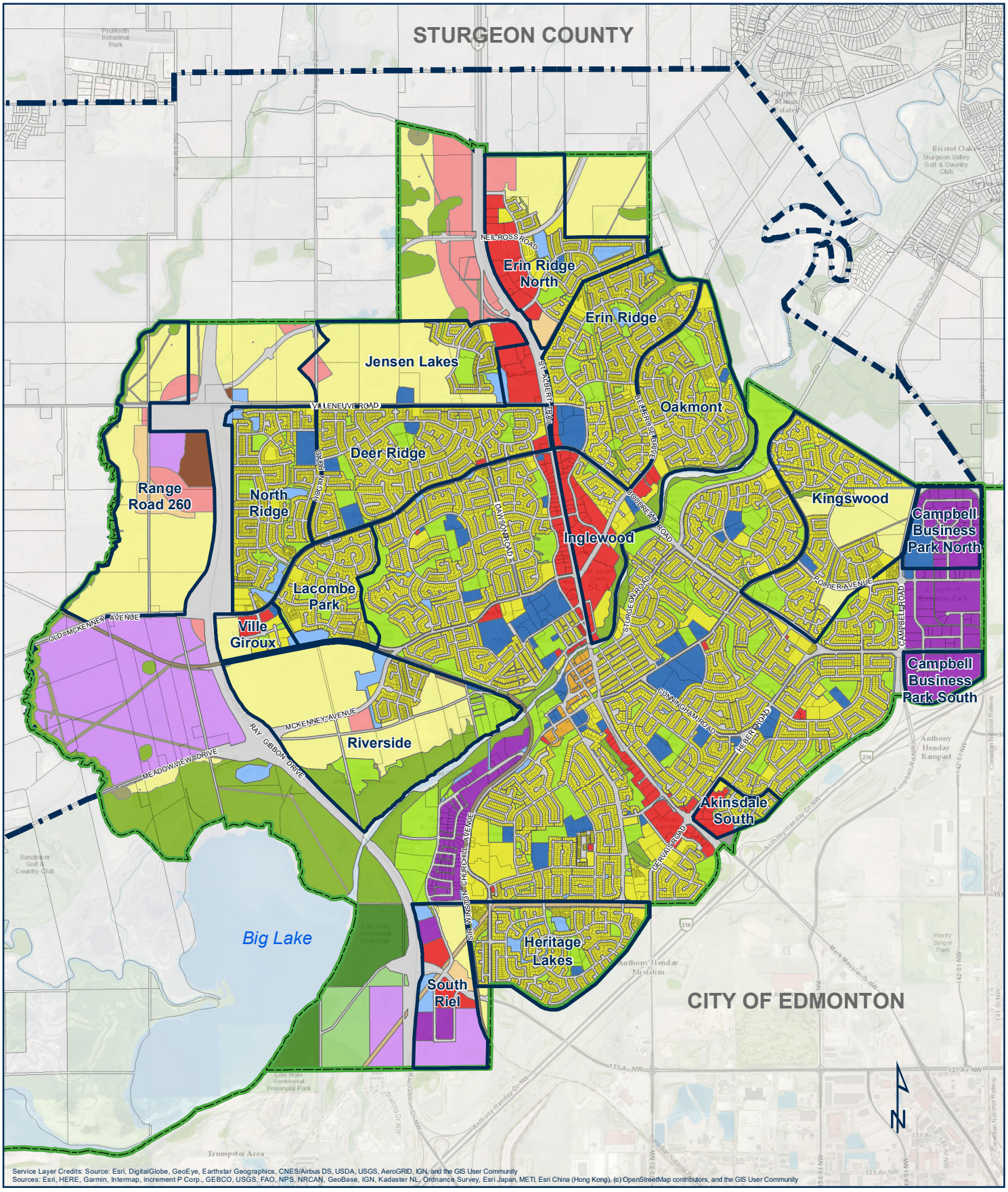
4.1. Land Supply Analysis

The City's current land base amounts to 4,973.3 hectares (ha). As summarized in Table D.5 and as illustrated in Map D.6, 677.5 ha (14.9%) of the City's land base is unavailable or undevelopable, while 3,132.0 ha (63.0%) was absorbed as of March 2018. As shown in Tables D.5 and D.6, this includes lands consumed for:

- Unavailable or undevelopable land uses (e.g. environmental reserve, Lois Hole Centennial Provincial Park, the Sturgeon River, pipelines, power transmission lines, rail lines, transportation facilities, and former landfills);
- The four core land uses (residential, commercial, industrial, and institutional); and
- Developable overhead land uses (parks and open space, public utilities, and circulation).

Table D.5: Gross Developable Land Supply

	Area (ha)	Percent
Gross Area	**4,973.3**	**100.0%**
Environmental Reserve	342.5	6.9%
Lois Hole Centennial Provincial Park and Future Expansion	101.3	2.0%
Sturgeon River	32.1	0.6%
Pipelines	20.1	0.4%
Power Transmission Lines	15.1	0.3%
Well Setbacks	4.4	0.1%
Rail	26.6	0.5%
Transportation Utility Corridor	2.1	0.0%
Ray Gibbon Drive	161.0	3.2%
Future Arterial Roads	20.5	0.4%
Former Landfills	15.3	0.3%
Total Undevelopable and Unavailable Lands	**741.0**	**14.9%**
Gross Developable Land Supply	**4,232.2**	**85.1%**
Gross Absorbed Land Supply (see Table D.6)	**3,132.0**	**63.0%**
Gross Unabsorbed Land Supply (see Tables D.6 and D.7)	**1,100.3**	**22.1%**



City of St. Albert Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

3TM114-83 1:50,000

- Absorbed Residential
- Unabsorbed Residential
- Absorbed Mixed Use
- Unabsorbed Mixed Use
- Absorbed Commercial
- Unabsorbed Commercial
- Absorbed Industrial
- Unabsorbed Industrial
- Absorbed Institutional
- Public Utility
- Parks and Open Space
- Environmental Reserve
- Provincial Park
- Provincial Park Future Expansion
- Former Landfill
- Rail
- Pipeline/Well Setback
- Power Transmission
- Circulation
- Transportation Utility Corridor
- Area Structure Plan

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.6: LAND SUPPLY STATUS

Table D.6: Breakdown of Absorbed Land Supply

	Area (ha)	Percent
Gross Developable Land Supply	**4,232.1**	**100.0%**
Residential	1,387.5	32.8%
Mixed Residential/Commercial	11.3	0.3%
Commercial	176.1	4.2%
Industrial	165.7	3.9%
Institutional	139.0	3.3%
Total Net Developable Core Land Uses	**1,879.9**	**44.4%**
Parks and Open Space	347.5	8.2%
Public Utilities	124.3	2.9%
Circulation	780.4	18.4%
Total Net Developable Overhead Land Uses	**1,252.3**	**29.6%**
Gross Absorbed Land Supply[8]	**3,132.0**	**74.0%**
Gross Unabsorbed Land Supply[9]	**1,100.3**	**26.0%**

As presented in Table D.6, the amount of gross developable land within the current City limits that was unabsorbed and available for future development as of March 2018 totaled 1,100.3 ha, or 22.1% of the City's total land base. This gross unabsorbed land supply breaks down to 709.4 ha for residential, 111.4 ha for commercial and 279.6 ha for industrial (Table D.7).

Also, in Table D.7, by subtracting an assumed 35%[10] of the gross unabsorbed residential lands for developable overheads, the net amount of land available for residential within the current City limits is 461.1 ha. By subtracting 30%[11] of the gross unabsorbed commercial and industrial lands for developable overheads, the net amount of commercial and industrial lands available within the City are 77.9 ha and 195.7 ha respectively.

[8] For the purpose of this study, **absorbed land supply** is defined as lands zoned under the land use bylaw (LUB) and subdivided for development.
[9] For the purpose of this study, **available land supply** is defined as lands not yet zoned and/or subdivided for development, and is based on LUB districting, approved area structure plan land use designations, and future land use identified in the municipal development plan, etc.
[10] This 35% deduction from gross residential assumes 10% for parks and open space (municipal and school reserves), 5% for public utilities and 20% for circulation (local and collector roads). The maximum amount a municipality may require for roads and public utilities at the subdivision stage under the *Municipal Government Act* is 30%, while the maximum dedication for municipal and school reserves is 10%.
[11] This 30% deduction from gross commercial and industrial assumes 10% for parks and open space, 5% for public utilities and 15% for circulation.

Table D.7: Breakdown of Unabsorbed Land Supply

	Gross Area (ha)	Percent	Net Area (ha)	Percent
Unabsorbed Land Supply	**1,100.3**	**100.0%**	**734.7**	**66.8%**
Residential	709.4	64.5%	461.1	41.9%
Commercial	111.4	10.1%	77.9	7.1%
Industrial	279.6	25.4%	195.7	17.8%
Estimated Developable Overheads	**—**	**—**	**365.6**	**33.2%**

It should be noted that the amount of land remaining for institutional is not provided in Table D.7 as future lands for institutional land uses are not often made available until the subdivision stage. As institutional land uses can be compatible with and located within all three other core land uses, the City's residential, commercial, and industrial land supplies could be reasonably expected to provide additional institutional land supply at the various subdivision stages over time for uses such as fire halls, community centres, schools and churches. However, it is observed in Map D.6 that all existing institutional land uses are either within or adjacent to existing or planned future residential land uses with no instances wholly surrounded by commercial and/or industrial land uses.

4.2. Estimated Years to Land Supply Depletion

Table D.8 presents the estimated years to land supply depletion from the end of 2018 under the four projection scenarios, using the assumptions presented in Chapter 6.0 if the City were to maintain its current boundaries. Based on the distribution of institutional land uses observed in Map D.6, 100% of the future institutional land requirements has been apportioned to the City's remaining residential land supply.

The years to depletion noted in Table D.8 is based on the estimated annual consumption of the remaining unabsorbed land within the City. In general, a land requirements model is used to determine the annual consumption of land by land use type for each scenario. Within the model, it is assumed that 100% of the annual land requirement by land use type occurs in the City before eventually being pushed outside the City's boundary.

Table D.8: Land Supply Depletion Estimates from 2018 by Scenario

Land Use	Low Case			Base Case			High Case			Midpoint Case		
	Year Depleted	Years to Depletion	Average ha/year	Year Depleted	Years to Depletion	Average ha/year	Year Depleted	Years to Depletion	Average ha/year	Year Depleted	Years to Depletion	Average ha/year
Residential	2061	43	16.5	2051	33	21.5	2039	21	33.8	2044	26	27.3
Commercial	2068	50	2.2	2057	39	2.9	2043	25	4.5	2048	30	3.7
Industrial	2049	31	9.0	2042	24	11.6	2034	16	17.5	2037	19	14.7
Total Average ha/year	**–**	**–**	**27.7**	**–**	**–**	**36.0**	**–**	**–**	**55.7**	**–**	**–**	**45.7**

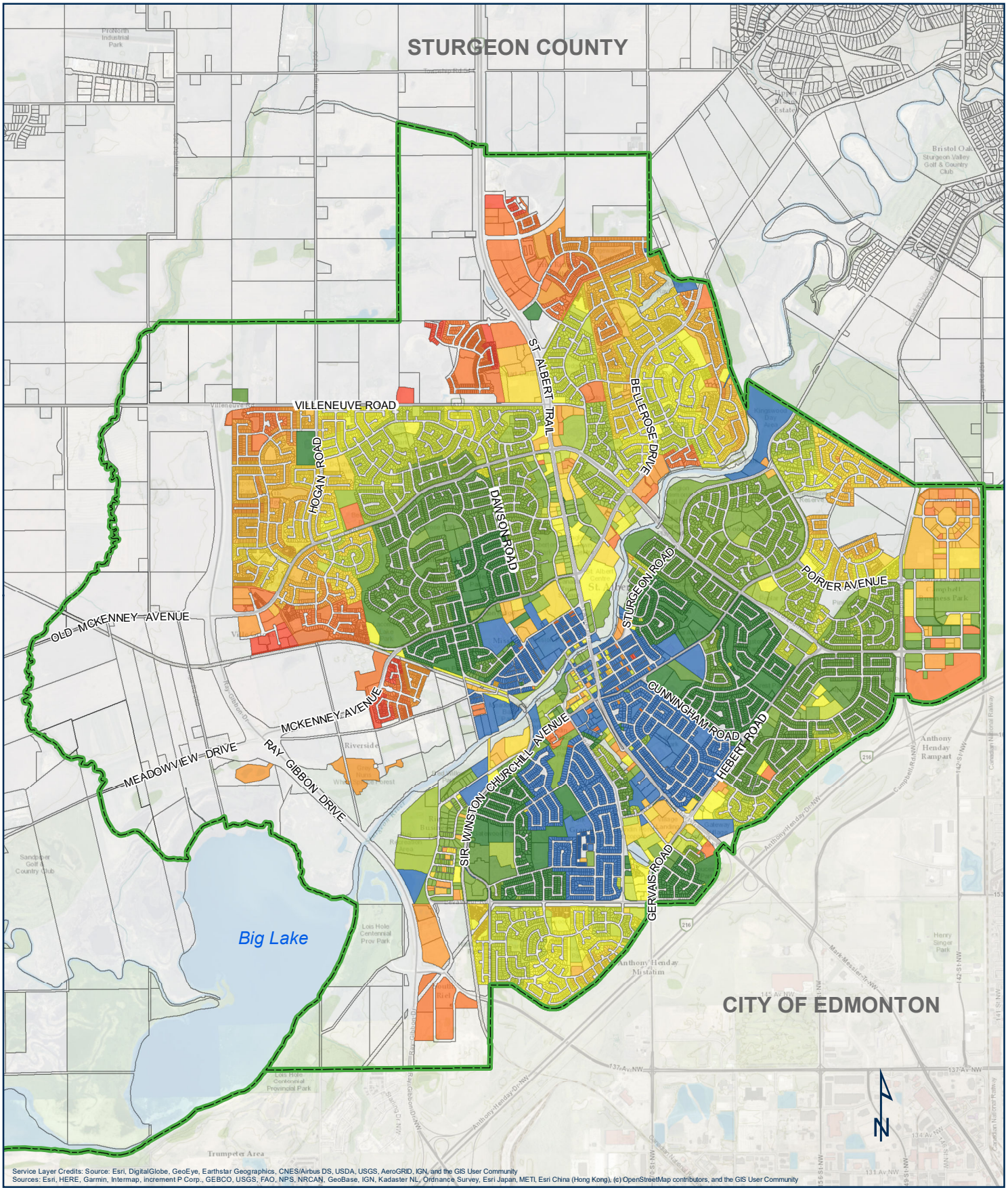
As presented in Table D.8, it will take 26 years (2044) for the City's residential land supply to be depleted under the recommended "Midpoint Case" Scenario based on the land supply estimates in Table D.7. In terms of non-residential development, it will take 30 years (2048) and 19 years (2037) for the City's commercial and industrial land supplies respectively to be depleted under the "Midpoint Case" Scenario. Under the "High Case" Scenario, estimates of land supply depletion vary from 16 to 25 years depending on land use, while the estimate under the "Base Case" Scenario varies from 24 to 39 years.

4.3. Historical Land Absorption Analysis

A historical land absorption analysis enables an understanding of how land has been consumed through the plan registration process over a certain time period. Extrapolation of the results allows the estimation of the earliest time in which all available lands could be absorbed under two key assumptions – that there will be flexibility of land use among the City's remaining available lands, and that all owners of the available lands will participate in development. For the purpose of this GMS, St. Albert's historical land absorption analysis was undertaken by calculating the total area of all plans registered over 50 years in 5-year intervals from January 1, 1968 to December 31, 2017.

As illustrated in Map D.7 and presented in Table D.9, the average amount of lands absorbed annually between 1968 and 2017 was 50.6 ha (or 0.8 gross developable quarter sections[12] per year). With a gross unabsorbed land supply of 1,100.3 ha (Table D.6), it would take 24.75 years to absorb these lands through plan registration based on the assumption that the recent 50-year rate of 50.6 ha per year remains constant. This estimate of nearly 25 years is generally consistent with the remaining 26 years to depletion for residential in Table D.8 but lower than the 30 years for commercial and higher than the 19 years for industrial. The difference of 5 years for commercial is due to having a higher than proportionate supply compared to

[12] A typical **gross quarter section** is 64.75 ha (160 acres) in size based on standard township survey dimensions of 804.7 m by 804.7 m (0.5 miles by 0.5 miles). Over time, municipalities acquire road widening or arterial road dedication from quarter sections, whether at the subdivision stage or through road plan registrations, which in turn reduces the gross developable area of the original quarter sections. For the purpose of the GMS, a **gross developable quarter section** has an area of 63.5 ha in recognition of titled area already lost to road widening or future titled area to be lost for road widening or arterial road dedication purposes.



City of St. Albert Cultivate Life

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Pre-1968
1968-1972
1973-1977
1978-1982
1983-1987
1988-1992
1993-1997
1998-2002
2003-2007
2008-2012
2013-2017
2018
Municipal Boundary

Note: Historical land absorption footprint based on registered subdivision plans by year of registration excluding undeveloped remant block shell parcels, unabsorbed lands, circulation, environmental reserve, provincial park, and utility rights-of-way.

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.7: HISTORICAL LAND ABSORPTION

residential. The difference of 6 years for industrial is due to assumptions in the land requirements model to capture higher than traditional volumes of industrial growth in the future.

Table D.9: St. Albert's Historical Land Absorption, 1968–2017

Time Period	Area Absorbed Excluding Circulation[13] (ha)	Assumed Area of Associated Circulation[14] (ha)	Gross Developable Area Absorbed (ha)	Gross Developable Quarter Sections	Gross Developable Area (ha) per Year	Gross Developable Quarter Sections per Year
1968-1972	241.8	55.3	297.1	4.7	59.4	0.9
1973-1977	260.0	59.4	319.4	5.0	63.9	1.0
1978-1982	277.9	63.5	341.4	5.4	68.3	1.1
1983-1987	158.5	36.2	194.7	3.1	38.9	0.6
1988-1992	208.0	47.5	255.5	4.0	51.1	0.8
1993-1997	169.8	38.8	208.6	3.3	41.7	0.7
1998-2002	207.7	47.5	255.2	4.0	51.0	0.8
2003-2007	197.1	45.0	242.1	3.8	48.4	0.8
2008-2012	123.9	28.3	152.2	2.4	30.4	0.5
2013-2017	213.6	48.8	262.4	4.1	52.5	0.8
1968-2017	**2,058.3**	**470.3**	**2,528.6**	**39.8**	**50.6**	**0.8**

4.4. Residential Lands

As presented previously in Table D.7, the City had a gross residential land supply of 709.4 gross ha (461.1 net ha) as of March 2018 to accommodate population growth. As noted in Section 4.2, these lands will be consumed within 26 years (in 2044) under the "Midpoint Case" Scenario. This consumption includes a 100% allocation of future institutional land requirements to residential areas.

4.5. Commercial Lands

As of March 2018, the City's commercial land base available for subdivision totaled 111.4 gross ha (77.9 net ha) as noted in Table D.7. According to Table D.8, the commercial land base will be depleted within 30 years (by 2048) under the "Midpoint Case" Scenario.

[13] GIS data provided by the City did not include portions of registered plans that involved dedication of roads, lands, and untitled walkways. Therefore, these areas are assumed to represent 81.6% of lands absorbed based on the breakdown of absorbed land supply presented in Table D.6.
[14] Circulation is assumed to be 18.4% of gross area of registered plans based on the 18.4% circulation presented in the breakdown of absorbed land supply presented in Table D.6.

4.6. Industrial Lands

As of March 2018, the City had 279.6 gross ha (195.7 net ha) of industrial land available for subdivision as noted in Table D.6. As indicated in Section 4.2, the remaining available industrial lands will be depleted within 19 years (in early 2037) under the “Midpoint Case” Scenario. This consumption includes a 25% allocation of future institutional land requirements to residential areas.

4.7. Institutional Lands

Table D.6 indicates that the City had 139.0 gross ha of available institutional land supply at the end of 2018. The amount of land remaining for institutional uses in the City is understated, however, as future lands for institutional uses are not often made available until the subdivision stage. The remaining institutional land requirements are anticipated to be interspersed throughout future growth areas as facilities such as churches, fire stations, libraries, civic buildings, etc. are required. More specifically, it is assumed that 100% of the institutional land requirements will be captured within residential growth areas. It is also assumed that portions of the gross developable overheads will accommodate some of these uses (e.g., schools on municipal reserve sites).

5.0 Study Area Analysis

5.1. Topography

The topography of the study area is illustrated in Map D.8. The west and northwest portions of the study area have elevations ranging between 654 m and 690 m above sea level (ASL). In the east and northeast portions of the study area, the elevations range from 650 m to 690 m ASL.

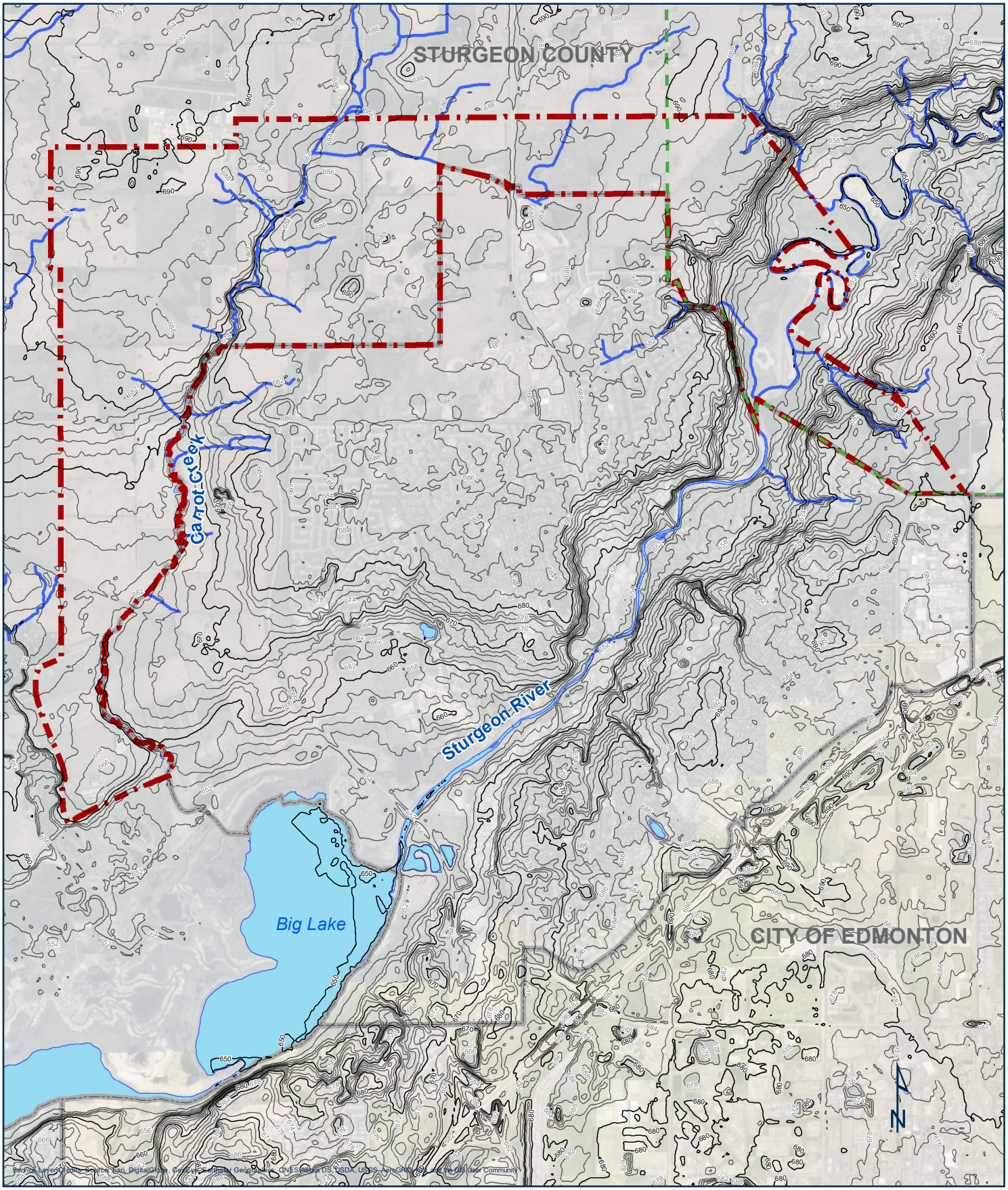
Lands within the west and northwest portions of the study area generally slope toward Carrot Creek. The highest points, of about 690 m ASL, are located in the northwest corner of the study area in the vicinities of the Northern Lights Estates subdivision and ProNorth Industrial Park. Lands within the north portion of the study area are generally flat and slope to the ditched segment of Carrot Creek. The east and northeast portions of the study area are where the steepest slopes are located. With low points of 550 m along the Sturgeon River, steeper relief occurs between 652 m and 686 m ASL to the northwest of the river and between 652 m and to 690 m to the southeast of the river.

5.2. Hydrography

Map D.9 illustrates the watercourses and water bodies that are present within the study area. The Sturgeon River flows just outside the southwestern portion of the study area before emptying into Big Lake. It then outlets from Big Lake and meanders through the City and traverses the northeast portion of the study area. After the river exits the study area, it continues to the northeast before emptying into the North Saskatchewan River.

Carrot Creek forms the current west boundary of the City. A lower-volume branch of the creek enters the study area from the north to the west of Highway 2. A higher-volume branch also originates from the north to the east of Highway 2. Upon crossing Highway 2, this branch follows a ditch system to meet up with the other branch. After converging, the creek generally flows south, bisecting the northwest portion of the study area, before emptying into Big Lake. The lake is an important water body within the Sturgeon River basin. While located in Sturgeon County, it forms a portion of the southwest boundary of St. Albert and the northwest boundary of the City of Edmonton. Big Lake's main inflow is the Sturgeon River, although Carrot Creek and Atim Creek also flow into this lake.

In addition to these significant hydrological features, there are several other unnamed water bodies and watercourses within the study area.



City of St. Albert
Cultivate Life

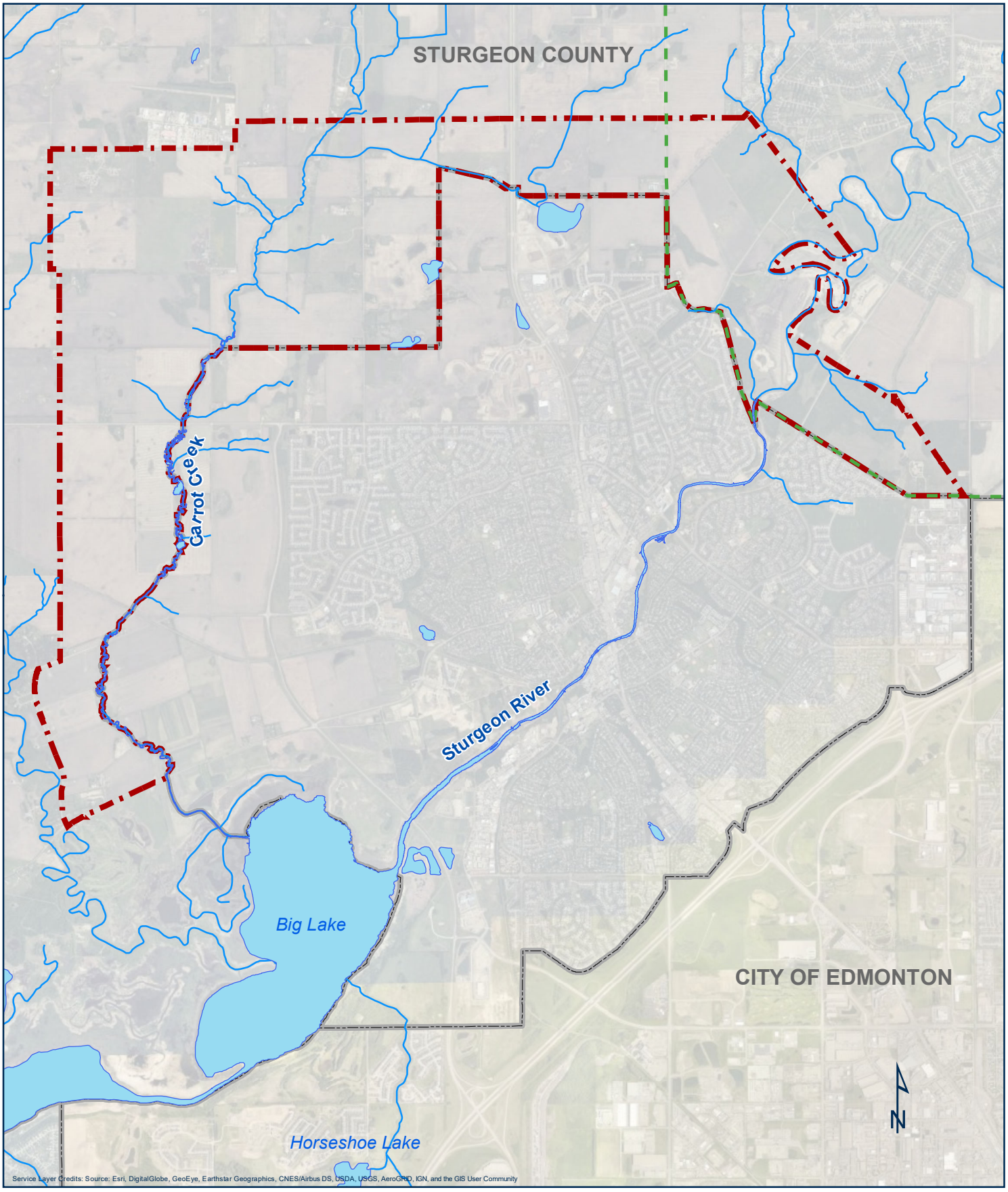
- Municipal Boundary
- MPAA
- Sturgeon Valley Area Structure Plan (ASP)
- 2 m Contour
- 10 m Contour

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.8: TOPOGRAPHY



City of St. Albert
Cultivate Life

Municipal Boundary
MPAA
Sturgeon Valley ASP
Watercourse
Water Body

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.9: HYDROGRAPHY

5.3. Ecological Considerations

An Ecological Assessment (EA) prepared in support of this GMS (see Appendix E of the City's Annexation Application), identifies ecological connectivity, assets, and liabilities in the study area in relation to the City, the County, and the Edmonton Metropolitan Region, and is built upon the City's 2015 Natural Areas Assessment Update. The results are summarized below and presented in Map D.10.

