REPORT

Landcraft Development Corporation

Shiloh Area Structure Plan

DRAFT

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1.0 INTRODUCTION

1.1 Background

This Area Structure Plan (ASP) has been developed to provide the framework for the subdivision and development of NE 32 52-27-W4 and SE 32 52-27-W4 in the southwest corner of the City of Spruce Grove, Alberta.

1.2 Purpose

Area Structure Plans are intended to provide direction for the growth and development of an area based on the location of major land uses (residential, commercial, schools, open space, major utilities, etc.). It is a document that lays the groundwork for an area, sets the context for future growth, and defines the intended character for an area as it develops.

The specific purpose of the Shiloh Area Structure Plan is to:

- Summarize existing conditions;
- Establish the development concept;
- Provide context, objectives and policies for each land use;
- Describe servicing schemes; and,
- Demonstrate how staging and implementation will proceed.

1.3 Plan Area

The Plan Area is bounded on the west by agricultural land, designated as future residential, located in the Town of Stony Plain. To the north is Highway 16A with future commercial land to the north of the highway. Campsite Road forms the eastern boundary of Plan Area with commercial and the industrial lands to the east of Campsite Road. To the south is agricultural land located in Parkland County. In total, the Plan Area includes 129.5 hectares (320 acres) of land.

Figures 1 and 2 show the Plan Area’s municipal and local context, respectively.
1.4 Plan Organization

The Plan has been divided into the following five sections:

1.0 INTRODUCTION, which includes the purpose and background, description of the ASP area and planning and community consultation process;

2.0 EXISTING CONDITIONS, which provides an analysis of the physical environment and existing land uses. A brief overview of relevant statutory plans and existing zoning is also provided.

3.0 DEVELOPMENT CONCEPT, which outlines the land uses designated for the Plan Area including their intensity and compatibility with adjacent land uses.

4.0 SERVICING, which includes the following:
   • Transportation Network, which provides an overview of the internal and external road network.
   • Water Network, which addresses how water servicing will be implemented
   • Sanitary Sewer, which deals with sanitary servicing for the neighbourhood
   • Stormwater Management, which describes how storm water will be handled.

5.0 IMPLEMENTATION, which provides a general direction for future infrastructure extension and presents further requirements for implementation of the Plan.

1.5 Planning Process

Urban Systems initiated the project by meeting with the City of Spruce Grove in June 2006. Over the summer, the project team met with stakeholders and gathered background information. The development concept was created through the fall and presented to the City of Spruce Grove for comment in December 2006. The draft Area Structure Plan was then developed through early 2007 and submitted to the City for comment in June. Further discussions between the City and the two majority land owners took place through the second half of 2007 and beginning of 2008. The results of these were incorporated into this document, which was submitted in spring 2008. A public open house was held in June 2008.
2.0 EXISTING CONDITIONS

2.1 Site Description

The Plan Area is primarily undeveloped agricultural land. CN Rail owns a 30 m wide right-of-way in NE 32 within which it operates a single track principal mainline. The City of Spruce Grove’s Wayside Campsite is located in the northeast corner of the Plan Area on a 2.6 ha parcel. A bus company operates as a temporary use from a 1.2 hectare parcel in the north east corner of SE 32. A 3.0 ha wetland area is located in the northwest corner of the Plan Area.

Five utility rights-of-way are present in the Plan Area. It may be possible to develop these rights-of-way as trails or open space to create a community use for the rights-of-way. A telecommunications tower is located immediately southwest of the intersection of the CN Rail right-of-way and Campsite Road on a 0.08 hectare site.

Due to the clearing of the land for cultivation and its topography, there are no habitats or natural vistas with the exception of the permanent wet area in the northwest corner of the site. This will be protected as environmental reserve.

There are also no sites or structures of historical, architectural and aesthetic significance.

2.2 Soils

The subject property is located in the Central Parkland sub-region of Alberta. Black and dark brown chernozems (earth rich in humus) commonly occur under grassland vegetation, whereas dark gray chernozems and luvisolics (earth found under trees) occur under aspen stands. The surficial deposits are generally ground moraine (till covered areas with irregular topography often forming gently rolling hills or plains).

