THE CITY OF SPRUCE GROVE

BYLAW C-932-15

PIioneer lands area structure plan amendment

WHEREAS, pursuant to the Municipal Government Act, R.S.A. 2000, c. M-26, including amendments, a municipality may adopt and amend an area structure plan;

AND WHEREAS, the City of Spruce Grove wishes to amend Bylaw C-686-08, the Pioneer Lands Area Structure Plan, as amended;

NOW THEREFORE, the Council for the City of Spruce Grove, duly assembled, hereby enacts as follows:

1. Bylaw C-686-08, the Pioneer Lands Area Structure Plan, be amended as outlined in Schedule 1 which is attached to and forms part of this bylaw.

This bylaw shall come into force and effect when it receives third reading and is duly signed.

First Reading Carried 26 October 2015
Public Hearing Held 23 November 2015
Second Reading Carried 23 November 2015
Third Reading Carried 26 September 2016
Date Signed 3 October 2016

__________________________
Mayor

__________________________
City Clerk
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1 Background

The Pioneer Lands Area Structure Plan (ASP) was originally approved in February 2009 as Bylaw No. C-686-08 to guide development in the north portion of the annexation lands in the City of Spruce Grove.

Since the adoption of the Pioneer Lands ASP in 2009, the plan has been amended three times to accommodate the changing needs of the community. A first amendment to the ASP was approved on June 28, 2010 as Bylaw C-745-10, which reconfigured the collector road and land uses for Phase 1 of Greenbury. A second amendment to the ASP was approved on November 14, 2011 as Bylaw C-797-11, which created a “Special Study Area” to add a major commercial and mixed use component in the northwest portion of the plan area. A third amendment was approved on March 25, 2013 as Bylaw C-837-13, which updated the development concept as a result of more detailed review of land uses and adjusted the mixed-use designation in the Westwind Village area.

The approved development concept for the Pioneer Lands ASP is included as Exhibit 1.

1.1 Amendment

This proposed amendment to the Pioneer Lands ASP continues to follow the vision and guiding principles developed to create a smart-green community as approved in the ASP.

The primary purpose of this amendment is to update the overall concept plan to reflect recent detailed planning and engineering resulting in several amendments as described below.

Amendments to the Prescott portion of the Pioneer Lands ASP include:

≠ redesignation of the southeast plan area from Level 2 (medium to high density residential) to Level 1 (low to medium density residential);
≠ addition of a community park (class C) adjacent to the future collector road;
≠ addition of a greenway at the east end of Grove Drive and the removal of the potential future extension of Grove Drive to the east;
≠ update the designation of Grove Drive east of Pioneer Road from an arterial to a collector road standard;
≠ reconfiguration of the district park site north of Prescott Boulevard;
≠ addition of a greenway between the two approved Level 2 (medium to high density residential) sites;
≠ the neighbourhood commercial site is proposed to be increased from 0.70 hectares to 0.85 hectares;
≠ redesignation of the area northeast of Prescott Boulevard from Level 1 (mixed low to medium density residential) to parks and open space to accommodate the existing tree stand;
≠ removal of the linear park north east of Prescott Boulevard, which was previously proposed to connect to the existing tree stand;
≠ reduction of the south storm water management facility; and
≠ reduction of the approved Level 2 (mixed medium to high density residential) site east of the Pioneer Road roundabout.

Amendments to the Kenton portion of the Pioneer Lands ASP include:
≠ redesignation of the northeast area of Kenton from Level 1 (mixed low to medium density residential) and parks/open space to Level 2 (mixed medium to high density residential);

Additional amendments to the Greenbury portion of the Pioneer Lands ASP include:
≠ redesignation of the area west of the proposed Pioneer Road roundabout from Level 1 (mixed low to medium density residential) to Level 2 (mixed medium to high density residential);
≠ reduction in the amount of stormwater management facilities;
≠ redesignation of the existing Pioneer Road government road allowance north of the proposed Pioneer Road roundabout, from parks and open space to public utility lot to accommodate a sanitary trunk;
≠ adjustment to the shape of the north school site at the end of Pioneer Road;
≠ reconfiguration of the neighbourhood park northeast of Vanderbilt Common; and
≠ update sequencing of phases for the ASP.

Amendments to the Westwind portion of the Pioneer Lands ASP include:
≠ 0.60 ha reduction of commercial along the east boundary of Westwind, with the realignment of the public utility lot.

2 Location and Context

The proposed amendments to the Pioneer Lands ASP are located throughout the plan area east of Century Road and north of Grove Drive.

The proposed amendments and updates to the plan affect the NE ¼ 11-53-27-4, NW ¼ 12-53-27-4 and SW ¼ 12-53-27-4 quarter sections. These lands are part of the Kenton, Greenbury, Prescott and Westwind neighbourhoods.
An air photo of the ASP area is included as Exhibit 2 – Aerial Photo. This photo was taken in September 2013 and shows that the adjacent Spruce Village neighbourhood has reached full build out. Jubilee Park is located southwest of Pioneer Lands and is developed as a regional park destination. Several stages within Greenbury have been fully constructed with development continuing to the north. Development in Prescott has begun with several stages approved including a new school site. Two stages of development are built in Kenton with future stages planned to the north.

The adjacent Pioneer East Area Structure Plan was approved in May of 2013 and lies south of Grove Drive. This amendment to the Pioneer Lands ASP aligns with the approved plans of the Pioneer East ASP development concept.

2.1 Land Ownership

IBI Group is applying for this amendment to the Pioneer Lands ASP on behalf of the participating landowners, Beaverbrook Pioneer Ltd, Beaverbrook Kenton Ltd. and Westwind Developments Ltd.

3 Policy Context

This proposed ASP amendment describes the land uses, density of development, location of major roads and utilities and the proposed sequence of development in accordance with the City of Spruce Grove “Area Structure Plan Guidelines”.

The ASP amendment adheres to the guidelines of the following bylaws and policies.

3.1 Municipal Development Plan

The City's Municipal Development Plan ‘Your Bright Future’ was approved as Bylaw C-668-07 on July 12, 2010.

This proposed amendment is in general conformance with the City of Spruce Grove Municipal Development Plan (MDP).

The proposed Pioneer Lands ASP amendment corresponds with the following goals, objectives and policies of Section 4 – Environmental Management and Section 5 – Form and Infrastructure within the MDP.

5.2.2.1 Integrate a variety of housing types and densities to create diverse streetscapes in neighbourhoods and increase diversity in the housing stock.

An amendment to the area north of the intersection of Westwind Drive and the north/south collector proposes to introduce a medium to high density residential site into the community. This will provide opportunities to create diversity in the housing stock and streetscape by mixing low density residential and medium density housing along the collector road.

5.5.1.1 Locate new park areas so it takes advantage of and maximizes the catchment area of the community and meets the standards for provisions as identified in the Parks and Open Space Master Plan.
This amendment proposes to add three linear parks throughout the Pioneer Lands ASP. These linear parks offer linkages from adjacent residential areas to activity nodes such as the proposed park site in west Greenbury, increasing the accessibility of parks within the neighbourhood.

A pocket park is added in the Prescott neighbourhood to provide a focal amenity for local residents.

6.2.1.1 Develop Gateway Lands with a focus on regional service and commercial uses, integrated land use development, multi-modal transportation access, and innovative compact high quality design as discussed in Section 5.4 – Form and Infrastructure: Gateway Lands that services primarily a regional base but also draws local users.

The Westwind commercial area is strategically located along Century Road and Highway 16 to serve both local residents and regional users providing opportunities to cluster high density housing adjacent to commercial uses and major roadways.

3.2 Capital Region Growth Plan

This amendment maintains the population and employment projections of the Capital Region Growth Plan. The proposed amendments result in minimal change to the residential densities, the plan still maintains the density target range of 25-30 units per net residential hectare set by the Capital Region Board.

3.3 The City of Spruce Grove Parks & Open Space Master Plan

The City of Spruce Grove’s Parks and Open Space Master Plan was approved by Council on March 26, 2007. This document guides the development of parks, open space and outdoor recreation facilities in the City of Spruce Grove.

All amendments and updates to school and park sites throughout the ASP area continue to follow the principles of the Open Space Master Plan.

3.4 The City of Spruce Grove Land Use Bylaw No. C-824-12

The City of Spruce Grove’s Land Use Bylaw C-824-12 contains zoning regulations and land use standards to control the development of land.

The proposed ASP amendments comply with the regulations in the City’s Land Use Bylaw, C-824-12.

Redistricting and subdivision applications will be submitted separately from this amendment.
4 Development Concept

4.1 Vision

The vision for Pioneer Lands is to create a sustainable residential community, which integrates with the regional commercial centre, providing opportunities for vibrant streetscapes with convenient links to open space amenities.

The amendment to the Pioneer Lands ASP is consistent to the vision and guidelines approved in the previous amendment (Bylaw C-837-13), which further enhances opportunities for connections between residents, neighbourhood focal points, and amenities.

4.2 Land Use Concept

The proposed Land Use Concept for the amendment area is presented as Exhibit 3 and proposed Land Use and Population Statistics are presented as Exhibit 4.

The following provides a brief description and rationale for the land use amendments proposed for the Pioneer Lands ASP.

4.2.1 Residential

The proposed residential development comprises approximately 55% of the Gross Developable Area (GDA), with a planned yield of 4,333 residential units and a population of 12,656 residents. The overall mix of residential densities shall yield approximately 27.8 units per net residential hectare. The proposed amendment has minimal change to the overall density of the approved ASP raising it from 27.5 units per net residential hectare.

The residential land uses for this amendment reflect MDP policy 5.2.2.2, which states residential densities are split into two categories being Level 1 (a mix of low to medium density residential) and Level 2 (a mix of medium to high density residential).