5.3.1. Natural Areas

As part of the EA, the inventory of natural areas in the City was updated, including significant natural areas, environmentally sensitive areas, and other uncategorized natural areas. There is a total of 185 natural areas scattered throughout the City with a combined area of 463.1 ha. Compared to the Natural Areas Assessment conducted in 2015, there was a decrease of 10 sites representing a loss of approximately 5.1 ha of natural areas. The majority of sites that were completely lost between these two studies were identified in 2015 as natural areas planned for loss. Most of the lost sites were small natural areas and were concentrated in developing areas within the Riverside ASP and South Riel ASP lands.

5.3.2. Ecological Network

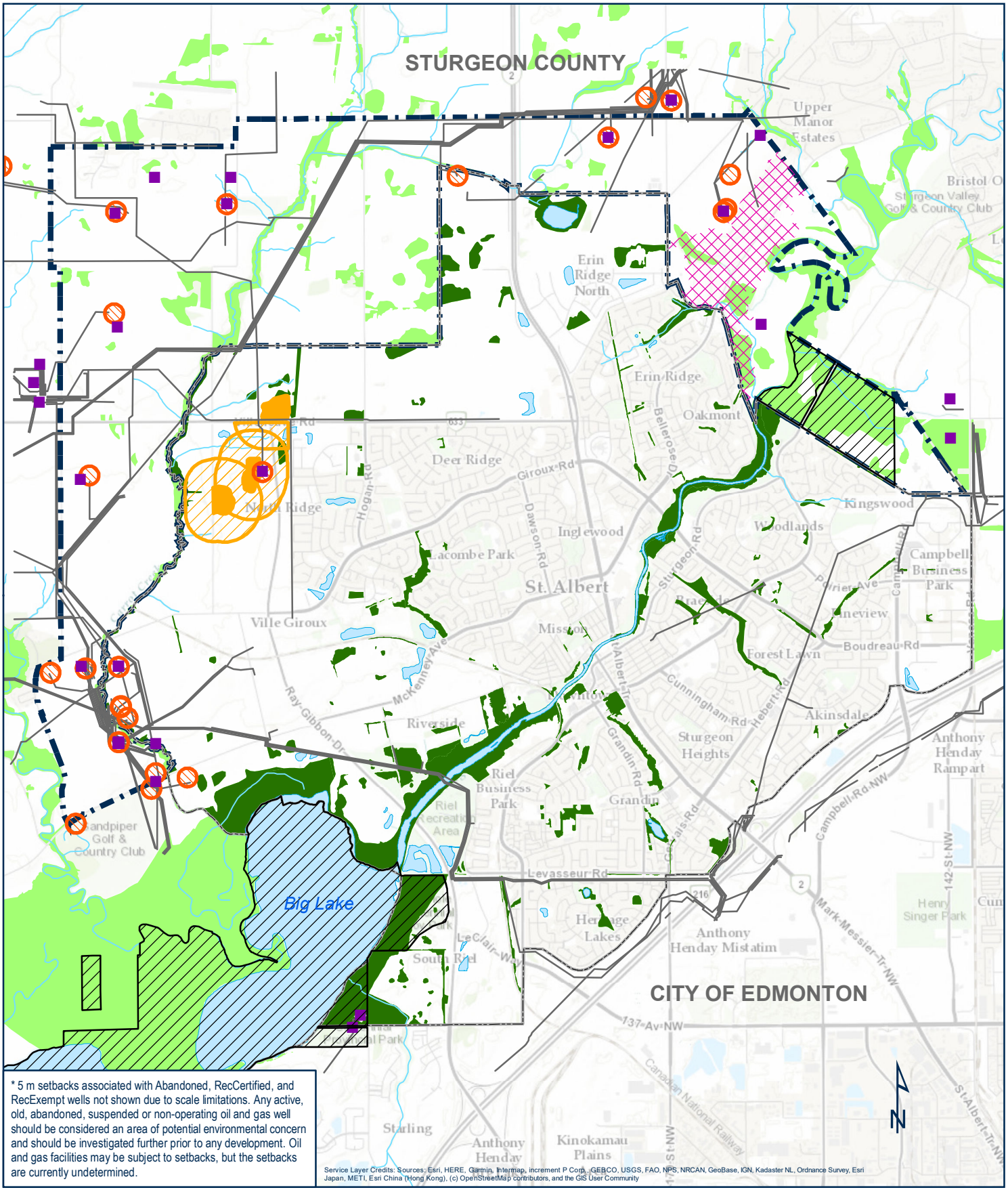
The ecological network of the City was also updated to incorporate the changes in the natural areas inventory and identify the most important ecological corridors as "landscape linkages". Three new landscape linkages were identified:

1. Through the core of the City along the Sturgeon River valley;
2. Along the west side of the City by way of Carrot Creek and its associated ravine; and
3. Roughly arcing around and through the north edge of the existing City boundary, comprising mapped natural areas, important steppingstone clusters and undeveloped agricultural lands.

The latter is particularly important for the study area as the configuration of its ecological network components may provide an enhanced ecological connection between Carrot Creek and the Sturgeon River downstream of the City. The ecological function of this landscape linkage is an important consideration for the future expansion of the City.

5.3.3. Potential Environmental Reserve

The EA identified lands for potential environmental reserve (ER) designation, comprising ravines, potentially unstable lands, wetlands, and lands that are subject to flooding. Most of these areas are located around either the Sturgeon River, Carrot Creek, or associated tributaries. Lands subject to flooding account for the largest contribution of potential ER within the study area, accounting for a total of 256 ha. Seven semi-permanent or permanent wetlands were also identified as potential ER, for a total of 33 ha. Six of these wetlands are concentrated in a relatively small area north and west of the existing City boundaries, and function as an important part of the landscape linkage identified around the north boundary of the City.



* 5 m setbacks associated with Abandoned, RecCertified, and RecExempt wells not shown due to scale limitations. Any active, old, abandoned, suspended or non-operating oil and gas well should be considered an area of potential environmental concern and should be investigated further prior to any development. Oil and gas facilities may be subject to setbacks, but the setbacks are currently undetermined.

City of St. Albert Cultivate Life

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- City of St. Albert Natural Areas
- Natural Areas (Outside City)
- 100 m Active or Suspended Well Setback*
- Oil and Gas Facility*
- Pipeline
- Non-Operating Landfill
- 300 m Landfill Setback
- Potential Geotechnical Constraints
- MPAA
- Municipal Boundary
- Parks and Protected Areas Alberta
- Water Body

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.10: ECOLOGICAL CONSIDERATIONS

5.3.4. Potential Conservation Reserve

Some of the natural areas that do not meet the criteria for ER designation were identified as potential conservation reserve (CR) lands[15] under the following criteria for environmental significance:

1. Wooded upland habitat at least 1 ha in size;
2. Temporary or seasonal wetlands at least 1 ha in size;
3. Identified as an important ecological steppingstone or corridor; or
4. Share a boundary with identified potential ER lands.

There is a combined total of 138 ha of potential CR lands within the study area, many of which are located within the provincially protected River Lot 56 (69 ha). Outside of this protected area, the CR lands include four significant woodlands and a few slivers of upland habitat adjacent to wetlands or ravines, which may not have a substantial importance on their own but their designation as CR would add ecological value to the adjacent ER lands.

5.3.5 Crown Claimable Wetlands

The EA also identified seven semi-permanent and permanent wetlands, all of which have reasonable potential to be claimed by the Crown at the time of subdivision as permanent and naturally occurring bodies of water pursuant to the *Public Lands Act*.

5.3.6 Ecological Constraints

Based on available information on environmental site assessments (ESAs) and oil and gas infrastructure within the study area, the EA identified some areas of potential environmental concern, primarily related to oil and gas pipelines, wells, and facilities. The EA recommends requiring a Phase I ESA prior to area structure plan adoption or development on parcels of general environmental concern, and a Phase II ESA for parcels containing an oil or gas well, pipeline or facility.

5.3.7 Ecological Assets Interaction with Ecological Constraints

The EA also examined the geospatial relationship between ecological assets and ecological constraints to identify planning synergies that can potentially optimize the conservation value of these areas. The most notable synergy within the study area is associated with the large area of geotechnical concern in the northeast portion of the study area, north of the Sturgeon River. This forms part of the identified east-west landscape linkage and overlaps with four natural areas, two potential ER areas and four potential CR areas. Additionally, the area is surrounded by an unstable floodplain, and four oil and gas facilities (including wells). These features may make this area undevelopable for most uses. Yet, if annexed and left undeveloped it could serve as a significant conservation area, greatly increasing the functionality of both the regional ecological corridor and the northern landscape linkage. Other opportunities for conservation include pipeline rights-of-way connected to different features of the ecological network, and a

[15] The dedication of Conservation Reserve at the time of subdivision is subject to compensation in accordance with the *Municipal Government Act*.

small concentration of oil and gas infrastructure in the south of the study area that can enhance the ecological function of Carrot Creek.

5.4. Energy Considerations

Map D.11 shows the various energy facilities located within the study area. There is one power transmission line that bisects the west portion of the study area, and a second one that runs along a segment of the east boundary of the study area and then to the Sturgeon Valley. There are also two conceptual power lines that were identified in the EMRGP as future power needs, which cross the west and northeast portions of the study area.

Most of the oil and gas activity is concentrated in the west and northwest of the study area, with several associated wells, pipelines and oil and gas facilities. There are 109 oil and gas wells within the study area, of which 90 wells are abandoned, reclamation certified or reclamation exempt. The remaining 19 wells could be active or are suspended. In the absence of information on individual wells, a setback of 100 m was chosen for all potentially active wells, regardless of sour gas content. All wells should be examined in more detail prior to any development around them, including determination of required setbacks.

There are 119 pipelines within the study area, of which 28 are operating, 36 are abandoned, and 55 are discontinued. Details of each pipeline, including status, substance, and location is provided in the Ecological Assessment (see Appendix E of the City's Annexation Application). Pipelines, while not necessarily barriers to development, will need to be examined individually in more detail prior to any future development. Thirty inactive oil and gas facilities are also located in the study area.

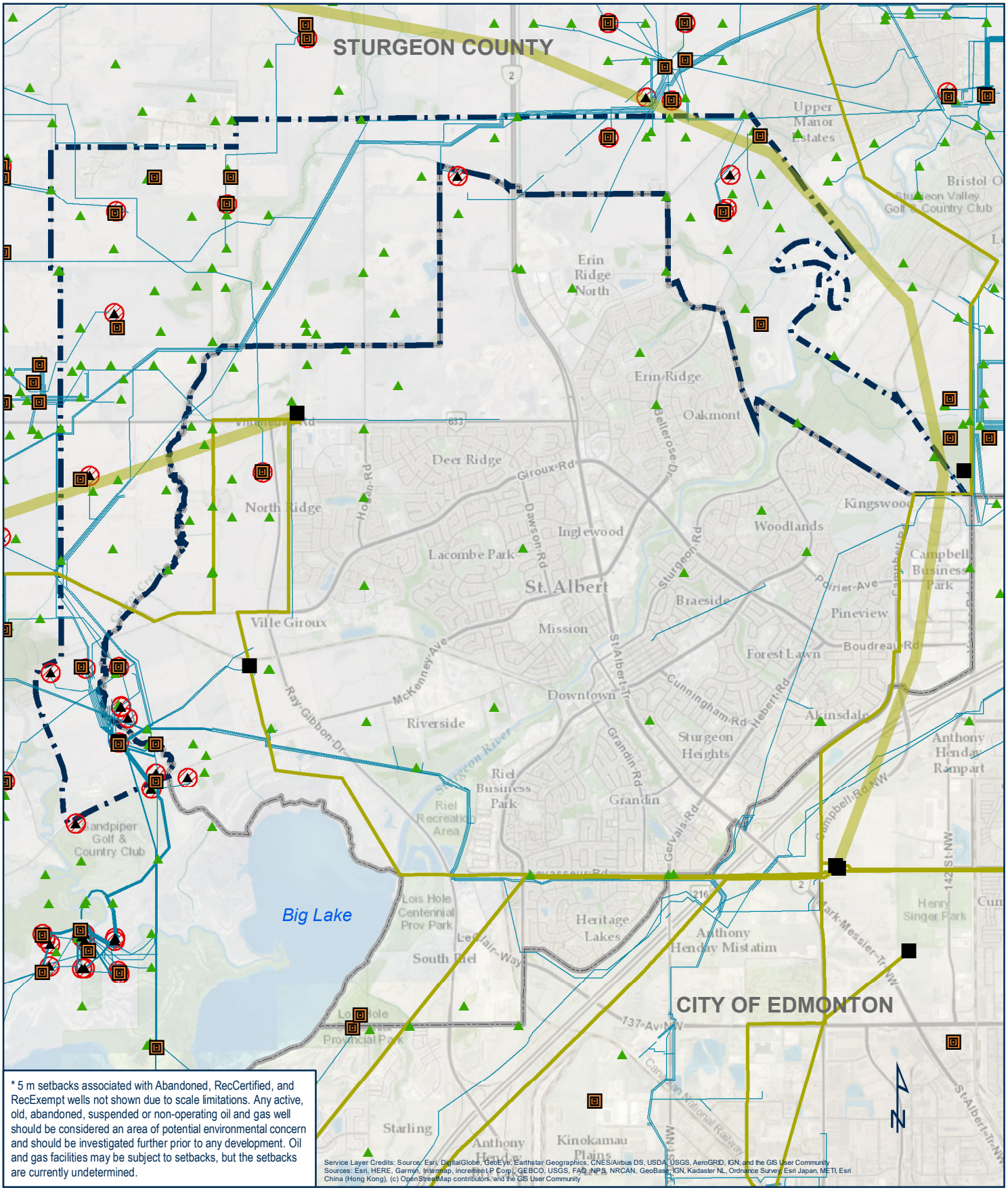
Even though a well site, pipeline or facility may have a valid reclamation certificate, be abandoned, or be suspended, it does not ensure the former lease area is free of any contamination. Any active, old, abandoned, suspended or non-operating oil and gas pipeline, well or facility should be considered an area of potential environmental concern and should be further investigated prior to any future development.

5.5. Transportation Considerations

The transportation concept presented herein is from the Transportation Study prepared in support of the GMS (see Appendix F of the City's Annexation Application) and is illustrated in Map D.12. This study describes the existing transportation network, analyzes the transportation serviceability of the study area, and evaluates the current and future transit infrastructure needs of the City.

5.5.1. Road Network Considerations

There are currently three regional roads servicing the City of St. Albert and a fourth that is planned.



* 5 m setbacks associated with Abandoned, RecCertified, and RecExempt wells not shown due to scale limitations. Any active, old, abandoned, suspended or non-operating oil and gas well should be considered an area of potential environmental concern and should be investigated further prior to any development. Oil and gas facilities may be subject to setbacks, but the setbacks are currently undetermined.

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Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

City of St. Albert Cultivate Life

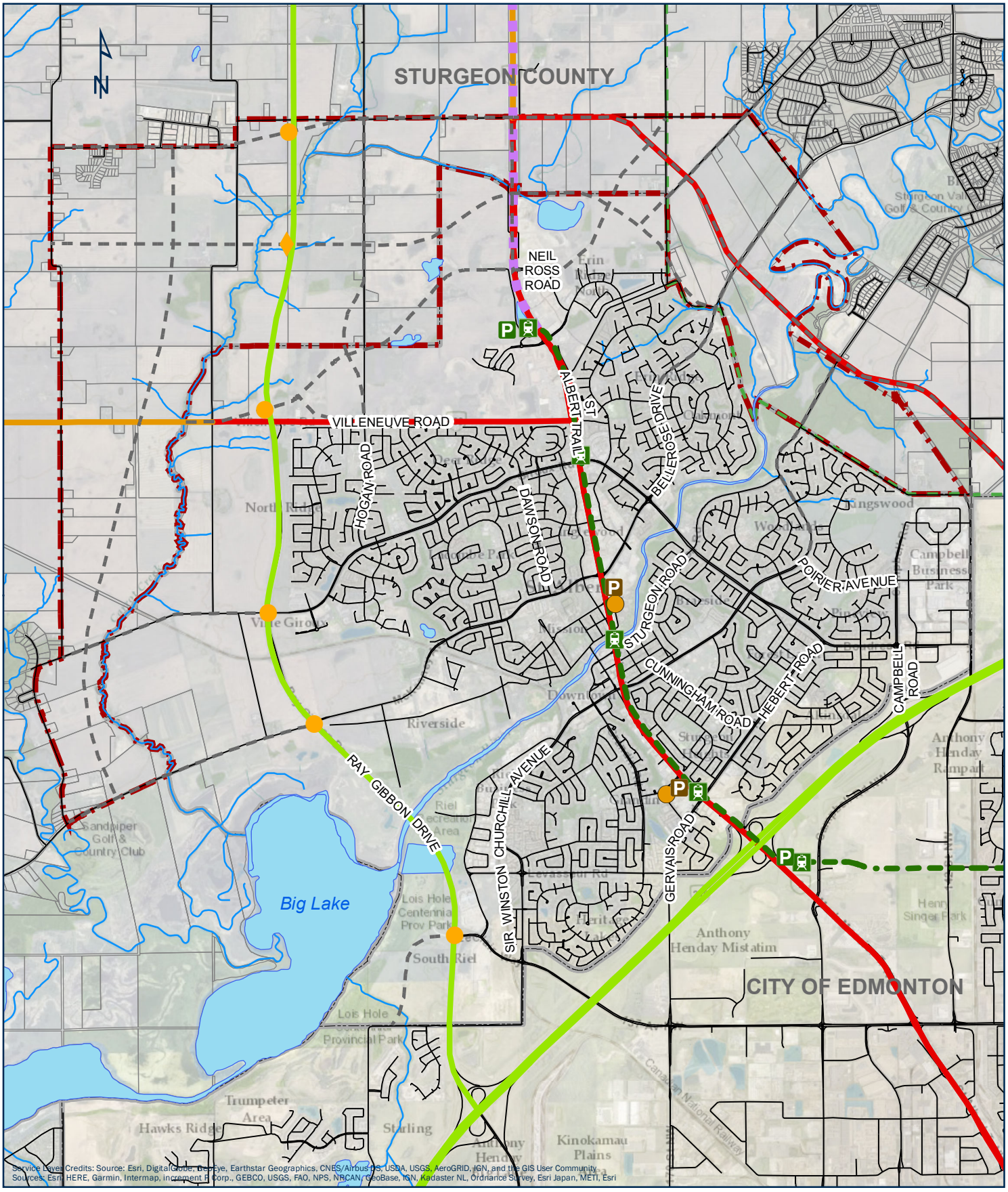
- Municipal Boundary
- MPAA
- Power Transmission Line
- Future Power Need (Conceptual)
- Power Substation
- Oil and Gas Facility*
- Well - Abandoned / RecCertified / RecExempt
- Well - All Other
- 100 m Active or Suspended Well Setback*
- Pipeline

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.11: ENERGY CONSIDERATIONS



City of St. Albert Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

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- Municipal Boundary
- MPAA
- Regional Arterial
- Regional Expressway
- Regional Freeway
- Other Roadway
- Potential Arterial
- Potential Flyover
- Potential Interchange
- Existing Transit Centre
- Existing Park-and-Ride
- Future Park-and-Ride
- Future LRT Station
- Planned LRT
- Future Regional Bus

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.12: TRANSPORTATION SERVICING CONCEPT

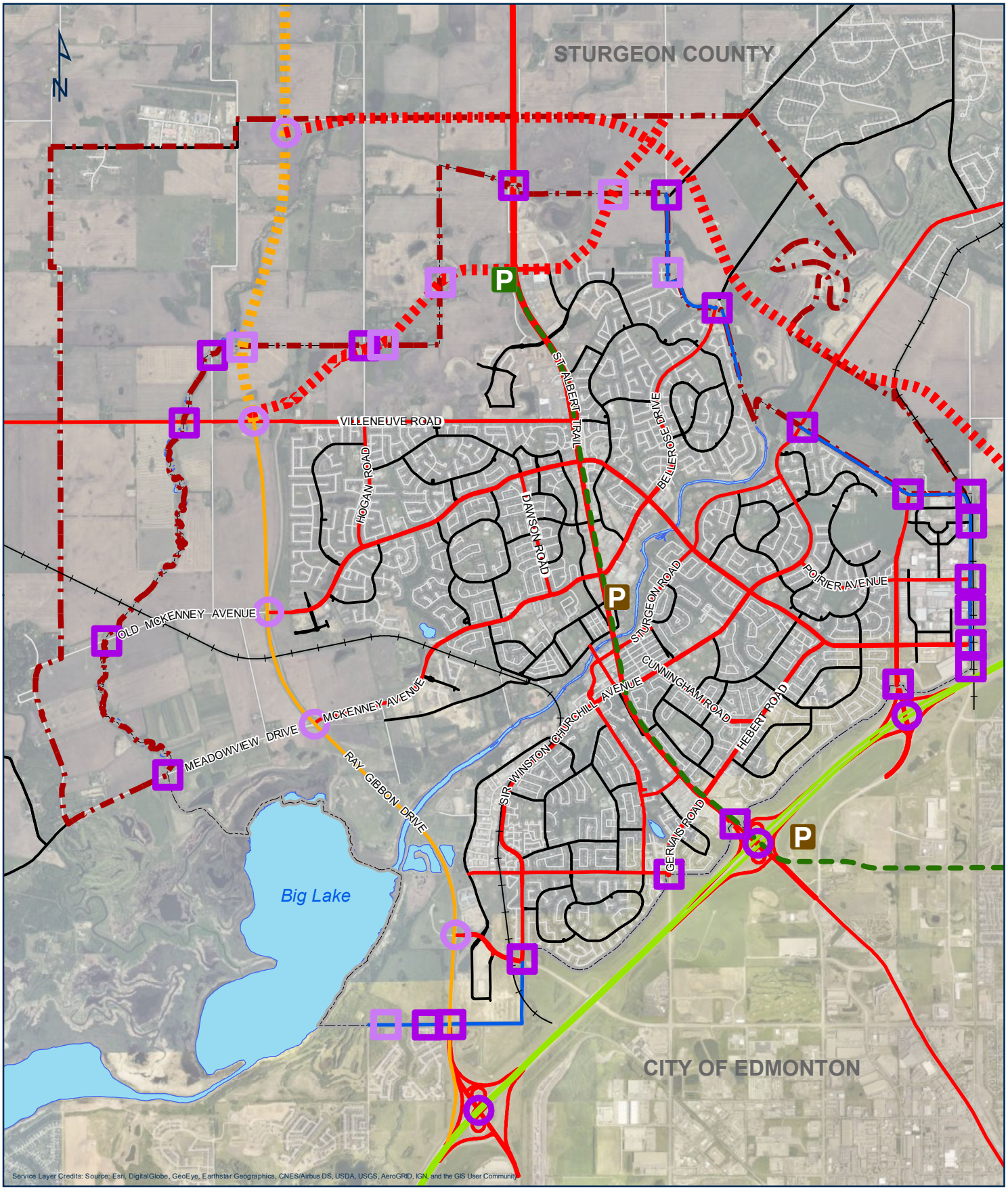
1. **Ray Gibbon Drive** is a two-lane undivided arterial roadway running north-south through the west portion of the City. Traffic demand on this road is currently exceeding capacity. The City signed a cost-sharing agreement with the Government of Alberta to widen it to four lanes This road is planned to be a six-lane freeway.
2. **St. Albert Trail** is a portion of **Highway 2** that runs north-south bisecting the City. It is a four-lane regional arterial roadway.
3. **Villeneuve Road** is a portion of **Highway 633** that runs east-west and bisects the northern portion of the City. It is a two-lane regional arterial roadway with several commercial accesses onto the north side, near St. Albert Trail.
4. **127 Street** is currently a four-lane arterial that originates south of Anthony Henday Drive in Edmonton and branches off into a two-lane roadway (Range Road 250) connecting into the Sturgeon Valley. This road is currently outside of the boundaries of St. Albert and Sturgeon County, but there are plans to extend it to the northwest to ultimately connect with Highway 2 north of St. Albert. This extension would be a regional arterial roadway intended to operate at lower speeds than regional expressways. The Transportation Study presents a high-level traffic analysis to assess the need for extending 127 Street across the Sturgeon River to support full build-out of the northeast portion of the study area.

Including the 127 Street extension and the expansion of Ray Gibbon Drive, a total of 19 improvements and additions to the City's current road network are identified in the Transportation Study as requirements to support future growth.

Proximity and capacity criteria in the Transportation Study were used to determine the transportation serviceability of lands within the study area. Based solely on proximity and serviceability, the units that most easily integrate into the transportation network are to the west along Villeneuve Road as well as the north/northeast. These areas received the highest proximity and capacity serviceability rankings because of the proximity to existing paved roadways with capacity to support additional transportation demand. This capacity analysis is based on the existing infrastructure. The recent funding of the Ray Gibbon Drive widening could provide additional transportation capacity to the western portion of the study area. These results were combined with a cost analysis to produce final servicing rankings, which are presented in Section 5.7.1.

5.5.2. Transit Considerations

Map D.13 presents the locations of existing and planned future park and ride facilities for the City as well as the future alignment of the Metro Line extension of Edmonton's light rail transit network into St. Albert. The City has two park and ride facilities: a dedicated park and ride location at the Nakî Transit Centre, and a shared lot at St. Albert Centre. The Nakî Transit Centre was recently constructed on Campbell Road southeast of Anthony Henday Drive within the City of Edmonton, replacing the Village Transit Station to become St. Albert's new transit hub. A northern park and ride is proposed in the 2015 St. Albert LRT Planning Study Phase 2 – Alignment Section Report. The northern park and ride would be north of Villeneuve Road to the west of St. Albert Trail in the vicinity of the future Fowler Way and would serve as the northern terminus for the St. Albert LRT extension.



City of St. Albert Cultivate Life

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- Municipal Boundary
- MPAA
- Railroad
- Boundary Road
- Proposed Expressway
- Proposed
- Freeway
- Expressway
- Arterial
- Collector
- Other
- Future Metro Line (Light Rail Transit)
- Existing Boundary Connection
- Future Boundary Connection
- Existing Interchange
- Proposed Interchange
- Existing Park and Ride
- Proposed Park and Ride

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.13: TRANSIT AND ACCESS CONSIDERATIONS

There is limited transit infrastructure near the study area to serve potential future growth. As such, transit serviceability was not considered when ranking the overall transportation serviceability of the lands. New transit routes can be planned within the final annexation area to service future growth at the area structure plan preparation stage.

