CITY OF ST. ALBERT

BYLAW 1/2014

Being a bylaw to establish the
Jensen Lakes Area Structure Plan

NOW THEREFORE the Municipal Council of the City of St. Albert pursuant to the provisions of the Municipal Government Act hereby ENACTS AS FOLLOWS:

1. This Bylaw may be cited as “Jensen Lakes Area Structure Plan Bylaw”.

2. The Jensen Lakes Area Structure Plan, attached hereto as Schedule A, is hereby adopted.

READ a first time this 22nd day of April, 2014.

READ a second time this 22nd day of April, 2014.

READ a third and final time 5th day of May, 2014.

SIGNED AND PASSED THIS 6th day of May, 2014.

MAYOR

CHIEF LEGISLATIVE OFFICER
TABLE OF CONTENTS

1.0 INTRODUCTION ............................................................................................................. 1
  1.1 Purpose ......................................................................................................................... 1
  1.2 Authority of the Plan ...................................................................................................... 1
  1.3 Timeframe of the Plan .................................................................................................... 2
  1.4 Interpretation of the Plan .............................................................................................. 3
      1.4.1 Map Interpretation ................................................................................................. 3
      1.4.2 Application of the Plan ......................................................................................... 3
  1.5 Objectives .................................................................................................................... 3
  1.6 Property Ownership Patterns ....................................................................................... 4
  1.7 Planning Context .......................................................................................................... 4
      1.7.1 Intermunicipal Development Plan (IDP) ................................................................. 5
      1.7.2 Municipal Development Plan (MDP) ........................................................................ 5
      1.7.3 Existing Area Structure Plan ................................................................................... 5
      1.7.4 Land Use Bylaw (LUB) ............................................................................................ 5
      1.7.5 Transportation Master Plan (TMP) .......................................................................... 6
      1.7.6 Utility Master Plan (UMP) ........................................................................................ 6

2.0 SITE ANALYSIS ............................................................................................................. 8
  2.1 Natural and Cultural Features ..................................................................................... 8
      2.1.1 Topography and Drainage ..................................................................................... 8
      2.1.2 Sturgeon River Designated Flood Line ......................................................................... 8
      2.1.3 Geotechnical Conditions ..................................................................................... 8
      2.1.4 Vegetation Resources .......................................................................................... 9
      2.1.5 Natural Site Assessment ....................................................................................... 10
      2.1.6 Environmental Site Assessment ........................................................................... 11
      2.1.7 Heritage Resources ............................................................................................. 12
  2.2 Current Development Patterns .................................................................................... 12

3.0 LAND USE CONCEPT .................................................................................................. 13
  3.1 Future Land Use Map .................................................................................................. 13
  3.2 Land Use Concept: Major Development Patterns ....................................................... 13
  3.3 Residential Land Use ................................................................................................... 14
      3.3.1 Low Density Residential ...................................................................................... 14
      3.3.2 Medium Density Residential ................................................................................ 14
JENSEN LAKES AREA STRUCTURE PLAN

Part 1

Introduction

3.3.3 Medium to High Density Residential .............................................. 14
3.4 Commercial .......................................................................................... 15
3.5 Institutional .......................................................................................... 15
3.6 Parks and Open Space ........................................................................ 15
3.6.1 Trails ................................................................................................. 16
3.6.2 School/Park Site ................................................................................ 16
Table 3-1: Student Population Projection ................................................... 17
3.6.3 Stormwater Management Facilities (SWMFs) .................................... 17
3.6.4 Private Lake and Private Beach ......................................................... 18
3.7 Development Statistics ........................................................................ 19
Table 3-2: Development Statistics ............................................................. 20

4.0 TRANSPORTATION ........................................................................ 21
4.1 Arterial Road Network .......................................................................... 21
4.2 Collector and Local Road Network ......................................................... 21
4.2.1 Alliance Church (Service Road) ......................................................... 22
4.3 Transit .................................................................................................. 23
4.4 Pedestrian/Bicycle Links ..................................................................... 23
4.5 Noise Attenuation ............................................................................... 23
4.6 Off-Site Levies ..................................................................................... 24
4.6.1 Notes ............................................................................................... 24
4.7 Capital Recreation Fees ........................................................................ 25
4.8 Crime Prevention through Environmental Design (CPTED) ................. 25
4.9 Timing of Development – Fowler Way .................................................. 25

5.0 Utility Services .................................................................................... 26
5.1 Water Supply and Distribution .............................................................. 26
5.2 Wastewater Collection System (Sanitary) ............................................ 26
5.3 Stormwater Management .................................................................... 27
5.4 Shallow Utilities ................................................................................ 28
5.5 Public Utility Lots (PULs) .................................................................. 28

6.0 IMPLEMENTATION ........................................................................... 29
6.1 Development Staging ........................................................................... 29
6.2 Redistricting and Subdivision ............................................................... 30
6.3 Island Surrounded by Private Lake ....................................................... 30
6.4 Building Inspections .......................................................................... 30
# List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Location Map</td>
<td>31</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Future Land Use</td>
<td>32</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Transportation</td>
<td>33</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Water Servicing</td>
<td>34</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Wastewater Collection System</td>
<td>35</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Stormwater Management</td>
<td>36</td>
</tr>
<tr>
<td>Figure 7</td>
<td>Legal Descriptions</td>
<td>37</td>
</tr>
<tr>
<td>Figure 8</td>
<td>Municipal Reserve</td>
<td>38</td>
</tr>
<tr>
<td>Figure 9</td>
<td>Constraints</td>
<td>39</td>
</tr>
<tr>
<td>Figure 10</td>
<td>Staging Plan</td>
<td>40</td>
</tr>
</tbody>
</table>
1.0 INTRODUCTION

1.1 Purpose

(1) The Proposed Future Land Use Concept (2012), Map 4 of the Intermunicipal Development Plan Bylaw 7/2001, as amended shows the Plan Area as Mixed Use, which includes a compatible mix of commercial, business land uses and residential with a range of housing choice with amenities such as parks, open space, school site, and retail.

(2) This plan establishes the conceptual land use, transportation and servicing patterns for Jensen Lakes to implement the Municipal Development Plan (MDP), which designates this sector of the city for commercial and residential uses.

(3) Servicing standards, population analysis and other details supporting this Area Structure Plan (ASP) are referenced in the Jensen Lakes Area Structure Plan Technical Report (Technical Report) dated October 2013 and revised February 2014 as prepared by IBI Group. The documents were used to prepare this Bylaw.

1.2 Authority of the Plan

The Jensen Lakes Area Structure Plan (ASP) has been adopted through a bylaw passed by Council in accordance with the Municipal Government Act (MGA).

The MGA identifies an ASP for the purpose of providing a framework for subsequent subdivision and development of the area. The ASP is to describe sequence of development, land use purposes, population density, and general location of transportation, public utilities, and other matters Council considers necessary. The approval of the Jensen Lakes Area Structure Plan does not guarantee development rights. At the time of subdivision, detailed engineering drawings and plans of subdivision will be reviewed and the City will then determine if development can proceed. In order to encourage development within the City of St. Albert, Council, by approving this Area Structure Plan, acknowledges the following limitations:
That final approval of any servicing agreements remains subject to a review of plans of subdivision and detailed engineering drawings as per the City Engineering Standards, Utility Master Plan (UMP), Transportation Master Plan, Transportation System Bylaw, Municipal Development Plan (MDP), Land Use Bylaw (LUB), and any other documents, Municipal or otherwise, the City determines relevant to the development. The approval of this ASP does not warrant approval of any servicing agreement, future districting, development agreement, development permit, or building permit.