The vast majority of the Plan Area was cleared in the past for cultivation.

Generally, the north quarter section drains to the wet area in its northwest corner of the ASP. Likewise, the south quarter section drains to the low area in the southwest corner of the ASP. Some vegetation surrounds the wet area in the northwest corner of the Plan Area.
2.3 Topography

The Plan Area is essentially flat with elevations ranging from 699 m (above sea level) in the northwest corner to 708 m (above sea level) at the extreme south end of the Plan Area.

There is no evidence that any portion of the Plan Areas is subject to flooding with the exception of the seasonal wet area in the southwest corner. That area will be developed as a stormwater management facility.

2.4 Land Uses within One Kilometre

The primary land uses within one kilometre of the Plan Area are agricultural, commercial and industrial. Immediately east of NE 32 is a combination of commercial uses along Highway 16A and industrial uses south of the CN Rail right-of-way. Across Highway 16A to the northeast of the Plan Area is the Westgrove area, which includes commercial along Highway 16A and residential to the north and east of the commercial area. The land to the west is in agricultural use and is designated by the Town of Stony Plain for future urban expansion. The land to the south is in agricultural use in Parkland County.

2.5 Policy Context

2.5.1 Municipal Government Act

The creation and adoption of Area Structure Plans are legislated by the Alberta Municipal Government Act. The Shiloh Area Structure Plan is consistent with Section 633 of the Municipal Government Act which describes the purposes of an ASP.

1. For the purpose of providing a framework for subsequent subdivision and development of an area of land, a council may, by bylaw, adopt an area structure plan.

2. An area structure plan must describe

   - the sequence of development proposed for the area;
   - the land uses proposed for the area, either generally or with respect to specific parts of the area;
   - the density of population proposed for the area either generally or with respect to specific parts of the area;
   - the general location of major transportation routes and public utilities;
   - and, may contain any other matters the council considers necessary.
2.5.2 **City of Spruce Grove Municipal Development Plan**

The City of Spruce Grove Municipal Development Plan designates most of the Plan Area as Urban Expansion with an Environmental Management Area (EMA) in the northwest corner. The area north of the railway not designated as EMA is designated as Commercial Corridor. The southeast corner of NE 32 is designated as Future Industrial. Discussions with the City of Spruce Grove have determined that they would no longer support the development of these lands for industrial purposes. An amendment to the MDP to remove the industrial designation is not required.

2.5.3 **City of Spruce Grove Land Use Bylaw**

According to the City of Spruce Grove Land Use Bylaw, the land is currently zoned U-R Urban Reserve – Holding District. The purpose of the U-R District is to reserve those areas of the municipality which are rural in character or land use for urban development other than industrial until such time as a subdivision plan has been accepted in principle or approved. The U-R District further states that the reclassification of land to other land use districts will normally occur subsequent to the acceptance of an area structure plan and subsequent to the approval of subdivisions proposed.

2.5.4 **Intermunicipal**

The City of Spruce Grove, Town of Stony Plain and Parkland County adopted the non-statutory Boundary Interface Planning Study (BIPS) in July 2007. This study addresses urban interface issues in the tri-municipal area. The direction and intent of the BIPS has been reflected in this Plan where appropriate and based on the discussions between the City of Spruce Grove and the two majority landowners.

In addition, there is no Intermunicipal Development Plan for the interface between the City of Spruce Grove and Town of Stony Plain. Part VII Section 3.0 of the City of Spruce Grove Municipal Development Plan does however contain the following statements:

- The City of Spruce Grove will refer land use applications which are within 800 m of the Town of Stony Plain’s boundaries to the Town for comment
- The City will endeavor to provide an opportunity for input by the Town of Stony Plain during the discussion and/or preparation of Area Structure Plans.
- The City will work with the Town of Stony Plain to ensure that short term and long term transportation and infrastructure planning which may, in the opinion of the City, have an impact on the Town of Stony Plain, will be referred to the Town for comment.
2.6  Land Ownership