5.5.3. Access Considerations

Map D.13 also presents the alignments of existing boundary roads, future regional roads, existing and planned future boundary connections, and proposed future interchanges in relation to the City and the study area. Two boundary roads, eleven existing boundary connections, and five planned future boundary connections along the City's boundary currently provide or will provide access to the study area. Four proposed interchanges along Ray Gibbon Drive will provide ease of access to the regional transportation network for future developments in the study area – three in the City and one at the northern edge of the study area.

5.6. Infrastructure Servicing Considerations

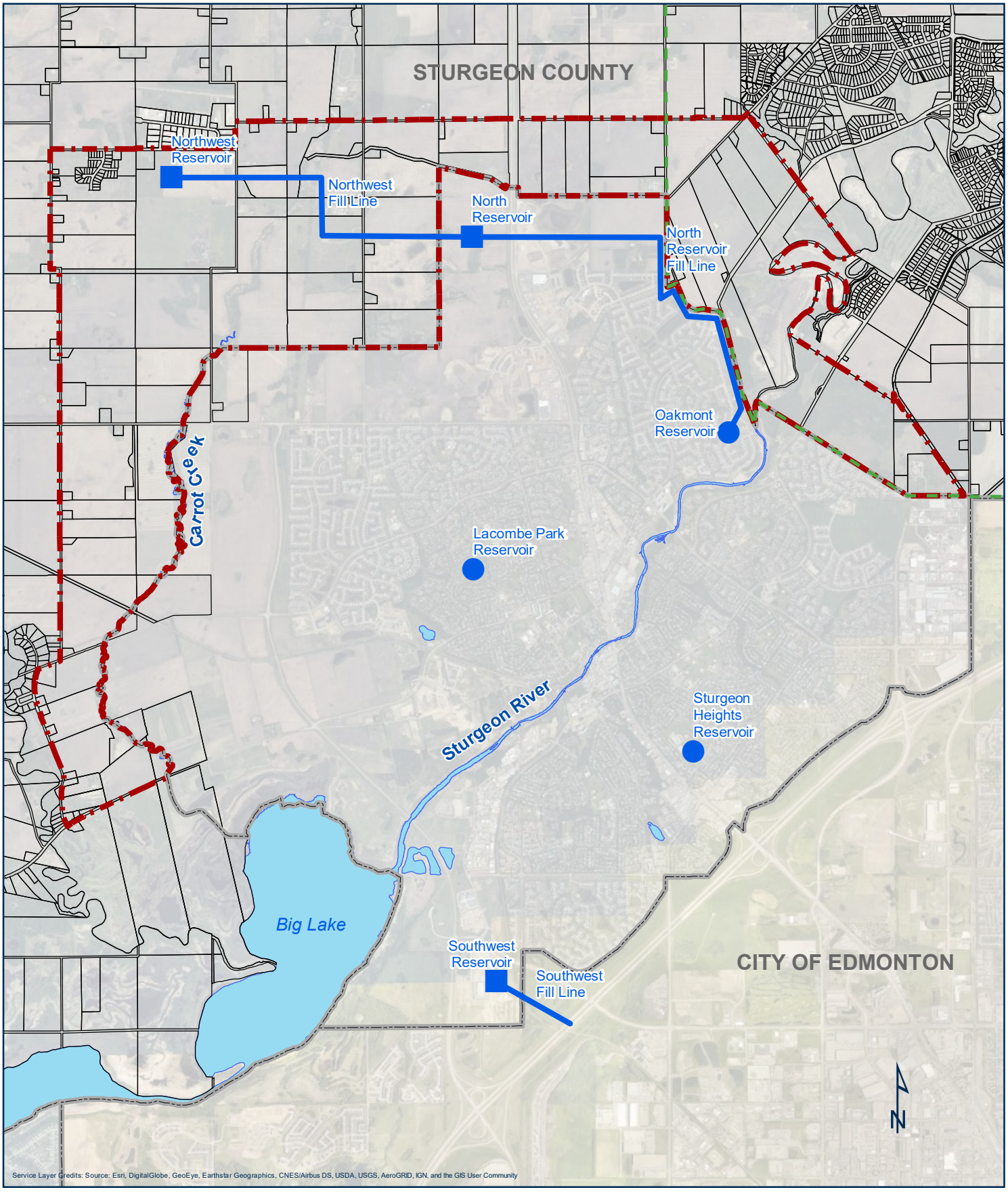
The Infrastructure Servicing Study (ISS) prepared in support of the GMS (see Appendix G of the City's Annexation Application) summarizes the opportunities and constraints for extending the City's water, wastewater, and stormwater systems into the study area, and presents an overarching servicing plan for the GMS. It also informs the RAA by way of an evaluation of the study area to assess which sub-areas will be easiest and most cost effective to service.

The ISS servicing plans are based on available background reports, master plans, and discussions with City representatives. In some cases, the servicing constraints have not been finalized. It is anticipated that the servicing plans will be refined over time based on more detailed technical analyses. Additionally, the servicing rankings are presented Sections 5.7.2 through 5.7.4 to convey relative ease of servicing for water, wastewater, and stormwater respectively, and served as an input in defining the boundaries of the RAA.

5.6.1. Water Servicing

There are three existing reservoirs (Lacombe Park, Oakmont, and Sturgeon Heights) in the City with two additional reservoirs currently planned for future construction. The City requires additional storage capacity which will be provided by the proposed North and Southwest Reservoirs that will be constructed to meet demands within the current City boundary and anticipated annexation areas. The Southwest Reservoir will service growth in the southwest and west-central areas, while the North Reservoir will service the northwest, north, and northeast areas. An additional reservoir (Northwest Reservoir) would be constructed outside the current City boundary to service annexation lands.

The entire study area can easily be serviced with the planned and proposed water reservoirs. The water concept for the study area is shown on Map D.14.



City of St. Albert Cultivate Life

- Municipal Boundary
- MPAA
- Sturgeon Valley ASP
- Parcel
- Existing Reservoir
- Proposed Reservoir
- Proposed Supply Line

0 0.2 0.4 0.8 1.2 1.6 km

3TM114-83 1:55,000

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.14: WATER SERVICING CONCEPT

5.6.2. Wastewater Servicing

The City is serviced by the Alberta Capital Region Wastewater Commission (ACRWC) St. Albert Pump Station. The City conveys its wastewater flows to this pump station through a series a local, sub-trunk, and trunk sewers.

New development areas in the north-central and northeast parts of the City are serviced by existing trunks through Erin Ridge on an interim basis. These areas will ultimately be serviced via the proposed Erin Ridge Lift Station (LS) or the Jensen Lakes LS, both of which will connect to the Northeast LS, which in turn will discharge wastewater to the ACRWC St. Albert Pump Station. Portions of the trunks connecting the Erin Ridge LS and the Jensen Lakes LS to the Northeast LS have been constructed as part of an interim servicing strategy. These lift stations are proposed to be oversized to provide wastewater servicing for the study area's north sub-area.

The North Interceptor Trunk is being constructed in stages through the north-central part of the City. It is being designed as a combination storage/conveyance facility to intercept wastewater flows in the northwest part of the City and discharge them to the ACRWC St. Albert Pump Station. The far west section will be constructed as needed to service development between Ray Gibbon Drive and Carrot Creek. The North Interceptor Trunk has capacity for wastewater flows from the study area's west and northwest sub-areas, west of Carrot Creek.

The entire study area can be serviced through existing and planned wastewater infrastructure. The wastewater concept for the study area is shown on Map D.15, which reveals there are seven conceptually delineated wastewater service areas or basins in the study area. Five of these basins overlap into the City. Of the two that do not overlap, there is one small wastewater basin wholly within the study area to the northeast, approximately 350-650 m from the current City boundary, while the other is larger in the northwest portion of the study area, adjacent to the west side of Carrot Creek that forms the City's current boundary.

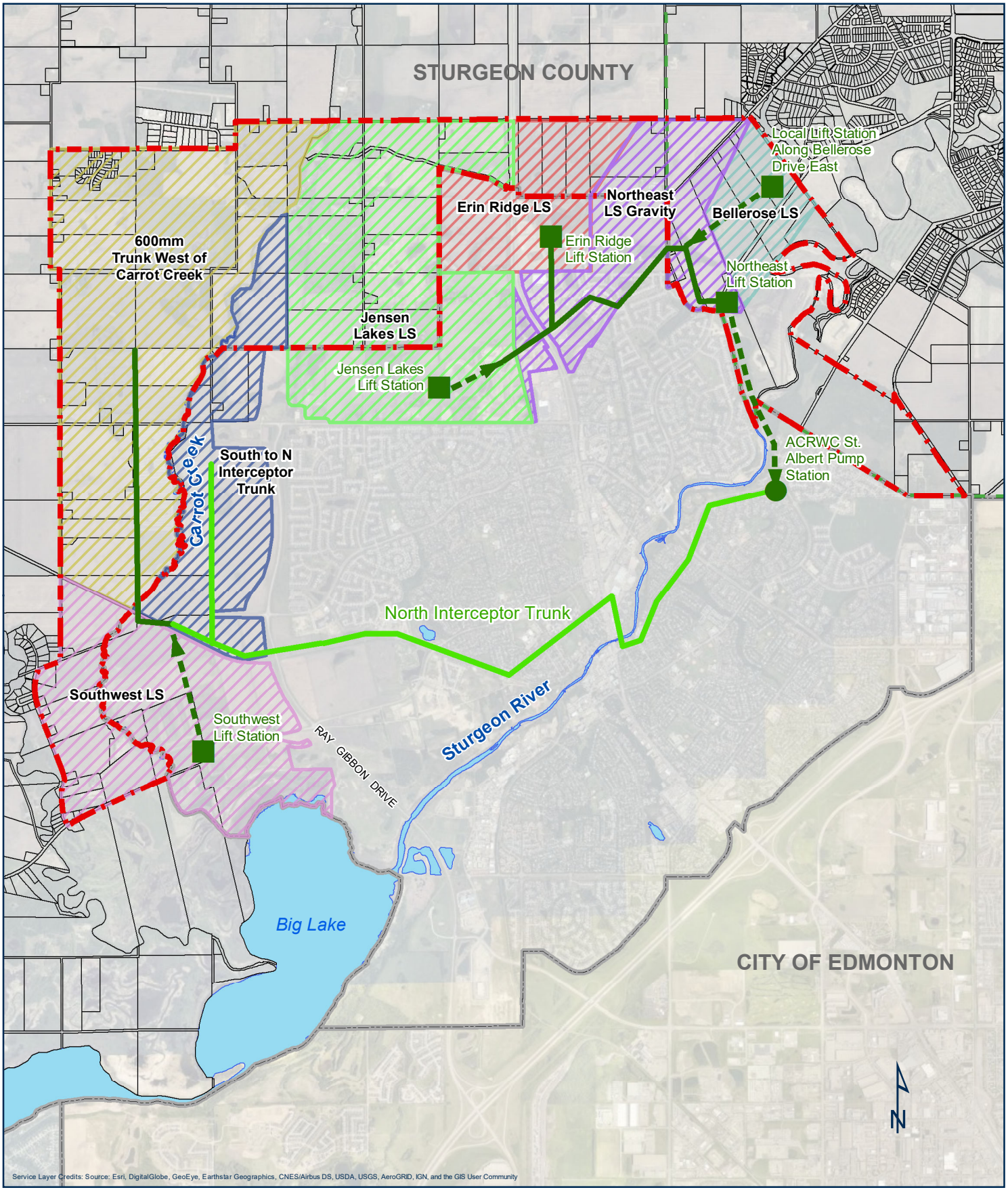
5.6.3. Stormwater Servicing

There is limited existing stormwater infrastructure available in the north and west parts of the City for servicing new development areas within the current City boundary and the study area.

The north area is proposed to be serviced via a gravity trunk to the Sturgeon River through the County. Part of this area requires a stormwater pump station due to the flat topography and construction challenges associated with deep sewer installations in poor subsoil conditions.

There are two concepts for servicing lands east and west of Carrot Creek: 1) constructing storm trunks parallel to the creek; and 2) utilizing the creek for stormwater discharge and constructing extensive erosion protection works in the creek. The City has not formally adopted either concept, and further study is needed to determine the preferred concept.

While these are servicing challenges, the entire study area can be serviced through the planned or alternate stormwater infrastructure system. The stormwater concept for the study area is shown on Map D.16. There are eight conceptually delineated stormwater service areas or



City of St. Albert Cultivate Life

Municipal Boundary
MPAA
Sturgeon Valley ASP
Parcel
Service Area

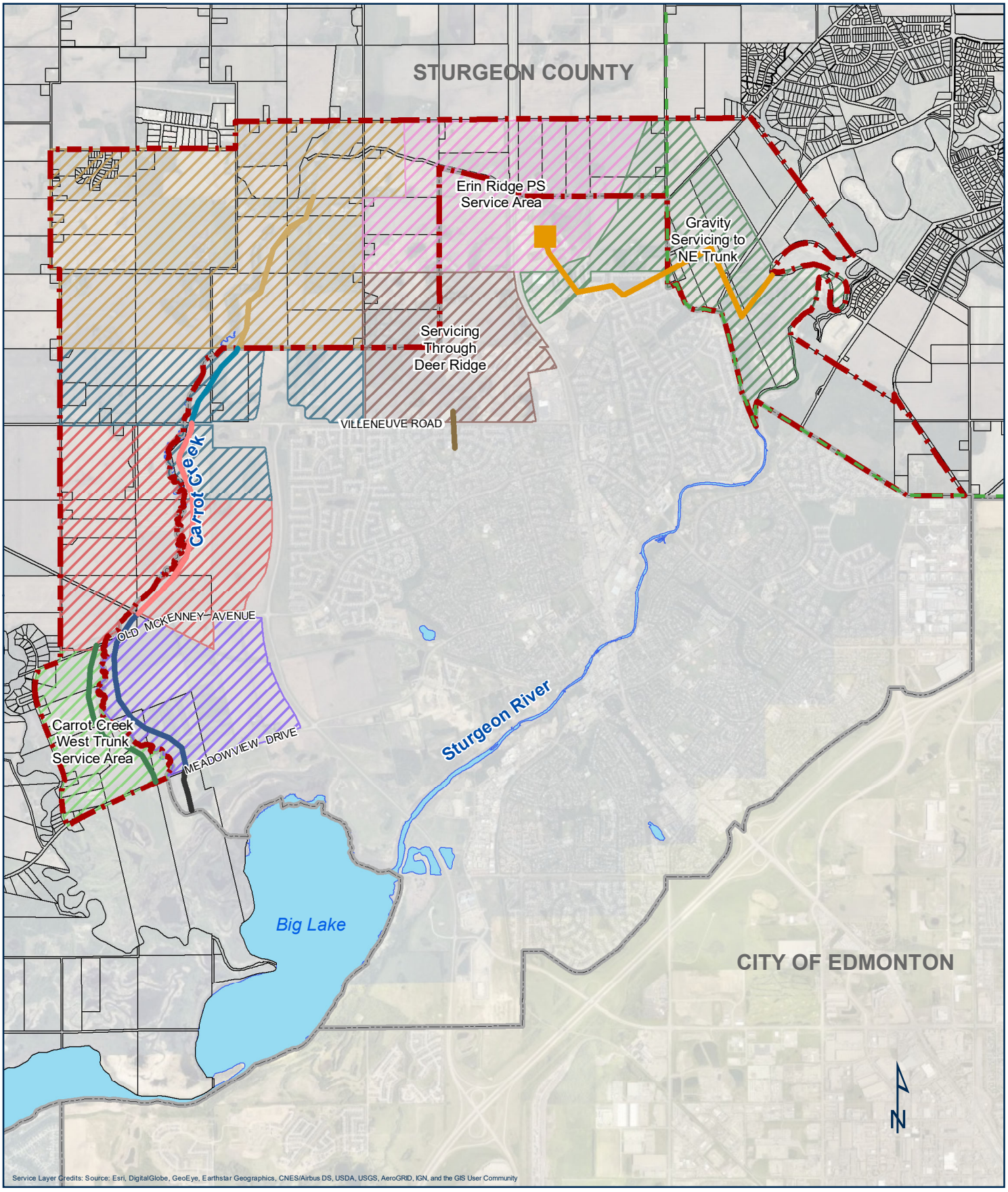
Existing Pump Station
Proposed Pump Station
Proposed Trunk
Proposed Force Main
North Interceptor Trunk

0 0.2 0.4 0.8 1.2 1.6 km

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.15: WASTEWATER SERVICING CONCEPT



City of St. Albert
Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

3TM114-83 1:55,000

- Municipal Boundary
- MPAA
- Sturgeon Valley ASP
- Parcel
- Service Area
- Carrot Creek West Trunk
- Carrot Creek East Trunk 1
- Carrot Creek East Trunk 2
- Carrot Creek East Trunk 3
- Carrot Creek East Trunk 4
- Carrot Creek East Trunk 5
- Deer Ridge Line
- Northeast Trunk
- Storm Pump Station

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.16: STORMWATER SERVICING CONCEPT

basins within the study area and/or in undeveloped portions of the City adjacent to the study area. Of these, five overlap the current City boundary while one is wholly within the City on the east side of Carrot Creek generally between Meadowview Drive and Old McKenney Avenue. The remaining two stormwater basins are wholly within the study area. The smaller basin is on the west side of Carrot Creek, opposite the one wholly within the City and also generally north of Meadowview Drive and Old McKenney Avenue. The larger basin is in the northwest portion of the study area adjacent to the current City boundary, approximately 800 m north of Villeneuve Road (Highway 633).

5.7. Overall Serviceability Considerations

Maps D.17 through D.21 show the individual and aggregated serviceability rankings of the study area by analysis area. A high serviceability rating indicates a relative ease to service the analysis area, while a low serviceability rating indicates constraints to extend the City's servicing infrastructure.

5.7.1. Transportation Serviceability Considerations

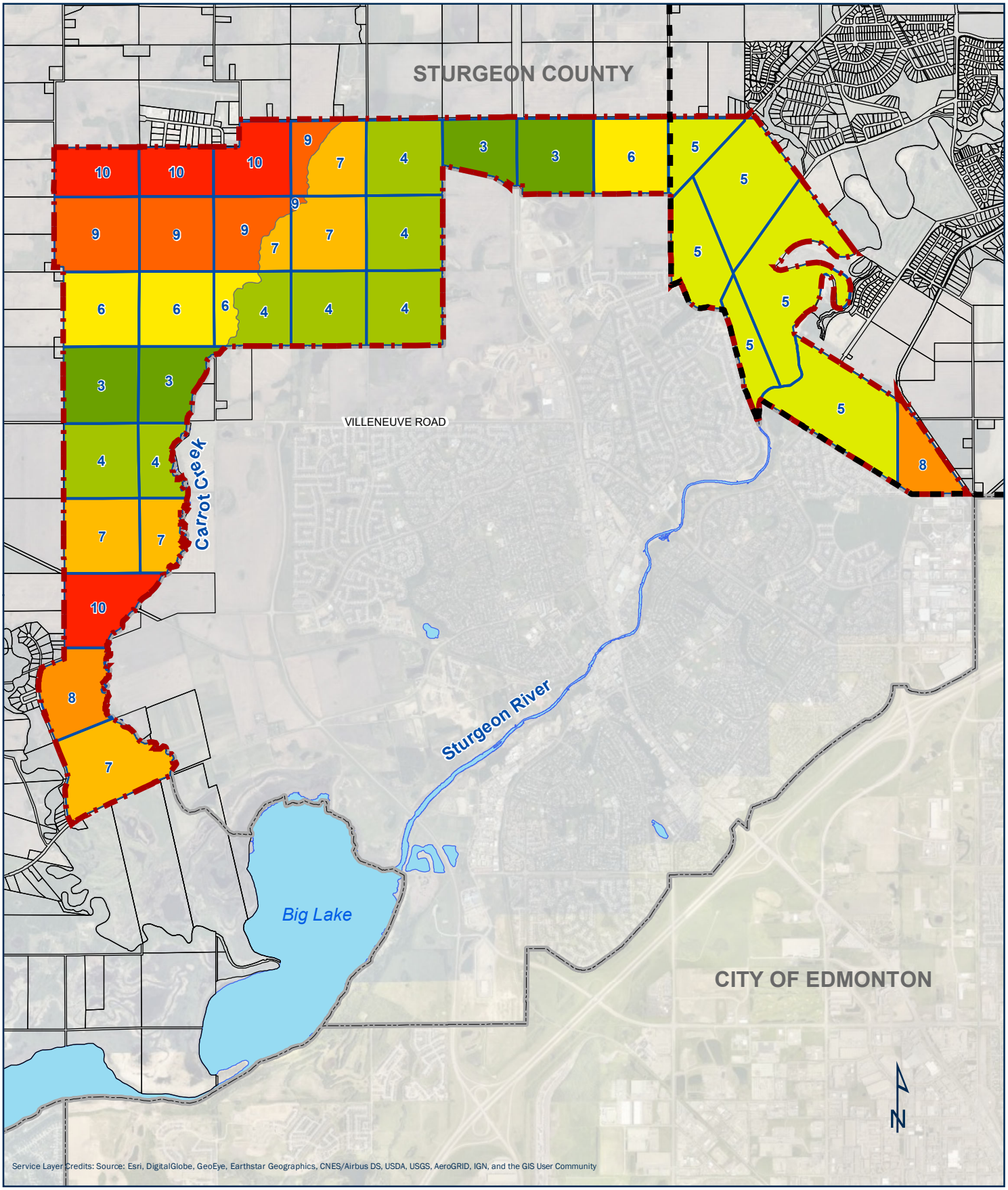
The transportation serviceability rating (see Map D.17) shows that the analysis areas with the highest ratings (3 and 4 out of 10) are those located adjacent to the northern boundary of the City, and at either side of Villeneuve Road (Highway 633) on the west portion of the study area. The analysis areas within the Sturgeon Valley ASP have a rating of 5, except for the easternmost portion of the study area (Poundmaker's Lodge area) which has a rating of 8. Analysis areas around the southern and northern portions of Carrot Creek have a generally low serviceability, with ratings ranging from 7 to 10. The northwest corner of the study area, west of Carrot Creek, presents the lowest transportation serviceability, with ratings of 9 and 10.

5.7.2. Water Serviceability Considerations

In terms of water serviceability (see Map D.18), lands in the north and northeast have the highest ratings, ranging from 2 to 4 out of 10, except for some areas around the northern portion of Carrot Creek with ratings of 5 and 6. The entire west portion of the study area has ratings of 5 and 6, indicating medium serviceability. The northwest portion, however, has the lowest serviceability, reaching a rating of 7 in the areas adjacent to Northern Lights Estates and ProNorth Industrial Park. In general, water serviceability is relatively high and there are few major constraints to provide water service throughout the study area.

5.7.3. Wastewater Serviceability Considerations

Wastewater serviceability ratings (see Map D.19) are generally lower than those associated with water infrastructure. The best rated analysis areas are in the north and, to some extent, in the northeast. The northern portion of the study area has ratings ranging from 4 to 7 out of 10, with most of the constrained areas located around Carrot Creek. The east and northeast areas have ratings of 5 and 6, except for the westernmost portion of the Sturgeon Valley ASP, which appears better positioned with a rating of 4. The western portion of the study area has ratings of 6 and 7, associated with some constraints to provide wastewater infrastructure across Carrot Creek. The northwest corner of the study area has the lowest wastewater serviceability, with the areas surrounding Northern Lights Estates and ProNorth Industrial Park ranging between 8 and 9.



City of St. Albert Cultivate Life

km
0 0.2 0.4 0.8 1.2 1.6

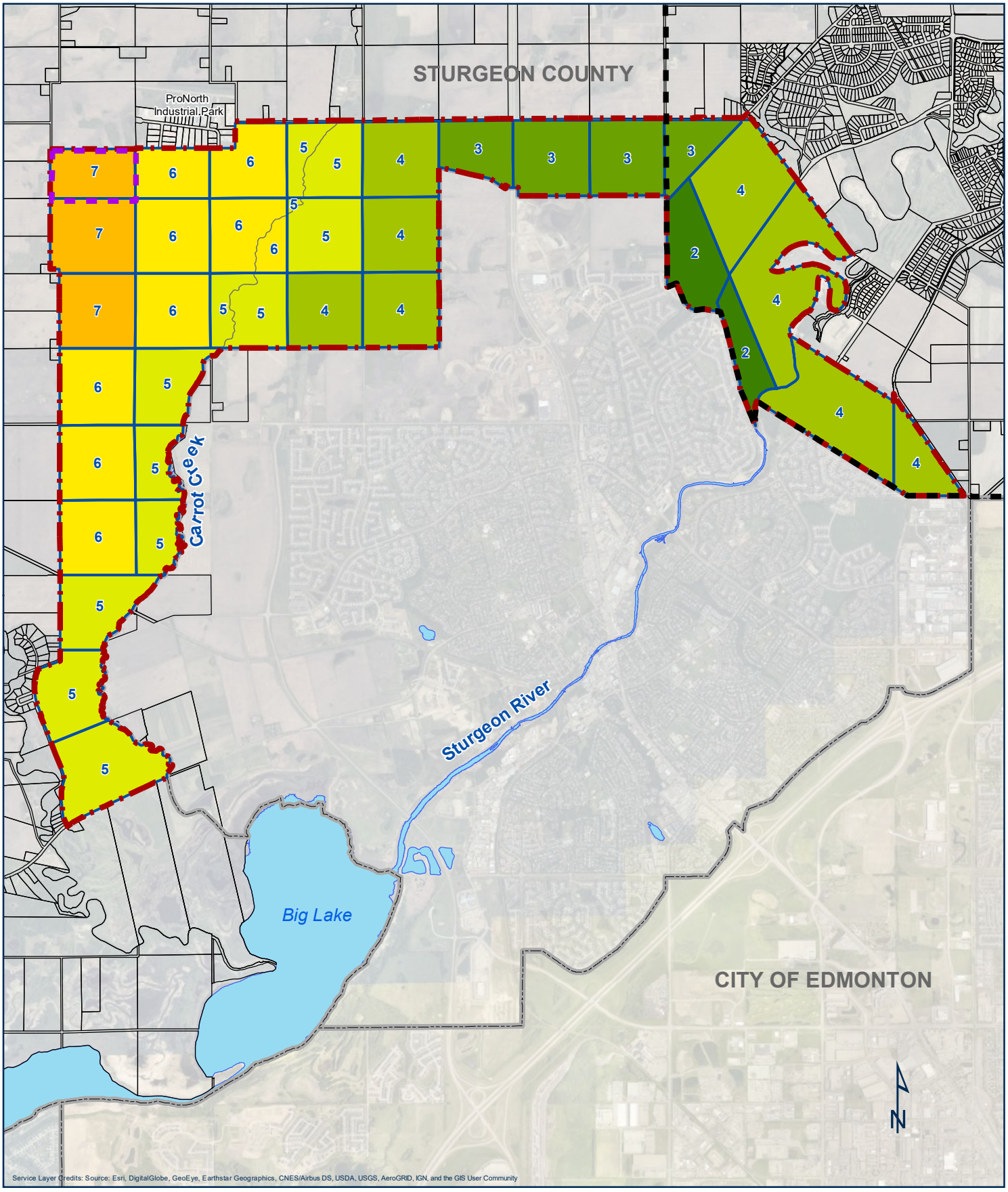
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- Municipal Boundary
- MPAA
- Sturgeon Valley ASP
- MPAA Analysis Area
- Parcel

- Rank of 1
- Rank of 2
- Rank of 3
- Rank of 4
- Rank of 5
- Rank of 6
- Rank of 7
- Rank of 8
- Rank of 9
- Rank of 10

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.17: TRANSPORTATION SERVICING RANKINGS