That the City reserves the right to apply any additional infrastructure servicing specification to the lands covered by this ASP in order to provide quality services to the citizens.

That all development expenses and other costs, of every nature and kind, are expended at the developer’s sole risk, and that any additional expenses incurred by the development as a result of any modification resulting from the aforesaid Engineering Standards are for the sole account of the developer.

The City is not responsible financially or otherwise, to provide infrastructure to support development of this ASP.

1.3 Timeframe of the Plan

The Area Structure Plan is future-oriented and depicts how Jensen Lakes is expected to be developed over a 10 to 15 year period of time and through a series of public and private sector initiatives. Most of the development will be dependent on servicing capabilities and on market demand. While the plan envisions a desired future, changes to the plan may be required to respond to new circumstances. Thus, to ensure that it remains current and relevant, the plan may be reviewed, updated, and amended either generally or in regard to a specific issue as determined necessary by Council or when the Municipal Development Plan (MDP) is updated.
1.4 Interpretation of the Plan

1.4.1 Map Interpretation

Due to the small scale of the ASP maps, the boundaries or locations of any symbols or areas shown on a map within the ASP are approximate and not absolute, and are to be verified at the time of subdivision. With the exception of surveyed delineations, boundaries and symbols on the maps are not intended to define exact locations except where they coincide with clearly recognizable physical features or fixed boundaries such as existing roads or utility rights-of-way. Minor deviations on the boundaries between land uses may be allowed, at the discretion of Planning and Development Department Administration, as long as the general location of land uses does not change and the overall statistics for the neighbourhood are still achieved. While proposed roads and walkways are shown in order to illustrate possible alignments, the local road alignments and walkway locations are subject to verification and possible realignment at the time of subdivision.

1.4.2 Application of the Plan

The Jensen Lakes ASP shall apply to the area shown on Figure 1. The area is located in the northwest quadrant of St. Albert and is bounded by:

- Villeneuve Road and Deer Ridge neighbourhood to the south;
- Sturgeon County boundary for a portion of the north boundary;
- St. Albert Trail and a commercial site to the east; and
- Range Road 255 to the west.

The ASP encompasses a gross area of 156.56 hectares with Villeneuve Road and a gross developable area of 150.94 hectares excluding Villeneuve Road.

1.5 Objectives

The objectives of this ASP are to:

- develop a family-friendly neighbourhood that is safe, friendly, attractive, and well serviced;
• incorporate the Botanical Arts City branding with trail connections to mid-
size and large park areas with recreation amenities;
• create a unique to St. Albert lifestyle experience with a private lake that may
have recreational opportunities of non-motorized boating, fishing, skating,
swimming and a beach, all without leaving the community;
• develop some pedestrian and vehicle connectivity with Deer Ridge and
North Ridge Phase 2 neighbourhoods along with linkages to the commercial
sites;
• provide an urban style commercial area to serve residents with their day-to-
day shopping needs;
• create a circulation system where different modes of transportation give
access to the parks, trails, school, and retail sites;
• provide a range of housing options to cater to different income levels, age
and social groups, as well as tenure, which includes single family and semi-
detached housing, townhousing, and apartments; and
• establish good connectivity for transit service and linkages to the future
transit station.

1.6 Property Ownership Patterns
There are six landowners within the Plan Area. The landowners include
Villeneuve Communities Inc. as the major landowner, Swist, Melcor
Developments Company, Western Canadian District of the Christian &
Missionary Alliance (Church), and Badger Land Development Corporation. The
City of St. Albert owns the road right-of-way for Villeneuve Road. Figure 7
provides the legal descriptions of the parcels of land within the Plan Area.

1.7 Planning Context
The ASP has been prepared within the context of the statutory planning system
in St. Albert, as well as other non-statutory master planning and servicing
initiatives, which provides guidance for the future land use and development
options of Jensen Lakes.
1.7.1 Intermunicipal Development Plan (IDP)

The Intermunicipal Development Plan for Sturgeon County and the City of St. Albert applies to these lands. The IDP designates lands with three proposed future land uses: compatible mix of commercial, business land uses, and urban residential. With Bylaw 1220/10, Sturgeon County repealed their portion of the IDP, while the City of St. Albert continues to maintain the IDP as of the writing of this ASP.

1.7.2 Municipal Development Plan (MDP)

The City of St. Albert MDP, Bylaw 15/2007, as amended, Future Land Use Policy, Map 2, designates the Plan Area as commercial and predominantly residential.

The Transportation Network, Map 5, MDP, includes the proposed NE Sector Arterial roadway from Ray Gibbon Drive to St. Albert Trail as adopted by Council in Bylaw 15/2007, as amended. On March 15, 2013, Council announced the naming of the NE Sector Arterial roadway to be Fowler Way on the west side of St. Albert Trail and Neil Ross Road on the east side of St. Albert Trail.

1.7.3 Existing Area Structure Plan

There has been no previous Area Structure Plan for this area of St. Albert.

1.7.4 Land Use Bylaw (LUB)

The City’s Land Use Bylaw, Bylaw 9/2005, as amended, controls development of the lands within the neighbourhood. The Urban Reserve District is a holding district for orderly transformation to future urban expansion or intensification development. Changes to the land use district will be required through an amendment to the Land Use Bylaw (redistricting), ahead of subdivision and development.

The ASP Future Land Use map demonstrates the base land uses and descriptions within this document describe the expected uses and densities. Anticipated land uses are: neighbourhood commercial, corridor commercial, public and private services such as a school,
institutional facilities such as religious assembly, low density residential, medium and medium-high density residential, public parks, trails, stormwater management facilities (as public utility lots), and private walkways, a private lake and two private beaches.

1.7.5 **Transportation Master Plan (TMP)**

The *Transportation Master Plan (2008)* prepared by ISL for the City of St. Albert applies to these lands as the *TMP* was developed with consideration to the annexed lands. The *TMP* (Exhibit 4.18 and 4.25) shows road patterns at the 75,000 and 105,000 population horizon. By the 105,000 population horizon, an arterial road is shown connecting from Ray Gibbon Drive east to the City’s boundary, an internal collector roadway mid-way within the Plan Area, and a second arterial road running north-south from Villeneuve Road to the north City boundary. However, the north-south arterial road has not been provided within the Plan Area; therefore, the Transportation Master Plan will have to be amended to remove this north-south arterial roadway. Villeneuve Road is shown in the TMP and the Plan Area as ending at the junction of Hogan Road/Range Road 255 with Hogan Road connecting to the future NE arterial roadway, which has been named Fowler Way for the portion west of St. Albert Trail.

1.7.6 **Utility Master Plan (UMP)**

The *Utility Master Plan* for the City of St. Albert is a general framework for providing utility services to future developments (water, wastewater and stormwater management). The *UMP* (2008) was prepared by Stantec. An updated UMP (2014) will be submitted to the City within 2014, considering all developable lands and current infrastructure. The lands for the Area Structure Plan were considered in the *UMP* (2008) analysis as were all annexed lands.