The Plan Area’s land ownership is as follows:

**NE 32 52-27-W4**
- Borghild Irene Dresen, Drake Dresen and Esbern Blake Dresen: 59.6 ha (147.5 ac)
- City of Spruce Grove: 2.6 ha (6.4 ac)
- Canadian National Railway: 2.5 ha (6.1 ac)

**SE 32 52-27-W4**
- Landcraft Development Corporation.: 63.5 ha (157 ac)
- Rental Bus Lines: 1.21 ha (3 ac)
2.7 Environment

The following represents this Area Structure Plan’s Environmental Impact Statement:

- The environmental management area in the northwest corner of the site has been identified in this Plan and will be protected as environmental reserve at the subdivision stage with ownership transferred to the City of Spruce Grove.

- Stormwater management will be controlled based on Alberta Environment and City of Spruce Grove requirements. This will include water quality control currently non-existent on site. Furthermore, stormwater management will be addressed on an intermunicipal/watershed basis as the link between the two stormwater management facilities may be partially located in the Town of Stony Plain.
3.0 DEVELOPMENT CONCEPT

3.1 Plan Vision

*To develop a well integrated community that has a strong and diverse residential identity including low, medium and high density housing alternatives and affordable housing supported by high quality open spaces and vibrant commercial areas.*

3.2 Plan Goals

- Provide a general framework for the Plan Area’s development that meets the needs of the City and the market;

- Ensure efficient and economically feasible servicing schemes;

- Facilitate a diverse residential community, including innovative design where feasible;

- Provide open spaces that are safe, attractive, and linked by pedestrian trails;

- Provide an adequate amount of commercial space;

- Connect the Plan Area to existing development in Spruce Grove and support integration with the eastern fringe of Stony Plain as it develops; and,

- Create a well organized community that allows efficient access for vehicles and pedestrians.
3.3 Residential

Residential development consisting of single detached, duplex, semi-detached, row housing and apartments will occupy most of the Plan Area south of the Trans Mountain Oil right-of-way.

Residential will consist primarily of low and medium density residential, similar to Spruce Grove’s existing neighbourhoods. These uses will be well integrated with one another to create a well designed and attractive block face. Modifications to the City’s Land Use Bylaw, in particular the development of a new district, may be required to accommodate this.

High density residential has been located along major collectors on the north and south edges of the residential part of the Plan Area. This will reduce traffic impacts and support small scale commercial development. All medium and high density sites will be a maximum of 1.2 ha as specified by the City of Spruce Grove Land Use Bylaw.

This Plan projects a gross density for the area of 30 units per ha or approximately 1,800 units. The developers will implement the various districts through the rezoning process and according to market demand, rather than dictate the location of each district and sub-district at the Area Structure Plan level.

As discussed in more detail in Section 3.7 Open Space, neighbourhood residents will have parks, natural areas and trails as recreational amenities. It is also expected that the residents will use the nearby Tri Leisure Centre extensively along with regional natural areas such as Big Lake and Lois Hole Provincial Park. Students will likely be bussed from the area to existing schools in Spruce Grove and Stony Plain as a school site has not been designated in this Plan.
The following table summarizes the area, density, estimated number units and population for the Plan Area.

### Table 1 Projected Residential Statistics

<table>
<thead>
<tr>
<th>Quarter Section</th>
<th>Land Use</th>
<th>Area (ha)</th>
<th>Gross Density (units per ha)</th>
<th>Number of Units</th>
<th>Population*</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE 32</td>
<td>Low and Medium Density Residential</td>
<td>9.6</td>
<td>24.0</td>
<td>230</td>
<td>635</td>
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<tr>
<td></td>
<td>High Density Res.</td>
<td>2.7</td>
<td>87.0</td>
<td>235</td>
<td>649</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>12.3</strong></td>
<td><strong>37.8</strong></td>
<td><strong>465</strong></td>
<td><strong>1,284</strong></td>
</tr>
<tr>
<td>SE 32</td>
<td>Low and Medium Density Residential</td>
<td>45.7</td>
<td>24.0</td>
<td>1,097</td>
<td>3,028</td>
</tr>
<tr>
<td></td>
<td>High Density Res.</td>
<td>2.8</td>
<td>87.0</td>
<td>244</td>
<td>673</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>48.5</strong></td>
<td><strong>27.6</strong></td>
<td><strong>1,341</strong></td>
<td><strong>3,701</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>60.8</strong></td>
<td><strong>29.7</strong></td>
<td><strong>1,806</strong></td>
<td><strong>4,985</strong></td>
</tr>
</tbody>
</table>