The Area Structure Plan, at full build out, is projected to provide approximately:

≠ 3,644 Low to Medium Density Residential Units;
≠ 689 Medium to High Density Residential Units;

4.2.1.1 Kenton

The ASP amendment proposes to introduce a medium to high density residential site at the corner of Westwind Drive and the future north/south collector, which will be complimentary to the proposed Westwind commercial area. The proposed location of the multi-family site in proximity to commercial uses will provide commercial businesses with a local customer base with access to convenient shopping and services.

4.2.1.2 Prescott

The east extension of Grove Drive is no longer proposed as a future road connection. Removing this extension will eliminate the exposure of the multi-family residential site to collector level traffic and transit routes. As a result, it is not advantageous to locate the multi-family site at the
## Exhibit 4
Pioneer Lands ASP Amendment - Proposed Land Use Statistics

<table>
<thead>
<tr>
<th>Land Use</th>
<th>GDA (ha)</th>
<th>% of GDA</th>
<th>Units/ha</th>
<th>Units</th>
<th>Pop/Unit</th>
<th>Pop.</th>
</tr>
</thead>
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<tr>
<td>Low to Medium Density Residential</td>
<td>145.76</td>
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<td>25.0</td>
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<td>10,932</td>
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<tr>
<td>Medium to High Density Residential</td>
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<td><strong>Total Residential</strong></td>
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<td><strong>55.4%</strong></td>
<td><strong>27.8</strong></td>
<td><strong>4,333</strong></td>
<td><strong>12,656</strong></td>
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<tr>
<td>Westwind Commercial</td>
<td>19.06</td>
<td>6.8%</td>
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<td>Stormwater Management Facilities</td>
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<td>Public Utility Lot</td>
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<td>Collector Roads</td>
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<td>6.8%</td>
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<td><strong>Total Non Residential</strong></td>
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<td><strong>44.6%</strong></td>
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<td><strong>Gross Developable Area</strong></td>
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<td>Pipeline</td>
<td>1.24</td>
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<td>Arterial Road (Grove Drive)</td>
<td>1.35</td>
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<tr>
<td><strong>Total Gross Area</strong></td>
<td><strong>284.20</strong></td>
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</tbody>
</table>

* The MR in Gateway Lands portion of the ASP was dedicated with the original subdivision. The 10% MR required for the remaining GDA in Pioneer Lands is 22.7 ha.
approved location, as there is no longer direct access onto a major roadway. Therefore, the multi-family site is proposed to be removed from the southeast area of Prescott through redesignation from Level 2 (medium to high density residential) to Level 1 (low to medium density residential).

An amendment to the ASP proposes to add a medium to high density residential site in the northeast area of Prescott adjacent to the approved Level 2 (medium to high density residential) site. The proposed multi-family site has access to the collector road.

4.2.1.3 Greenbury

The lands west of Pioneer Road are proposed to be redesignated from Level 1 (low to medium density residential) to Level 2 (medium to high density residential). The proposed multi-family site is situated near the future school site and along a collector road to encourage and support future transit use through the allocation of higher residential densities.

4.2.2 Commercial

This amendment proposes a 0.60 ha decrease in the east area of the Westwind commercial lands described in the approved ASP. The proposed changes are to accommodate additional stormwater management capacity required to service the community. The realignment of the public utility lot provides a direct view and pedestrian linkage to the collector to the south, creating an appropriate transition of uses from commercial to residential.

The neighbourhood commercial site adjacent to Grove Drive in Prescott is proposed to increase in size to accommodate more efficient layout of commercial uses and to fit with the surrounding development. The neighbourhood commercial site is proposed to increase from 0.70 hectares to 0.85 hectares. This is not a significant amendment to the commercial lands in this ASP.

4.2.3 Open Space

The land parcels in the Westwind area have already fulfilled the obligation under the Municipal Government Act to dedicate or pay cash-in-lieu for municipal reserves totalling 10% of Gross Developable Area with the original subdivision of the lands. The park dedication included in those lands reduces the dedication required within Greenbury, Prescott and Kenton.

The park spaces have been reorganized to respond to the layout and configuration of more detailed planning. One additional pocket park and three greenways have been incorporated into the plan as a part of the proposed amendment to the ASP.

The types of parks in the Pioneer Lands ASP are identified in Exhibit 5 - Transportation, Parks, & Open Space.

A pocket park is proposed in the southeast area of the Prescott neighbourhood. The park space is configured to provide collector road frontage for visibility and neighbourhood surveillance as well as provide a more localized recreational opportunities for nearby residents.
PIONEER LANDS AREA STRUCTURE PLAN AMENDMENT
Transportation and Open Space Plan
Exhibit 5
Three greenways have been added to the ASP to enhance pedestrian connectivity within the neighbourhood. The first greenway is proposed as a link for pedestrians and cyclists between Greenbury and Kenton. The greenway is part of a continuous series of parks and open spaces stretching from the future school site in the east to the pocket park and commercial land uses in Westwind Village.

A second greenway has been added to the southeast boundary of the Prescott neighbourhood. This greenway creates an important link for pedestrians joining the two neighbourhoods and replaces a potential road connection that was anticipated to the east.

The third greenway is proposed in the Prescott neighbourhood as a pedestrian linkage from Pioneer Road between the two medium density residential sites. The greenway will provide a public amenity connecting nearby residents to the park site in the central area of the Prescott neighbourhood.

The open spaces proposed are consistent with the City of Spruce Grove’s Parks and Open Space Master Plan, which defines seven categories of open space. The linear greenways introduced as part of the ASP amendment fall under category ‘E’, which are classified as linear systems, green corridors, paths, and streets. The pocket park proposed in Prescott falls under category ‘C’, which is classified as amenity green spaces, neighbourhood parks and civic spaces. This park provides an important amenity visible from the collector road and forming part of the dispersed park system.

This amendment proposes to redesignate the old Pioneer Road government road allowance from parks and open space to the public utility lot designation. A sanitary trunk was installed in this location in 2014 and continues south under Pioneer Road.

Enhanced pedestrian linkages have been added throughout plan area as identified in Exhibit 5. Enhanced pedestrian linkages may provide opportunities to integrate the proposed multi-use trail system with other pedestrian corridors to strengthen connections to neighbourhood amenities such as stormwater ponds, parks and school sites.

Key pedestrian connections have been integrated throughout the plan area between various parks, school sites, storm ponds and open spaces. Key pedestrian connections provide linkages between major parks and open space amenities through the use of sidewalks or pathways, but do not required enhanced infrastructure.

A walkability plan shall be prepared at the subdivision level of planning to indicate the types of sidewalks, important pedestrian connections, and opportunities for alternate road cross sections, such as, sidewalks on one side of the road or enhanced pedestrian corridors.

Overall, the amount of Municipal Reserves owing in the ASP is 22.7 hectares, accounting for 10% of the Gross Developable Area on the lands owing municipal reserves.

### 4.2.4 Transportation System

Collector roads are designed to provide efficient movement for local traffic and transit routes throughout the various sub-neighbourhoods of the Pioneer Lands ASP.

The ASP has been updated to include changes to the overall transportation network. The north-south collector road connecting Grove Drive to Prescott Boulevard has been updated to align with the transportation network approved for the Pioneer East ASP.
The east portion of Grove Drive is no longer proposed as a future road extension east into Parkland County. In accordance with the Transportation Master Plan, this amendment also updates the designation of Grove Drive from an arterial to collector road standard east of Pioneer Road. Grove Drive is proposed to terminate at the intersection of the future collector road connecting south to the Pioneer East ASP and north to the Prescott neighbourhood.

5 Servicing

The servicing concepts are updated and graphically presented in Exhibit 6 – Servicing Concept.

5.1 Water

Water services will follow the alignment of the collector roads in the amendment area and connect to existing services in Spruce Village and Greenbury.

5.2 Stormwater Drainage

To initiate detailed level subdivision design, the amendment proposes to reconfigure the respective stormwater management ponds within Greenbury and Prescott. The stormwater management facilities will be designed to accommodate a 100 year storm event.

Through engineering review of the grading, it has been determined that the approved storm pond sizes were larger than required for the anticipated stormwater capacity requirements. As part of the proposed amendment, the respective storm ponds in the Greenbury and Prescott neighbourhoods were reconfigured and reduced to allow for efficient stormwater management, while providing functional community amenities.

There is an existing unnamed creek traversing the south east portion of the plan area in the SE ¼ section. This creek will be integrated within a stormwater management facility, which will be designed to control runoff from the area and allow flow through of runoff from upstream catchments.

The details of the stormwater management system will be included in the Stormwater Management Plan and reviewed through coordination with the City of Spruce Grove, Alberta Environment, and Alberta Sustainable Resources Development.

The City of Spruce Grove is in the process of obtaining approvals from Alberta Environment and Sustainable Resources Development (AESRD) for the mitigation of the existing wetlands south of Highway 16 (Yellowhead Trail). No claim to the bed and shore was made under the Public Lands Act.

5.3 Sanitary

As shown in Exhibit 6 – Servicing Concept, this amendment does not significantly change the sanitary system proposed in the approved Pioneer Lands ASP. Updates to Exhibit 6 – Servicing Concept, illustrates where sanitary has been installed to-date.
LEGEND

- Existing Water Pipe
- Proposed Water Pipe
- Existing Sanitary Sewer
- Proposed Sanitary Sewer
- Existing Surface Drainage Course
- Proposed Storm Connection
- Proposed Storm Sewer
- Existing Storm Sewer
- ASP Boundary
- Storm Management Facility
- Meridian PUL
- Public Utility Lot (PUL)
6 Phasing

The proposed general phasing of development is included as **Exhibit 7 – Phasing Plan**. The southwest parcel of commercial in Westwind is likely the first phase of commercial development, providing retail and services for local residents.

Residential development in Greenbury is progressing north in a logical sequence of infrastructure construction. Prescott development continues in an eastward direction from the school site. Kenton residential development shall continue to the north.