The *UMP* (2008) shows this area with anticipated development in 2015 and the need to extend infrastructure.

Wastewater collection system (sanitary) that would support three quarters of the Plan Area will flow under St. Albert Trail east through Erin Ridge North neighbourhood to a future NE sanitary lift station proposed
in the vicinity of Coal Mine Road and Range Road 253. The future northeast lift station would be connected with a future northwest forcemain that extends from the intersection of Sturgeon Road and Sir Winston Churchill Avenue to Coal Mine Road.

The west portion of the Plan Area would flow to a future sanitary lift station.

On the west side of St. Albert Trail, in the vicinity of 35 City Annex North, a pump house and a water reservoir are planned for the future to provide adequate level of service for water distribution for the north part of St. Albert.

Northwest Area Storm Trunk Outfall and North-Central Outlet Upgrades through the Deer Ridge Neighbourhood are needed to support future development in the north portion of the City. In addition, Carrot Creek storm trunk outfall development would also support development.

The current stormwater management release rate is 2.5 litres, per second, per hectare (L/s/ha) for Sturgeon River and 1.8L/s/ha for Carrot Creek, of which both are under review. Additional studies showing the impact on downstream stormwater facilities must be completed if release rates are altered.

Currently, there is very limited servicing capacity within the existing infrastructure. The existing capacities do not have the ability to support the complete development of Jensen Lakes. In order for development to proceed, significant front-ending of infrastructure will be required to provide essential services to the development area, as delineated in the Off-Site Levy Bylaw, as amended.
2.0 SITE ANALYSIS

2.1 Natural and Cultural Features

2.1.1 Topography and Drainage
The area is generally flat with a wetland depression straddling SE ¼, 17-54-25-4 and Plan 392EO, Parcel A and at the north portion of Plan 782MC, Lot B is another low lying wetlands area. The ground elevation ranges from 688 metres to 685 metres.

2.1.2 Sturgeon River Designated Flood Line
The lands are above the Designated Flood Line for the Sturgeon River.

2.1.3 Geotechnical Conditions
Geotechnical investigations within the Plan Area are documented within three reports prepared by CT & Associates Engineering Inc.

The geotechnical for SE ¼, 17-54-25-4 and Plan 392EO, Parcel A was completed May 2012 with fieldwork conducted on April 26 and 30, 2012. The land is undeveloped and is cultivated farmland. These two sites had 21 boreholes drilled that assessed the soils and groundwater conditions as it relates to future development of the lands. The southwest and central portion of the site has a high water table and wet soft soil conditions found at 1.0 metres to 1.6 metres depths. Other parts of the site had groundwater located between 2.8 metres and 8.4 metres below the surface. In the east and southwest portions, two areas have fill placement.

The geotechnical for SW ¼, 17-54-25-4 and Plan 782MC, Lots A and B was completed September 2012 with fieldwork conducted on July 4, 5, 6, 10 and September 7, 2012. Part of SW ¼, 17-54-25-4 has a landscape business, a homestead, with the remainder of the site as cultivated farmland. Plan 782MC, Lot A has a farmyard, is cultivated, and a wellhead is located in the northwest corner that had no production. Plan 782MC, Lot B is cultivated farmland with a wetland in the north portion.

At the south portion, adjacent to Villeneuve Road, is a crude oil pipeline that is no longer in use. These three sites had 20 boreholes drilled to assess the soils and groundwater conditions for future development.
Groundwater was found below the existing ground surface at 1.8 metres and 8.1 metres. However, in areas that have depressions there were shallow water table readings at 0.1 metre and 1.3 metres.

The geotechnical for part of NW ¼, 16-54-25-4 and Plan 012 0659, Lot 1 was completed July 2013 with fieldwork conducted on June 21, 2013 with 6 boreholes drilled to monitor groundwater. The site is undeveloped and is cultivated farmland. Groundwater was found at 1.5 meters to 5.2 metres below the ground surface.

The high water table levels will likely require additional design work related to excavation, building footings elevations, and foundations to address the matter of drainage, soil stability, and seepage.

Areas of high ground water levels in the Plan Area may require further investigation at the time of subdivision, Development Permit, and building construction stage to identify mitigation measures addressing hydro-geological concerns. If an acceptable strategy cannot be obtained, then the land may be deemed unsuitable for development.

Plan 952 1746, Block A requires borehole testing and geotechnical review at the subdivision or Development Permit stage by a professional engineer to outline any potential mitigation strategies.

### 2.1.4 Vegetation Resources

In June 2008, Stantec prepared a natural areas report for the City of St. Albert, *St. Albert Natural Areas Review and Inventory*, which served as an addendum to the *St. Albert Natural Areas Review and Inventory, 1999* prepared by Spencer Environmental Management Services Ltd. The Addendum covered the lands annexed into St. Albert in 2007.

Within the Plan Area are two wetlands that are shown in the Addendum as Locally Significant Natural Areas (NW 110) central (3.5 ha) and (NW 111) northwest (2.97 ha). Both wetlands will be developed and the developer will work with Alberta Environment and Sustainable Resource Development (AESRD) to determine the required compensation under the Water Act for the loss of wetlands.

The MDP, Policy 10.2 indicates the City of St. Albert shall protect not only provincially and regionally significant areas, but also locally significant, sustainable areas, except where the protection compromises...
other necessary parks, trails and open space requirements in a neighbourhood. The City is not requiring protection of these wetlands.

2.1.5 Natural Site Assessment

Bruce Thompson & Associates Inc. prepared the Natural Area Assessment for SE ¼, 17-54-25-4 dated July 2012 and SW ¼, 17-54-25-4, Plan 782MC, Lots A and B, dated September 2013. No natural area assessment was done on Plan 012 0659, Lot 1 or Plan 952 1746, Block A.

SE ¼, 17-54-25-4 has a large central wetland with an approximate size of 3.5 hectares and a smaller wetland southward with a size of 0.65 hectares. Along Villeneuve Road, directly north of Dundas Place in Deer Ridge is a tree stand and the remaining sections of land are cultivated farmlands. The assessment identified the wetlands have sheet water areas that attract migrating waterfowl and shorebirds, and that provide birds with feeding, nesting and rearing forms of habitat. There were also Red-winged and Yellow-headed Blackbirds. The area is vegetation-free with good visibility to detect predators. Wetlands are also home to chorus frogs and muskrats. Depending on the amount of snowmelt and rainfall, water levels will fluctuate, which impacts the attraction of bird migration. The tree area is a mature aspen forest that attracts nesting birds and ground birds. The assessment recommends retaining the wetland areas with the opportunity for an ecological recreation area and that the tree stand is sustainable and is a stepping stone for wildlife.

SW ¼, 17-54-25-4, Plan 782MC, Lots A and B are in the west portion of the Jensen Lakes ASP. Within these parcels of land are five wetlands with the largest wetland located in the north portion of Plan 782MC, Lot B. This wetland also has a tree shelterbelt; both straddle lands with Sturgeon County. Before these lands can be developed, further analysis will be required on the wetlands and tree stand. The large wetland is sustainable providing the whole wetland is retained; however, development of part of the wetland would make the remaining portion unsustainable. The whole size of the northern wetland is 2.97 hectares.
2.1.6 Environmental Site Assessment

A Phase 1 Environmental Site Assessment (ESA), based on the Canadian Standards Association (CSA) outlined in document Z768-01 (2006), was prepared by CT & Associates Engineering Inc., June 2013 for Villeneuve Communities Inc. for parcels SW ¼, 17-54-25-4, Plan 782MC, Lots A and B. Three potential impacts to the site include:

- An abandoned crude oil pipeline running east-west along the south property line that is adjacent to Villeneuve Road;
- An abandoned oil wellhead in the center portion of the site. The wellhead did not have actual production; and
- Stockpile of soil in the west portion placed in about 2008, material of unknown origin or environmental quality.