City of St. Albert
Cultivate Life

km
0 0.2 0.4 0.8 1.2 1.6

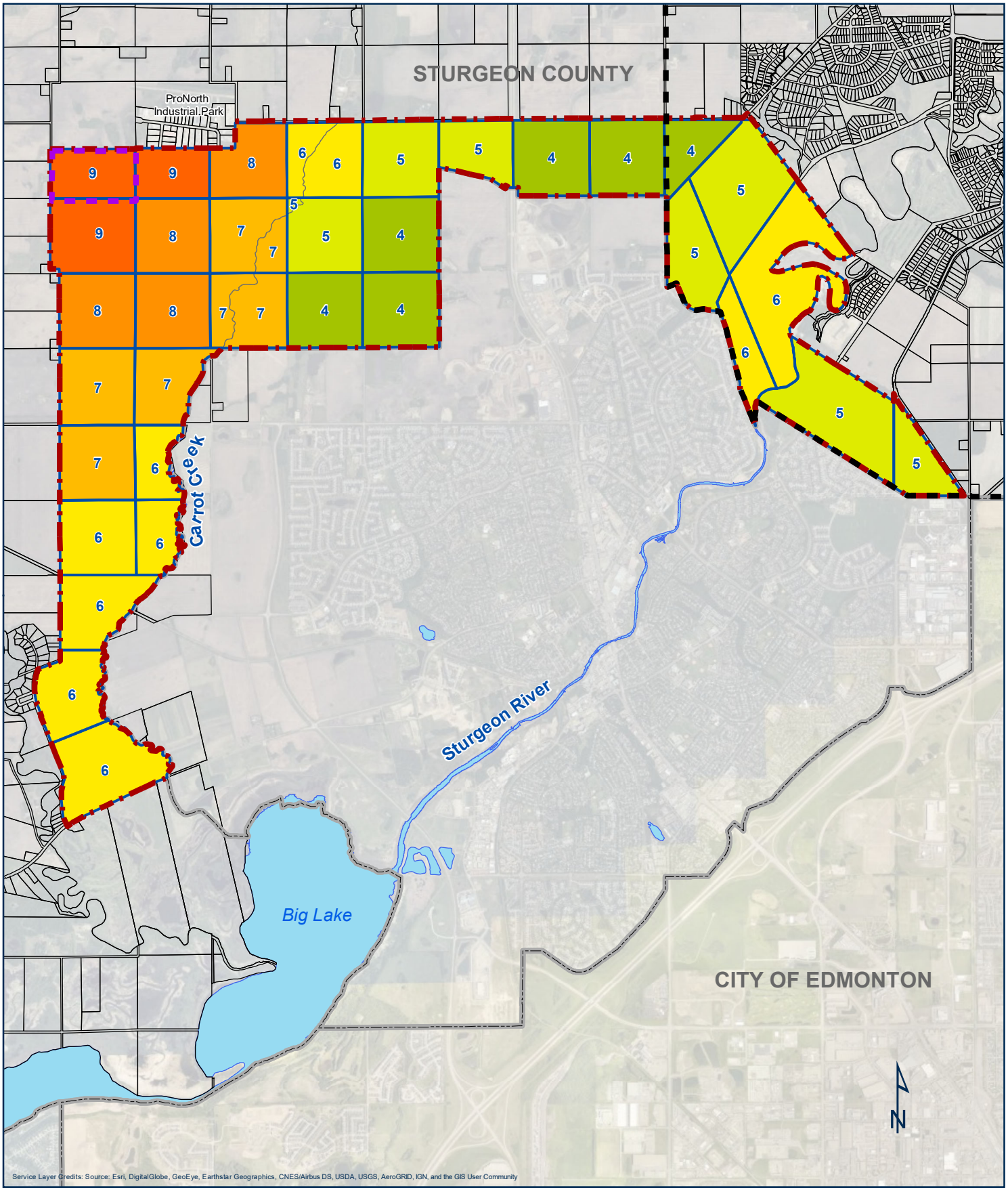
3TM114-83 1:55,000

- Municipal Boundary
- MPAA
- Sturgeon Valley ASP
- Northern Lights Estates ASP
- MPAA Analysis Area
- Parcel

- Rank of 1
- Rank of 2
- Rank of 3
- Rank of 4
- Rank of 5
- Rank of 6
- Rank of 7
- Rank of 8
- Rank of 9
- Rank of 10

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.18: WATER SERVICING RANKINGS



City of St. Albert
Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

3TM114-83 1:55,000

- Municipal Boundary
- MPAA
- Sturgeon Valley ASP
- Northern Lights Estates ASP
- MPAA Analysis Area
- Parcel

- Rank of 1
- Rank of 2
- Rank of 3
- Rank of 4
- Rank of 5
- Rank of 6
- Rank of 7
- Rank of 8
- Rank of 9
- Rank of 10

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.19: WASTEWATER SERVICING RANKINGS

5.7.4. Stormwater Serviceability Considerations

Stormwater serviceability ratings (see Map D.20) range from 3 and 9 out of 10 throughout the study area. Ratings of 3 and 4 can be found in the north, northeast, east and southwest portions of the study area. The analysis areas adjacent to the middle section of Carrot Creek have ratings of 5 and 6, while the northern portion of the creek is surrounded by analysis areas rating between 6 and 8. The lowest rated analysis areas are those located around Carrot Creek in the northern boundary of the study area, and the areas of Northern Lights Estates and ProNorth Industrial Park.

5.7.5. Aggregated Serviceability Considerations

Map D.21 presents an aggregation of all rankings within Maps D.17 through D.20 where transportation, water, wastewater, and transportation serviceability are each given the same weight. The aggregation of these serviceability analyses shows that the northern and eastern portions of the study area present the better opportunities to expand municipal servicing infrastructure, including water, wastewater, stormwater, and transportation. On the other hand, the lands on the west and especially the northwest portions of the study area present some barriers to municipal servicing, in most cases associated with the presence of Carrot Creek.

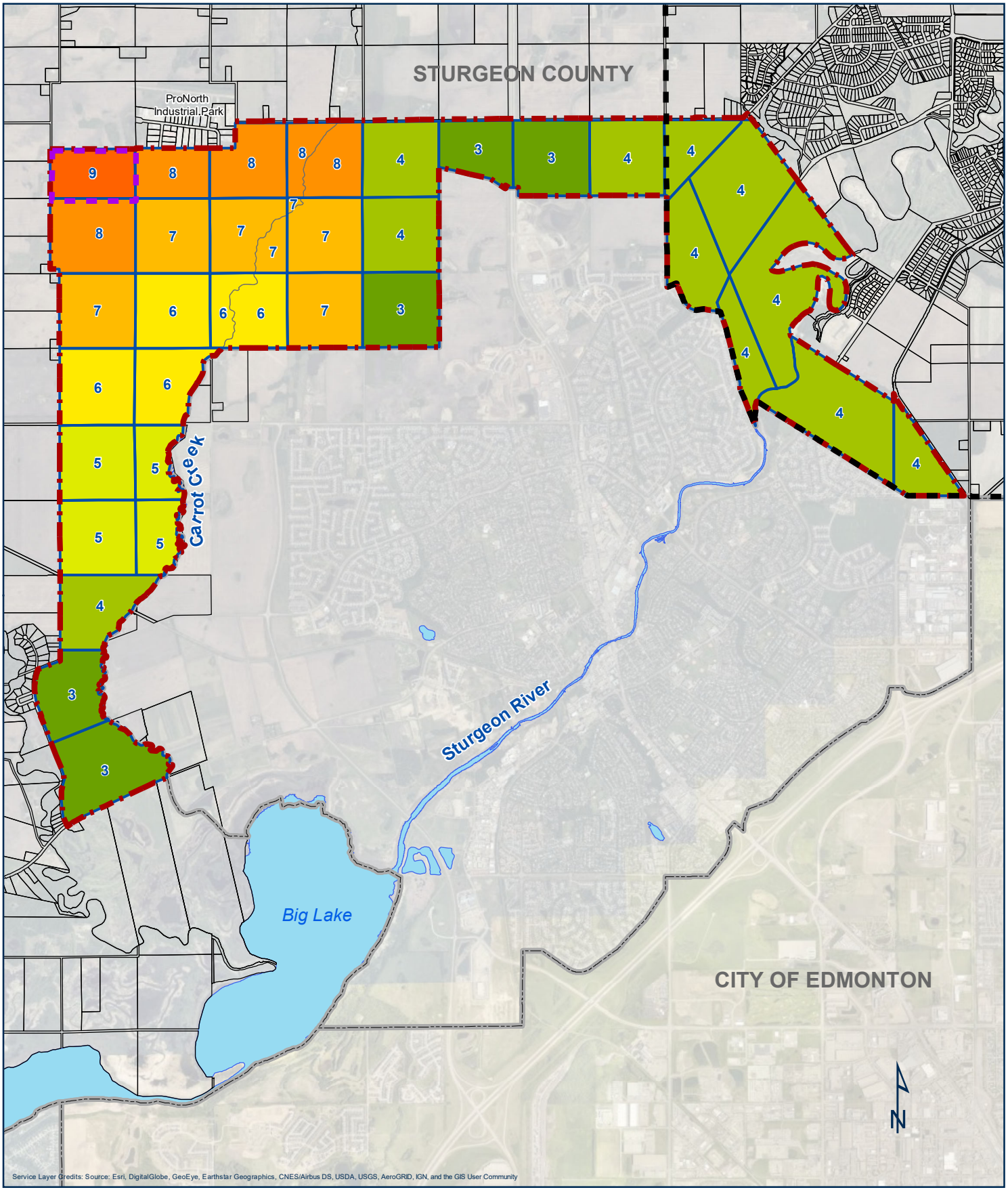
5.8. Historical Considerations

A Historical Resources Study prepared in support of this GMS (see Appendix H of the City's Annexation Application) found three distinct areas present within the study area where *Historical Resources Act* (HRA) clearance conditions are likely applicable to future development. These areas are shown in Map D.22.

The first area is subject to potential palaeontological conditions under the HRA. As glacial till is thin along the course of Carrot Creek, fossil bearing bedrock deposits may be impacted by deep excavations. Sewer outflow installation represents the most likely development type where palaeontological conditions may apply to HRA clearance in this area.

The second area is subject to potential archeological conditions under the HRA as it includes the flood plain of the Sturgeon River. Flood plain deposits are considered high potential locations for intact cultural deposits. Past field assessments carried out within the Sturgeon River Valley adjacent to the study area confirm this assessment.

The third area is also subject to potential archeological conditions under the HRA as it includes the former Edmonton Residential School (now Poundmaker's Lodge). HRA clearance conditions related to archaeology, historic structures, and Indigenous consultation will likely be associated with any potential development impacts to this location. In particular, concerns over unrecorded grave features will likely require some level of archaeological monitoring for ground disturbance activities.



City of St. Albert
Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

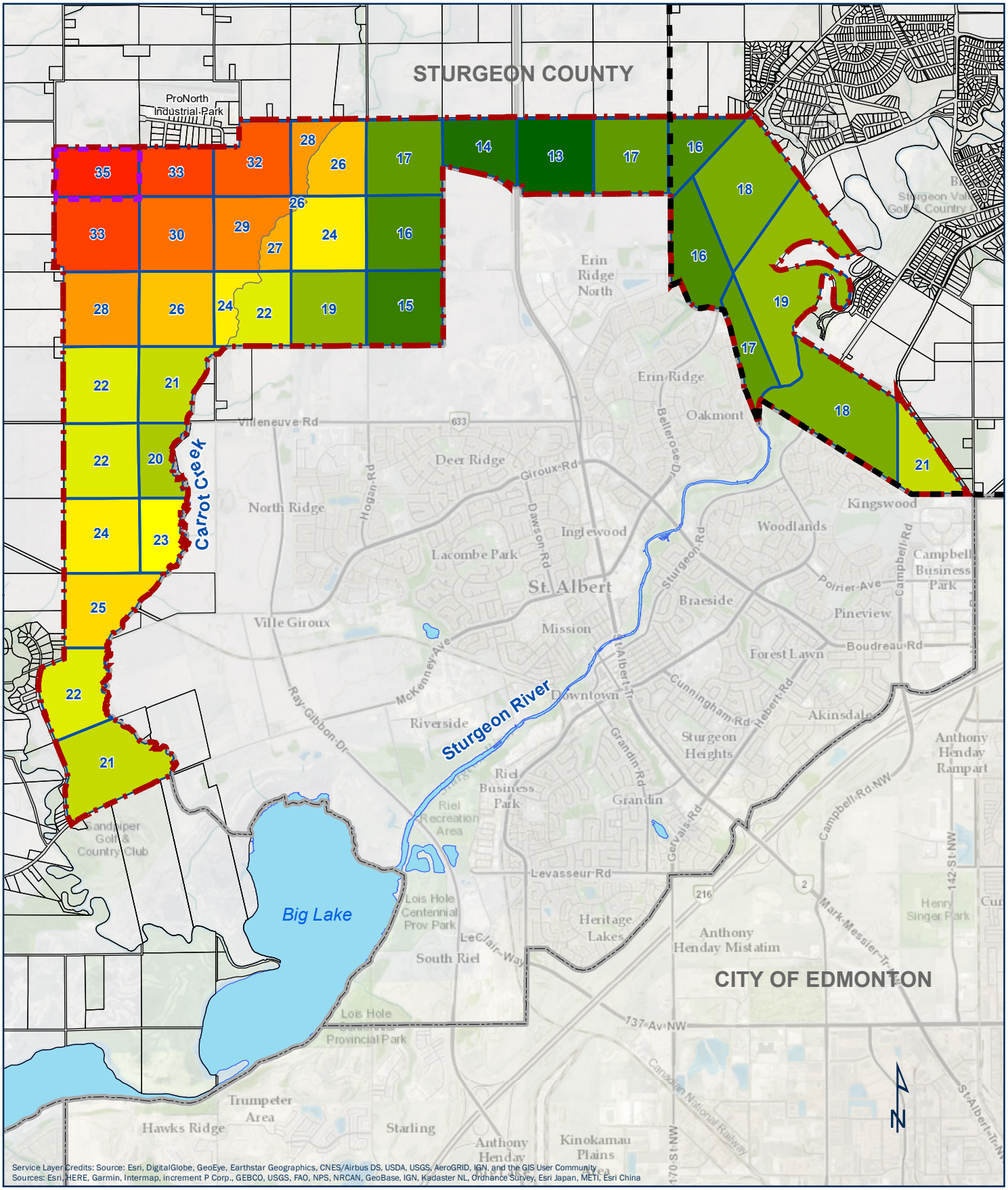
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- Municipal Boundary
- MPAA
- Sturgeon Valley ASP
- Northern Lights Estates ASP
- MPAA Analysis Area
- Parcel

- Rank of 1
- Rank of 2
- Rank of 3
- Rank of 4
- Rank of 5
- Rank of 6
- Rank of 7
- Rank of 8
- Rank of 9
- Rank of 10

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.20: STORMWATER SERVICING RANKINGS



City of St. Albert Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

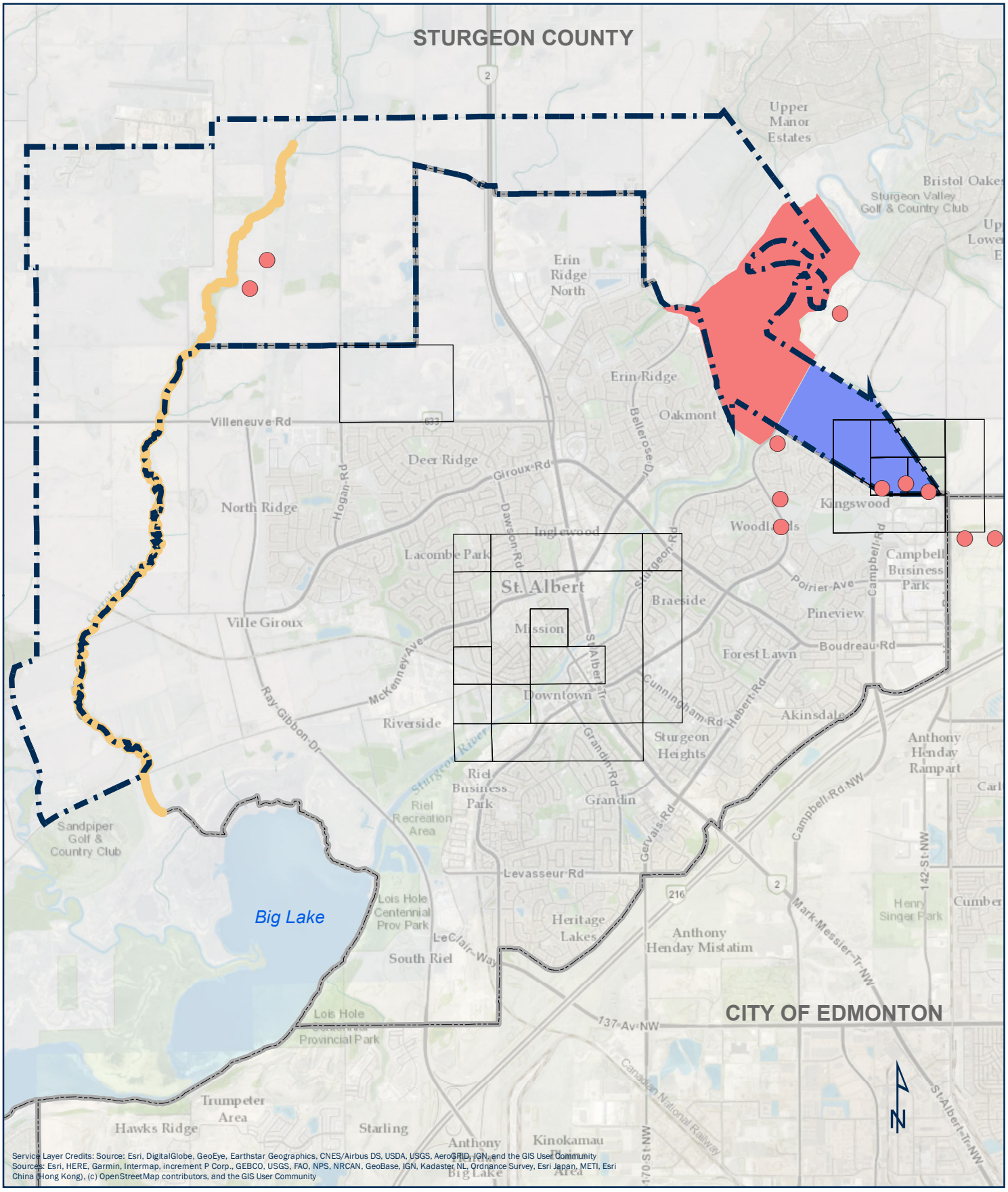
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- Municipal Boundary
- MPAA
- Sturgeon Valley ASP
- Northern Lights Estates ASP
- MPAA Analysis Area
- Parcel

13	18	23	28
14	19	24	29
15	20	25	30
16	21	26	32
17	22	27	33
			35

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.21: AGGREGATED SERVICING RANKINGS



City of St. Albert Cultivate Life

Municipal Boundary
MPAA
Legal Subdivision with Historic Resource Value
Archaeological Site

Areas of Potential HRA Clearance Conditions

Archaeological
Archaeological, Historic, Indigenous Consultation
Palaeontological

0 0.4 0.8 1.6 km

3TM114-83 1:55,000

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.22: HISTORICAL RESOURCE CONSIDERATIONS

5.9. Agricultural Considerations

Agricultural considerations are presented in Map D.23 and are primarily drawn from the Agricultural Baseline Assessment (ABA) that was prepared in support of this GMS (see Appendix I of the City's Annexation Application). The ABA describes the agricultural lands (2019 baseline) and their use both within the study area and within 1 km of its boundary. The ABA, in conjunction with other technical studies, is intended to help inform the Recommended Annexation Area (RAA) presented in Chapter 8.0.

The subsequent Agricultural Impact Assessment (AIA), on the other hand, is based on the RAA and evaluates its impacts on current and future agricultural land and operations. The AIA is included as Appendix J of the City's Annexation Application. Agricultural considerations arising from the AIA are presented in Section 8.4.

5.10. Land Use and Development Considerations

5.10.1. Edmonton Metropolitan Region Growth Plan (EMRGP)

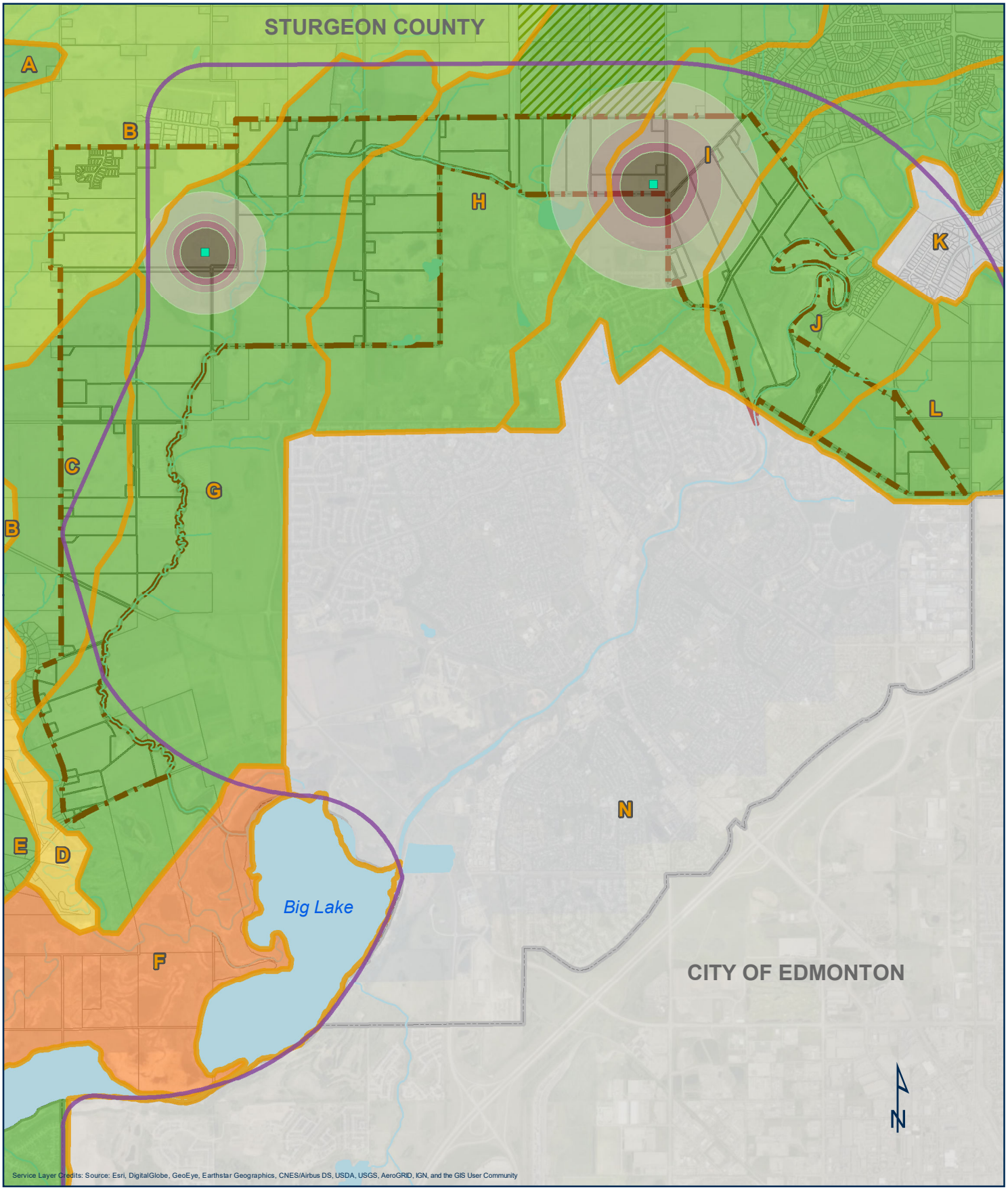
The Edmonton Metropolitan Region Board (EMRB) approved the EMRGP in 2017. The EMRGP adopts a regional structure based on three policy tiers:

1. The Rural Area, defined as the lands within the wider region, consisting primarily of rural working landscapes with agricultural lands, and other rural area uses such as country residential development, and recreational and resource extraction opportunities;
2. The Metropolitan Area, defined as the lands surrounding the metropolitan core, which are tied by socio-economic dynamics and infrastructure, and encompass the highest concentration of existing and future urban development in the region; and
3. The Metropolitan Core, defined as the contiguous developed area within the City of Edmonton with the highest density development and highest concentration of regional amenities and services.

As illustrated in Map D.24, most of the study area is located within the Metropolitan Area, except for some portions in the west which are located within the Rural Area. The EMRGP describes the Metropolitan Area as a contiguous urban settlement pattern with urban levels of service. The growth directions for this policy tier include the intensification of built-up areas, the development of compact and contiguous greenfield areas with a diverse and compatible mix of land uses, planning and building transit-oriented development (TOD), and fostering employment growth.

The Rural Area is described as a group of rural working landscapes, natural resource assets, existing and planned country residential areas, and small urban communities with local and sub-regional levels of service. The growth directions for this policy tier include encouraging growth in existing built-up areas and brownfield sites, planning and building rural and sub-regional centres with a mix of land uses and higher densities, supporting employment growth in major employment areas, and promoting growth and diversification of the agricultural sector.

The EMRGP requires that specific density and intensification targets be met for greenfield residential development, TOD centres, and urban and sub-regional centres within each policy



City of St. Albert
Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

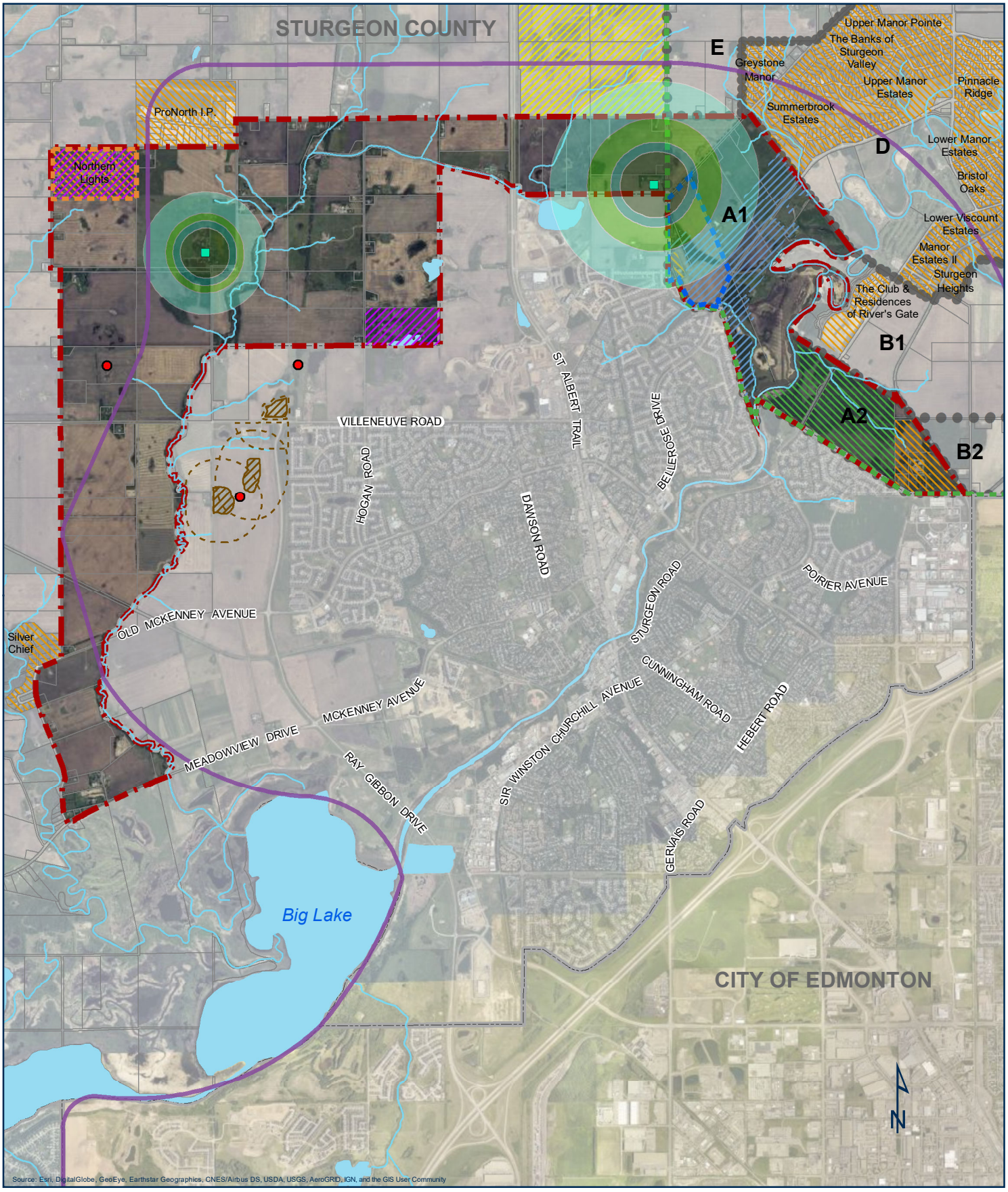
MPAA
UofA Research Station
Metro/Rural Area Boundary
Soil Area*
Confined Feeding Operation
MDS Category 1 Setback
MDS Category 2 Setback
MDS Category 3 Setback
MDS Category 4 Setback
≥40% Class 2 Soil (Prime)
≥40% Class 3 Soil (Prime)
≥40% Class 4 Soil
≥40% Class 5 Soil
≥40% Class 6 Soil
≥40% Class 7 Soil
≥40% Unrated Soil

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.23: AGRICULTURAL CONSIDERATIONS

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* Refer to Table I.5 of the Agricultural Baseline Assessment associated with the GMS (Appendix I of the City of St. Albert's Annexation Application)



City of St. Albert Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

3TM114-83 1:55,000

- EMRGP Metro/Rural Boundary
- Sturgeon Valley ASP
- Northern Lights Estates ASP
- Proposed Keys Cross ASP
- Existing Development
- River Lot 56
- Unreclaimed ESA Location
- Approx. Geotech. Constraint*
- Potential Contaminated Land
- Non-Operating Landfill
- Landfill Buffer
- UofA Research Station
- Confined Feeding Operation
- MDS Category 1
- MDS Category 2
- MDS Category 3
- MDS Category 4
- SVSSA Sub-Area

*Approximated areas of steeper slope beyond the flood plain where slope stability and/or high water table may pose a constraint for development based on the City's past experiences in Oakmont and Erin Ridge

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.24: LAND USE AND DEVELOPMENT CONSIDERATIONS

tier. For St. Albert, the minimum greenfield residential density is 40 dwelling units per net residential hectare (du/nrha), the aspirational intensification target is to build 17.5% of new dwellings within the built-up urban area, the aspirational density target for TOD centres is 140 to 160 people and jobs per gross hectare, and the aspirational density target for urban and sub regional centres is 100 dwelling units per net residential hectare. These targets apply to the current and future City boundaries located within the Metropolitan Area and are to be implemented at the area structure plan level.