7 Implementation

The proposed plan will be implemented through applications for redistricting and subdivision as per the City of Spruce Grove Bylaws and Standards.
CITY OF SPRUCE GROVE

BYLAW C-837-13

PIONEER LANDS AREA STRUCTURE PLAN AMENDMENT

WHEREAS, pursuant to the Municipal Government Act, R.S.A. 2000, c. M-26, including amendments, a municipality may adopt and amend an area structure plan,

AND WHEREAS, the City of Spruce Grove wishes to amend Bylaw C-686-08, the Pioneer Lands Area Structure Plan, as amended,

NOW THEREFORE, the Council for the City of Spruce Grove, duly assembled, hereby enacts as follows:

THAT, the Pioneer Lands Area Structure Plan be amended as outlined in Schedule 1 which is attached to and forms part of this Bylaw,

The proposed area structure plan amendment includes changes to the Development Concept map and the land use statistics.

This bylaw comes into force and effect when it receives third reading and is duly signed.

First Reading Carried 25 February 2013

Public Hearing Held 25 March 2013

Second Reading Carried 25 March 2013

Third Reading Carried 25 March 2013

Date Signed MAR 28 2013

Signed by City of Spruce Grove Mayor and City Clerk
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<td>7.0</td>
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1.0 BACKGROUND

The Pioneer Lands Area Structure Plan (ASP) was originally approved in February 2009 as Bylaw No. C686-08 to guide development in the north portion of the annexation lands. An amendment to the ASP was approved on November 14, 2011 as Bylaw C-797-11. This amendment defined the concept plan and design guidelines for the Gateway Lands.

The approved Development Concept for the Pioneer Lands ASP is included as Exhibit 1.

1.1 Amendment

This proposed amendment to the Pioneer Lands ASP continues to follow the vision and principles as presented in the approved ASP Bylaw 797-11.

The primary purpose of this amendment is to perform a graphic update to the approved Development concept as a result of more detailed review of the land uses.

A secondary purpose is to update the naming of neighbourhood areas to be consistent with the marketing intentions for the Pioneer Lands and promoting a sense of place and belonging for residents.

The neighbourhod names have been added to Exhibit 3 – Land Use Concept. “Westwind” replaces “Gateway Lands”, and “Westwind Village” replaces “mixed-use urban village” in the exhibits and following text of the Report.

Proposed amendments to the Pioneer Lands ASP include:

- a reconfiguration of the Westwind Village open space;
- redesignation of mixed-use to commercial and residential uses;
- reduction in the size of the commercial site on Pioneer Road with redesignation of the north half to medium to high density residential; and
- update of servicing Exhibit 7 to show existing services.

The proposed updates to this ASP do not change the vision and guidelines approved in the previous amendment.
2.0 LOCATION & CONTEXT

The proposed amendments to the Pioneer Lands Area Structure Plan affect the land uses in Westwind Village and the commercial site on Pioneer Road.

Neighbourhood names have been added to the ASP to define areas of development, including Westwind, Westwind Village, Kenton, Greenbury and Prescott.

Westwind consists of the commercial portions of the area formerly referred to as Gateway Lands along Highway 16 and Century Road. Westwind Village is an area of integrated Residential and commercial uses located within Westwind and outlined in Exhibit 3 – Development Concept.

Kenton is the residential portion of the Gateway Lands, located adjacent to Westwind. Kenton and Westwind are undergoing development simultaneously and are connected through pedestrian greenways, roadways and a central park site. The two areas interface along a north/south collector road on the east side of Westwind Village.

Greenbury began development north of Grove Drive and east of Jubilee Park and continues to develop with several stages currently under construction. There are a mix of single-detached, semi-detached and townhouses built today, which were developed under the Greenbury Mixed Residential (GMR) District. The GMR district was the basis for the recently adopted new Land Use Bylaw. Greenbury continues to be a benchmark for sustainable design and innovation in land development for the region.

Prescott is located north of Grove Drive and east of Pioneer Road. The first stage of redistricting was approved by Council in 2012 marking the first residential neighbourhood in Spruce Grove to be developed east of Pioneer Road.

2.1 Land Ownership

IBI Group is applying for this amendment to the Pioneer Lands ASP on behalf of the participating owners and private developers of the subject lands.
3.0 POLICY CONTEXT

This proposed ASP amendment describes the land uses, density of development, location of major roads and utilities and the proposed sequence of development in accordance with the City of Spruce Grove “Area Structure Plan Guidelines”.

The ASP amendment adheres to the guidelines of the following bylaws and policies.

3.1 Municipal Development Plan

The City’s Municipal Development Plan ‘Your Bright Future’ was approved as Bylaw C-668-07 on July 12, 2010.

This amendment continues to follow the goals, objectives and policies of the MDP as described in the previous amendment. Below are updates to the MDP policies from the previous amendment.

5.4.1.2 Include a community level gathering place, medium to high density residential development, and a regional park-and-ride for transit in Gateway Lands.

The Westwind Village Park site is reconfigured to include more frontage on the collector road, creating a more inviting space to act as a central meeting place for the residential and commercial uses. Where feasible, this park site will provide opportunities to retain a portion of the existing tree stand and for residents to gather in usable park space. This new configuration will give better opportunity for commercial uses to address the park with the possibility of patios or plazas.

Westwind Village continues to be planned as a horizontal mix of commercial and residential uses that are complementary to each other and integrated through designated pedestrian walkways and open space. A redistricting application has been submitted for the residential site to be R2 (Medium to High Density Residential) district and is circulating concurrently with this proposed ASP amendment.

The remaining residential lands in Kenton shall continue to be developed as low to medium density residential uses, consistent with the R1 district in the Land Use Bylaw.

There are no further details on a new transit facility, but the Westwind area continues to be a logical place for Spruce Grove Transit to install a transit facility to service the area and provide a major link to the regional transit system connecting to the City of Edmonton.

Policies 6.1.1.5 Promote appropriate increases to residential densities to support commercial development at a neighbourhood and city-wide level.

The MDP states in 5.2.2.2 that residential densities will be split into Level 1 and Level 2. Level 1 residential provides opportunities for a mix of street oriented townhouses, duplex, and single-family homes. This policy has been implemented through the adoption of the R1 district in the Land Use Bylaw.

Applying broader land use categories allows greater flexibility in types of housing to be developed. The net residential density will meet or exceed the minimum requirements set by the Capital Region Board.
Objective 6.2.2 Provide opportunities for mixed use development to occur in the City Centre and the Urban Village and for integrated land use development to occur in Gateway Lands as identified on Figure 8: Future Land Use.

The mixed residential housing forms of the R1 district provide opportunities for higher density than conventional low density residential districts and will access commercial uses through designated pedestrian routes with marked and signed crossings of roadways. An R2 medium to high density residential site is proposed to be well connected and integrated within Westwind Village. This residential site would be complementary providing a supply of consumers, neighbours and potential employees for the commercial uses.

Westwind Village shall provide integrated land uses through horizontal integration of residential, open space and commercial uses. This shall be achieved through the provision of pedestrian connections and through implementation of the Westwind Village design guidelines described in the approved ASP.

Policies 6.2.2.3 Apply high standards of community design to increase the pedestrian orientation and enhance the overall aesthetics of mixed use areas and integrated land use development areas, including:

- building orientation and presentation on the site;
- scale of buildings;
- site signage;
- site landscaping;
- site lighting;
- development relationship to the street;
- building facades;
- sidewalks/trail connections;
- informal seating areas;
- parking areas; and
- bus stops and/or hubs.

The Pioneer Lands ASP contains design guidelines that deal with the items listed above to help achieve integration of commercial and residential land uses.

3.2 Capital Region Growth Plan

This amendment maintains the population and employment projections of the Capital Region Growth Plan. The overall neighbourhood projections maintain a minimum 25 units per net residential hectare.

3.3 The City of Spruce Grove Parks & Open Space Master Plan

The City of Spruce Grove Parks and Open Space Master Plan was approved by Council on March 26, 2007. This document guides the development of parks, open space and recreation facilities in the City of Spruce Grove. This proposed amendment continues to follow the principles of the Open Space Master Plan.
3.4 The City of Spruce Grove Land Use Bylaw No. C-824-12

The City of Spruce Grove Land Use Bylaw C-600-06 was replaced by a new Land Use Bylaw 824-12 effective January 1, 2013. The current district for the amendment area is UR – Urban Reserve.

Districting for this area will use the new residential and commercial districts adopted in the new Land Use Bylaw.

An application to redistrict and subdivide a medium to high density site within Westwind Village has been submitted concurrently with this proposed amendment to the ASP.
4.0 DEVELOPMENT CONCEPT

4.1 Vision

The vision for Gateway Lands as described in the Pioneer Lands ASP is of a regional commercial center providing opportunities for shopping and employment, while integrating with a compact residential community creating vibrant streetscapes with convenient links to open space amenities.

This amendment maintains this vision.

4.2 Land Use Concept

The proposed Land Use Concept for the amendment area is presented as Exhibit 3 and the proposed Land Use and Population Statistics are presented as Exhibit 4.

The following provides a description and rationale for the land use amendments proposed for the Pioneer Lands ASP.

4.2.1 RESIDENTIAL

Proposed residential development comprises approximately 56% of the Gross Developable Area (GDA), with a planned yield of 4,366 units and a population of 12,751 residents. The overall mix of residential densities shall yield approximately 27.7 units per net residential hectare.

The residential land uses for this amendment reflect the MDP policy 5.2.2.2 that states residential densities are split into two categories, Level 1 and Level 2. These categories are reflected in the new Land Use Bylaw which include R1 (low to medium density) and R2 (medium to high density residential).

This amendment proposes to add a medium to high density residential site in the southeast adjacent to Pioneer Road and the future commercial site. This location is appropriate for medium to high density uses due to its proximity to the arterial roads, ample open space opportunities, and to help support the future commercial site.

The Area Structure Plan, when fully developed, is projected to provide approximately:

- 3,674 Low to Medium Density Units;
- 692 Medium to High Density Residential Units.