A Phase 1 Environmental Site Assessment (ESA), based on the Canadian Standards Association (CSA) outlined in document Z768-01 (2006), was prepared by CT & Associates Engineering Inc., June 2013 for Melcor for parcels Plan 012 0659, Lot 1 and part of NW ¼, 16-54-25-4. The site has two former crude oil pipelines that extend in a southwest-northeast and northwest direction within the north portion of the property. When the pipeline is removed, soil sampling and hydrocarbon testing are recommended.

A Phase 1 Environmental Site Assessment (ESA), based on the Canadian Standards Association (CSA) outlined in document Z768-01 (2006), was prepared by CT & Associates Engineering Inc., April 2012 for Villeneuve Communities Inc. for parcels SE ¼, 17-54-25-4, and Plan 392EO, Parcel A. Fill material was placed on the site between 2001 to 2003, from the shopping centre development that occurred at the corner of Villeneuve Road and St. Albert Trail. The fill material is not of environmental concern. There is an abandoned crude oil pipeline through the east portion of the site and along the south property line. When the pipeline is removed, soil sampling and hydrocarbon testing are recommended.

The abandoned oil wellhead in the northeast corner of Plan 782MC, Lot A, requires a reclamation certificate, and until the reclamation certificate is provided no overnight accommodations or public facility development within a 100-metre radius is permitted. However, when the reclamation
certificate is issued, likely a 5 metre access radius will be required. This
determination is regulated by the Alberta Energy Regulator (AER).
The City’s past practice on wellheads is that the wellhead must be on
private held lands and provide adequate accessibility according to all
pertinent standards and legislation. The City will not assume ownership
or liability for a wellhead.
Plan 952 1746, Block A, requires environmental site assessment prior to
subdivision or further site development.

2.1.7 Heritage Resources
IBI Group, on behalf of Villeneuve Communities Inc., was given Historical
Resources Act clearance to proceed with development within these
parcels: 782MC, Lots A and B; SW ¼, 17-54-25-4; SE ¼, 17-54-25-4;
and Plan 392EO, Parcel A. This review identified a farmstead built
around 1950 to 1960 and has been photographed. The review
determined that there is no historical significance with the farmstead;
therefore, no further work is required. No further archaeological
assessment is required as the land is cultivated fields.

2.2 Current Development Patterns
The Plan Area is bordered to the north by cultivated fields and some wetlands
that are located in Sturgeon County and part of the north ASP boundary is
within St. Albert adjacent to cultivated fields. To the east is a commercial
shopping centre and St. Albert Trail, the west boundary is Range Road 255 with
a small portion of the ASP area crossing Range Road 255. The south
boundary is Villeneuve Road and Deer Ridge neighbourhood.
The Plan Area is predominantly in agricultural use. The area has two large
wetlands, a few small tree stands, old farmstead buildings, a house and
workshop, a landscape business, a church, and a cellular tower. Some
constraints, as shown on Figure 9, include in the northwest corner of Plan
782MC, Lot A, an oil wellhead that was never used in production; running east-
west along Villeneuve Road an abandoned crude oil pipeline that crosses to the
northeast part of Plan 012 0659, Lot 1; and within Plan 012 0659, Lot 1, a
pipeline that splits to the north.
3.0 LAND USE CONCEPT

3.1 Future Land Use Map

The Future Land Use Map for Jensen Lakes is shown on Figure 2. This map consists of a series of coloured areas and symbols that define expected future land use and roadway patterns for the subject lands.

3.2 Land Use Concept: Major Development Patterns

Residential land use will dominate Jensen Lakes with pockets of commercial, parks, and a religious assembly.

Jensen Lakes is adjacent to Villeneuve Road with a portion of the site adjacent to St. Albert Trail. Two commercial areas will service both local and regional shopping interests.

The residential components are predominantly low density residential, intermixed with medium density residential, and medium to high density residential. The multiple family structures will be located along arterial and collector roadways and near the commercial areas. The exiting church site remains in its current location on Villeneuve Road.

Unique to the area is a private lake and beaches that will be maintained and financed by a homeowners association. Owning a home in the Jensen Lakes neighbourhood will require being a member of the homeowners association, which will be identified on the Title of Certificate for a property.

All stormwater management facilities (SWMF) are wet ponds. One SWMF will entail the expansion of the pond located behind the commercial site of Walmart. The second pond is in the west portion of the Plan Area and it runs north-south. Trails will be located around a portion of each SWMF and connect to sidewalks and parks.

The medium to high density residential areas would consist of densities of 94 to 141 dwelling units per hectare. The medium density residential areas would consist of densities of approximately 35 dwelling units per hectare to 94 dwelling units per hectare. The low density residential areas would have a density of 20 dwelling units per hectare. The average overall net density of the residential area is 30 dwelling units per net residential hectare. The total number of dwelling units proposed is 2,119 units. The proposed developable
residential area is 70.5 hectares±, which is 47% of the developable area for the Plan Area.

Within the Plan Area is the Alliance Church, an institutional use, with a land area of 5.47 hectares±. A land sale of a portion of the church site may reduce the church site to an area of 2.63 hectares±, as shown in the development statistics table. The land surplus to the church’s need will be developed as residential.

3.3 Residential Land Use

3.3.1 Low Density Residential

Low density residential land use will comprise of 62 hectares± of land within the Plan Area. The number of low density residential units anticipated is 1,241 dwelling units. Low density may include single-family detached, single-family detached with basement suite, semi-detached, and duplex housing forms. Of the total number of dwelling units proposed, approximately 58.6% of the dwelling units will be low density residential. The land use districts that meet this description are Low Density Residential (R1) and (R2) as per the Land Use Bylaw 9/2005, as amended.

3.3.2 Medium Density Residential

Medium density residential development may consist of townhouses and apartment buildings as regulated by the Land Use Bylaw 9/2005, as amended. The land use districts that meet this description are Medium Density Residential (R3) and (R3A). The number of Medium Density Residential (R3) dwelling units proposed is 50 dwelling units; and 315 dwelling units are proposed for the R3A District, which combined is approximately 17% of the total number of residential dwelling units in the Plan Area.

3.3.3 Medium to High Density Residential

Medium to high density residential units are proposed in three areas with two on the east portion near commercial and one on the west portion also adjacent to commercial. The number of dwelling units proposed is
513 units, which would comprise approximately 24% of the total number of residential units in the Plan Area. This area could be built under the Medium/High Density Residential (R4) District of Land Use Bylaw 9/2005, as amended, which permits apartments and stacked townhouses.