The northeast portion of the study area is within the Sturgeon Valley Special Study Area (SVSSA), which was incorporated into the 2017 EMRGP through a ministerial order executed in 2019. Area A of the SVSSA is entirely within the northeast portion of the study area and illustrated as the combination of Sub-Area A1 north of the Sturgeon River and Sub-Area A2 south of the Sturgeon River in Map D.24. Policy within the amended EMRGP applies a minimum greenfield residential density of 35 du/nrha to Area A of the SVSSA (specifically Sub-Area A1 in Map D.24 as Sub-Area A2 features natural and public land uses), which is lesser than 40 du/nrha that applies to St. Albert.

5.10.2. ProNorth Industrial Park

As illustrated in Map D.24, ProNorth Industrial Park is located immediately north of the northwest portion of the study area. This industrial area is 71 ha (176 ac) in size and is currently experiencing expansion interest. Existing uses include manufacturing, construction and contracting services, metal fabrication, industrial equipment supply, self storage, and aircraft rental.

Although ProNorth Industrial Park is outside the study area, it plays a significant role in shaping the potential land use concept for the adjacent lands within the study area. There is no ASP in place for this industrial park. The lands within ProNorth are zoned as Medium Industrial Unserviced District in the County's Land Use Bylaw, which permits uses such as agricultural support, contractor services (major/minor), equipment and fleet sales/service, storage, and warehousing. According to Start in Sturgeon, the County's economic development site, ProNorth is currently sold out but the municipality is working on an expansion to accommodate industrial development through the rezoning of adjacent lands.

5.10.3. Sturgeon County Area Structure Plans

The study area contains one area structure plan (ASP) adopted by Sturgeon County and overlaps a portion of another. It also contains a draft ASP proposed by a developer in 2017. The locations of these ASPs are illustrated on Map D.24.

Sturgeon Valley ASP (SVASP)

The SVASP overlaps the study area as identified in Map D.24. The SVASP covers over 2,048 ha (5,060 acres) of land within Sturgeon Valley, lying northeast of the City boundary. The vision for the SVASP is to "preserve, protect, and enhance to the greatest extent possible the irreplaceable attributes of the rural and natural landscape for present and future generations". Implementation of the SVASP has resulted in the continued preservation of high value

agricultural lands, along with orderly rural residential development built out contiguously from an established core, locating residential development on lands that have marginal agricultural and/or ecological value.

The County has been working on an update of the SVASP to ensure consistency with the 2017 EMRGP in collaboration with St. Albert and Edmonton through the EMRGP-mandated special study area planning process. The areas of the SVASP that overlap with the study area are largely undevelopable as most of the lands are within the flood plain or consist of provincially significant parkland (see areas labeled A1 and A2 in Map D.24).

Northern Lights Estates ASP

The Northern Lights Estates ASP is located inside the northwest corner of the study area as identified in Map D.24. Within a plan area of 47 ha (115 ac), it designates the subject lands for predominantly residential use (133 single detached lots), a commercial site, and supporting open space.

Proposed Keys Cross ASP

A developer in the northeast portion of the maximum potential annexation area proposed a draft ASP to County Council in April 2017. Branded as Keys Cross, the draft ASP is bound by Bellerose Drive to the south, the future 127 Street extension's alignment to the east (eastern boundary of River Lot 37), Coal Mine Road to the north, and the City's current boundary (Coal Mine Road) to the west. The draft ASP applies to 62 ha of land proposed for a mix of low density residential, townhouse, and medium density residential with supporting institutional (existing church), utility, and open space uses. At full build-out, the draft ASP estimates 2,903 residents living in 1,272 dwelling units at a density of 40.5 dwelling units per net residential hectare. The County and City have not formally reviewed the draft Keys Cross ASP to date due to the ongoing annexation process.

5.10.4. Existing Development and Land Fragmentation

As illustrated in Map D.24, the largest concentration of existing development is in Sturgeon Valley, outside of the study area. Other existing developments in the surrounding area include ProNorth Industrial Park, the Silver Chief subdivision, and the University of Alberta Research Station. Within the study area, there are only two developments of considerable magnitude: Northern Lights Estates in the northwest and Poundmaker's Lodge in the east. There are also two major confined feeding operations (CFO), both located in the north portion of the study area. One is located in the northwest of the study area, west of Carrot Creek, and the other west of the Sturgeon Valley ASP boundary, immediately north of the current City limits. Both CFOs have associated Minimum Distance Separations (MDS) that apply to a significant portion of the study area.

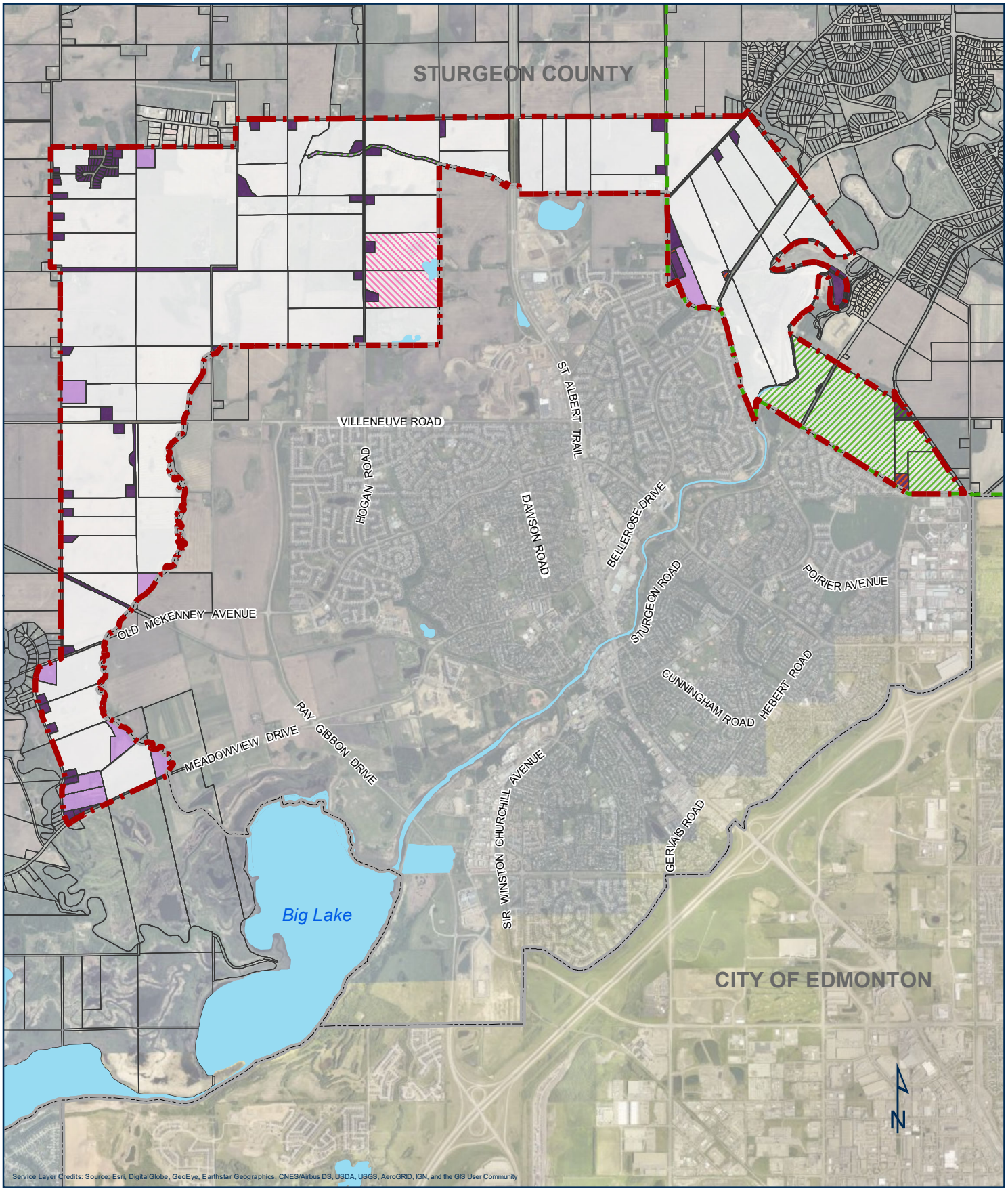
Other land use considerations include potential geotechnical constraints in subarea A1 of the Sturgeon Valley ASP, and the provincially owned and preserved River Lot 56, located west of Poundmaker's Lodge. The environmental constraints analysis conducted as part of the Ecological Assessment found three locations where ESAs have been performed and have not

been issued a reclamation certificate, meaning these sites are not being actively monitored or remediated. These sites are shown in Map D.24 as underclaimed ESA locations, and correspond to a produced water/crude oil pipeline spill, a former dry waste landfill, and a temporary snow storage facility and compost yard.

5.11. Ownership and Fragmentation Considerations

Map D.25 illustrates the status of parcels by ownership type and level of fragmentation within the study area. Most of these parcels are privately owned. River Lot 56 and Poundmaker's Lodge form a cluster of provincially owned lands in the east of the study area. Municipally owned lands are limited to two parcels located in the north portion of the study area, amounting to less than a quarter section in size.

Map D.25 also illustrates those parcels within the study area that are fragmented due to past subdivision activity. Parcels that are less than 4 ha in size and those between 4 ha and 10 ha are identified. Smaller parcels are scattered throughout the study area but mostly concentrated in the west and northwest sections, particularly in Northern Lights Estates.



City of St. Albert
Cultivate Life

Municipal Boundary
MPAA
Sturgeon Valley ASP
Water Body
Fractional Ownership

Municipal Land
Provincial Land
< 4 ha Parcel
4 to 10 ha Parcel
> 10 ha Parcel

0 0.2 0.4 0.8 1.2 1.6 km

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.25: OWNERSHIP AND FRAGMENTATION CONSIDERATIONS

6.0 Growth Assumptions

6.1. Average Household Size

An estimate of assumed average household size is necessary for the purpose of determining the amount of land required for future residential development. The average household size assumptions estimated by *Metro Economics* by projection scenario in Chapter 3.0 were:

- 2.58 people per unit (ppu) in the Low Case
- 2.58 ppu in the Base Case;
- 2.60 ppu in the High Case; and
- 2.59 ppu in the Midpoint Case.

By comparison, the City's average household size in the 2016 census was 2.74 ppu, and 2.81 ppu in 2006. The decrease from 2.74 ppu in 2016 to the averages presented above in 2070 is due to continuation of the established demographic trend of smaller household sizes over time due to smaller families (less children) and empty nesting after children leave their family homes.

6.2. Residential Intensification

The Edmonton Metropolitan Region Growth Plan (EMRGP) applies an aspirational residential intensification target of 17.5% to the City of St. Albert. This means that the City should strive for 17.5% of its future dwelling unit construction being directed to infill in its existing built-up areas. For the purpose of this exercise it is assumed that 17.5% of its constructed future dwelling units will be within the existing built-up areas by 2070.

6.3. Residential Density

The City is contained within the Metropolitan Area policy tier in the EMRGP. The conceptual boundaries of the Metropolitan Area also generally include the study area, or maximum potential annexation area (MPAA). In the EMRGP, the minimum greenfield residential density target prescribed to the City is 40 dwelling units per net residential hectare (du/nrha). Notwithstanding, the northeast portion of the MPAA is within the Sturgeon Valley Special Study Area (previously introduced in Section 5.10.1), which now forms part of the EMRGP and applies a lesser minimum greenfield residential density target of 35 du/nrha. This target specifically applies to the portion of the MPAA east of Range Road 253 and north of the Sturgeon River between the City and existing residential communities in Sturgeon Valley.

The Northern Lights Estates ASP in the northwest corner of the MPAA has a planned residential density of 3.6 du/nrha based on 133 dwelling units planned on 37 ha of land devoted to residential land use. As an ASP adopted by Sturgeon County before the approval of the EMRGP, this planned density is grandfathered and therefore not subject to the minimum residential density target.

Based on the above density influences, the residential density assumption applied to the MPAA and previously unplanned greenfield areas within the City is 37.5 du/nrha. For those unabsorbed residential lands within the City that are subject to previously approved ASPs, the residential density assumption is 34.0 du/nrha in accordance with the weighted average planned densities of these ASPs that are not yet full built-out (see Table D.10).

Table D.10: Planned Density of Area Structure Plans under Development

Area Structure Plan	Area (net ha)	Planned Dwelling Units	Planned Density (du/nrha)
Erin Ridge North	38.00	1,440	37.9
Jensen Lakes	70.49	2,119	30.1
Pineview II/Kingswood	49.93	1,129	22.6
Range Road 260	65.24	2,452	37.6
Riverside	125.80	4,015	31.9
South Riel	9.90	792	80.0
Ville Giroux	14.36	746	51.9
Total	**373.72**	**12,693**	**34.0**

6.4. Net Developable Overheads

Net developable overheads are those land uses required to support or service residential, commercial, industrial, and institutional development, including parks and open space (inclusive of municipal reserve), public utilities (stormwater management facilities, lift stations, etc.) and circulation (local roads, collector roads, lanes and walkways). The *Municipal Government Act* allows for the maximum dedication of developable lands for these overheads to be 40% – comprising 10% municipal reserve and 30% public utilities and circulation.

6.4.1. Residential Net Developable Overheads

For the purpose of this exercise it is assumed that 35% of the City's gross developable land requirements for future residential growth will accommodate the necessary net developable overheads. This assumes 10% for parks and open space, 5% for public utilities and 20% for circulation.

6.4.2. Commercial, Industrial, and Institutional Net Developable Overheads

For the purpose of this exercise it is assumed that 30% of the City's gross developable land requirements for future commercial, industrial, and institutional growth will accommodate the necessary net developable overheads. This assumes 10% for parks and open space, 5% for public utilities and 15% for circulation.

6.5. Relationships of Residential to Other Core Land Uses

Further review of the findings of the land supply analysis in Table D.7 indicates the following existing relationships between absorbed residential lands and absorbed lands for other core land use purposes:

- For every 100 ha of absorbed net residential lands, there are 13 ha of absorbed net commercial lands;[16]
- For every 100 ha of absorbed net residential lands, there are 12 ha of absorbed net industrial lands;[17] and
- For every 100 ha of absorbed net residential lands, there are 10 ha of absorbed net institutional lands.[18]

For the purpose of baseline land requirement calculations, prior to the application of any aspirational municipal assessment split targets, the above ratios will be used to calculate future commercial, industrial, and institutional land requirements. In addition, these assumptions will be applied prior to allocating the residential intensification allowance.

6.6. Municipal Assessment Split

The City's current municipal assessment split, from a tax assessment perspective, is 85% residential to 15% non-residential. However, after factoring in mill rates, the City's current municipal assessment split, from a tax revenue perspective, is 80% residential to 20% non-residential. For projected growth from 2018 to 2070, the City aspires to achieving a tax revenue split of 60% residential to 40% non-residential across its future growth areas while maintaining the current 80% residential to 20% non-residential split within its absorbed lands as of 2018.

Table D.11 presents the City's existing residential to non-residential split from an absorbed land supply perspective. The City had a total absorbed land supply of 1,740.7 ha in March 2018. Of that total absorbed land supply, approximately 80% (1,393.2 ha) was the residential component and approximately 20% (347.5 ha) was the non-residential component, comprised of 10.5% (181.7 ha) commercial and 9.5% (165.7 ha) industrial. Therefore, a direct relationship is observed between the City's current tax assessment split of 80/20 to its absorbed residential and non-residential land supply. For the purpose of this exercise the land requirements will be

[16] Based on the formula: 176.1 ha commercial ÷ (1,387.5 ha residential + (50% of 11.3 ha mixed residential/commercial)) = 13%
[17] Based on the formula: (165.7 ha industrial + (50% of 11.3 ha mixed residential/commercial)) ÷ (1,387.5 ha residential + (50% of 11.3 ha mixed residential/commercial)) = 12%
[18] Based on the formula: 139.2 ha institutional ÷ (1,387.5 ha residential + (50% of 11.3 ha mixed residential/commercial)) = 10%

adjusted to calculate the additional industrial land supply necessary for the City's future growth, from 2018 to 2070, to achieve the aspirational 60/40 tax revenue split based on the direct relationship observed between actual absorbed residential and non-residential land supply.

Table D.11: Absorbed Residential and Non-Residential Land Supply

Absorbed Land Supply by Land Use	Area (ha)	Percent
Residential	1,387.5	79.7%
50% of Mixed Residential/Commercial	5.6	0.3%
Total Residential	**1,393.2**	**80.0%**
Commercial	176.1	10.1%
50% of Mixed Residential/Commercial	5.6	0.3%
Industrial	165.7	9.5%
Total Non-Residential	**347.5**	**20.0%**
Total Absorbed Land Supply	**1,740.7**	**100.0%**

6.7. Market Allowance

When determining land requirements to accommodate projected growth needs, there will be lands within recommended expansion areas where development will not occur within the horizon of a forecast period. In recognition of this, it is appropriate to apply a market allowance as an overhead that:

- Recognizes that some land within recommended expansion areas will not develop within the horizon of the study (e.g., landowners either will not develop or sell to developers, whether they own full quarter sections or smaller parcels); and
- Encourages fair market competition among developers that are participating in development.

For the purpose of this exercise an assumed market allowance of 10% is applied to gross residential, commercial, and industrial land requirements. Although a 50-year horizon should facilitate one ownership change for each parcel of land within the recommended expansion areas, there is no guarantee a new buyer will be motivated to develop. Further, ownership changes in the near term of lands not expected to be developed until the later years of the long-term planning horizon may result in some lands having multiple changes in ownership prior to development.

7.0 Land Requirements

Table D.12 presents the City's 50-year land requirements based on the Base, Midpoint and High Case population projection scenarios presented in Chapter 3.0 and the various assumptions presented in Chapter 6.0.

Table D.12: Land Requirements

Land Use	Base Case with 60/40 Municipal Tax Revenue Split (gross developable hectares)			Midpoint Case with 60/40 Municipal Tax Revenue Split (gross developable hectares)			High Case with 60/40 Municipal Tax Revenue Split (gross developable hectares)		
	Total Land Required	Land Supply in City	Land Required Beyond	Total Land Required	Land Supply in City	Land Required Beyond	Total Land Required	Land Supply in City	Land Required Beyond
Residential	990.4	709.4	**281.1**	1,244.6	709.4	**535.2**	1,498.6	709.4	**789.3**
Commercial	151.7	111.4	**40.4**	193.7	111.4	**82.3**	235.6	111.4	**124.3**
Industrial	623.6	279.6	**344.0**	795.9	279.6	**516.4**	968.2	279.6	**688.6**
Institutional	105.5	0.0	**105.5**	134.7	0.0	**134.7**	163.8	0.0	**163.8**
Total	**1,871.3**	**1,100.3**	**771.0**	**2,368.9**	**1,100.3**	**1,268.6**	**2,866.2**	**1,100.3**	**1,766.0**

Under the recommended Midpoint Case scenario, the City has a total land requirement of 2,368.9 gross developable ha by 2070. This includes lands that can be developed for residential, commercial, industrial, institutional, and supporting developable overhead land uses (parks and open space, public utilities, and circulation). The land requirements expressed in gross developable hectares therefore excludes undevelopable overhead land uses (e.g. environmental reserve, future arterial roads, pipelines, well setbacks, previously developed lands, etc.).

Upon subtracting the 1,100.3 gross developable ha of unabsorbed land supply currently within the City, 1,268.6 gross developable ha are required beyond its current boundary to accommodate projected growth under the Midpoint Case scenario. This land requirement will increase upon delineating the recommended annexation area once undevelopable overhead land uses within it are quantified.

In comparison, the Base Case scenario generates a total land requirement of 1,871.3 gross developable ha, of which 771.0 are required beyond the City boundary. In the High Scenario, 2,866.2 gross developable ha are required, of which 1,766.0 are beyond boundary.

8.0 Recommended Annexation Area

Map D.26 illustrates the Recommended Annexation Area (RAA), which comprises 1,629.6 gross ha of land (25.2 gross quarter sections[19] or 25.7 gross developable quarter sections).[20] The RAA is based on the projected growth of St. Albert to 2070 under the Midpoint Case scenario and consideration of a comprehensive study area analysis partially informed by numerous technical studies. The RAA will allow the City to properly plan land uses and infrastructure investments over the long-term in an orderly, comprehensive, and sustainable manner.

Utilizing a beyond boundary total gross developable land requirement of 1,268.6 ha (20.0 gross developable quarter sections) from Table D.12, the RAA accommodates 91% of the City's 50-year residential, commercial, industrial, and institutional growth needs to the west (north of the CN rail line), northwest, north, and northeast of the City (north of the Sturgeon River). Outer boundaries of the RAA include CN's Sangudo Subdivision and Range Road 261 to the west, Northern Lights Estates to the northwest, Township Road 544 to the north, and a combination of Range Road 253, the future 127 Street extension, and Bellerose Drive to the northeast.

The RAA also includes three parcels to the east that are south of the Sturgeon River consisting of the provincially owned River Lot 56, the City-owned St. Albert Cemetery, and the provincially owned Poundmaker's Lodge site. These three parcels are not required to accommodate future growth by the City; rather these public uses and amenities, which are inherently linked to St. Albert, are recommended for annexation to formalize their links to the community.

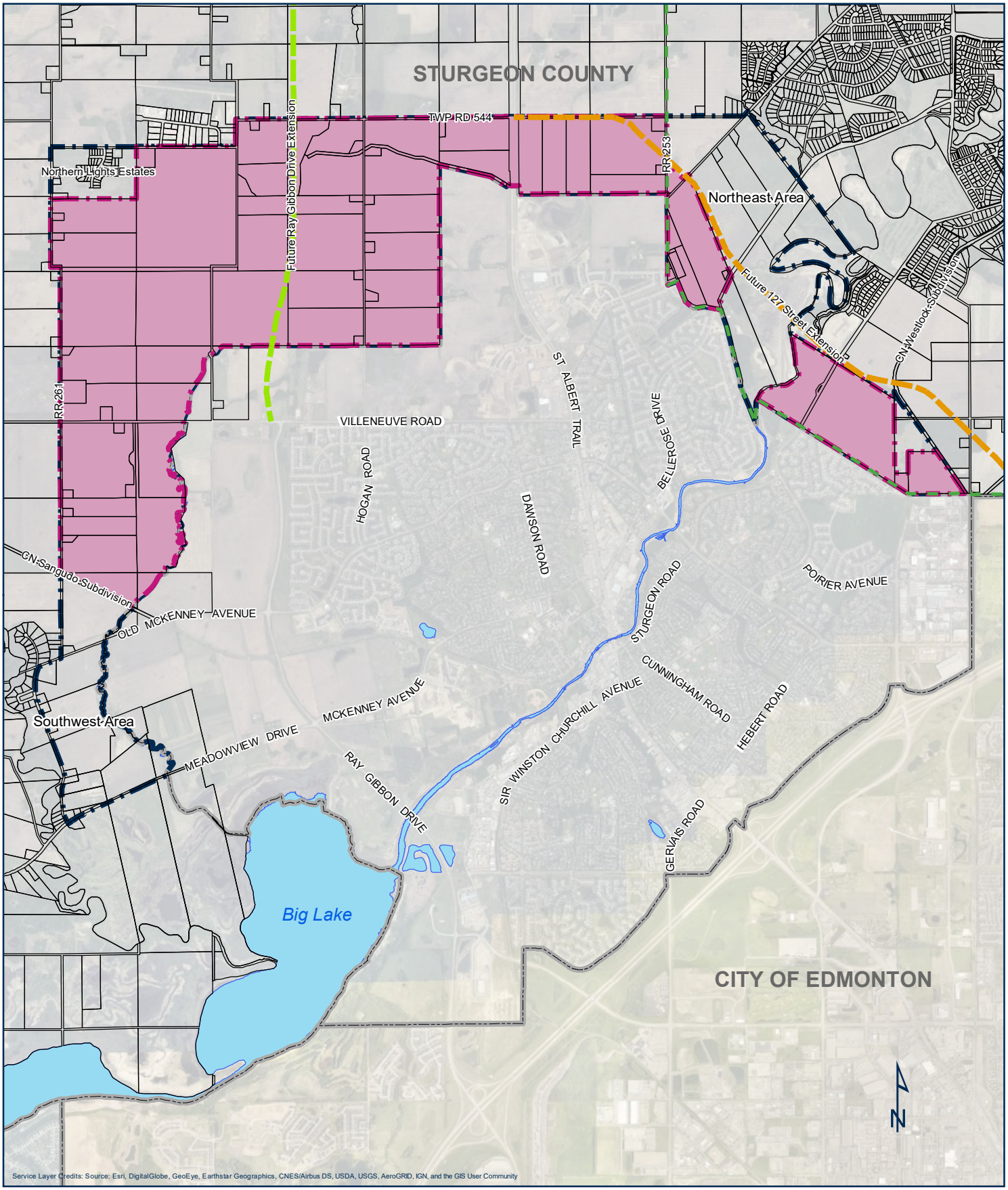
The configuration of the RAA is based on the following.

1. It represents a logical extension of the City's existing urban footprint and servicing systems to the west, northwest, north, and northeast adjacent to some lands already developed within the City or planned for future urban development by the City.

2. It facilitates the potential for long-term commercial development, particularly large format retail, highway corridor, and transit-oriented mixed-use opportunities, along highway corridors, as well as supporting commercial nodes that will help improve the City's current tax revenue assessment split.

3. It facilitates an opportunity for contiguous northwest expansion of the City's future Lakeview Business District across Carrot Creek where it can: be buffered from planned future residential growth in the City on the east side of Carrot Creek; benefit from potential rail access from CN's Sangudo Subdivision; benefit from direct access to Highway 633 (Villeneuve Road); and benefit from proximity and access to Ray Gibbon Drive via planned future interchanges at Old McKenney Avenue (Giroux Road) and Highway 633 (Villeneuve Road).

[19] As previously footnoted in Section 4.3, a **gross quarter section** has an area of 64.75 ha before losing any titled area to road widening or arterial road dedication.
[20] As previously footnoted in Section 4.3, a **gross developable quarter section** has an area of 63.5 ha in recognition of titled area already lost to road widening or future titled area to be lost for road widening or arterial road dedication purposes.



City of St. Albert
Cultivate Life

Municipal Boundary
Sturgeon Valley ASP
MPAA
Parcel
Recommended Annexation Area (RAA)
Regional Arterial (Future)
Regional Freeway (Future)

0 0.2 0.4 0.8 1.2 1.6 km

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.26: RECOMMENDED ANNEXATION AREA

4. It facilitates future industrial growth at greater than historical volumes, which will be a significant contributor to the City improving its current tax revenue assessment split of 80% residential to 20% non-residential.