*based on the City of Spruce Grove average household size of 2.76 as per 2006 Federal Census (Statistics Canada)

### 3.4 Residential Policies

#### 3.4.1 The projected density in the Plan Area is 30 dwelling units per gross hectare for the residential lands. Development proposals remain subject to standard rezoning, subdivision and development permit approval processes that apply throughout the Plan Area.

#### 3.4.2 Architectural guidelines will be implemented by the developers to ensure good design and market acceptance.
Parcel sizes for the medium and High density residential will conform with the Land Use By-law.

Legend
- Yellow: Low/Medium Density Residential
- Orange: High Density Residential
- Red: Commercial
- Pink: Special Study Area
- Green: Park
- Pale Green: Environmental Reserve
- Blue: Stormwater Management
- Green Line: Trail
- Blue Line: Major Road
- Green Asterisk: Park

FIGURE 4
land use plan
3.5 Commercial

Commercial is the second most common land use in the Plan Area and can be found in two locations. The first location is the highway commercial area between Highway 16A and the CN Rail right-of-way. Locating commercial uses in this portion of the Plan Area will continue the established pattern of vehicle oriented commercial development along Highway 16A. This site is large enough to accommodate two big box retail establishments along with numerous smaller commercial uses such as eating and drinking establishments and gas bars.

The second location recognizes the importance of Campsite Road as a valuable commercial/light industrial corridor. Commercial uses to a depth of approximately 120 m have been located along Campsite Road. As one of the City’s primary transportation routes, some of excellent business access and exposure opportunities will emerge in this area. This land use will also serve as buffer between the residential land uses to the west and the industrial land use to the east of Campsite Road.

3.6 Commercial Policies

3.6.1 Highway commercial development shall be designed and landscaped to contribute positively to Spruce Grove's western gateway.

3.6.2 The need for buffering between CN right-of-way and the commercial sites to the north shall be determined in consultation with the City of Spruce Grove.

3.6.3 The number of and nature of the highway commercial access points will be determined in consultation with the City of Spruce Grove as part of the Development Permit process.

3.6.4 The highway commercial site shall be sensitively integrated with the environmental reserve and adjacent stormwater management facility in NE 32.

3.6.5 Access to commercial uses along Campsite Road beyond major roads shown on Figure 4 will be considered where supported by a Transportation Impact Assessment and the City of Spruce Grove.
3.7 Special Study Area

The Special Study Area is located between the CN Rail right-of-way and the Trans Mountain Oil right-of-way, west of the commercial along Campsite Road as shown on Figure 4. The alignment of these rights-of-way makes designating land uses and laying out the area a challenge.

The area could be developed for primarily residential use. However, the residential-rail interface requires careful consideration. Setbacks including berms and sound walls are the current industry standard and may be appropriate here.

The area could also be developed for primarily commercial uses. Less attention to the rail interface would be required. However, that approach may create the need for buffering on the south edge of the special study area adjacent to the proposed medium and high density residential due to railway noise migration. Also, commercial development’s need for access and visibility would be very limited in the western part of the Special Study Area.

In the interests of proceeding with development in the remainder of the Plan Area, land uses will not be specified in the Special Study Area until further discussions between the City, landowners and their consultants have occurred. Once land use is agreed upon, an amendment to the Shiloh Area Structure Plan will be brought forward to formally designate the land uses in the Special Study Area.