### 3.4 Commercial

The overall developable area for commercial use is approximately 7% of the developable lands, which is approximately 10.9 hectares±. The commercial lands that are adjacent to St. Albert Trail have an area of 7 hectares± that will be accessed from the collector roadway connecting at St. Albert Trail and Everitt Drive North. This site is part of the St. Albert Trail corridor commercial area as identified in the Municipal Development Plan. Two land use districts suitable for the development of the commercial cell along St. Albert Trail include Regional Commercial (RC) District, which provides the opportunity for quality design and landscaping while providing a safe, pleasant and pedestrian-friendly environment. The other land use district is the Corridor Commercial (CC) District, which allows for the sale of a wide variety of goods and services to serve the community and surrounding region.

The second commercial site is located on the west end of the Plan Area at the corner of Hogan Road and Fowler Way with an area of 4 hectares±. This commercial site will serve the immediate neighbourhoods. Potential land use districts as per the Land Use Bylaw 9/2005, as amended are Neighbourhood Commercial (C1) and General Commercial (C2) Districts.

### 3.5 Institutional

Within the Plan Area is an existing church that has 5.47 hectares± of land. A portion of the church’s land will be sold leaving a site area of 2.6 hectares±. The church site, designated Institutional, is owned by Western Canadian District of the Christian & Missionary Alliance. Religious Assembly is a land use that is discretionary in many land use districts within the Land Use Bylaw.

### 3.6 Parks and Open Space

The parks and open space system in the Plan Area will include trails, a school, parks, and stormwater management facilities. The Municipal Government Act and the Municipal Development Plan specify that 10% of the developable lands
be dedicated as Municipal Reserve, which can be used for development of a school, parks, and trails that are not associated with public utility lots.

The proposed Municipal Reserve dedication configuration is shown in Figure 8, while the parks and open space system is depicted on the Future Land Use map (Figure 2).

3.6.1 Trails

A multi-use trail is being proposed along two collector roadways. Multi-use trails would be part of the road right-of-way and not receive municipal reserve credit. A multi-use trail is wider than a sidewalk and tends to be an asphalt surface. The development of the multi-use trail will be reviewed at time of Development Agreement in consultation with several City departments. Other trails proposed will provide connections between parks, neighbouring streets, and access to stormwater management facilities. Walkway connections will also be developed over infrastructure within the Plan Area.

Some trails, walkways or parks may have Public Utility Lot (PUL) designations where there are utility rights-of-way; therefore, no municipal reserve dedication would be granted in these circumstances. The trails must be installed at the time of subdivision so that future residents are aware of trail alignments.

Pedestrian connectivity to the commercial area adjacent to St. Albert Trail is proposed and may require some coordination with the businesses. Access to Villeneuve Road is proposed at several points from the Plan Area. Villeneuve Road will be upgraded to urban standards with a sidewalk or trail on the north side. Further design considerations are needed for the south side of Villeneuve Road to determine appropriate pedestrian connectivity.

3.6.2 School/Park Site

A school site of 5.8 hectares± is proposed to be located on the east portion of the Plan Area. The school site is located with street frontage on two sides along with walkway connections.
Student population analysis is based on the City of St. Albert 2012 Census. Age Composition within the 2012 Census was used to project the potential school aged children.

Table 3-1: Student Population Projection

<table>
<thead>
<tr>
<th>Age</th>
<th>Grades</th>
<th>% of 2012 City of St. Albert Census age composition population 57,078</th>
<th>Student Generation Jensen Lake Population 5,070</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-9</td>
<td>K-4</td>
<td>6.0%</td>
<td>304</td>
</tr>
<tr>
<td>10-14</td>
<td>5-9</td>
<td>6.7%</td>
<td>340</td>
</tr>
<tr>
<td>15-19</td>
<td>10-12</td>
<td>7.3%</td>
<td>370</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>1,014</td>
</tr>
</tbody>
</table>

The anticipated number of students in the Jensen Lakes neighbourhood at full build-out is around 1,000 students between the ages of 5 to 19 years. This is based on the City of St. Albert 2012 Census Age Composition population of 57,078, the anticipated population of 5,070 for Jensen Lakes, and the percentage of each age/grade category. At the time of development, the most current Census for St. Albert and consultation with school boards will occur to better anticipate student population.

3.6.3 Stormwater Management Facilities (SWMFs)

Two stormwater management facilities are proposed within the Plan Area. SWMF 1 is located behind the Walmart shopping centre and will act as a buffer between the commercial use and the residential area. SWMF 2a/2b will be located in the east portion of the Plan Area extending between Fowler Way and Villeneuve Road. SWMF will have trail connections to access the surrounding residential area and a trail along a portion of each SWMF will be created when the ponds are developed.

These facilities may be connected through a combination of overland flows and buried pipes to transfer stormwater. The stormwater management facilities will be dedicated as Public Utility Lots (PULs); therefore, no Municipal Reserve credit will be given to these PUL uses. Municipal Reserve credit may be provided to trail areas adjacent to
SWMFs, to be determined and based upon City policies at the time of subdivision.

The design of the SWMFs will maximize the opportunity to complement or enhance the fragmented habitat in the Plan Area. This can be accomplished through plantings that are supportive of wildlife and bird life that access wetlands and marshes.

The Technical Report proposed the SWMFs using a Real Time Control system; therefore, expanded pond sizes are needed for additional storage capacity and as a safety measure during heavy rainfall events. In addition, the SWMFs cannot be too deep as that would require fencing; thus, impacting an amenity to the surrounding residential area.

3.6.4 Private Lake and Private Beach

A private freshwater recreational lake, gated walkways, and two beaches are proposed as recreational amenities for the homeowners in Jensen Lakes. This lake is not for stormwater management; it will have a built-in re-circulation system, treatment facility and an operational protocol developed that will be managed by a homeowners association to ensure the safe reliable enjoyment of these private areas. The recreational opportunities may include non-motorized boats, swimming, stocked fishing, and winter skating. The private beaches may include a clubhouse and an open area to accommodate private recreation activities for this neighbourhood.

The City is not responsible for the private lake, private beaches, private walkways, or enforcement of exclusive use; it is a neighbourhood homeowner association that will be financially responsible to maintain, operate, and staff this non-public neighbourhood amenity. Parking for these facilities will be on private lands, not on City lands.
3.7 Development Statistics

The development statistics for the Plan Area are shown, quantitatively, in Table 3-2.

The developable area is 150.94 hectares, as there is no Environmental Reserve to be dedicated in the Plan Area. All roads, except Villeneuve Road, are included within the developable area. The residential area is 62 hectares±, which is 41%± of the developable area. The commercial area is 10.9 hectares±, which is 7%± of the developable land. The remaining developable lands are shown in the Table 3-2 Development Statistics.

The population per household fluctuates depending on the type of dwelling unit as indicated in the City of St. Albert Census 2012. In the low density residential units, 3,637 persons are projected, based on 2.93 persons per household. In the medium density residential units, 365 persons are projected based on a combination of 2.02 persons per household for townhouse and 1.61 persons per household for low-rise apartments. In the medium/high density residential units, 513 persons are projected based on 1.61 persons per household. The population for Jensen Lakes is estimated at 5,070.