Where appropriate, housing along major collector roads will be oriented to address the street through the use of rear lanes. The intent is to create streetscapes that are inviting for pedestrians and motorists alike, creating a vibrant atmosphere. This street-orientation provides visual interest for street users and surveillance by neighbours.

Stage 1 of the development was approved as street-oriented laned housing and is currently under construction.

4.2.2 COMMERCIAL

This amendment does not affect the type or scale of commercial uses described in the approved ASP. The commercial area along the north boundary of the neighbourhood is planned to act as a
### Exhibit 4
Pioneer Lands ASP Amendment - Proposed Land Use Statistics

<table>
<thead>
<tr>
<th>Land Use</th>
<th>GDA (ha)</th>
<th>% of GDA</th>
<th>Units/ha</th>
<th>Units</th>
<th>Pop/Unit</th>
<th>Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low to Medium Density Residential</td>
<td>146.94</td>
<td>52.5%</td>
<td>25.0</td>
<td>3,674</td>
<td>3.0</td>
<td>11,021</td>
</tr>
<tr>
<td>Medium to High Density Residential</td>
<td>10.33</td>
<td>3.7%</td>
<td>67.0</td>
<td>692</td>
<td>2.5</td>
<td>1,730</td>
</tr>
<tr>
<td><strong>Total Residential</strong></td>
<td><strong>157.27</strong></td>
<td><strong>56.2%</strong></td>
<td><strong>27.5</strong></td>
<td><strong>4,366</strong></td>
<td><strong>12,751</strong></td>
<td></td>
</tr>
<tr>
<td>Westwind Commercial</td>
<td>19.32</td>
<td>6.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbourhood Commercial</td>
<td>0.70</td>
<td>0.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parks and Recreation (MR)*</td>
<td>22.00</td>
<td>7.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stormwater Management Facilities</td>
<td>25.71</td>
<td>9.2%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Roads</td>
<td>38.11</td>
<td>13.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collector Roads</td>
<td>16.70</td>
<td>6.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Non Residential</strong></td>
<td><strong>122.54</strong></td>
<td><strong>43.8%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net Developable Area</strong></td>
<td><strong>279.81</strong></td>
<td><strong>100.0%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipeline</td>
<td></td>
<td></td>
<td></td>
<td>1.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arterial Road (Grove Drive)</td>
<td></td>
<td></td>
<td></td>
<td>3.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Area</strong></td>
<td><strong>284.20</strong></td>
<td></td>
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</tr>
</tbody>
</table>

*The MR in Gateway Lands portion of the ASP was dedicated with the original subdivision. The 10% MR required for the remaining GDA in Pioneer Lands is 22 ha.*
regional destination point for consumers providing access to a variety of commercial and business uses. The high visibility of the commercial lots along Highway 16 will help boost Spruce Grove’s regional appeal as a business and shopping destination. The area will act as a major employment node, reducing commute times for people living in Spruce Grove that may have alternatively driven to surrounding communities for work.

The first stage of commercial lands located on Century Road has been redistricted to C2 – Vehicle Oriented Commercial district as the first phase of commercial development in Westwind. This site will provide opportunities for retail and services to local residents.

The commercial area will be well connected by the neighbourhood walkway system providing designated convenient linkages for pedestrians and cyclists. As shown in Exhibit 5 – Westwind Village, there are opportunities for access to the site from all sides, creating an open and inviting atmosphere.

Another amendment to commercial uses is proposed for the future site on Pioneer Road.

Through experiences with the development of other neighbourhood commercial sites, it is determined that the size of the commercial site on Pioneer Road is too large. This amendment proposes reducing the size of the site from 1.6 ha to 0.7 ha, which is more appropriate to the scale of neighbourhood commercial development anticipated for this area.

4.2.3 WESTWIND VILLAGE

Westwind Village measures approximately 4 hectares and accommodates a horizontal mix of retail and residential uses. An updated conceptual plan for the area is included as Exhibit 5 – Westwind Village Concept, showing general pedestrian connections and orientation of uses.

4.2.3.1 Integration & Connectivity

Opportunities to provide convenient connectivity for residents of Kenton remain a priority for the plan with greenway connection to the east from a central open space park.

With horizontal integrated uses, commercial and residential buildings are located separately, but in close proximity to one another. This arrangement of uses is desirable to reduce the potential for conflicts between users, such as, parking access and loading zones, while providing residents access to retail within a short walking distance and supplying retailers with a local supply of consumers and employees.

In Westwind, a complementary relationship between retail and residential uses will create opportunities to work and live within a compact community. The location of Westwind Village allows for connection to the community walkway system allowing for seamless integration with the surrounding residential communities of Kenton and Spruce Village.

Westwind Village shall be designed to encourage pedestrian interaction along efficient pedestrian walkways and connections, helping to create a vibrant street life. Detailed design of the site shall be presented in a development permit application.

The mix of uses within a compact area helps to ensure the continuous use of public spaces throughout the day. While many residents are away at work during the day, consumers and employees will continue to frequent public spaces. This shall create a continuous passive surveillance system and promote a sense of security and belonging among residents.
4.2.3.2 Streetscape

Westwind Village will have a pedestrian scale street presence with opportunities to access walkways into the site from all sides. The streetscape will be enhanced through application of a unifying theme and implementation of architectural design guidelines. Specific size, shape, and orientation of residential and commercial buildings will be determined at development permit.

The vehicular accesses to the site were reviewed with a Traffic Impact Assessment performed by Bunt Engineering and was submitted to City administration under separate cover. The access locations recommended under this study are shown on Exhibit 5. It was determined that the north access to the site is limited to right-in/right-out. In order to provide sufficient vehicle access to the commercial, the north residential mixed-use site was removed and the commercial site was expanded, providing an all-directional access to the east onto the adjacent collector roadway.

The northeast corner of the site is better suited to commercial uses due to its high visibility and exposure to the main collector road.

4.2.3.3 Urban Design

High quality urban design in Pioneer Lands shall continue to be addressed through the provision of connected walkways, preservation of treed areas within public open space and/or private yards, visually interesting streetscapes, and the integration of stormwater management facilities and public open spaces into the community.

The following table lists urban design concepts and how they will be applied to Westwind Village.

These were approved with Bylaw C-797-11. Proposed adjustments to the guidelines for this amendment are shown in red.

**Urban Village Design Guidelines**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Guideline</th>
<th>Application within Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Connectivity</td>
<td>1.1 Provide convenient links for pedestrians, cyclists, motorists, and transit users between neighbourhood focal points and amenities.</td>
<td>1.1.1 Provide accesses around the perimeter of the urban village with clear distinction between internal roads and walkways.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.2 Provide several opportunities for pedestrian and vehicular access to the site at regular intervals from the surrounding roadways.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.3 Provide connections from the community and to/from neighbourhood amenities and focal points with greenways, multi-use trails, or sidewalks.</td>
</tr>
<tr>
<td>2. Integration</td>
<td>2.1 Integrate the internal uses in a complementary fashion.</td>
<td>2.1.1 An internal main street will be developed where commercial and residential usage co-exist.</td>
</tr>
<tr>
<td>Concept</td>
<td>Guideline</td>
<td>Application within Gateway</td>
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<tr>
<td></td>
<td><strong>Concept</strong></td>
<td><strong>Guideline</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.1.1 Connections between residential and commercial uses will be accommodated through marked pedestrian crossings.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.1.2 Orient buildings to maximize active use of the public spaces, such as locating outdoor patios for restaurants and cafes near main thoroughfares.</td>
</tr>
<tr>
<td></td>
<td>2.2 Integrate commercial and mixed residential uses with the surrounding community.</td>
<td>2.2.1 The surrounding community will have strong multi-use trail linkages and greenways providing attractive and convenient links between neighbourhood amenities and focal points.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.2.2 Incorporate 360 degree facades for retail where access is provided from internal parking areas and buildings address the public street.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.2.3 Opportunities for “reverse housing” where houses front onto greenways will be explored at more detailed levels of planning.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.2.4 Multi-use linkages are provided through linear ponds, linear greenways, and in some cases along major street linkages to connect neighbourhood amenities, such as, the Gateway Westwind commercial area, the mixed use urban Westwind Village, Jubilee Park, future potential school sites, and open space opportunities.</td>
</tr>
<tr>
<td>3. Sense of Place</td>
<td>3.1 Use appropriate signage to clearly identify uses within the urban Westwind Village.</td>
<td>3.1.1 Integrate signage into the architecture of buildings.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.1.2 Use signage that is clearly visible at pedestrian and</td>
</tr>
<tr>
<td>Concept</td>
<td>Guideline</td>
<td>Application within Gateway</td>
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</tr>
<tr>
<td></td>
<td>vehicular scale.</td>
<td>3.1.3 Place signage perpendicular to shop fronts at a pedestrian scale.</td>
</tr>
<tr>
<td></td>
<td>3.1.4 Avoid visual clutter from signs.</td>
<td>3.1.4 Use entry features to give names to areas.</td>
</tr>
<tr>
<td>3.2</td>
<td>3.2.1 An architectural and landscape theme for the mixed use urban Westwind Village will be described and implemented through architectural design guidelines.</td>
<td>3.2.2 Landmarks shall be located at strategic points on the site to enhance local place making.</td>
</tr>
<tr>
<td>Arrangement of Internal Uses</td>
<td>4.1 Reduce the impacts of incompatible uses.</td>
<td>4.1.1 Arrange and buffer residential areas and public gathering spaces from high traffic areas and incompatible uses to reduce the impact of noise and visual irritants.</td>
</tr>
<tr>
<td></td>
<td>4.1.2 Orient commercial loading zones away from residential uses, outdoor patios and public open spaces.</td>
<td>4.1.3 Use landscape and fencing to screen waste disposal and storage areas from sight lines of residential areas and pedestrian walkways.</td>
</tr>
<tr>
<td></td>
<td>4.1.4 Use buffers or specialized technical applications, such as, double glazed windows to reduce noise levels where optimal layout of noise sources cannot be achieved.</td>
<td>4.1.5 In horizontal mixed integrated land use</td>
</tr>
<tr>
<td>Concept</td>
<td>Guideline</td>
<td>Application within Gateway</td>
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<tr>
<td></td>
<td></td>
<td>developments, residential and commercial uses will be separated by internal circulation systems and/or landscape features.</td>
</tr>
<tr>
<td>4.1.6</td>
<td>Separate parking areas and accesses for residential and commercial uses will be provided.</td>
<td></td>
</tr>
<tr>
<td>4.1.7</td>
<td>Where applicable, arrange residential uses to back on to the north collector road, which will accommodate high levels of commercial and neighbourhood traffic.</td>
<td></td>
</tr>
<tr>
<td>5. Parking</td>
<td>Parking areas are designed to be efficient, unobtrusive and complementary to surrounding uses.</td>
<td>5.1.1 Commercial and residential uses will have separate parking areas.</td>
</tr>
<tr>
<td></td>
<td>5.1.2 Commercial and residential uses will have separate accesses to parking areas.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.1.3 Designated pedestrian links from parking areas to residential or commercial buildings will be provided.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.1.4 Parking lot promenades will be strategically located and enhanced with landscaping to provide convenient links to commercial uses.</td>
<td></td>
</tr>
<tr>
<td>6. Streetscape</td>
<td>Arrange buildings to provide an attractive and secure urban environment for pedestrians.</td>
<td>6.1.1 Where appropriate, orient buildings to front onto the collector and local roads.</td>
</tr>
<tr>
<td></td>
<td>6.1.2 Provide higher density street-oriented residential product along the collector roads with vehicle access from back lanes.</td>
<td></td>
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<tr>
<td></td>
<td>6.1.3 Plan for higher density residential within and adjacent to the mixed-use urban Westwind Village.</td>
<td></td>
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<tr>
<td>Concept</td>
<td>Guideline</td>
<td>Application within Gateway</td>
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</tr>
<tr>
<td></td>
<td>6.1.4 Explore options for innovative housing and architecture to provide visual interest to pedestrians and motorists.</td>
<td></td>
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<tr>
<td></td>
<td>6.1.5 Provide ground floor facades that are rich in detail and provide interest for pedestrians.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.1.6 Provide a variety of facades for residential units fronting onto the street.</td>
<td></td>
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<tr>
<td></td>
<td>6.1.7 Arrange landscaping in an attractive and complementary manner.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.1.8 Provide outdoor seating where appropriate.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.1.9 Provide adequate lighting using efficient technologies to illuminate dark areas creating an inviting atmosphere.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.1.10 Clearly identify primary entrances through the use of canopies, awnings, porches, architectural features, display windows, signage, planters and other design features.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.1.11 Design entrances to be well-lit at night with clear address numbering.</td>
<td></td>
</tr>
<tr>
<td>7. Sustainability</td>
<td>7.1 Encourage a sustainable and environmentally friendly community through the use of environmentally friendly technologies and sustainable design.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.1.1 Explore the use of environmentally friendly technologies for lighting, construction materials, landscaping, water usage, and stormwater drainage.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.1.2 Where possible, orient buildings and windows to take advantage of winter sun and summer shade through passive solar design.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.1.3 Design buildings with</td>
<td></td>
</tr>
</tbody>
</table>
4.2.4 OPEN SPACE