3.8 Special Study Area Policies

3.8.1 Development in the Special Study Area shall not be permitted until an application to amend the Shiloh Area Structure Plan is approved by City Council.
3.9 Open Space

Open space in the form of natural areas, active and passive parks, and trails are an integral component of the Shiloh Area Structure Plan. As well as being a statutory requirement, open space is an important place-making tool. Development will occur in accordance with the City of Spruce Grove Parks and Open Space Master Plan combining environmental stewardship with comprehensive, contiguous and innovative open spaces.

Open space will be developed adjacent to the stormwater management facilities in each quarter section. The stormwater management facility in the north quarter will connect with a larger wetland complex located to the west in Stony Plain and provide the opportunity for nature appreciation and interpretation in a developed urban area. Open space has also been shown in several conceptual locations on Figure 4. The location and size of these parks is to be determined and this Plan recognizes the City’s preference for larger park sites. It is expected that municipal reserve will be provided primarily as land in the residential parts of the Plan Area.

A multi-use trail connection will be developed along Campsite Road. This trail connection will link into the regional trail system and Tri Leisure Centre users can travel to the facility without the use of a vehicle. Crossing protection at the Campsite Road/CN Rail crossing will be determined in collaboration with Transport Canada, the City of Spruce Grove and CN Rail.

The Trans Mountain Oil right-of-way will be developed as a pathway as will the portion of the ATCO Gas right-of-way west of the north-south collector road. Other links between park sites will be developed at the subdivision stage.

In general, the developer and the City will determine the exact location, size and function of open space and the use of the municipal reserve entitlement at the redistricting and subdivision approval stages of the development process.
3.10 Land Use Statistics

The following table summarizes the conceptual allocation of land in the Plan Area. The final, detailed distribution of land amongst the categories will occur with the approval of redistricting and subdivision applications.

In commercial developments, the City of Spruce Grove commonly requests cash in lieu of municipal reserve land. Municipal reverse values for the commercial land will be determined and collected at the subdivision stage.

Table 2 Land Use Statistics

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross Area</strong></td>
<td>129.5</td>
</tr>
<tr>
<td>(E½ 32 52-27-W4)</td>
<td></td>
</tr>
<tr>
<td>Environmental Reserve</td>
<td>3.6</td>
</tr>
<tr>
<td>Wayside Campsite</td>
<td>2.6</td>
</tr>
<tr>
<td>CN Railway</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total Developable Land</strong></td>
<td>120.8</td>
</tr>
<tr>
<td>Residential</td>
<td>61.0</td>
</tr>
<tr>
<td>Commercial</td>
<td>36.9</td>
</tr>
<tr>
<td>Special Study Area</td>
<td>10.9</td>
</tr>
<tr>
<td>Municipal Reserve</td>
<td>8.4</td>
</tr>
<tr>
<td>Stormwater Management Facilities</td>
<td>3.6</td>
</tr>
</tbody>
</table>
3.11 Compatibility with Adjacent Land Uses

Commercial development is located along the Highway 16A frontage in the Plan Area and will face existing and proposed commercial development to the north across Highway 16A and to the east across Campsite Road. Complete land use compatibility is expected in these areas.

Commercial uses along Campsite Road will buffer residential land uses to the west from the industrial land uses on the east side of Campsite Road.

Residential uses in the south, central and west parts of the Plan Area will create a critical mass of residential and contribute to a sense among residents of being part of Spruce Grove.

Collector and local roads provide access into the Plan Area. This collector and local road system will be designed to prevent shortcutting through the neighbourhood.

From a socio-economic point of view, the inclusion of medium and high density residential development will provide the opportunity for choice in affordable housing, particularly for young people and newcomers to Spruce Grove.
4.0 SERVICING

4.1 Transportation

As shown on Figure 5 - Servicing Plan, access to the Plan Area will be from the Highway 16A and Campsite Road arterial roadways. North of the railway, roads will be constructed to the City of Spruce Grove’s commercial road standard. South of the railway, two accesses from Campsite Road will be constructed as major collector roadways and provide primary access to the proposed residential development. Minor collector and local residential roads will connect through to individual blocks and lots in the Plan Area. At the Development Agreement and/or the Development Permit stage for any lands fronting on the Campsite Road, the provision of right-in/right-out accesses will be addressed.