Policy 4.11, Neighbourhood Design Principles, of the MDP requires a minimum of 30 dwelling units per net residential hectare and the Plan Area has 30 dwelling units per net residential hectare. The policy also requires a minimum of 30% medium density and medium/high density residential units. The total number of residential units is 2,119, of which 878 are medium density and medium/high density units, which equates to 41% of the proposed units.
Table 3-2: Development Statistics

<table>
<thead>
<tr>
<th>Area (ha)</th>
<th>% of GDA</th>
<th>Units</th>
<th>Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross Area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Villeneuve Road</td>
<td>156.52</td>
<td>5.62</td>
<td></td>
</tr>
<tr>
<td><strong>Gross Developable Area (GDA)</strong></td>
<td>150.94</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Walkways (PUL)</td>
<td>0.78</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Municipal Reserve (includes trails not over utilities, park, school, 50% trail around SWMF)</td>
<td>15.09</td>
<td>10.0%</td>
<td></td>
</tr>
<tr>
<td>Stormwater Management (PUL)</td>
<td>9.04</td>
<td>6.0%</td>
<td></td>
</tr>
<tr>
<td>Arterial Road-Fowler Way</td>
<td>4.64</td>
<td>3.1%</td>
<td></td>
</tr>
<tr>
<td>Internal Circulation (non-arterial)</td>
<td>24.80</td>
<td>18.4%</td>
<td></td>
</tr>
<tr>
<td>Villeneuve Road widening</td>
<td>0.76</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Private Lake &amp; Beaches</td>
<td>8.27</td>
<td>5.5%</td>
<td></td>
</tr>
<tr>
<td>Private Walkways</td>
<td>0.52</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal Other Uses</strong></td>
<td>66.89</td>
<td>44.3%</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>10.93</td>
<td>7.2%</td>
<td></td>
</tr>
<tr>
<td>Institutional (church)</td>
<td>2.63</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal Commercial/Institutional</strong></td>
<td>13.56</td>
<td>8.9%</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Density Residential</td>
<td>62.08</td>
<td>41.3%</td>
<td>1,241</td>
</tr>
<tr>
<td>Medium Density Residential R3</td>
<td>1.42</td>
<td>0.9%</td>
<td>50</td>
</tr>
<tr>
<td>Medium Density Residential R3A</td>
<td>3.35</td>
<td>2.2%</td>
<td>315</td>
</tr>
<tr>
<td>Medium/High Density Residential</td>
<td>3.64</td>
<td>2.4%</td>
<td>513</td>
</tr>
<tr>
<td><strong>Subtotal Residential</strong></td>
<td>70.49</td>
<td>46.7%</td>
<td>2,119</td>
</tr>
</tbody>
</table>

- May not add up to 100% due to rounding.
- Overall, there will be 30 dwelling units per net residential hectare, MDP Policy 4.11 requires 30 dwelling units per net residential hectare with a minimum of 30% medium and/or high density residential.
- Residential breakdown consists of:
  - 20 du/ha for low density residential;
  - 35 du/ha for medium density residential;
  - 90 du/ha for institution/medium density residential; and
  - 141 du/ha for medium/high density.
- Of the net residential hectare, 8.4 ha are for medium and/or high density residential; 41.4% of the units are medium and/or high density residential.
- Expected population per residential unit is:
  - 2.93 persons per low density dwelling unit;
  - 2.02 persons per medium density dwelling unit; and
  - 1.61 persons per medium/high dwelling unit.
4.0 TRANSPORTATION

4.1 Arterial Road Network

The Transportation network for Jensen Lakes is shown on Figure 3. This map consists of a series of coloured roadways and trails that define expected future transportation patterns for the subject lands.

The Plan Area is bounded on the north by Fowler Way (named in March 2013), a future NE arterial road. In 2009, Associated Engineering conducted a study to determine an approximate alignment of Fowler Way, which will connect at the junction of Ray Gibbon Drive and Villeneuve Road, crossing through North Ridge Phase 2 neighbourhood and traversing the north boundary of Jensen Lakes with Fowler Way connecting to Neil Ross Road on the east side of St. Albert Trail.

The proposed Fowler Way alignment in the Jensen Lakes ASP is subject to change as a functional alignment study needs to be undertaken. Development statistics and land uses could be impacted and an amendment to the ASP may be required once the alignment is finalized.

Within the Plan Area, roadways are expected to function at acceptable levels of service. The exception is the intersection of St. Albert Trail and Villeneuve Road, which is expected to operate below acceptable levels of service in the AM and PM peak hours. Additional analysis is needed to determine if additional northbound and southbound auxiliary lanes along St. Albert Trail would improve traffic movement.

4.2 Collector and Local Road Network

In 2009, Stantec Consulting conducted a study of the St. Albert Trail corridor extending north from Villeneuve Road to the City’s north boundary. The study indicated major collector roads would have all-directional intersections with St. Albert Trail, and properly spaced minor collector roads may have the opportunity to have right-in-right-out access only. Direct access from a business onto St. Albert Trail is not being considered, as access to businesses would be provided by the major and minor collector roadways. The north portion of St. Albert Trail is a rural cross-section, which is being reviewed with the potential to be developed to urban standards.
The commercial site along St. Albert Trail will be accessed with a right-in-right-out, with additional access from a major collector roadway within the Plan Area. This internal major collector roadway will align with Everitt Drive North on the east side of St. Albert Trail.

The internal major collector roadway that weaves through the neighbourhood will start at St. Albert Trail and end at Hogan Road with a major collector roadway connection leading to Dennison Drive, and a minor collector roadway connection leading to Range Road 255. The transportation schematic (Figure 3) includes four (4) roundabouts at intersections on the internal major collector roadway within the development. These roundabouts are expected to encourage traffic calming and reduce speeds and shortcutting along this internal collector roadway.

Local roads are designed with cul-de-sacs and loops that will connect to the internal major collector roadway.

The school site has roadways on two sides with pedestrian access on the sides that have no vehicle access.

Villeneuve Road was built as a secondary highway and is expected to be downgraded from an arterial roadway to a major collector roadway with upgrades to an urban roadway standard that includes sidewalk or trail. Villeneuve Road, at the time of writing this ASP, may remain open from St. Albert Trail to Hogan Road. Before any road closure of Villeneuve Road is considered, the City will review and update the Transportation Master Plan and the Transportation System Bylaw.

The Plan Area shows Villeneuve Road wider in the future to accommodate an urban road design as a major collector roadway.

4.2.1 Alliance Church (Service Road)

A service road runs parallel to the south of the Alliance Church’s land (Plan 952 1746, Block A) and north of Villeneuve Road, which was dedicated without compensation at the time of subdivision in 1995. The total area of the service road is 0.60 hectares. Sturgeon County anticipated this land would be needed for future road widening of Villeneuve Road. Should this 0.60 hectare section of Villeneuve Road not be needed in the future, the land may be returned to the adjacent landowner that runs parallel to the service road. A road closure bylaw and Land Use Bylaw amendment are needed before this service road
can be developed, as this area has been incorporated into the ASP boundary with proposed land use designations of Institutional and Residential.

4.3 Transit
Transit routes must be established as part of the first stage of development as per *MDP Policy 12.7, New Area Structure Plan Technical Reports*. In addition, transit stops must be within 400 metres walking distance of all residents. This distance is reduced for multiple family dwelling, institutional uses, major seniors residents and activity centres. Transit stops are typically proposed along major collector roadways and done in consultation with the City’s Transit Department.

4.4 Pedestrian/Bicycle Links
Pedestrian and multi-modal connections include sidewalks on all streets, walkways over infrastructure, and trails around a portion of the stormwater management facilities. There is the potential for trails as part of the road right-of-way along major collectors, but this will be determined at time of Development Agreement.