The parcels of land in Westwind and Kenton have already paid the 10% of Gross Developable Area Municipal Reserve dedication with the original subdivision of the lands.

The linear greenway was included with the Stage 1 subdivision of Kenton, promoting a strong pedestrian connection from residential areas to Westwind Village. Where possible, existing trees have been retained in the private back-of-lots of Stage 1 and shall be retained within future park spaces creating natural settings with mature trees.

The Westwind Village park space is reconfigured with more frontage along the collector road. This orientation should provide more accessibility for pedestrians to the commercial site and may provide more opportunities for patios or plazas adjacent to future retail establishments.

**Exhibit 6 - Transportation, Parks, & Open Space** shows the amended park site.

Overall, the amount of park to be dedicated as Municipal Reserve in the ASP is 22.5 ha, accounting for 10% of the Gross Developable Area. The amount of park space planned for Gateway Lands is 0.80 ha. This is included in the 10% overall land dedication for Pioneer Lands ASP.
PROPOSED PIONEER LANDS ASP AMENDMENT

TRANSPORTATION AND OPEN SPACE PLAN

EXHIBIT 6
5.0 SERVICING

The servicing concepts are graphically presented in Exhibit 7. It has been updated to show where services have been installed as part of construction activities.

6.0 PHASING

Stage 1 of Kenton began construction in Fall 2012. The Phasing Plan is included as Exhibit 8 and is unchanged by this amendment.

7.0 IMPLEMENTATION

The proposed plan will be implemented through applications for redistricting and subdivision as per the City of Spruce Grove standards. A residential redistricting application for Stage 2 Kenton and for the R2 site in Westwind Village, are submitted under separate cover.
PROPOSED PIONEER LANDS ASP AMENDMENT
PHASING PLAN
EXHIBIT 8
CITY OF SPRUCE GROVE

BYLAW C-797-11

PIONEER LANDS AREA STRUCTURE PLAN AMENDMENT

WHEREAS, pursuant to the Municipal Government Act, R.S.A. 2000, c. M-26, including amendments, a municipality may adopt and amend an area structure plan,

AND WHEREAS, the City of Spruce Grove wishes to amend Bylaw C-686-08, the Pioneer Lands Area Structure Plan, to amend the land uses in the "Gateway Lands" and alter park allocations and the location of major roadways:

NOW THEREFORE, the Council for the City of Spruce Grove, duly assembled, hereby enacts as follows:

1. Bylaw C-686-08 is amended as described in the attached Schedule A.

2. This bylaw comes into force and effect when it receives third reading and is duly signed.

First Reading Carried 15 August 2011

Public Hearing Held 14 November 2011

Second Reading Carried 14 November 2011

Third Reading Carried 14 November 2011

Date Signed NOV 9 2011

Signed by City of Spruce Grove Mayor and City Clerk
Westwind Developments Ltd.

PIONEER LANDS AREA STRUCTURE PLAN - GATEWAY LANDS AMENDMENT
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1.0 BACKGROUND

The Pioneer Lands Area Structure Plan (ASP) was originally approved in February 2009 as Bylaw No. C686-08 to guide development of predominantly residential uses in the north portion of the annexation lands. An amendment to the ASP was approved on June 28, 2010 as Bylaw C-745-10. This amendment reconfigured the collector road and land uses for Phase 1 of Greenbury.

The approved development concept for the Pioneer Lands ASP is included as Exhibit 1.

1.1 Amendment

This proposed amendment to the Pioneer Lands ASP continues to follow the vision and principles developed to create a smart-green community as approved in the ASP.

The primary purpose of this new amendment is to create a plan for the area designated “Special Study Area” in the approved ASP. This area is intended to add a major commercial component to Spruce Grove that will provide a high profile destination for commercial and business activities. This prime location for commercial development will take advantage of high visibility from the Yellowhead Highway and will be integrated with residential and open space uses through the planned local pedestrian circulation system and local roads.

Amendments to the Gateway Lands portion of the Pioneer Lands ASP include:
- addition of a mixed-use urban village;
- realignment of the collector roads;
- designation of residential land uses;
- reconfiguration of the stormwater management facilities;
- configuration of the open spaces; and
- addition of Gateway commercial uses.

Additional amendments to the balance of the Pioneer Lands ASP include:
- redesignation of low density residential and mixed residential land uses to Level 1 (low to medium density residential);
- redesignation of medium and high density residential sites to Level 2 (medium to high density residential);
- reconfiguration of medium and high density residential uses;
- removal of several linear parks to provide consolidated open spaces with potential for school or programmable spaces;
- realignment of Pioneer Road;
- adjustments to the proposed phasing plan to reflect changes in the sequence of development.
2.0 LOCATION & CONTEXT

The proposed amendments to the Pioneer Lands Area Structure Plan affect the lands designated as Special Study area in the approved ASP. These lands are located in the southeast corner of the intersection of Century Road and Yellowhead Trail (Highway 16). The highway is a major traffic thoroughfare that links Edmonton to Jasper providing high exposure of commercial uses to passing traffic. The Gateway Lands amendment area encompasses approximately 90 ha of land located north of the Spruce Village Neighbourhood.

The secondary amendment encompasses NE ¼ 11-53-27-4, NW ¼ 11-53-27-4 and SW ¼ 12-53-27-4. These lands are located to the north and to the east of the first phase of development in Greenbury.

An air photo of the amendment area is included as Exhibit 2 – Aerial Photo. This photo was taken in September 2009.

The adjacent Spruce Village neighbourhood is about 90% developed. Jubilee Park is located south and east of the Pioneer Lands and is developed as a regional park destination. Construction of the first phase of Greenbury in Pioneer Lands is underway with lots being registered and services currently being installed.

Lands south of Grove Drive do not have an Area Structure Plan in place and remain in agricultural use or in a naturally wooded state. Lands to the east of the amendment area in the Parkland County and zoned AGR – Agricultural Restricted.

2.1 Land Ownership

IBI Group is applying for this amendment to the Pioneer Lands ASP on behalf of the participating owners and private developers of the land.
3.0 POLICY CONTEXT

This proposed ASP amendment describes the land uses, density of development, location of major roads and utilities and the proposed sequence of development in accordance with the City of Spruce Grove “Area Structure Plan Guidelines”.

The ASP amendment adheres to the guidelines of the following bylaws and policies.

3.1 Municipal Development Plan

The City’s Municipal Development Plan ‘Your Bright Future’ was approved as Bylaw C-668-07 on July 12, 2010.