Access locations from the Plan Area to Highway 16A and Campsite Road will be determined in consultation with the City of Spruce Grove.

The transportation network will be well integrated with linear parks. This includes sidewalks and boulevard treatments along main roads as well as trail crossings where required. As discussed in Section 3.7 Open Space, a pedestrian link to the Tri Leisure Centre will be developed on Campsite Road along the east side of NE 32.

Roadway connections to Stony Plain will be determined at a later date.

4.2 Water

According to the City of Spruce Grove’s Waterworks Master Plan, the Plan Area is located in Pressure Zone 1. Development will be serviced by the extension of a 250 mm water main located in the Campsite Road right-of-way. The water network will be designed to provide an efficient system with adequate fire flows. Connection points are shown on Figure 5 - Servicing Plan. Residential servicing requirements for water will be determined at the detailed engineering design stage.

4.3 Sanitary Sewer

According to the City of Spruce Grove’s Sanitary Sewerage Master Plan, the Plan Area will be serviced by the extension of a 450 mm trunk sewer from the north across Highway 16A. The connection point is conceptually shown on Figure 5 - Servicing Plan. Residential servicing requirements for sanitary sewer will be determined at the detailed engineering design stage.
4.4 Stormwater Management

Stormwater management for the Plan Area is in accordance with the City of Spruce Grove's Master Drainage Plan (1998). According to that document, no flows from neighbouring properties shall enter the Plan Area and the storm runoff will be controlled by two stormwater management facilities located in its northwest and southwest corners. The site is located in the Atim Creek Drainage Basin and stormwater runoff will ultimately discharge into Atim Creek.

Edmonton Municipal Intensity Duration Frequency (IDF) curves were used to size the minor and major drainage system. Pipes are proposed to convey flows generated from minor storm events. They will be sized such that when flowing full under the 5 year storm event, the hydraulic grade line is at the pipe crown. The pipes will direct flows from developed areas to the stormwater management facilities. The pipe sizes and invert elevations will be determined at the detail design stage.

Major flows above the 1:5 year events, up to and including the 1:100 year storm event will be directed overland through open spaces, lot grading and the road network to the proposed stormwater management facilities. As per Section V.D.1 of the City of Spruce Grove's Municipal Development Standards (April 2006), the discharge rate for the proposed stormwater management facilities is 2.5 L/s/ha.

Due to topography, the Plan Area is divided into two major drainage basins. The north drainage area (approximately 41 ha), which includes the proposed commercial land to the north of the railway and half of the residential lands to the south of the Railway drains to the northwest stormwater management facility. This facility is proposed to be a wet pond with 2 meters of normal water depth. The rest of the Plan Area (approximately 88.5 ha) drains south to the proposed southwest stormwater management facility, which is also a wet pond with a normal depth of 2 meters. The details of these ponds will be finalized in the detailed design stage.

The southwest stormwater management facility is designed to store its proportion (approximately 88.5 ha) of stormwater flows from the 195.8 ha drainage basin shown on the Proposed Master Drainage Plan for Ultimate Development (1998) based on land area. The remaining undeveloped lands (107.3 ha) to the west and south of the Plan Area that form the remainder of the drainage basin, will require the expansion of this stormwater management facility on those lands to manage their own storm water.

Residential servicing requirements for stormwater will be determined at the detailed engineering design stage.
5.0 IMPLEMENTATION

This Area Structure Plan will be implemented through a number of mechanisms, including the Land Use Bylaw, subdivision and development permit approval processes and monitoring.

Generally, development will occur based on market conditions and the logical extension of services as illustrated in Figure 6 - Staging Plan. It is expected that the stormwater management facilities will be constructed with the first stages and that development will tend to move from north to south and from east to west. Deviation from the proposed staging plan will not require an Area Structure Plan amendment.