Private walkways are proposed near the private lake. These private walkways will require access passes by the residents and will be maintained and supervised by the homeowners association.

4.5 Noise Attenuation
Acoustical Consultants Inc. provided a study on noise attenuation dated August 13, 2013. Areas having noise levels over 65 dBA in a 24 hour period will have measures taken to address the noise. The study indicated that the highest noise factor will occur along Fowler Way and this is where noise mitigation is needed. Noise mitigation will be required for low density and multiple family dwelling units located along Fowler Way. Noise mitigation may include 1.83 metre high fences constructed from solid double boarded wood or a dense surface masonry wall with no gaps. Landscaping may be required to soften the look of long continuous fences or walls. Noise attenuation may also be managed with berms, fencing, and landscaping.

At the time of subdivision, Development Agreement, or Development Permit, provision for noise attenuation amenities will be required at the cost of the developer. Additional requirement may be needed for residential developments.
adjacent to commercial developments so that noise, light, and odours from the commercial area to the residential are addressed prior to or at the time of Development Permit.

4.6 Off-Site Levies

The Jensen Lakes neighbourhood is subject to Off-site Levies for arterial roadway networks, water, wastewater, and stormwater management facilities. Off-Site Levies will be calculated, assessed and collected at the time of subdivision or upon execution of a Development Agreement, in accordance with the rate that is applicable at that time. Should a subdivision or Development Agreement not be part of the development process, levies will then be collected at the time of Development Permit.

In addition to the Off-Site Levies, additional costs may need to be borne by the developers to facilitate the near term plan of infrastructure capacity improvements.

4.6.1 Notes

As upgrades are required to the water supply and distribution, to the wastewater collection system (sanitary), to the stormwater management facilities, and arterial road network, the City may enter into an agreement with the developer on Front-ending identified infrastructure required to support the development. The City’s responsibility to the developer for any Front-end reimbursement shall be in accordance with the related Off-site Levy City policies.

Should a developer choose to oversize, without a request from the City, the oversizing will be at the cost of the developer and not recoverable. In addition, the City will take ownership of such oversized infrastructure and will determine how the capacity will be used.
4.7 **Capital Recreation Fees**  
The Jensen Lakes residential areas are subject to the Capital Recreation Contribution that is charged per residential unit. The Contribution is determined in the Capital Recreation Contribution agreement prepared as a condition of subdivision or as a condition of the Development Permit.

4.8 **Crime Prevention through Environmental Design (CPTED)**  
Decisions relating to transportation design, street patterns, access, noise barriers, public open spaces, parks, multi-use trails, walkways, stormwater management facilities, private walkways, private beaches, private lake, and the built environment shall use CPTED principles to create a safe and secure neighbourhood. The following basic strategies, respecting existing City standards, will be used during the development of Jensen Lakes:

- Use of natural surveillance strategies to increase visibility and awareness of public and private space;
- Use of natural access control techniques to guide/direct person within the natural and built environments; and
- Promotion of territorial reinforcement by increasing definition of space and local stewardship.

4.9 **Timing of Development – Fowler Way**  
A functional plan of the arterial road system connecting Ray Gibbon Drive to St. Albert Trail must be undertaken and finalized prior to the Plan Area achieving full build-out.
5.0 Utility Services

5.1 Water Supply and Distribution

Water will be provided to Jensen Lakes through the extension of an existing 300 mm water main located on the west side of St. Albert Trail that connects at Everitt Drive North. This is an extension of an existing line on Ebony Way. There will be three looping connections located at Dennison Drive, Hogan Road and Coal Mine Road.

Off-site water improvements are required to support Jensen Lakes and other future lands within the north annexation area. Pipe sizing will be determined at the time of subdivision to ensure an adequate level of service.

Currently, Phase 2 of the Oakmont water transmission line will require funding through developer contributions. Water mains of the appropriate sizes will be required to be carried through the development and connections will extend to the edge of the ASP boundary or acceptable termination points as determined by the City. The required water servicing for the Plan Area is as per Figure 4. See Notes under Section 4.6, Off-site Levies, of this document.

5.2 Wastewater Collection System (Sanitary)

The Plan Area will be serviced using gravity sewers and a pumping station with forcemain. All of Jensen Lakes will drain by gravity to a pumping system that provides a 5 metre vertical lift to discharge through forcemain(s) and connect to the extension of the 900 mm trunk. The existing 900 mm trunk is located on the west side of St. Albert Trail.

The sanitary lines being extended from Ebony Way and Everitt Drive have limited wastewater capacity. The existing wastewater collection system may support development for approximately one to two phases of development depending on the densities and timing of development. Before any additional development can proceed beyond this capacity, upgrades to the existing system (Oakmont lift station pumping) and an additional trunk line as outlined in the Off-Site Levy program will be required to provide essential services to the development area.

A future connection will be extended to the Alberta Capital Region Wastewater Commission (ACRWC) pump station, which is located on Sturgeon Road and Sir Winston Churchill Avenue. The pipe sizes will be determined at time of
subdivision except where sizes are noted on the wastewater collection system within this document.

The wastewater collection system components of the appropriate size and depth with adequate capacity will be required to be carried through the development and extend to the edge of the ASP boundary or acceptable termination points as determined by the City and as depicted in Figure 5.

See Notes under Section 4.6, Off-site Levies, of this document.

5.3 Stormwater Management

There are two stormwater management facilities within Jensen Lakes. The required release rates at the time of writing this document are 2.5 litres, per second, per hectare as per the Big Lake Stormwater Management Plan Report May 2004. Currently, there is no capacity within the existing stormwater conveyance system should conventional operational protocols be incorporated into the system. In order to support any development without significant construction of off-site stormwater conveyance systems, Real Time Control system is being proposed by the developer.

The implementation of Real Time Control System is a new Stormwater Management system to the City and will require detailed review at the time of subdivision.

SWMF 1 is a dry pond that supports the corridor commercial development (Walmart). This dry pond will be expanded into the Jensen Lakes neighbourhood and designed as a wet pond that will service approximately 69.44 hectares of Jensen Lakes and 18.12 hectares of commercial for a total area of 88.12 hectares. SWMF 1 will discharge to an existing 375 mm outfall pipe located on Villeneuve Road that flows south through an easement in Deer Ridge. The proposed development timeframe of SWMF 1 is in Stage 1.

SWMF 2a/2b appears as two ponds on the future land use plan; however, this is one large pond with an equalizing conduit under the internal major collector roadway, which connects the two ponds as one SWMF. This large SWMF will support a land basin of 96.63 hectares. This SWMF will connect to the outfall located at Deer Ridge Drive and Dennison Drive.

SWMF 1 and 2a/2b may discharge via Real Time Controlled pumping as there is not sufficient downstream capacity. Real Time Control is managed with electronic telemetry and remote sensors installed at the outfall locations. The rate of release is restricted by the downstream capacity. The anticipated
drawdown time of the SWMFs and pipes is 79 hours for SWMF 1 and 58 hours for SWMF 2a/2b. The proposed development timeframe of SWMF 2a/2b is in Stages 13 and 18. This timeframe for development of SWMF 2a/2b needs to be reviewed as this SWMF supports the majority of the lands in the Jensen Lakes neighbourhood.