The Gateway Lands ASP amendment corresponds with the following goals, objectives and policies of Section 5 – Form and Infrastructure.

**Goal 5 Spruce Grove manages growth to ensure the city is economically, environmentally, and socially sustainable.**

The addition of the Gateway commercial and residential lands and associated infrastructure, will create employment and attract major highway commercial development in the City of Spruce Grove.

**Goal 6 Spruce Grove remains a compact, safe, and efficient community that emphasizes connectivity, accessibility, special places, and parks and open space and promotes a high standard of community design incorporating green and healthy living principles.**

The Gateway Lands will be developed as a “special place” in the City of Spruce Grove through development and application of design guidelines creating an attractive urban setting. The area will have a regional presence as a commercial and business centre.

The Gateway Lands will be integrated with the surrounding residential neighbourhoods of Spruce Village and Pioneer Lands through linkages created by the collector road network and the local trail system of open spaces associated with the stormwater management facilities.

Overall the Pioneer Lands hold a high standard for green development and healthy living principles. Sustainable measures include the use of bioswales for stormwater management, LED lighting and compact residential development.

5.4 Gateway Lands

5.4.1 Develop the Gateway Lands as an integrated land use development which takes advantage of its strategic location on the Yellowhead TransCanada Highway while still considering local context and overall connectivity

The commercial uses in the Gateway Lands will be oriented with signage that is clearly visible from Highway 16 and also from internal neighbourhood roads. This exposure will attract travellers on the Highway to enter Spruce Grove or to take note of what commercial uses are available for future visits.

The location of Gateway Lands on the edge of the City is ideal because it will allow a large number of visitors to enter Spruce Grove without overburdening local roads in the interior of the City
5.4.1.1 Update the Pioneer Lands Area Structure Plan to include a concept plan and land use statistics for Gateway Lands which focuses on:

- **integrated land use development;**
  This amendment proposes a mix of commercial and residential uses that are complementary to one another and are integrated with controlled intersections and transitions where necessary.

- **regional service and commercial uses;**
  The Gateway Lands will provide a strong commercial presence in the region, providing services, office and retail uses.

- **multi-modal transportation options and connectivity;**
  The Gateway Lands are planned to be serviced by a regional transit hub providing a transit link to the City of Edmonton. The area is also well connected to the community through roads and multi-use trails.

- **relationship with Jubilee Park and the surrounding residential neighbourhoods;**
  Jubilee Park is planned to be well connected to Gateway Lands and surrounding residential by the pedestrian linkages and multi-use trails.

- **innovative, compact, and high quality design.**
  This amendment adds compact housing within the Mixed Residential and Mixed-Use land uses. The quality and innovation of these land uses will be showcased near a high traffic area accessing the commercial lands.

5.4.1.2 Include a community level gathering place, medium to high density residential development, and a regional park-and-ride for transit in Gateway Lands.

A Mixed-Use site is proposed for Gateway Lands which will incorporate medium density residential with commercial retail development. The remaining residential lands will be mainly Level 1 – low to medium density. This will provide a higher average density than conventional low density zones.

A park site is proposed to act as a central meeting place for the urban village area. This park site will provide opportunities to retain a portion of the existing tree stand and for residents to gather in usable park space. Detail studies will be carried out to establish feasibility of retaining trees during subsequent planning stages.

The Spruce Grove Transit system will service the area and there are preliminary plans for a transit facility and park and ride service. This park and ride will be part of the regional transit system that links to the City of Edmonton.

5.4.1.3 Incorporate a traffic analysis of Gateway Lands in the Transportation Master Plan to look at circulation and road/sidewalk capacity for private vehicles, transit, pedestrians, and cyclists and traffic calming strategies.

A Traffic Impact Assessment is underway for The Gateway Lands. This assessment will confirm road widths and capacities proposed by the Area Structure Plan.

The Gateway Lands ASP amendment corresponds with the following goals, objectives and policies of Section 6 – Economic Development.
Goal 7 “Spruce Grove is affordable to residents and businesses, has a diverse tax base and offers a range of commercial services, light-to-medium industrial activities and employment options.

Development of the Gateway Lands as a major commercial node with compact residential forms helps to address this goal. Increased affordability is achieved through increasing the tax base with revenues coming from commercial properties and higher density than conventional residential development. The commercial development in Gateway will also create employment in the short-term in the form of construction activities, while development takes place and in the long-term as retail service, management and business employment opportunities.

The prime location of the Gateway Lands along the Yellowhead Highway will attract upper echelon commercial developers looking to take advantage of the high exposure to continuous levels of commuter traffic on the Highway.

Objective 6.1.1 Increase local employment opportunities and municipal revenues through attraction, diversification, growth, and development of commercial and industrial businesses.

Gateway Lands is anticipated to attract a diverse assortment of business and retail uses. These will create employment opportunities through construction activities and future business.

Policies 6.1.1.2 Designate sufficient land, at suitable locations, to provide for various types of commercial and industrial activities.

Seventeen hectares of land are proposed as commercial use in Gateway Lands. This location is ideal for large lot commercial due to its high visibility from Yellowhead Trail and access off of Century Road.

Policies 6.1.1.3 Promote contiguous development of commercial and industrial areas and encourage infill and redevelopment of existing commercial and industrial areas.

Commercial development at this location is contiguous as it is located at a major entrance to the City and is surrounded by existing residential. It will add to the growing business inventory in Spruce Grove.

Policies 6.1.1.4 Create a distinct identity for different areas and types of commercial and industrial park development through Land Use Bylaw regulations, Area Structure Plans, Area Redevelopment Plans, and community design guidelines.

The Gateway Lands commercial will have a distinct identity by virtue of its high visibility and regional appeal as a commercial node. Unique theming and architectural controls will be implemented through the Design Guidelines administered by the Developer and registered on title.

Policies 6.1.1.5 Promote appropriate increases to residential densities to support commercial development at a neighbourhood and city-wide level.

The MDP states in 5.2.2.2 that residential densities will be split into Level 1 and Level 2. Level 1 residential will provide opportunities for a mix of narrow oriented townhouses, duplex and single-family homes at a higher average density than conventional low density residential.

Applying broader land use categories will allow greater flexibility in types of housing to be developed.
Objective 6.1.2 Enhance the gateway potential of Highway 16 and Highway 16A.

The regional profile of the Century Road entrance from Highway 16 will be elevated significantly as commercial amenities develop with high visibility from the highway.

Policies 6.1.2.1 Capitalize on the strategic location of Gateway Lands (Figure 8: Future Land Use) on the Yellowhead TransCanada Highway.

Commercial buildings and signs will be oriented to provide high visibility and exposure to travellers on Highway 16. This location also has convenient access from the interchange at Century Road.

Policies 6.1.2.2 Work with Alberta Transportation to improve access to Spruce Grove from Highway 16 and upgrade existing interchanges to handle anticipated future traffic flows based on projected population growth in the region and the development of Gateway Lands.

The developers of Gateway Lands are working with Alberta Transportation to accommodate the anticipated commercial and residential traffic. The plan respects the opportunity for potential Highway widening within the existing ROW and the noise attenuation berm required for Highway 16 (the entire berm will sit on private land).

Objective 6.2.1 Continue to develop Spruce Grove as a regional service and commercial centre.

The Gateway Lands will elevate Spruce Grove's presence as a regional service and commercial centre through its high profile location and anticipated diversity of commercial businesses.

Policies 6.2.1.3 Develop Gateway Lands with a focus on regional service and commercial uses, integrated land use development, multi-modal transportation access, and innovative compact high quality design as discussed in 'Section 5.4 - Form and Infrastructure: Gateway Lands' that services primarily a regional base but also draws local users.

The Gateway Lands will attract users from the region through its high visibility and convenient access opportunities. The area will be serviced by the Spruce Grove transit system and will include a transit facility and park and ride stalls. The local multi-use trail system will connect and traverse the commercial and mixed use areas of Gateway Lands, providing convenient access for local pedestrians and cyclists.

Objective 6.2.2 Provide opportunities for mixed use development to occur in the City Centre and the Urban Village and for integrated land use development to occur in Gateway Lands as identified on Figure 8: Future Land Use.

The mixed residential housing will provide higher density than low density residential zoning and will access commercial uses through marked and signed crossings. A mixed use residential site is also proposed to accommodate a mix of commercial and residential uses creating an urban village atmosphere.
Policies 6.2.2.3 Apply high standards of community design to increase the pedestrian orientation and enhance the overall aesthetics of mixed use areas and integrated land use development areas, including:

- building orientation and presentation on the site;
- scale of buildings;
- site signage;
- site landscaping;
- site lighting;
- development relationship to the street;
- building facades;
- sidewalks/trail connections;
- informal seating areas;
- parking areas; and
- bus stops and/or hubs.

The Gateway Lands will address community design through a set of design guidelines for the area that deal with the items listed above.

A horizontal Mixed Use site is included in the Gateway Lands concept that will act as a focal point for the surrounding community incorporating community park space along the neighbourhood trail system.

3.2 Capital Region Growth Plan

This amendment maintains the population and employment projections of the Capital Region Growth Plan. The neighbourhood projections overall maintain a minimum 25 units per net residential hectare.

3.3 The City of Spruce Grove Parks & Open Space Master Plan

The City of Spruce Grove Parks and Open Space Master Plan was approved by Council on March 26, 2007. This document guides the development of parks, open space and recreation facilities in the City of Spruce Grove. This proposed amendment continues to follow the principles of the Open Space Master Plan.

City administration has requested more school sites than identified in the Master Plan due to population increases and demographic changes in the City. This amendment addresses this need by reducing the number of linear parks and pocket parks and creating consolidated parcel of open space appropriate for school sites.
3.4 The City of Spruce Grove Land Use Bylaw No. C-600-06

The City of Spruce Grove Land Use Bylaw C-600-06 contains zoning regulations and land use information for the City of Spruce Grove. The current zoning for the amendment area is AGR – Agricultural Restricted.