5. It leverages future provincial and regional roadway investments in the planned extension of Ray Gibbon Drive to the northwest and the future 127 Street extension to the northeast, allowing for a better spread of traffic across three corridors to/from Edmonton to the southeast.

6. It minimizes the number of potential active wastewater and stormwater servicing basins beyond the City's current boundary that would be subject to competition for necessary infrastructure investments as the City grows over the long-term.

7. It generally aligns with the conceptual boundary of the Metropolitan Area policy tier in the Edmonton Metropolitan Region Growth Plan (EMRGP) and allows for future urban development in a manner that will comply with the objectives, principles, and policies of the EMRGP.

8.1. Northeast Area

MPAA lands to the northeast of the future 127 Street extension, between the Sturgeon River and Range Road 253, are excluded from the RAA for the following reasons:

1. There are seven wastewater servicing basins in the MPAA (see Map D.15), five of which overlap the City boundary and include yet to be developed lands within the City. Most of the land northeast of the future 127 Street extension is not serviceable by gravity to lands in the NAA or the City and is therefore confined to its own basin. Annexation of land northeast of the future 127 Street extension would therefore introduce a new, undersized basin that would compete for infrastructure investments with five other basins in the City as they are building out. Annexation of this area should only be considered in the medium-term future, in consultation with the County and affected landowners, when one or more of the five other basins within the City have their required infrastructure investments in place.

2. The financing and responsibility for the construction of the future 127 Street extension remains unknown.

3. One of the MGB's annexation principles states that all municipalities affected by an annexation application be afforded opportunities to accommodate growth. These lands already have rights to accommodate future development in accordance with the EMRGP-endorsed Sturgeon Valley Special Study Area (SVSSA). Exclusion of these lands provides an opportunity for the County to capture future residential and commercial growth in this area in addition to a larger area southeast of the Sturgeon River in accordance with the SVSSA.

4. These lands do not have the same efficiencies and benefits to the City over the medium to long-term as those contained in the RAA.

8.2. Northern Lights Estates

MPAA lands within the developing Northern Lights Estates subdivision are excluded from the RAA for the following reasons:

1. The Northern Lights Estates subdivision is wholly outside of the conceptual boundary of the Metropolitan Area in the EMRGP. Further, its ASP allows for continued build-out at rural estate residential densities that are not in alignment with the EMRGP or the range of residential densities and built forms expected of urban municipalities.

2. One of the MGB's annexation principles states that all municipalities affected by an annexation application be afforded opportunities to accommodate growth. These lands already have rights to accommodate future development in accordance with the Northern Lights Estates Area Structure Plan (ASP) previously adopted by the County. Exclusion of these lands provides an opportunity for the County to capture future residential growth through full build-out of the ASP.

3. Another of the MGB's annexation principles states that annexation applications should not be a tax initiative. The County already collects taxes from residential lots developed within the first stage of the subdivision.

4. The subdivision is currently serviced by infrastructure owned by the County. Annexation of the subdivision would necessitate intermunicipal servicing agreements between the City and the County, and potentially require the City to compensate the County for previous infrastructure investments in this area.

5. These lands do not have the same efficiencies and benefits to the City over the medium to long-term as those contained in the RAA.

8.3. Southwest Area

MPAA lands to the southwest of the City, bounded by Carrot Creek to the east, Meadowview Drive to the south, Range Road 261 and the Silver Chief subdivision to the west, and CN's Sangudo Subdivision to the north, are excluded from the RAA for the following reasons:

1. This portion of the MPAA has the highest concentrations of oil and gas activity and is encumbered by a combination of active wells, numerous pipelines, and other associated facilities. Introduction of urban development in this area would be more appropriate in the medium-term at the earliest after most oil and gas activity ceases and subsequent remediation is completed, where necessary, to enable determination of the highest and best use of the lands and comprehensive planning.

2. Most of this area is outside of the conceptual boundary of the Metropolitan Area in the EMRGP.

3. There are seven stormwater servicing basins in the MPAA (see Map D.16). Five of these basins overlap the City boundary and include yet to be developed lands within the City, which means there are two new basins wholly located within the MPAA. There is also an eighth basin in the City located between Ray Gibbon Drive and Carrot Creek, generally south of Old McKenney Avenue, that has not yet experienced development. Most of the land in the Silver Chief area is within the smaller of the two new basins. Annexation of this area would therefore introduce a new, undersized basin that would compete for infrastructure investments with six other basins in the City as they are building out as well as the large new basin to be annexed. Annexation of this area should only be considered in the medium-term future, in consultation with the County and affected landowners, when one or more of the seven other basins within the City have their required infrastructure investments in place.

4. As noted in Section 8.1, there are seven wastewater servicing basins in the MPAA (see Map D.15), five of which overlap the City boundary and include developing lands within the City; this area is part of one of these overlapping basins. More specifically, it is a sub-basin on the west side of Carrot Creek while the downstream balance of the basin is in the City on the east side of Carrot Creek. While annexing the balance of this basin rather than most of a new and large wastewater servicing basin north of CN's Sangudo Subdivision would keep the number of post-annexation basins to five, this area is small and excluding lands in the new basin to the north would significantly reduce the time horizon of the City's annexation. If annexed, development in this area or sub-basin would compete for infrastructure investments with the four other basins in the NAA as they are building out as well as the balance of this basin already within the City. Annexation of this area should only be considered in the medium-term future, in consultation with the County and affected landowners, when one or more of the other basins have their necessary infrastructure investments in place.

5. These lands do not have the same efficiencies and benefits to the City over the medium to long-term as those contained in the RAA.

8.4. Agricultural Considerations

The agricultural considerations presented herein are from the Agricultural Impact Assessment (AIA) prepared to accompany the GMS (see Appendix J of the City's Annexation Application).

Approximately 1,193 ha (2,948 ac) of agricultural lands are within the RAA. The City proposes a staged conversion of all agricultural lands within the RAA's boundaries to non-agricultural uses by 2070. The AIA focuses on the first 30 years of the proposed land use changes, as the identified trends were expected to continue through 2070.

There will be an expected loss of municipal assessment, investment, and revenue related to agricultural uses associated with the loss of these agricultural lands. However, there will be an anticipated offsetting magnitude increase in municipal assessment, investment, and revenue from these lands as they are converted from agriculture to residential, commercial, and industrial uses.

In addition to impacts to agricultural lands within the RAA, there is also a potential for impact to agricultural lands within 1 km of its boundary. Conflicts may arise between residents within the RAA and agricultural operations in proximity to them as a result of dust, noise, odours, etc. that result from normal agricultural practices.

Although many of the impacts to agricultural lands will be offset by the proposed conversion to non-agricultural land uses within the RAA, the following recommendations are made to further mitigate and minimize the impacts to agriculture from these changes:

1. That the City work with the Edmonton Metropolitan Region Board to amend the current Rural Area policy tier within the RAA to the Metropolitan Area policy tier.

2. That the City stage development within the RAA to minimize the impact on agricultural lands by requiring contiguous development with existing, planned or built-up urban areas, conserve agricultural lands for agricultural purposes for as long as possible and to allow time for resolution of potential conflicts including existing Confined Feeding Operations.

3. That the City and County promote and support the development of value-added agriculture production, processing, and distribution as part of the commercial and industrial development within the RAA and within 1 km of its boundary to provide additional opportunities for local agricultural producers.

4. That the City and County work with agricultural operators and RAA residents to proactively identity and address potential conflicts through education and the use of Beneficial Management Practices to reduce the impacts of agricultural operations.

5. That the City and County initiate discussions with the University of Alberta and the Natural Resources Conservation Board on the potential for the development of a Confined Feeding Operation on the St. Albert Research Station and determine appropriate planning/actions to mitigate/minimize any potential conflicts.

9.0 Annexation Area Negotiations

9.1. Preliminary Negotiated Annexation Area

The RAA (see Map D.26) was advanced to the ANSC in late June 2019. Following three months of negotiations, the City and County agreed on a preliminary negotiated annexation area (PNAA) for public engagement purposes. As illustrated in Map D.27, the PNAA added three lots previously excluded from the RAA – the lot north of the river that is east of the current City boundary and south of Boudreau Drive, and two lots adjacent to River Lot 56, the St. Albert Cemetery, and the provincially owned lot leased by Poundmaker's Lodge on the south side of the Sturgeon River.

The primary purpose for adding the lot north of the river was to potentially avoid an intermunicipal crossing agreement between the City and the County for the City's construction of a future stormwater right-of-way from lands north of Bellerose Drive to the river. Secondly, more detailed developability analysis at an ASP stage may reveal an opportunity to develop a small portion of the subject lands for urban uses.

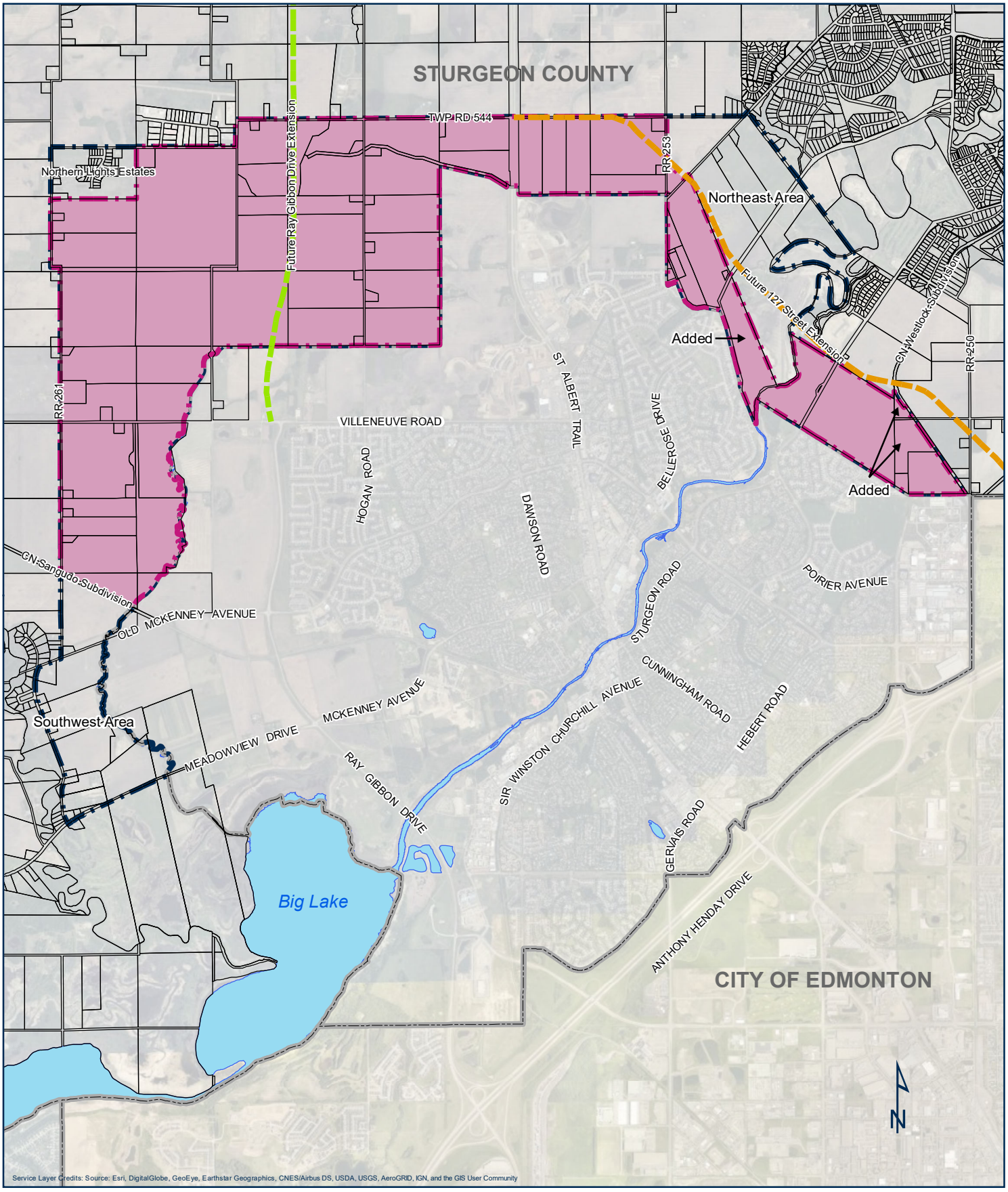
The two lots south of the river were added for three purposes. Firstly, the two parcels, like River Lot 56 and the Poundmaker's Lodge lot, are owned by the province; it therefore unifies all provincial ownership in the area under one municipal jurisdiction. Secondly, their inclusion results in a smoother municipal boundary essentially comprising the northeast boundary of River Lot 56 and CN's Westlock Subdivision compared to a more jagged municipal boundary. Thirdly, the two lots are isolated from lands in the County by CN's Westlock Subdivision. They lack physical connection with lands across the rail line and form natural extensions of River Lot 56 and the Poundmaker's Lodge lot.

In all, the inclusion of these three lots resulted in the PNAA having an area of 1,682.8 ha, which is 53.2 ha larger than the RAA.

9.2. Negotiated Annexation Area

The ANSC further refined the PNAA (see Map D.27) following a review of the input collected from the second round of annexation engagement in November 2019, the County's growth and infrastructure needs in and around the ProNorth Industrial Park, and other considerations. In April 2020, the City and County agreed on a final negotiated annexation area (NAA). As illustrated in Map D.28, the NAA resulted from the removal of 94.8 ha from the northwest portion of the PNAA. This affected seven lots and a portion of an eighth lot south of Township Road 544 and the ProNorth Industrial Park between a tributary of Carrot Creek to the east and the Northern Lights Estates subdivision to the west.

These lands were removed to enable the County an opportunity to further grow its ProNorth Industrial Park/Northern Lights Estates development node. They also provide the County an opportunity to make more efficient use of its municipal infrastructure investments that are adjacent to the north. Uncertainty respecting the future alignment of Ray Gibbon Drive and its



City of St. Albert Cultivate Life

Municipal Boundary
MPAA
Parcel

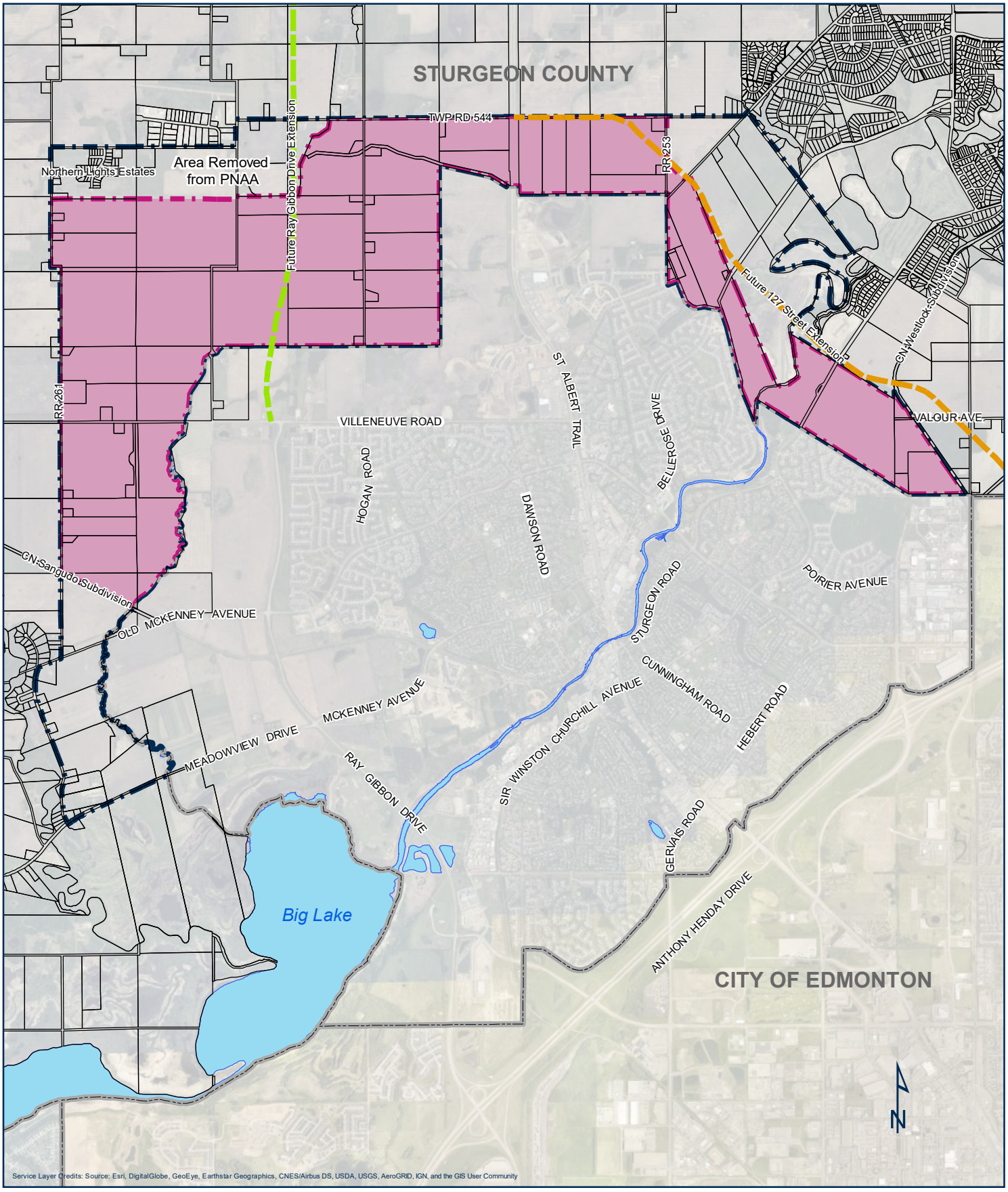
Preliminary Negotiated Annexation Area (PNAA)
Regional Arterial (Future)
Regional Freeway (Future)

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.27: PRELIMINARY NEGOTIATED ANNEXATION AREA



City of St. Albert Cultivate Life

- Municipal Boundary
- MPAA
- Parcel
- Negotiated Annexation Area (NAA)
- Regional Arterial (Future)
- Regional Freeway (Future)

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.28: NEGOTIATED ANNEXATION AREA

interchange with Township Road 544[21] in the eastern portion of these lands also played a role in their removal. It is also noted that opposition to annexation was conveyed by numerous landowners in this area following the second round of annexation engagement.

In all, the NAA has an area of 1,558.0 ha (24 gross quarter sections), which is 124.8 ha less than the PNAA and 71.6 ha less than the RAA.

9.3. Preliminary Land Use Breakdown

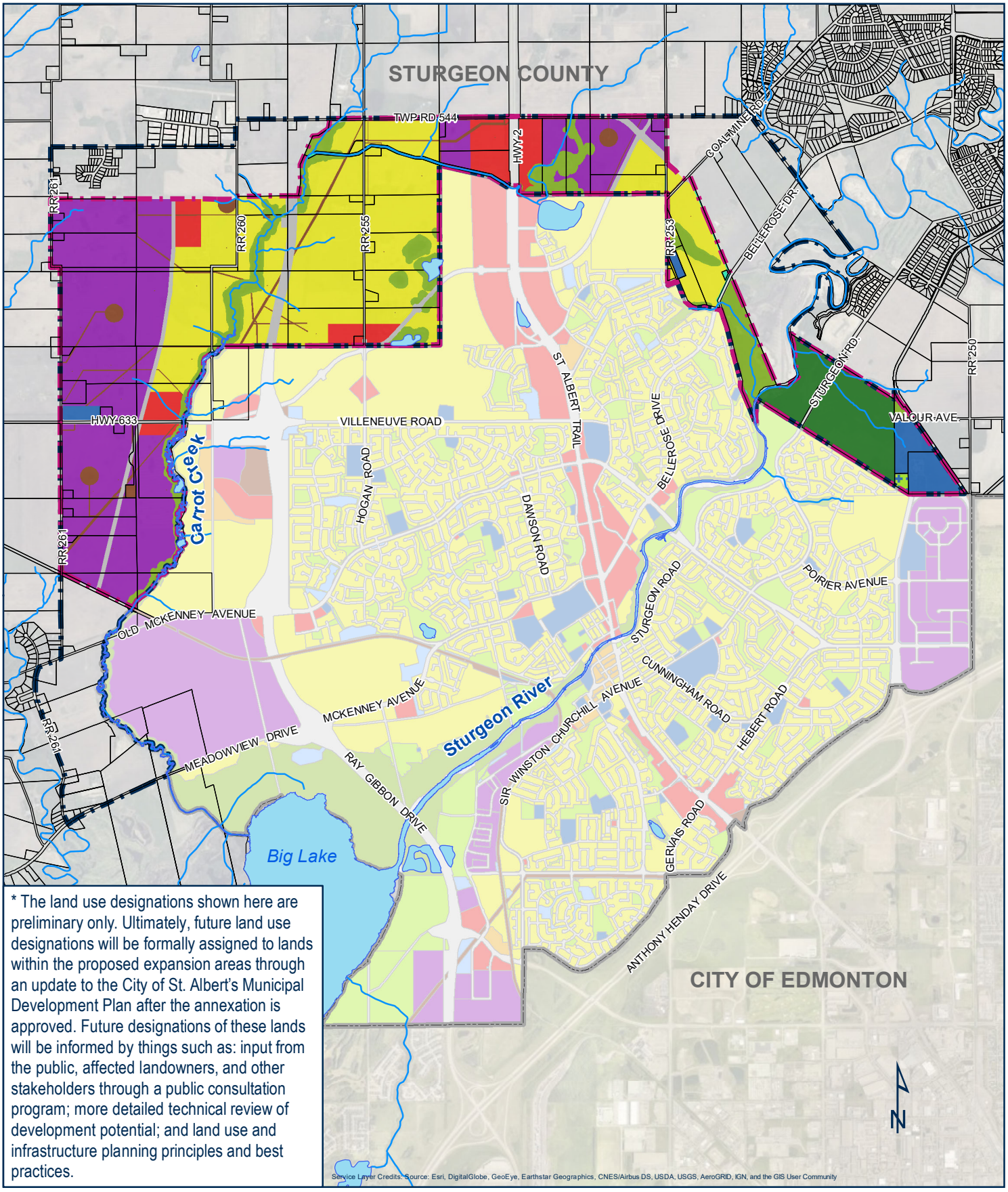
Preliminary land uses for the NAA are illustrated in Map D.29. The allocation of preliminary land uses was based on sound land use planning principles and informed by input from the City's planning staff but is not intended to be binding. Ultimately, land uses will be more formally assigned to the NAA through an update to the City's MDP that will follow annexation. The future land uses assigned through the MDP update will be informed by a more detailed technical review of development potential, sound land use planning principles, and input from the public, affected landowners and other stakeholders, and final land uses with be assigned through the City's Land Use Bylaw.

Table D.13 lists the total area (1,558.0 gross ha or 24.5 gross quarter sections), the gross undevelopable deductions, and the preliminary developable land use breakdowns within the NAA. The total gross developable lands within the NAA is estimated to be 1,078.0 ha (17.0 gross developable quarter sections).

Table D.13: Preliminary Land Use Breakdown of Negotiated Annexation Area

Land Use	Area (ha)
Gross Area of NAA	**1,558.0**
River Lot 56	169.5
Natural Area	106.9
Sturgeon River	0.9
Oil and Gas	46.3
Rail	<0.1
Cemetery	2.6
Future Arterial	53.3
Existing Road Allowance	46.2
Existing Public Utility	10.3
Existing Municipal Reserve	0.3
Existing Institutional	43.8
Total Gross Developable Lands	**1,078.0**
Residential (including 100% Institutional)	507.6
Commercial	82.3
Industrial	488.1

[21] Although a functional planning study has been prepared for the Ray Gibbon Drive extension as a realignment of Highway 2 from Highway 37 and beyond to the north, the provincial government has yet to gazette the alignment.



* The land use designations shown here are preliminary only. Ultimately, future land use designations will be formally assigned to lands within the proposed expansion areas through an update to the City of St. Albert's Municipal Development Plan after the annexation is approved. Future designations of these lands will be informed by things such as: input from the public, affected landowners, and other stakeholders through a public consultation program; more detailed technical review of development potential; and land use and infrastructure planning principles and best practices.

City of St. Albert
Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

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- MPAA
- NAA
- Residential
- Commercial
- Industrial
- Institutional
- Public Utilities
- Sturgeon River
- Cemetery
- Natural Area
- River Lot 56
- Municipal Reserve
- Oil and Gas
- Power Line
- Rail
- Future Arterial
- Existing Road

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.29: PRELIMINARY LAND USE CONCEPT

It is estimated that the NAA will provide:

- a combined 507.6 ha of gross developable land for residential and institutional purposes;
- 82.3 ha of gross developable land for commercial purposes; and
- 488.1 ha of gross developable land for industrial purposes.

Table D.12 indicated the City requires the following beyond boundary land requirements to accommodate 50 years of projected growth under the Midpoint Case scenario:

- a combined 669.9 gross developable ha quarter sections for residential and institutional purposes;
- 82.3 gross developable ha for commercial purposes; and
- 516.4 gross developable ha for industrial purposes.

In comparing, the NAA's gross developable capacities in Table D.13 above with the land requirements in Table D.12, the NAA is deficient of a 50-year supply by:

- 162.3 gross developable ha for residential and institutional combined; and
- 28.3 gross developable ha for industrial.

These deficits firstly result from the recommendation to minimize the number of wastewater and stormwater servicing basins that will be active in the City following annexation. Secondly, the negotiated removal of lands in the northwest adjacent to Northern Lights Estates and ProNorth Industrial Park also contribute to the deficits. As a result:

- the combined residential and institutional horizon of the NAA is reduced from 50 years (depletion in 2070) to approximately 44.5 years (depletion in mid-2064);
- the industrial horizon of the NAA is reduced from 50 years (depletion in 2070) to just over approximately 48 years (depletion in early 2069); and
- the average horizon of the NAA across all four core land uses (residential, commercial, industrial, and institutional) is reduced from 50 years (depletion in 2070) to nearly 46 years (depletion in 2066).

At the post-annexation MDP amendment stage, the City could consider a land use concept that equates to a uniform 46-year land supply across residential, commercial, and industrial uses.

10.0 Staging

10.1. Agricultural Land Conversion Staging

Map D.30 illustrates a recommended agricultural land conversion staging plan as advanced by Morris Seiferling Consulting Ltd. (MSCL) for consideration in the City's preparation of an update to its MDP following annexation approval. The agricultural land conversion staging plan was also a consideration in preparing the preliminary development staging plan in support of the Annexation FIA (see Section 10.2.5) but deviations were required in order to stage future development in accordance with the preliminary land use concept (Map D.29) and the staging assumptions throughout Section 10.2 and specifically within Tables D.14 through D.16.

Considerations and rationale for the agricultural land conversion staging plan recommendations advanced by MSCL are provided below.

10.1.1. Considerations for Staging Recommendations

1. Soils across the Maximum Potential Annexation Area (MPAA) are generally very good for agricultural production. The poorer agricultural soils are Solonetzic soils on some of the lower slopes in the northwest corner of the MPAA and Gleyed soils found throughout the area in depressions.