Stormwater within the Plan Area will move to SWMFs through pipes and as overland flows.

Stormwater pond sizes are approximations and may change in size at time of subdivision or Development Permit. A change in pond size may not require an amendment to this Area Structure Plan, providing development statistics and land use areas are not impacted. Stormwater Management for the Plan Area is as per Figure 6. Consultation with Administration will be required should a change in size be proposed for any SWMF.

The collection system components of the appropriate size and depth with adequate capacity will be required to be carried through the development and extend to the edge of the ASP boundary or acceptable termination points as determined by the City.

See Notes under Section 4.6, Off-site Levies, of this document.

5.4 Shallow Utilities

Power, gas, and communication franchise systems will service the area through agreements established with the developers. Shallow utilities may be located within a public utility lot (PUL) or through a utility right-of-way agreement.

Any existing overhead services must be relocated and placed underground at the time of Development.

5.5 Public Utility Lots (PULs)

A Public Utility Lot is where services such as water, wastewater, stormwater pipe, and shallow utilities are located. The size of a PUL will vary based on the number of utility services and pipe sizes accommodated. PULs can typically range between 6 metres to 9 metres in width. PULs do not receive Municipal Reserve credit. Emergency access to a site will be classed as a public utility lot and width of access will be determined in consultations with City Engineer and Public Works.
6.0 IMPLEMENTATION

6.1 Development Staging

Figure 10, Staging Plan illustrates approximately 19 stages of development for the Plan Area, which is anticipated to take 10 to 15 years to build-out. Stages 1 through 8 will start on the east side of the Plan Area. The first stage includes the development of the SWMF 1 and some residential uses. Development for a portion of the major collector roadway will occur in early stages of developing Jensen Lakes. It is anticipated that the major collector roadway will be developed over a number of years; therefore, the developer must provide all-weather turnaround roadways that support emergency services, solid waste collection, and transit.

The second phase of development is the commercial parcel adjacent to St. Albert Trail. The third stage of development would include a large park area that would support a school. The private lake and beaches are in the fourth stage of development. Part way through developing the east side of the Plan Area, development will then start on the west side of the Plan Area as it is anticipated that the extension of Hogan Road and Fowler Way will be built.

The development staging of SWMFs 2a/2b must be reviewed as this SWMF is not shown until Stages 13 and 18, but this SWMF serves a significant portion of the Plan Area.

Staging will be reviewed as subdivision applications are made to see that growth management objectives of the City as specified in the MDP, including avoiding "leap-frogging" of development in new areas and encouraging orderly, economical, and contiguous development, are addressed. Therefore, in addition to the infrastructure requirements, all development of Jensen Lakes must be contiguous and sequential in a manner as per MDP Policies 3.2 and 4.2, and comply with Neighbourhood Design Principles and Medium Density Residential staging as per MDP Policies 4.11 and 4.13. These MDP policies indicate when required medium density residential is to be developed in relation to the overall residential development. Contiguous and sequential development is important for efficient city services such as police, fire, transit, recreation and road maintenance.
6.2 Redistricting and Subdivision
Timing of redistricting and subdivision applications will proceed in response to servicing capacity, agreements, and market needs. Development will start on the east portion of the Plan Area with Stages 1-8, followed by Stages 9 and 10 on the west portion, and Stages 11-19 are more central to the Plan Area.

6.3 Island Surrounded by Private Lake
As development is staged, there will be a portion of homes and infrastructure (road, wastewater, storm and water) that are constructed as access to and within the “island” that is surrounded by a private lake. All infrastructure (inclusive but not limited to roads, wastewater, storm, and water) and necessary services associated with this island area such as garbage collection and snow clearing will remain within the ownership and responsibility of the homeowners association.

6.4 Building Inspections
The geotechnical investigations within the Plan Area indicated there are soft and wet soils. The developer, as part of the purchase package to builders, needs to identify soil issues and indicate that further geotechnical study may be required at building permit stage.

At time of subdivision, the developer and the City will consider restrictive covenants related to wet and soft soils that may impact development.
NOTES:
Circulation pattern does not constitute subdivision design and is subject to change (excluding collectors and arterials.) Fowler Way alignment is yet to be determined and may impact development statistics. Proposed trail alignment is subject to change.

Location and details relating to the proposed stormwater management facilities will be subject to geotechnical testing to the satisfaction of the City of St. Albert and the Province of Alberta.
NOTES:
Circulation pattern does not constitute subdivision design and is subject to change (excluding collectors and arterials.) Fowler Way alignment is yet to be determined and may impact development statutory.

Proposed trail alignment is subject to change.

Figure 3
Transportation
Jensen Lakes
Area Structure Plan

Arterial Road
Major Collector Road
Minor Collector Road
Local Road

Wellhead
Trail
ASP Boundary
City Boundary

Legend:
P - Park
W - Walkway
LDR - Low Density Residential
MDR - Medium Density Residential
MHDR - Medium / High Density Residential
SWMF - Storm Water Management Facility
PW - Private Walkway
PB - Private Beach
PL - Private Lake
NOTES:
Circulation pattern does not constitute subdivision design and is subject to change
(excepting collectors and arterials.)
Fowler Way alignment is yet to be determined and may impact development statistics.
Sanitary pipe sizes to be determined at time of detailed design, except as noted on
this figure.

Figure 5
Wastewater Collection System
Jensen Lakes Area Structure Plan
NOTES:
Circulation pattern does not constitute subdivision design and is subject to change (excepting collectors and arterials.)
Fowler Way alignment is yet to be determined and may impact development statistics.

Location and details relating to the proposed stormwater management facilities will be subject to geotechnical testing to the satisfaction of the City of St. Albert and the Province of Alberta.
NOTES:
Circulation pattern does not constitute subdivision design and is subject to change (excepting collectors and arterials.)
Fowler Way alignment is yet to be determined and may impact development statistics.

Location and details relating to the proposed stormwater management facilities will be subject to geotechnical testing to the satisfaction of the City of St. Albert and the Province of Alberta.
NOTES:
Circulation pattern does not constitute subdivision design and is subject to change (excepting collectors and arterials.)
Fowler Way alignment is yet to be determined and may impact development statistics.
Proposed trail alignment is subject to change.
Actual sizes for Municipal Reserve to be confirmed at time of subdivision.

Sturgeon County
City of St. Albert

Figure 8
Municipal Reserve
Jensen Lakes Area Structure Plan

15.09 ha
Municipal Reserve

Wellhead

Trail

ASP Boundary

City Boundary

Legend:
P - Park
W - Roadway
LDR - Low Density Residential
MDR - Medium Density Residential
M-HDR - Medium High Density Residential
SWMF - Storm Water Management Facility
PW - Private Walkway
PB - Private Beach
PL - Private Lake

G:\MAPS\Area Structure Plans\JensenLakes\ASP_Figures\Fig8_MunicipalReserve.mxd
NOTES:
Circulation pattern does not constitute subdivision design and is subject to change (excepting collectors and arterials.) 
Fowler Way alignment is yet to be determined and may impact development statistics.
NOTES:
Circulation pattern does not constitute subdivision design and is subject to change (excepting collectors and arterials.) Fowler Way alignment is yet to be determined and may impact development statistics.
Stage Boundaries are conceptual and subject to change at time of subdivision.