Residential districting for this area will use the new Mixed Residential District currently being implemented in the Greenbury area in Phase 1 of the ASP. This district allows a mix of row housing, single-detached and semi-detached building forms.

Conventional zoning will be applied to the commercial land uses in the plan.

The mixed-use parcel may require a new zone created to allow for a mix of residential and commercial uses on the site.

Redistricting and subdivision applications will be submitted separately from this Amendment.
4.0 DEVELOPMENT CONCEPT

4.1 Vision

The vision for Gateway Lands is of a regional commercial center providing opportunities for shopping and employment, while integrating with a compact residential community to create vibrant streetscapes with convenient links to open space amenities.

4.2 Land Use Concept

The proposed Land Use Concept for the amendment area is presented as Exhibit 3 and proposed Land Use and Population Statistics are presented as Exhibit 4.

The following provides a brief description and rationale for the land use amendments proposed for the Pioneer Lands ASP.

4.2.1 RESIDENTIAL

Proposed residential development comprises approximately 57% of the Gross Developable Area (GDA), with a planned yield of 4,427 units and a population of 12,942 residents. The overall mix of residential densities shall yield approximately 26 units per net residential hectare.

The residential land uses for this amendment are updated to reflect the new MDP policy 5.2.2.2 that states residential densities are split into two categories,

Level 1 is a mix of low to medium densities. These may include single-family, semi-detached and row housing up to two and a half storeys in height. The average density for this level is 25 units per hectare.

Level 2 residential is a mix of medium to high density residential including stacked row-housing, 4-storey walk-up apartments, and high-rise apartment buildings.

These land use categories will be implemented through a new Land Use Bylaw that is currently in preparation. Immediate districting applications may propose the Mixed Residential Zone that was created and approved in the first phase of Greenbury, or other conventional zones within the Land Use Bylaw.

The Area Structure Plan, when fully developed, is projected to provide approximately:

- 3,752 Low to Medium Density Units;
- 603 Medium to High Density Residential Units;
- 72 mixed-use residential units.

Where appropriate, housing along collector roads will be oriented to address the street through the use of rear lanes. The intent is to create streetscapes that are inviting for pedestrians and motorists alike, creating a vibrant urban village atmosphere. This street-orientation provides visual interest for street users and surveillance by neighbours.
## Exhibit 4
Pioneer Lands ASP Amendment - Proposed Land Use Statistics

<table>
<thead>
<tr>
<th>Land Use</th>
<th>GDA (ha)</th>
<th>% of GDA</th>
<th>Units/ha</th>
<th>Units</th>
<th>Pop/Unit</th>
<th>Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low to Medium Density Residential</td>
<td>148.36</td>
<td>53.0%</td>
<td>25.0</td>
<td>3,709</td>
<td>3.0</td>
<td>11,127</td>
</tr>
<tr>
<td>Medium to High Density Residential</td>
<td>6.70</td>
<td>3.1%</td>
<td>67.0</td>
<td>583</td>
<td>2.5</td>
<td>1,457</td>
</tr>
<tr>
<td>Mixed-Use</td>
<td>1.80</td>
<td>0.6%</td>
<td>40.0</td>
<td>72</td>
<td>2.5</td>
<td>180</td>
</tr>
<tr>
<td><strong>Total Residential</strong></td>
<td><strong>158.86</strong></td>
<td><strong>56.8%</strong></td>
<td><strong>27.4</strong></td>
<td><strong>4,364</strong></td>
<td><strong>2.5</strong></td>
<td><strong>12,764</strong></td>
</tr>
<tr>
<td>Gateway Commercial</td>
<td>17.10</td>
<td>6.1%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Neighbourhood Commercial</td>
<td>1.33</td>
<td>0.5%</td>
<td></td>
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</tr>
<tr>
<td>Parks and Recreation (MR)*</td>
<td>22.00</td>
<td>7.9%</td>
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</tr>
<tr>
<td>Stormwater Management Facilities</td>
<td>25.71</td>
<td>9.2%</td>
<td></td>
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<tr>
<td>Local Roads</td>
<td>38.11</td>
<td>13.6%</td>
<td></td>
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<tr>
<td>Collector Roads</td>
<td>16.70</td>
<td>6.0%</td>
<td></td>
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<tr>
<td><strong>Total Non Residential</strong></td>
<td><strong>120.95</strong></td>
<td><strong>43.2%</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Net Developable Area</strong></td>
<td><strong>279.81</strong></td>
<td><strong>100.0%</strong></td>
<td></td>
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<tr>
<td>Pipeline</td>
<td>1.24</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Arterial Road (Grove Drive)</td>
<td>3.15</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Total Area</strong></td>
<td><strong>284.20</strong></td>
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</tr>
</tbody>
</table>

*The MR in Gateway Lands portion of the ASP was dedicated with the original subdivision. The 10% MR required for the remaining GDA in Pioneer Lands is 22 ha.*
High to medium density residential sites have been reconfigured along Grove Drive. This amendment proposes moving a high density residential site to the southeast corner of the plan with close access to the arterial road.

The market today does not favour high density residential at the current approved location, which makes it difficult to move to the next stage of development. Moving the high density to a later phase will allow for timely development of lands within the ASP without reducing the overall densities in the Neighbourhood.

4.2.2 COMMERCIAL

The Gateway Lands are planned to act as a regional destination point for consumers and to provide convenient access to a variety of commercial and business uses. The high visibility of the lots along Highway 16 will help boost Spruce Grove’s regional appeal as a business and shopping destination. The area will act as a major employment node, reducing commute times for people living in Spruce Grove that may have alternatively driven to Edmonton for work.

The exposure of these lots will attract motorists that may have otherwise passed by Spruce Grove on the way to their intended destination.

These commercial lots will have access off the main collector road proposed for the Gateway Lands, with an internal circulation and parking network that provides convenient access to retail and businesses. The intensity of commercial development is planned to increase from east to west with potential uses including vehicle sales, offices, hotels, restaurants, financial services, retail stores, etc.

The southwest parcel of commercial lands located on Century Road may be the first phase of commercial development. This site will provide retail and services for local residents and will be integrated as a mixed-use development creating an urban village feature for the neighbourhood.

The commercial areas will be accessible by the regional bus transit system, providing a convenient alternate means for citizens to travel to work or to go shopping. The commercial area will also be well serviced by the neighbourhood walkway system providing safe and convenient links for pedestrians and cyclists.

Clear signage and architectural elements will be used on both the highway side and the internal neighbourhood side of commercial buildings to maximize exposure to consumers.

4.2.3 MIXED USE URBAN VILLAGE

A mixed-use urban village node is proposed as part of the innovation that is planned to attract new people to Spruce Grove. This mixed use site measures 4 hectares and accommodates a horizontal mix of retail and residential uses. A concept plan for the mixed-use area is included in Exhibit 5.
4.2.3.1 Location & Context

The mixed-use urban village is to be located between the two proposed collector road entrances from Century Road with high visibility from traffic entering the neighbourhood from the west. The planned mixed-use urban village area is strategically located to provide a focal point of interest and entry feature to the Gateway Lands community.

This site will provide the first impression to visitors as they enter Pioneer Lands and through the application of themes and architectural features, the site will create a sense of place that residents of Pioneer Lands and Spruce Grove will identify with.

The mixed-use village is grouped in close proximity to key regional amenity areas including the planned Gateway commercial area with exposure to the highway and the regional open space Jubilee Park. These features are key attractors to Pioneer Lands and along with the urban village node, will help to ensure each other's viability through drawing high levels of interest within Spruce Grove and the larger region.

4.2.3.2 Integration & Connectivity

With horizontal mixed-use developments, commercial and residential buildings are located separately, but in close proximity to one another. This arrangement of uses is desirable to reduce the potential for conflicts between users, such as, parking access and loading zones, while providing residents retail within walking distance and supplying retailers a local supply of consumers and employees.

In Gateway, a complimentary relationship between retail and residential uses will create opportunities to work and live within a compact community. The location of the urban village allows for connection to the community walkway system allowing for seamless integration with the surrounding residential community of Pioneer Lands and Spruce Village.

Commercial and residential areas will be linked through shared amenity spaces and integrated with surrounding residential through a comprehensive pedestrian circulation system. The site will be designed to encourage pedestrian interaction along efficient pedestrian walkways and connections. This will help create a walkable site with a vibrant street life.

The mix of uses within a compact area helps to ensure the continuous use of public spaces throughout the day. While many residents are away at work during the day, consumers and employees will continue to frequent public spaces. This shall create a continuous passive surveillance system and promote a sense of security and belonging among residents.

4.2.3.3 Streetscape

The mixed-use site will have a pedestrian scale street presence with units fronting on to Vanderbilt Common, the internal main street, and the north/south collector road. The site will have status as an innovative and attractive development where residents, employees, and consumers interact within vibrant and active urban spaces. The streetscape will be enhanced through application of a unifying theme and implementation of architectural design guidelines. Specific size, shape, and orientation of residential uses will be determined at zoning and development permit through discussions with City staff.

During warm seasons, the streetscape may be further stimulated by restaurants and cafés that provide patios where patrons can meet, visit and relax as active participants in the urban landscape.
4.2.3.4 Sustainability

The compact mix of uses proposed, reduces the need for personal vehicles and encourages a healthy lifestyle where walking is the primary mode of transportation. The mixed-use site is located along the multi-use circulation system, providing convenient access to retail and services for local pedestrians and cyclists.

A central park site may have the opportunity to retain some of the existing trees, creating a natural focal point and meeting place for residents of the area. Additional studies to determine the feasibility of returning trees will be carried out in later planning stages. This park site will be visible from the north/south collector road and will link the commercial amenities to the rest of the Pioneer Lands community.

4.2.3.5 Urban Design

High quality urban design for the development will be addressed through the provision of integrated walkways, preservation of treed areas within public open space and private yards, visually interesting streetscapes, and integration of stormwater management facilities into the community as open space amenities.