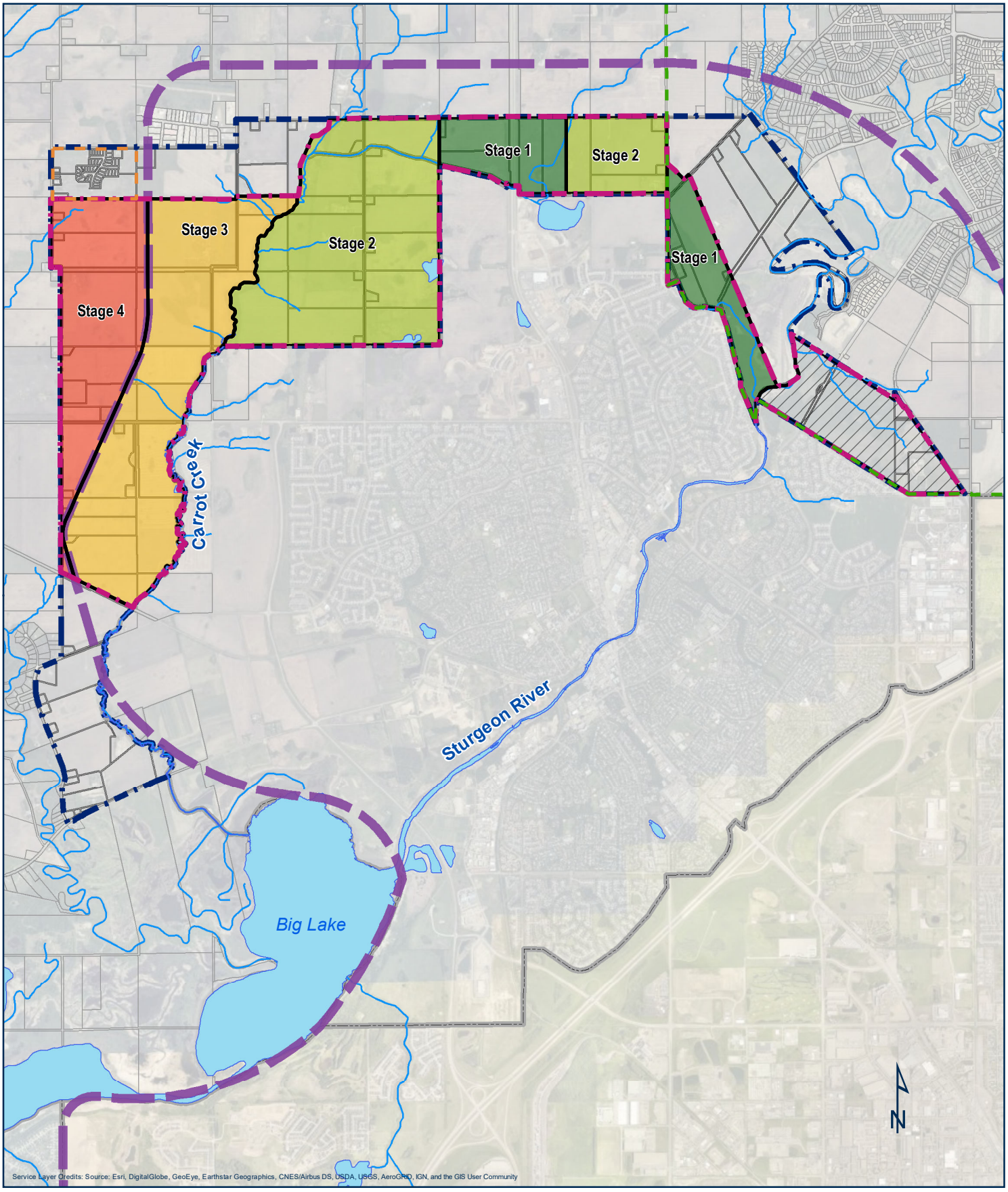
2. The Edmonton Metropolitan Region Growth Plan (EMRGP) delineates the majority of lands within the MPAA as within the Metropolitan Area policy tier with some lands along the west side in the Rural Area policy tier.

   The growth direction related to prime agricultural lands within the Metropolitan Area requires that prime agricultural lands be conserved for agricultural purposes for as long as possible, recognizing that these lands will urbanize over time to accommodate growth.

   The growth direction related to prime agricultural lands in the Rural Area requires that prime agricultural lands be conserved and maintained to support efficient agricultural production, value added agriculture production, diversification of the agricultural sector, and that fragmentation and conversion of prime agricultural lands for non-agricultural uses be minimized.

3. The City of St. Albert's Municipal Development Plan (MDP) requires avoiding the premature subdivision and conversion of agricultural land to other land uses, reducing leapfrog development, and ensuring contiguous development from existing urban areas. Therefore, both staging and development within each stage will follow this policy.

4. Sturgeon County's MDP promotes the growth and expansion of value-added agriculture.



City of St. Albert
Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

- Metro/Rural Area Boundary *
- MPAA
- Sturgeon Valley ASP
- Northern Lights Estates ASP
- Agricultural Conversion Staging Boundary
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- Not Applicable (Public Uses)

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.30: AGRICULTURE CONVERSION STAGING RECOMMENDATION

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* As conceptually delineated in the 2016 Edmonton Metropolitan Region Growth Plan.

5. There are currently two non-operating Confined Feeding Operations (CFOs) in the MPAA, a dairy operation on SE-24-54-26-4 and a poultry operation on SE-21-54-25-4. Given the poultry operation is adjacent to the City of St. Albert's current boundaries, and that it has not housed poultry since 1995, it is doubtful that the owners would apply to reopen it. As the dairy operation has considerably more infrastructure and is one kilometre away from the City's current boundaries, it is possible that it will reopen.

10.1.2. Rationale for Staging Recommendations

Since soils across the MPAA are generally very good for agricultural production, staging cannot be based solely on the conservation of the best agricultural soils.

Stage 1 – This is consistent with the City of St. Albert's MDP and EMRGP policies for contiguous development with existing planned or built-up urban areas. Development within this area should follow these same contiguous development policies. Commercial and industrial development along Highway 2 should include the provision for the growth and expansion of value-added agriculture businesses. This could be considered part of the mitigation for the loss of agricultural lands and the associated municipal assessment.

Stage 2 – Urbanization is delayed until development within the current City of St. Albert boundary and/or Stage 1 reaches this area to be consistent with the City of St. Albert's MDP and EMRGP policies. Development within this area should follow these same contiguous development policies. Industrial development should include the provision for the growth and expansion of value-added agriculture businesses. This could be considered part of the mitigation for the loss of agricultural lands and the associated municipal assessment.

Stage 3 – Urbanization should be delayed until development within the current City of St. Albert boundary and/or Stage 2 development reaches the boundary of this area to be consistent with the City of St. Albert's MDP and EMRGP policies. Development within this area should follow these same contiguous development policies. Commercial and industrial development should include the provision for the growth and expansion of value-added agriculture businesses. This could be considered part of the mitigation for the loss of agricultural lands and the associated municipal assessment. Delaying development in this area also allows potential conflict with the dairy operation to resolve itself over time and/or allow time for the City to take appropriate actions to resolve.

Stage 4 – Delayed development does not create an immediate policy conflict with provisions in the current EMRGP Rural Area policy tier. This gives the City of St. Albert time to request the EMRB to amend the Metropolitan Area policy tier in the future to include this area in order to accommodate future urban growth beyond the 2044 horizon of the EMRGP.

10.2. Preliminary Development Staging

An Annexation Financial Impact Assessment (FIA) is associated with the GMS (see Appendix F of the City's Annexation Application). Tables D.14 through D.16 below, which are inputs to the Annexation FIA, present the amounts of residential, commercial, and industrial lands consumed by year under the recommended Midpoint Case scenario. Institutional land requirements are embedded within Table D.14 with 100% distributed to the residential land requirements. The amount of land consumed is based on the scenario's growth rates and the growth assumptions presented in Chapter 6.0.

10.2.1. Initial Development Staging Assumptions

The consumption of lands in Tables D.14 through D.16 include the assumptions that:

- 100% of the City's future residential growth will be accommodated within its current limits for the first seven years (2019-2025); and
- 100% of the City's future commercial and industrial growth will be accommodated within its current limits for the first twelve years (2019-2030).

The longer timeframe assumption for commercial and industrial is applied as it is anticipated to take up to ten years following submission of the City's Annexation Application (in December 2020) to first receive a decision by the Province of Alberta (anticipated January 1, 2022), and then receive the prerequisite land use planning approvals (e.g. an MDP update and preparation and approval of one or more ASPs) prior to approval and registration of the first subdivisions within the commercial and industrial portions of the annexation area. Furthermore, the assumption recognizes that the City currently has a 30-year land supply for commercial growth and a 19-year land supply for industrial growth. In contrast, the lesser timeframe assumption for residential is applied as there is a motivated landowner in the northeast portion of the NAA that is adjacent to the current City boundary that has previously prepared a draft ASP (Keys Cross).

10.2.2. Subsequent Residential Development Staging Assumptions

Starting in 2026, the assumption is that 90% of St. Albert's residential growth will be absorbed by the residential land supply within the City's current boundary with the balance absorbed in Keys Cross. Then in 2031, the allocation is assumed to be 75% in-boundary and 25% beyond boundary for 10 years as more residential lands in the NAA make their way through the prerequisite planning approval and subdivision approval and registration processes. This is followed by a 10-year 50/50 distribution starting in 2041 and then a 5-year 25/75 distribution starting in 2051. Finally, the final remaining in-boundary residential land supply is absorbed in 2056 after which all future residential growth is captured within the NAA.

10.2.3. Subsequent Commercial Development Staging Assumptions

Starting in 2031, the assumption is that 75% of St. Albert's commercial growth will be absorbed by the commercial land supply within the City's current boundary with the balance absorbed in the NAA. Then in 2036, the allocation is assumed to be 50% in-boundary and 50% beyond boundary for 28 years. Finally, the final remaining in-boundary commercial land supply is absorbed in 2064 after which all future commercial growth is captured within the NAA.

10.2.4. Subsequent Industrial Development Staging Assumptions

Also starting in 2031, the assumption is that 75% of St. Albert's industrial growth will be absorbed by the commercial land supply within the City's current boundary with the balance absorbed in the NAA. Then in 2036, the allocation is assumed to be 50% in-boundary and 50% beyond boundary for 5 years, followed by another 5 years starting in 2041 at 34% and 66% respectively, and then followed by another 4 years starting in 2046 at 20% and 80% respectively. Finally, the final remaining in-boundary industrial land supply is absorbed in 2045 after which all future industrial growth is captured within the NAA.

10.2.5. Preliminary Development Staging Plan

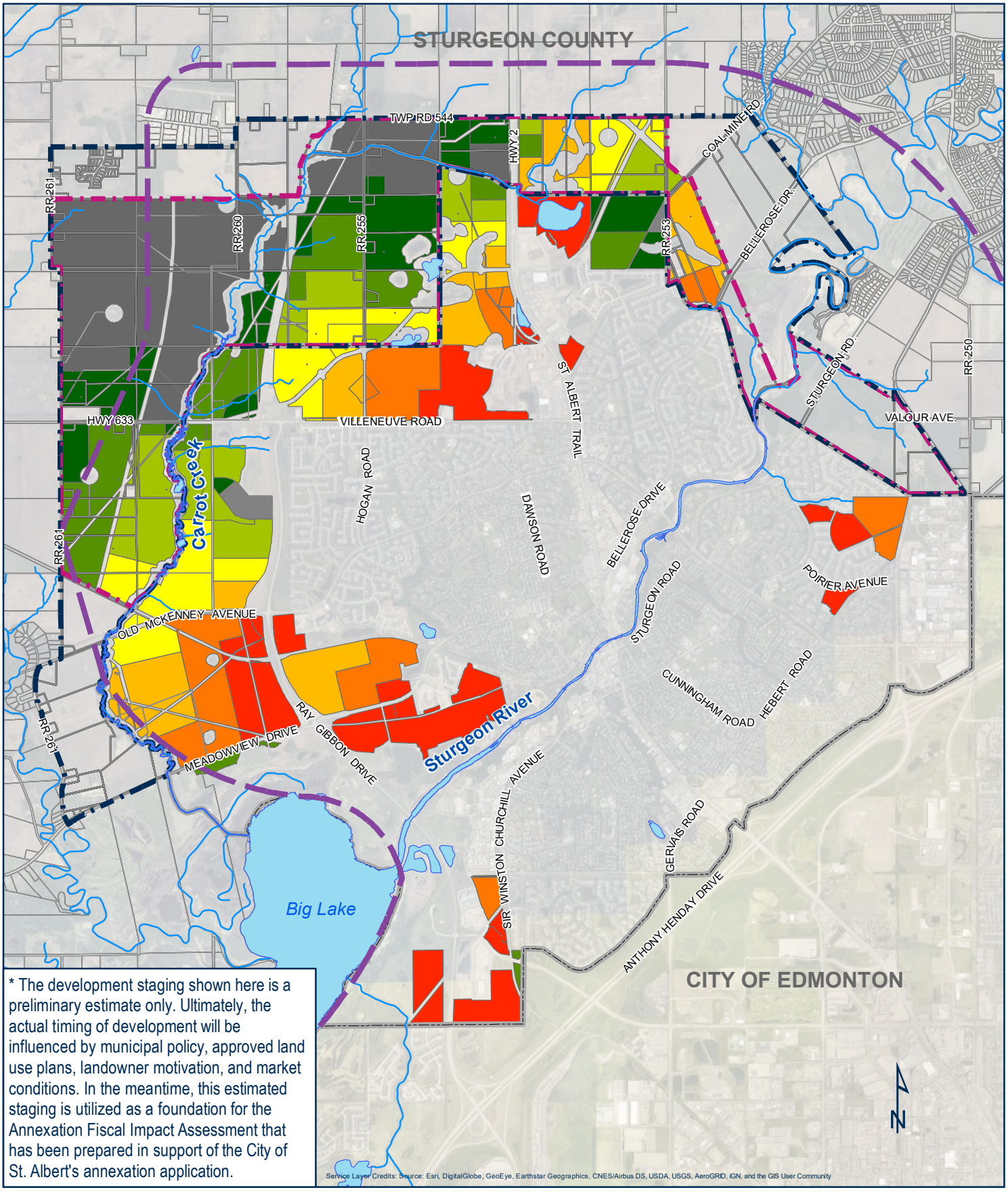
To establish a foundation for the associated Annexation FIA prepared by CORVUS Business Advisors, a preliminary development staging plan was prepared to conceptually illustrate how the remaining available lands within the City and the lands within the NAA may be consumed over time. As illustrated in Map D.31, the preliminary development staging plan shows land consumed in five-year intervals to 2055 based on the estimated amount of lands consumed by year by land use as presented in Tables D.14 through D.16. The first interval is seven years however to be inclusive of the two stub years (2019 and 2020) to factor in the time necessary to prepare this GMS and the City's Annexation Application.

The key land use planning principle used to develop the preliminary development staging plan was that development within each five-year interval would be contiguous with previously developed lands. This would enable the optimization of investment in supporting capital infrastructure and future operating and service delivery costs. It would also expand the municipal footprint in a responsible manner.

Other influences on the preliminary development staging plan were:

- The short-term need for additional industrial lands proximate to Highway 2;
- Proximity and access to existing major transportation infrastructure (Highway 2/St. Albert Trail and Ray Gibbon Drive) and future municipal transportation investments (realignment of Highway 633/Villeneuve Road and extension of Ray Gibbon Drive);
- Location of wastewater servicing basins; and
- Proximity to existing and future water and wastewater infrastructure.

It is important to note that the preliminary development staging plan illustrated in Map D.31 is a conceptual estimate generally based on the contiguity principle and influences mentioned above. Ultimately, municipal policy, approved land use plans, and market forces will dictate the actual staging of development once the Annexation Application is approved. In the meantime, the preliminary development staging plan illustrated is realistic and sufficient for establishing the foundation for the Annexation FIA.



* The development staging shown here is a preliminary estimate only. Ultimately, the actual timing of development will be influenced by municipal policy, approved land use plans, landowner motivation, and market conditions. In the meantime, this estimated staging is utilized as a foundation for the Annexation Fiscal Impact Assessment that has been prepared in support of the City of St. Albert's annexation application.

City of St. Albert Cultivate Life

0 0.2 0.4 0.8 1.2 1.6 km

- Metropolitan/Rural Area Boundary *
- Municipal Boundary
- MPAA
- NAA

- 2019 to 2025
- 2026 to 2030
- 2031 to 2035
- 2036 to 2040
- 2041 to 2045
- 2046 to 2050
- 2051 to 2055
- Beyond 2055

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.31: PRELIMINARY DEVELOPMENT STAGING

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* As conceptually delineated in the 2016 Edmonton Metropolitan Region Growth Plan.

Table D.14: Estimated Annual Residential and Institutional Land Consumption

Year	Total Land Req'd (ha)	Total Land to City (%)	Total Land to Annex. Area (%)	Opening City Lands Avail. (ha)	City Lands Consumed (ha)	Closing City Lands Avail. (ha)	Opening Annex. Lands Avail. (ha)	Annex. Lands Consumed (ha)	Closing Annex. Lands Avail. (ha)
2019	28.0	100%	0%	709.4	28.0	681.4	507.6	0.0	507.6
2020	28.0	100%	0%	681.4	28.0	653.5	507.6	0.0	507.6
2021	28.0	100%	0%	653.5	28.0	625.5	507.6	0.0	507.6
2022	28.0	100%	0%	625.5	28.0	597.6	507.6	0.0	507.6
2023	28.0	100%	0%	597.6	28.0	569.6	507.6	0.0	507.6
2024	28.0	100%	0%	569.6	28.0	541.7	507.6	0.0	507.6
2025	28.0	100%	0%	541.7	28.0	513.7	507.6	0.0	507.6
2026	27.7	90%	10%	513.7	25.2	488.5	507.6	2.5	505.1
2027	27.7	90%	10%	488.5	25.2	463.4	505.1	2.5	502.6
2028	27.7	90%	10%	463.4	25.2	438.2	502.6	2.5	500.1
2029	27.7	90%	10%	438.2	25.2	413.1	500.1	2.5	497.5
2030	27.7	90%	10%	413.1	25.2	387.9	497.5	2.5	495.0
2031	27.3	75%	25%	387.9	21.0	366.9	495.0	6.3	488.7
2032	27.3	75%	25%	366.9	21.0	346.0	488.7	6.3	482.4
2033	27.3	75%	25%	346.0	21.0	325.0	482.4	6.3	476.1
2034	27.3	75%	25%	325.0	21.0	304.1	476.1	6.3	469.9
2035	27.3	75%	25%	304.1	21.0	283.1	469.9	6.3	463.6
2036	27.3	75%	25%	283.1	21.0	262.1	463.6	6.3	457.3
2037	27.3	75%	25%	262.1	21.0	241.2	457.3	6.3	451.0
2038	27.3	75%	25%	241.2	21.0	220.2	451.0	6.3	444.7
2039	27.3	75%	25%	220.2	21.0	199.2	444.7	6.3	438.4
2040	27.3	75%	25%	199.2	21.0	178.3	438.4	6.3	432.1
2041	26.6	50%	50%	178.3	14.0	164.3	432.1	12.6	419.5
2042	26.6	50%	50%	164.3	14.0	150.3	419.5	12.6	406.9
2043	26.6	50%	50%	150.3	14.0	136.3	406.9	12.6	394.4
2044	26.6	50%	50%	136.3	14.0	122.4	394.4	12.6	381.8
2045	26.6	50%	50%	122.4	14.0	108.4	381.8	12.6	369.2
2046	26.6	50%	50%	108.4	14.0	94.4	369.2	12.6	356.6
2047	26.6	50%	50%	94.4	14.0	80.4	356.6	12.6	344.0
2048	26.6	50%	50%	80.4	14.0	66.5	344.0	12.6	331.5
2049	26.6	50%	50%	66.5	14.0	52.5	331.5	12.6	318.9
2050	26.6	50%	50%	52.5	14.0	38.5	318.9	12.6	306.3
2051	25.9	25%	75%	38.5	7.0	31.5	306.3	18.9	287.4
2052	25.9	25%	75%	31.5	7.0	24.5	287.4	18.9	268.6
2053	25.9	25%	75%	24.5	7.0	17.5	268.6	18.9	249.7
2054	25.9	25%	75%	17.5	7.0	10.6	249.7	18.9	230.8
2055	25.9	25%	75%	10.6	7.0	3.6	230.8	18.9	211.9
2056	25.5	13%	87%	3.6	3.6	0.0	211.9	22.0	190.0

Year	Total Land Req'd (ha)	Total Land to City (%)	Total Land to Annex. Area (%)	Opening City Lands Avail. (ha)	City Lands Consumed (ha)	Closing City Lands Avail. (ha)	Opening Annex. Lands Avail. (ha)	Annex. Lands Consumed (ha)	Closing Annex. Lands Avail. (ha)
2057	25.2	0%	100%	0.0	0.0	0.0	190.0	25.2	164.8
2058	25.2	0%	100%	0.0	0.0	0.0	164.8	25.2	139.7
2059	25.2	0%	100%	0.0	0.0	0.0	139.7	25.2	114.5
2060	25.2	0%	100%	0.0	0.0	0.0	114.5	25.2	89.3
2061	25.2	0%	100%	0.0	0.0	0.0	89.3	25.2	64.2
2062	25.2	0%	100%	0.0	0.0	0.0	64.2	25.2	39.0
2063	25.2	0%	100%	0.0	0.0	0.0	39.0	25.2	13.9
2064	25.2	0%	55%	0.0	0.0	0.0	13.9	13.9	0.0
2065	25.2	0%	0%	0.0	0.0	0.0	0.0	0.0	0.0
2066	25.2	0%	0%	0.0	0.0	0.0	0.0	0.0	0.0
2067	25.2	0%	0%	0.0	0.0	0.0	0.0	0.0	0.0
2068	25.2	0%	0%	0.0	0.0	0.0	0.0	0.0	0.0
2069	25.2	0%	0%	0.0	0.0	0.0	0.0	0.0	0.0
2070	25.2	0%	0%	0.0	0.0	0.0	0.0	0.0	0.0
Total	**1,379.3**	**—**	**—**	**—**	**709.4**	**—**	**—**	**507.6**	**—**

Table D.15: Estimated Annual Commercial Land Consumption

Year	Total Land Req'd (ha)	Total Land to City (%)	Total Land to Annex. Area (%)	Opening City Lands Avail. (ha)	City Lands Consumed (ha)	Closing City Lands Avail. (ha)	Opening Annex. Lands Avail. (ha)	Annex. Lands Consumed (ha)	Closing Annex. Lands Avail. (ha)
2019	3.7	100%	0%	111.4	3.7	107.6	82.3	0.0	82.3
2020	3.7	100%	0%	107.6	3.7	103.9	82.3	0.0	82.3
2021	3.7	100%	0%	103.9	3.7	100.2	82.3	0.0	82.3
2022	3.7	100%	0%	100.2	3.7	96.5	82.3	0.0	82.3
2023	3.7	100%	0%	96.5	3.7	92.7	82.3	0.0	82.3
2024	3.7	100%	0%	92.7	3.7	89.0	82.3	0.0	82.3
2025	3.7	100%	0%	89.0	3.7	85.3	82.3	0.0	82.3
2026	3.7	100%	0%	85.3	3.7	81.6	82.3	0.0	82.3
2027	3.7	100%	0%	81.6	3.7	77.8	82.3	0.0	82.3
2028	3.7	100%	0%	77.8	3.7	74.1	82.3	0.0	82.3
2029	3.7	100%	0%	74.1	3.7	70.4	82.3	0.0	82.3
2030	3.7	100%	0%	70.4	3.7	66.7	82.3	0.0	82.3
2031	3.7	75%	25%	66.7	2.8	63.9	82.3	0.9	81.4
2032	3.7	75%	25%	63.9	2.8	61.1	81.4	0.9	80.4
2033	3.7	75%	25%	61.1	2.8	58.3	80.4	0.9	79.5

Year	Total Land Req'd (ha)	Total Land to City (%)	Total Land to Annex. Area (%)	Opening City Lands Avail. (ha)	City Lands Consumed (ha)	Closing City Lands Avail. (ha)	Opening Annex. Lands Avail. (ha)	Annex. Lands Consumed (ha)	Closing Annex. Lands Avail. (ha)
2034	3.7	75%	25%	58.3	2.8	55.5	79.5	0.9	78.6
2035	3.7	75%	25%	55.5	2.8	52.7	78.6	0.9	77.6
2036	3.7	50%	50%	52.7	1.9	50.8	77.6	1.9	75.8
2037	3.7	50%	50%	50.8	1.9	49.0	75.8	1.9	73.9
2038	3.7	50%	50%	49.0	1.9	47.1	73.9	1.9	72.1
2039	3.7	50%	50%	47.1	1.9	45.2	72.1	1.9	70.2
2040	3.7	50%	50%	45.2	1.9	43.4	70.2	1.9	68.3
2041	3.7	50%	50%	43.4	1.9	41.5	68.3	1.9	66.5
2042	3.7	50%	50%	41.5	1.9	39.6	66.5	1.9	64.6
2043	3.7	50%	50%	39.6	1.9	37.8	64.6	1.9	62.7
2044	3.7	50%	50%	37.8	1.9	35.9	62.7	1.9	60.9
2045	3.7	50%	50%	35.9	1.9	34.1	60.9	1.9	59.0
2046	3.7	50%	50%	34.1	1.9	32.2	59.0	1.9	57.2
2047	3.7	50%	50%	32.2	1.9	30.3	57.2	1.9	55.3
2048	3.7	50%	50%	30.3	1.9	28.5	55.3	1.9	53.4
2049	3.7	50%	50%	28.5	1.9	26.6	53.4	1.9	51.6
2050	3.7	50%	50%	26.6	1.9	24.7	51.6	1.9	49.7
2051	3.7	50%	50%	24.7	1.9	22.9	49.7	1.9	47.8
2052	3.7	50%	50%	22.9	1.9	21.0	47.8	1.9	46.0
2053	3.7	50%	50%	21.0	1.9	19.2	46.0	1.9	44.1
2054	3.7	50%	50%	19.2	1.9	17.3	44.1	1.9	42.3
2055	3.7	50%	50%	17.3	1.9	15.4	42.3	1.9	40.4
2056	3.7	50%	50%	15.4	1.9	13.6	40.4	1.9	38.5
2057	3.7	50%	50%	13.6	1.9	11.7	38.5	1.9	36.7
2058	3.7	50%	50%	11.7	1.9	9.9	36.7	1.9	34.8
2059	3.7	50%	50%	9.9	1.9	8.0	34.8	1.9	32.9
2060	3.7	50%	50%	8.0	1.9	6.1	32.9	1.9	31.1
2061	3.7	50%	50%	6.1	1.9	4.3	31.1	1.9	29.2
2062	3.7	50%	50%	4.3	1.9	2.4	29.2	1.9	27.4
2063	3.7	50%	50%	2.4	1.9	0.5	27.4	1.9	25.5
2064	3.7	15%	85%	0.5	0.6	0.0	25.5	3.2	22.3
2065	3.7	0%	100%	0.0	0.0	0.0	22.3	3.7	18.6
2066	3.7	0%	100%	0.0	0.0	0.0	18.6	3.7	14.9
2067	3.7	0%	100%	0.0	0.0	0.0	14.9	3.7	11.2
2068	3.7	0%	100%	0.0	0.0	0.0	11.2	3.7	7.4
2069	3.7	0%	100%	0.0	0.0	0.0	7.4	3.7	3.7
2070	3.7	0%	100%	0.0	0.0	0.0	3.7	3.7	0.0
Total	**193.7**	**—**	**—**	**—**	**111.4**	**—**	**—**	**82.3**	**—**

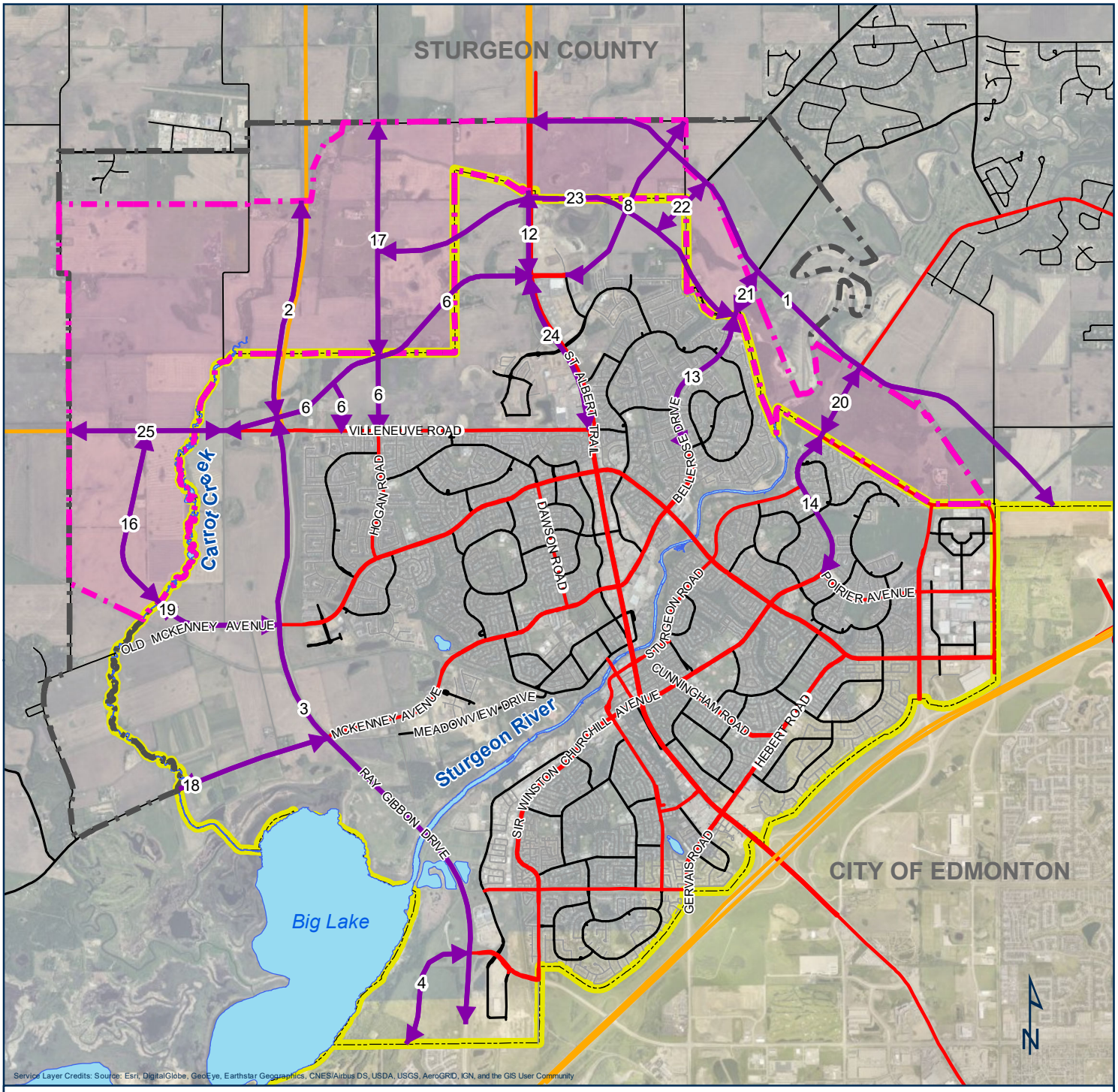
Table D.16: Estimated Annual Industrial Land Consumption

Year	Total Land Req'd (ha)	Total Land to City (%)	Total Land to Annex. Area (%)	Opening City Lands Avail. (ha)	City Lands Consumed (ha)	Closing City Lands Avail. (ha)	Opening Annex. Lands Avail. (ha)	Annex. Lands Consumed (ha)	Closing Annex. Lands Avail. (ha)
2019	15.3	100%	0%	279.6	15.3	264.2	488.1	0.0	488.1
2020	15.3	100%	0%	264.2	15.3	248.9	488.1	0.0	488.1
2021	15.3	100%	0%	248.9	15.3	233.6	488.1	0.0	488.1
2022	15.3	100%	0%	233.6	15.3	218.3	488.1	0.0	488.1
2023	15.3	100%	0%	218.3	15.3	203.0	488.1	0.0	488.1
2024	15.3	100%	0%	203.0	15.3	187.7	488.1	0.0	488.1
2025	15.3	100%	0%	187.7	15.3	172.4	488.1	0.0	488.1
2026	15.3	100%	0%	172.4	15.3	157.1	488.1	0.0	488.1
2027	15.3	100%	0%	157.1	15.3	141.8	488.1	0.0	488.1
2028	15.3	100%	0%	141.8	15.3	126.5	488.1	0.0	488.1
2029	15.3	100%	0%	126.5	15.3	111.2	488.1	0.0	488.1
2030	15.3	100%	0%	111.2	15.3	95.9	488.1	0.0	488.1
2031	15.3	75%	25%	95.9	11.5	84.4	488.1	3.8	484.3
2032	15.3	75%	25%	84.4	11.5	72.9	484.3	3.8	480.4
2033	15.3	75%	25%	72.9	11.5	61.4	480.4	3.8	476.6
2034	15.3	75%	25%	61.4	11.5	50.0	476.6	3.8	472.8
2035	15.3	75%	25%	50.0	11.5	38.5	472.8	3.8	469.0
2036	15.3	34%	66%	38.5	5.2	33.3	469.0	10.1	458.9
2037	15.3	34%	66%	33.3	5.2	28.1	458.9	10.1	448.8
2038	15.3	34%	66%	28.1	5.2	22.9	448.8	10.1	438.7
2039	15.3	34%	66%	22.9	5.2	17.7	438.7	10.1	428.6
2040	15.3	34%	66%	17.7	5.2	12.5	428.6	10.1	418.5
2041	15.3	20%	80%	12.5	3.1	9.4	418.5	12.2	406.2
2042	15.3	20%	80%	9.4	3.1	6.3	406.2	12.2	394.0
2043	15.3	20%	80%	6.3	3.1	3.3	394.0	12.2	381.7
2044	15.3	20%	80%	3.3	3.1	0.2	381.7	12.2	369.5
2045	15.3	2%	99%	0.2	0.2	0.0	369.5	15.1	354.4
2046	15.3	0%	100%	0.0	0.0	0.0	354.4	15.3	339.1
2047	15.3	0%	100%	0.0	0.0	0.0	339.1	15.3	323.8
2048	15.3	0%	100%	0.0	0.0	0.0	323.8	15.3	308.5
2049	15.3	0%	100%	0.0	0.0	0.0	308.5	15.3	293.2
2050	15.3	0%	100%	0.0	0.0	0.0	293.2	15.3	277.9
2051	15.3	0%	100%	0.0	0.0	0.0	277.9	15.3	262.6
2052	15.3	0%	100%	0.0	0.0	0.0	262.6	15.3	247.3
2053	15.3	0%	100%	0.0	0.0	0.0	247.3	15.3	231.9
2054	15.3	0%	100%	0.0	0.0	0.0	231.9	15.3	216.6
2055	15.3	0%	100%	0.0	0.0	0.0	216.6	15.3	201.3
2056	15.3	0%	100%	0.0	0.0	0.0	201.3	15.3	186.0

Year	Total Land Req'd (ha)	Total Land to City (%)	Total Land to Annex. Area (%)	Opening City Lands Avail. (ha)	City Lands Consumed (ha)	Closing City Lands Avail. (ha)	Opening Annex. Lands Avail. (ha)	Annex. Lands Consumed (ha)	Closing Annex. Lands Avail. (ha)
2057	15.3	0%	100%	0.0	0.0	0.0	186.0	15.3	170.7
2058	15.3	0%	100%	0.0	0.0	0.0	170.7	15.3	155.4
2059	15.3	0%	100%	0.0	0.0	0.0	155.4	15.3	140.1
2060	15.3	0%	100%	0.0	0.0	0.0	140.1	15.3	124.8
2061	15.3	0%	100%	0.0	0.0	0.0	124.8	15.3	109.5
2062	15.3	0%	100%	0.0	0.0	0.0	109.5	15.3	94.2
2063	15.3	0%	100%	0.0	0.0	0.0	94.2	15.3	78.9
2064	15.3	0%	100%	0.0	0.0	0.0	78.9	15.3	63.6
2065	15.3	0%	100%	0.0	0.0	0.0	63.6	15.3	48.3
2066	15.3	0%	100%	0.0	0.0	0.0	48.3	15.3	33.0
2067	15.3	0%	100%	0.0	0.0	0.0	33.0	15.3	17.7
2068	15.3	0%	100%	0.0	0.0	0.0	17.7	15.3	2.3
2069	15.3	0%	15%	0.0	0.0	0.0	2.3	2.3	0.0
2070	15.3	0%	0%	0.0	0.0	0.0	0.0	0.0	0.0
Total	**795.9**	**—**	**—**	**—**	**279.6**	**—**	**—**	**488.1**	**—**

10.3. Associated Core Capital Plans

CORVUS Business Advisors, ISL, and City representatives collaborated in establishing 35-year core capital plans for future major transportation, water, wastewater, and stormwater capital infrastructure in support of the Annexation FIA associated with the GMS (see Appendix K in the City's Annexation Application). The core capital plans illustrated in Maps D.32 through D.35 were based on the preliminary development staging plan (Map D.31) and the Transportation Study and Infrastructure Servicing Study associated with this GMS (see Appendix F and Appendix G in the City's Annexation Application respectively). Details associated with the capital projects depicted in Maps D.32 through D.35 are provided in the Annexation FIA.



1. 127 Street Extension
2. Ray Gibbon Dr. connection north of Villeneuve Rd. to NAA boundary
3. Ray Gibbon Drive freeway conversion from 137 Ave. to Villeneuve Rd.
4. West LeClair Way from City of Edmonton limits to Ray Gibbon Dr.
6. Fowler Way from Range Road 260 to St. Albert Trail, including Villeneuve Rd. and Hogan Rd. alignments from existing Villeneuve Rd. to Fowler Way
8. Neil Ross Rd. from St. Albert Trail to TR 544
12. St. Albert Trail from Fowler Way/Neil Ross Rd. to north City limits
13. Bellerose Dr. twinning to City limits
14. Sir Winston Churchill Ave. twinning to City limits
16. New Arterial Road from Old McKenney Ave. realignment to Villeneuve Rd.
17. Hogan Rd. (RR 255) arterial conversion
18. Meadowview Dr. arterial conversion
19. Old McKenney Ave. arterial conversion and realignment from Ray Gibbon Dr. to Carrot Creek
20. Sturgeon Rd. arterial conversion
21. Bellerose Dr. arterial conversion
22. Coal Mine Rd. from RR 253 to New North Road
23. New North Road
24. North St. Albert Trail Corridor Management
25. Villeneuve Rd. arterial conversion from RR 260 to RR 261

City of St. Albert Cultivate Life

Municipal Boundary
MPAA
NAA
Transportation Project

Expressway
Arterial
Collector
Local

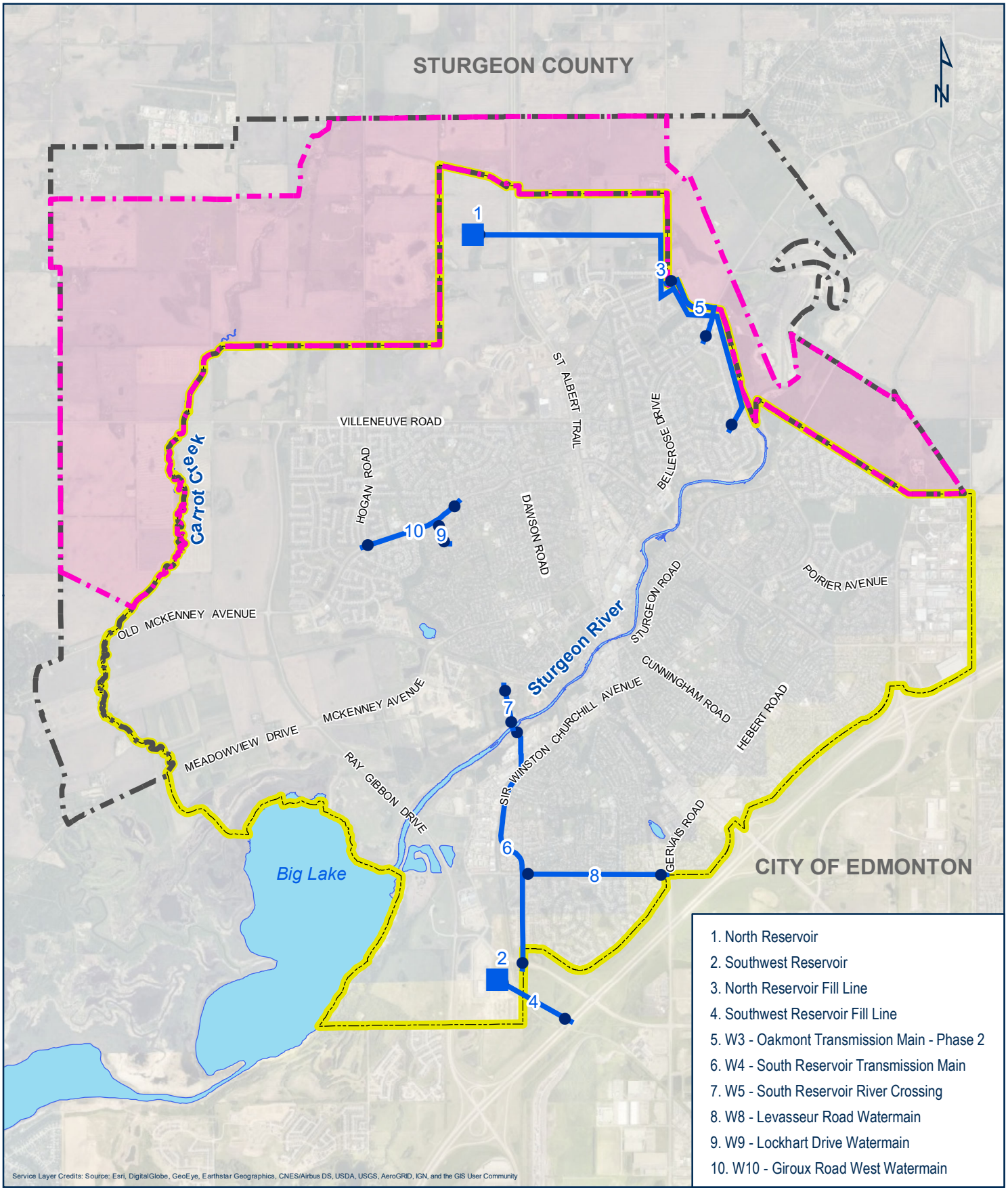
0 0.25 0.5 1 1.5 2 km

CANA83-3TM114 1:60,000

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.32: CORE CAPITAL PLAN – ROADS

Date: 2020-12-15 Document: \\edm\fs3\Projects\15100\15167_St Albert_Growth_Study_Annexation\02_CAD\D2\5_GIS\251_Figures\09_Growth_Management_Study\21_Core_Cap\St_Plans\15167_CoSA_GMS_Map_D32_CCP_Roads_20121215.mxd



City of St. Albert Cultivate Life

Municipal Boundary
MPAA
NAA

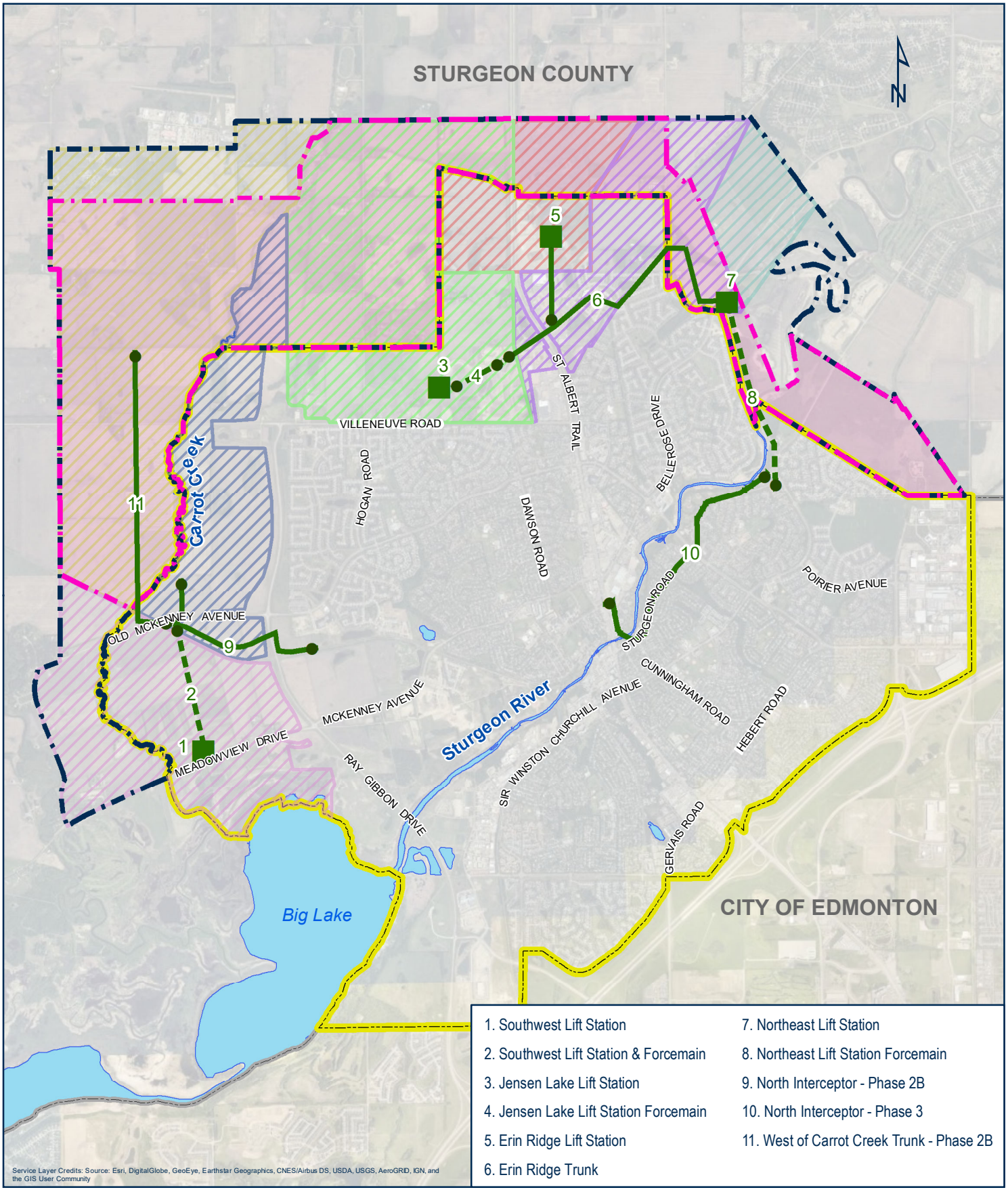
Proposed Reservoir
Proposed Water Main

0 0.2 0.4 0.8 1.2 1.6 km

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.33: CORE CAPITAL PLAN – WATER



1. Southwest Lift Station
2. Southwest Lift Station & Forcemain
3. Jensen Lake Lift Station
4. Jensen Lake Lift Station Forcemain
5. Erin Ridge Lift Station
6. Erin Ridge Trunk
7. Northeast Lift Station
8. Northeast Lift Station Forcemain
9. North Interceptor - Phase 2B
10. North Interceptor - Phase 3
11. West of Carrot Creek Trunk - Phase 2B

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

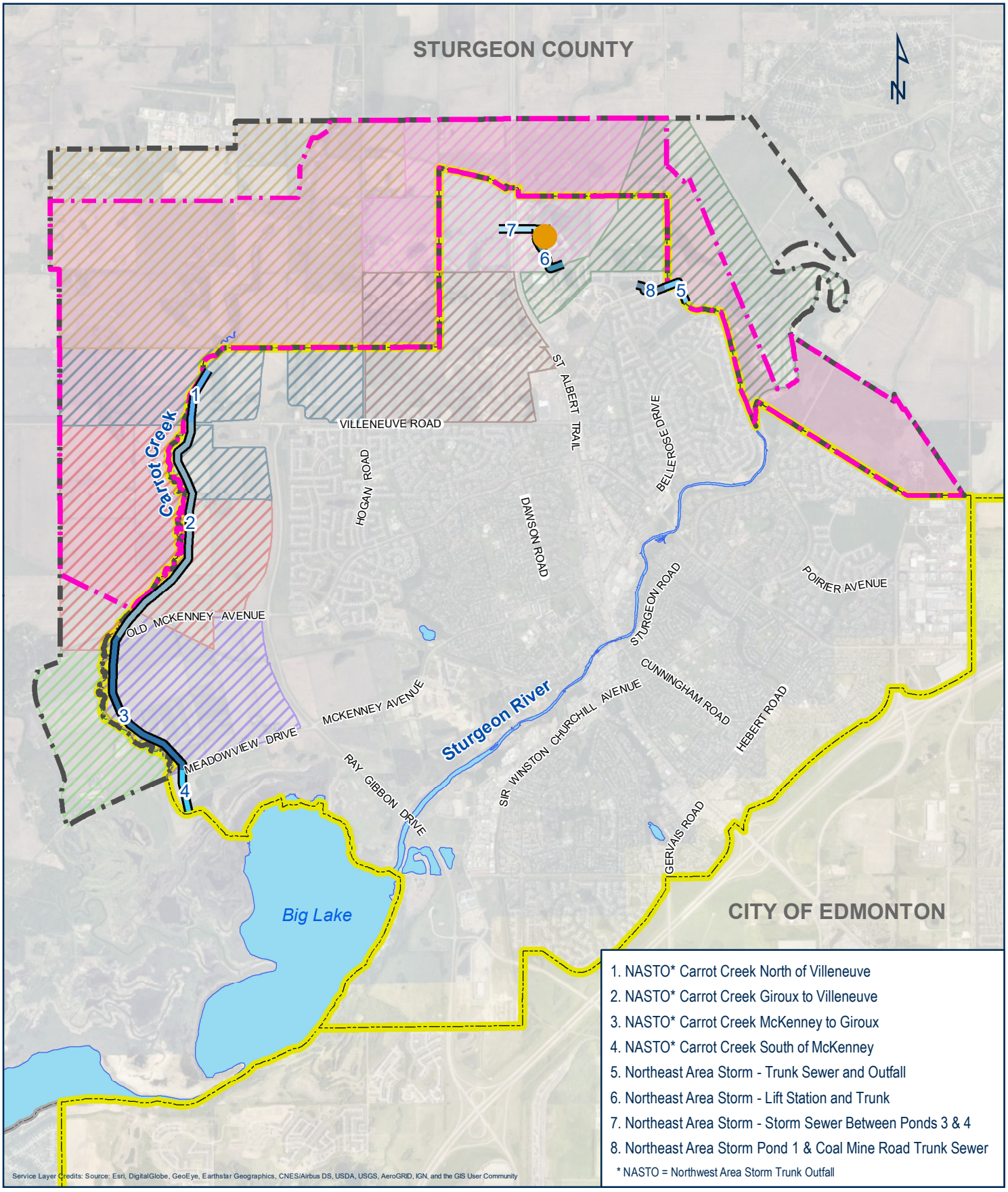
Municipal Boundary
MPAA
NAA
Service Area
Proposed Trunk
Proposed Force Main
Proposed Pump Station

0 0.2 0.4 0.8 1.2 1.6 km

3TM114-83 1:55,000

CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.34: CORE CAPITAL PLAN – WASTEWATER



City of St. Albert Cultivate Life

Municipal Boundary
MPAA
NAA
Service Area
Stormwater Projects
Proposed Lift Station

0 0.2 0.4 0.8 1.2 1.6 km

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CITY OF ST. ALBERT: GROWTH MANAGEMENT STUDY

MAP D.35: CORE CAPITAL PLAN – STORMWATER

11.0 Summary and Conclusions

1. In the last 50 years, the City of St. Albert's population has increased at an average annual rate of 3.9%, from 9,736 in 1966 to 65,589 in 2016.

2. At its 2018 population of 66,082, the City has tripled its population over the past 43 years since recording a population of 21,342 in its 1975 municipal census.

3. In 2014, the Edmonton Metropolitan Region Growth Plan (EMRGP) included two population growth scenarios for St. Albert for a 30-year time frame. In the EMRGP Low Case, the City was projected to grow to a population of 90,100 in 2044 – a change of 40%. In the EMRGP High Case, the City was estimated to grow to 118,000 in 2044 – a change of 84%.

4. Independent of the EMRGP growth scenarios, the Growth Management Study presents three scenarios – Low, Base, and High Cases – which are based on Alberta Treasury Board and Finance (ATBF) Census Division (CD) Population Projections for Alberta. In these scenarios, St. Albert is anticipated to accommodate 4.9% of the projected population growth of CD No. 4811, which includes the EMR. Upon further review and analysis, a fourth Midpoint Case (the interpolated middle between the Base and High Cases) was recommended as a reasonable and realistic basis for an annexation that meets the City's medium to long-term needs.

5. The Growth Management Study's Midpoint Case has been utilized for calculating future land requirements for the City. In this scenario, St. Albert's population is forecasted to reach 154,125 in 2070 – a change of 130% from 2018. This growth projection is appropriate as it trends 6,525 people above the 2044 midpoint between the EMRGP Low and High Cases.

6. In the 10-year period between 2008 and 2017 inclusive, the total amount of lands consumed through the plan registration process in the City of St. Albert amounted to 414.6 gross developable ha.

7. With an average annual land absorption rate of 50.6 ha between 1968 and 2017, and with 1,100.3 ha of lands available in the City's current boundary to accommodate future growth, it will take almost 25 years to absorb these lands through plan registration (e.g. subdivision plans, road plans, etc.) if this annual absorption rate remains constant.

8. As of March 2018, the City of St. Albert had 709.4 gross ha of residential land supply, 111.4 gross ha of commercial land supply and 279.6 gross ha industrial land supply available to accommodate future growth. Under the recommended Midpoint Case Scenario, it is estimated that these land supplies will be fully absorbed within the next 26, 30, and 19 respectively.

9. A Recommended Annexation Area (RAA) in the amount of 25.2 gross quarter sections (25.7 gross developable quarter sections) was identified to accommodate the City of St. Albert's future growth to 2070 under the Midpoint Case. The 25.2 gross quarter sections would allow the City to properly plan land uses and infrastructure investments over the long-term in an orderly, comprehensive, and sustainable manner.

10. The configuration of the RAA minimizes the number of potential active wastewater and stormwater servicing basins beyond the City's current boundary that would be subject to competition for necessary infrastructure investments as the City grows over the long-term.

11. As a result of extensive negotiations and County and landowner engagement, the City and County agreed to a Negotiated Annexation Area (NAA) of 24 gross quarter sections (a total of 1,558 ha, 71.6 ha less than the RAA). The reduction resulted from the negotiated removal of lands to the northwest of the City adjacent to Northern Lights Estates and ProNorth Industrial Park to provide the County an opportunity to grow and maximize efficient use of its existing municipal infrastructure in the area. The reduction was partially offset by the inclusion of two sets of lands to the northeast. Lands south of Bellerose Drive and north of the Sturgeon River were included to potentially avoid an intermunicipal crossing agreement between the City and the County for the City's construction of a future stormwater right-of-way. Two parcels in the vicinity of River Lot 56 and the Poundmaker's Lodge lot were also included to unify all provincial ownership in the area under one municipal jurisdiction, create a more logical municipal boundary, and acknowledge that they would be isolated from the balance of the County by a CN rail line (the Westlock Subdivision).

12. The NAA addresses the City's average 46-year need for residential, commercial, industrial, and institutional growth to the west (north of a CN rail line), northwest, north, and northeast of the City (north of the Sturgeon River). Outer boundaries of the NAA include CN's Sangudo Subdivision and Range Road 260 to the west, the southern edge of Northern Lights Estates across to Carrot Creek to the northwest, Township Road 544 to the north, and a combination of Range Road 253, the future 127 Street extension, and Bellerose Drive to the northeast. The NAA also includes five parcels to the northeast that are south of the Sturgeon River and west of CN's Westlock Subdivision consisting of the City-owned St. Albert Cemetery, the provincially owned River Lot 56 and Poundmaker's Lodge site, and two other provincially owned parcels.

13. The configuration of the NAA represents a logical extension of the City's existing urban footprint and servicing systems to the west, northwest, north, and northeast adjacent to some lands already developed within the City or planned for future urban development by the City. In addition, it:
    a. facilitates long-term commercial development along highway corridors and in other supporting nodes that will help improve City's current tax assessment split of 80% residential to 20% non-residential;
    b. facilitates an opportunity for contiguous northwest expansion of the City's future Lakeview Business District including benefits from potential access to rail and Highway 633 (Villeneuve Road), and future upgrades to Ray Gibbon Drive;

c. facilitates future industrial growth at greater than historical volumes, which will be a significant contributor to the City improving its current tax assessment split;
d. leverages future provincial and regional roadway investments in the planned extension of Ray Gibbon Drive to the northwest and the future 127 Street extension to the northeast, allowing for a better spreading of traffic across three corridors to/from Edmonton to the southeast;
e. minimizes the number of potential active wastewater and stormwater servicing basins beyond the City's current boundary that would be subject to competition for necessary infrastructure investments as the City grows over the long-term; and
f. aligns with the Edmonton Metropolitan Region Growth Plan.

14. It is prudent that the City of St. Albert proceed with a boundary adjustment to obtain enough residential, commercial, industrial, and institutional land supply to accommodate long-term growth over 45 years. This will enable proper planning of land uses and infrastructure investments in an orderly, comprehensive, and sustainable manner.

15. Overall, this negotiated annexation is reasonable and appropriate in order to meet its demonstrated long-term growth needs.