Architectural guidelines will be established for the area providing a unifying theme through establishment of standards for landscape, architecture, signage and accessibility. Theming for the Gateway Lands reinforced by street names and complementary architectural design regulations will help to establish the area as an attractive and desirable place to work, live and play.

The following table lists urban design concepts and how they will be applied to Gateway Lands.

**Urban Village Design Guidelines**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Guideline</th>
<th>Application within Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectivity</td>
<td>Provide convenient links for pedestrians, cyclists, motorists, and transit users between neighbourhood focal points and amenities.</td>
<td>Provide accesses around the perimeter of the urban village with clear distinction between internal roads and walkways.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide several opportunities for pedestrian and vehicular access to the site at regular intervals from the surrounding roadways.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide connections from the community and to/from neighbourhood amenities and focal points with greenways, multi-use trails, or sidewalks.</td>
</tr>
<tr>
<td>Integration</td>
<td>Integrate the internal uses in a complementary fashion.</td>
<td>An internal main street will be developed where commercial and residential uses will interface.</td>
</tr>
<tr>
<td>Concept</td>
<td>Guideline</td>
<td>Application within Gateway</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Connections between residential and commercial uses will be accommodated through marked pedestrian crossings.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Orient buildings to maximize active use of the public spaces, such as locating outdoor patios for restaurants and cafes near main thoroughfares.</td>
<td></td>
</tr>
<tr>
<td>Integrate commercial and mixed uses with the surrounding community.</td>
<td>The surrounding community will have strong multi-use linkages and greenways providing attractive and convenient links between neighbourhood amenities and focal points.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Incorporate 360 degree facades for retail where access is provided from internal parking areas and buildings address the public street</td>
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</tr>
<tr>
<td></td>
<td>Opportunities for &quot;reverse housing&quot; where houses front onto greenways will be explored at more detailed levels of planning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multi-use linkages are provided through linear ponds, linear greenways, and in some cases along major street linkages to connect neighbourhood amenities, such as the Gateway commercial area, the mixed use urban village, Jubilee Park, future potential school sites, and open space opportunities.</td>
<td></td>
</tr>
<tr>
<td>Sense of Place</td>
<td>Use appropriate signage to clearly identify uses within the urban village.</td>
<td>Integrate signage into the architecture of buildings. Use signage that is clearly visible at pedestrian and</td>
</tr>
<tr>
<td>Concept</td>
<td>Guideline</td>
<td>Application within Gateway</td>
</tr>
<tr>
<td>---------</td>
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<tr>
<td></td>
<td>Apply a unique architectural theme for the urban village to enhance a sense of place.</td>
<td>vehicular scale. Place signage perpendicular to shop fronts at a pedestrian scale. Avoid visual clutter from signs. Use entry features to give names to areas. An architectural and landscape theme for the mixed use urban village will be described and implemented through architectural design guidelines. Landmarks shall be located at strategic points on the site to enhance local place making.</td>
</tr>
<tr>
<td><strong>Arrangement of Internal Uses</strong></td>
<td>Reduce the impacts of incompatible uses.</td>
<td>Arrange and buffer residential areas and public gathering spaces from high traffic areas and incompatible uses to reduce the impact of noise and visual irritants. Orient commercial loading zones away from residential uses, outdoor patios and public open spaces. Use landscape and fencing to screen waste disposal and storage areas from sight lines of residential areas and pedestrian walkways. Use buffers or specialized technical applications, such as, double glazed windows to reduce noise levels where optimal layout of noise sources cannot be achieved. In horizontal mixed use developments, residential and commercial uses will be separated by internal circulation systems and landscape features.</td>
</tr>
<tr>
<td>Concept</td>
<td>Guideline</td>
<td>Application within Gateway</td>
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</tr>
<tr>
<td>Parking</td>
<td>Parking areas are designed to be efficient, unobtrusive and complementary to surrounding uses.</td>
<td>Separate parking areas and accesses for residential and commercial uses will be provided. Arrange residential uses to back on to the north collector road, which will accommodate high levels of commercial and neighbourhood traffic.</td>
</tr>
<tr>
<td>Streetscape</td>
<td>Arrange buildings to provide an attractive and secure urban environment for pedestrians.</td>
<td>Commercial and residential uses will have separate parking areas. Commercial and residential uses will have separate accesses to parking areas. Designated pedestrian links from parking areas to residential or commercial buildings will be provided. Parking lot promenades will be strategically located and enhanced with landscaping to provide convenient links to commercial uses.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Where appropriate, orient buildings to front onto the collector and local roads. Provide higher density street-oriented residential product along the collector roads with vehicle access from back lanes. Plan for higher density residential within and adjacent to the mixed-use urban village. Explore options for innovative housing and architecture to provide visual interest to pedestrians and motorists. Provide ground floor facades</td>
</tr>
<tr>
<td>Concept</td>
<td>Guideline</td>
<td>Application within Gateway</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>---------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>that are rich in detail and provide interest for pedestrians.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide a variety of facades for residential units fronting onto the street.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arrange landscaping in an attractive and complementary manner.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide outdoor seating where appropriate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide adequate lighting using efficient technologies to illuminate dark areas creating an inviting atmosphere.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clearly identify primary entrances through the use of canopies, awnings, porches, architectural features, display windows, signage, planters and other design features.</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Encourage a sustainable and environmentally friendly community through the use of environmentally friendly technologies and sustainable design.</td>
<td>Design entrances to be well-lit at night with clear address numbering.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Explore the use of environmentally friendly technologies for lighting, construction materials, landscaping, water usage, and stormwater drainage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Where possible, orient buildings and windows to take advantage of winter sun and summer shade through passive solar design.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Design buildings with flexibility to change uses adapting to market trends.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide a range of services and residential forms to accommodate different age groups and allow for residents to remain in Pioneer Lands throughout different stages of</td>
</tr>
</tbody>
</table>
4.2.4 TRANSIT STATION

The City is contemplating a transit station that includes park-and-ride parking stalls. The transit facility site will measure approximately 2 acres and will service the regional transit system with links to Edmonton and Stony Plain.

The most likely location for the transit facility will be within the commercial area. This location will be determined at more detailed levels of planning as commercial sites are laid out. Gateway commercial area will be a big attraction to commuters, and will act as a hub for employees, residents and consumers throughout the day.

4.2.5 OPEN SPACE

The parcels in the Gateway Lands area have already paid the 10% of Gross Developable Area Municipal Reserve dedication with the original subdivision of the lands.

Park spaces have been reoriented to respond to the City requirement of more consolidated park spaces accommodating future school sites and programmable space. A linear greenway has been added to the Gateway Lands to promote strong pedestrian connection from residential areas to the mixed-use site and commercial lands. Where possible, existing trees should be retained within park spaces and the trail system within the Gateway Lands, creating natural settings with mature trees.

The open spaces proposed are consistent with the City of Spruce Grove Parks and Open Space Master Plan, which defines seven categories of open space. The open spaces planned to be included in the Gateway Lands fall under category ‘E’.

Type E parks are classified as linear systems, green corridors, paths, and streets.

The types of park in the Pioneer Lands ASP are identified in Exhibit 6 - Transportation, Parks, & Open Space.

Overall, the amount of park to be dedicated as Municipal Reserve in the ASP is 22.5 ha, accounting for 10% of the Gross Developable Area. The amount of park space planned for Gateway Lands is 0.89 ha. This is included in the 10% overall land dedication for Pioneer Lands ASP.

4.2.6 TRANSPORTATION SYSTEM

Collector roads are designed to provide efficient movement for local traffic and wider right-of-ways for services and transit routes.

The collector roads are planned as standard Spruce Grove cross-sections.
The major collector road provides access from Century Road with additional width for turn bays to access the commercial lands. This road will provide access to the commercial sites and their internal parking and circulation system. The collector connects Century Road to Pioneer Drive.

Vanderbuilt Common will continue to provide access to Spruce Village from Century Road at the neighbourhood’s west access, but will not extend through to Pioneer Road. This east/west extension of the collector was found to be unnecessary in the Traffic Impact Assessment. Removing this extension will cut down on exposure of housing to collector level traffic by turning the road north and creating a connection to the main collector road.

A bend has been added to Pioneer Road, east of Greenbury. This bend creates a more interesting streetscape and will allow for more logical layout of local roads and lotting within Greenbury.

Through circulation of this ASP and the associated Traffic Impact Assessment, Alberta Transportation has identified the following infrastructure requirements to allow for an all-directional access from the proposed commercial to Century Road:

- Prior to the commercial access being opened to traffic, construct a double left turn exit ramp from Highway 16 westbound onto the Century Road interchange, including an additional southbound lane on the interchange structure. Dedicate all right-of-way necessary for ultimate interchange improvements, and complete a design of the ultimate interchange to the department’s satisfaction.

- Complete the following prior to development in the Pioneer Lands ASP reaching 85% of desired build-out densities, including the commercial:
  - Construct a double loop ramp in the northwest quadrant of Highway 16/Century Road interchange;
  - Widen the interchange structure to provide two lanes northbound, offset left turn lanes, and four lanes southbound;
  - Reconstruct northbound to westbound Highway 16 on-ramp;
  - Reconstruct northbound to eastbound off-ramp to triple lane ramp, including all necessary lane changes and tapers onto and off of Highway 15;
  - Interchange improvements further to the ultimate interchange design noted above.
5.0 SERVICING

The servicing concepts are graphically presented in Exhibit 7.

5.1 Water

Water services will follow the alignment of the collector roads in the amendment area and connect to existing services in Spruce Village.

5.2 Stormwater Drainage

The stormwater management facilities are designed to accommodate a 100 year storm event.

The linear storm pond in the northwest corner is configured to run along the north boundary of the neighbourhood. This pond will provide an amenity space with a multi-use trail extending along the planned commercial area. This trail will link commercial uses to the internal walkway system and to the walkway on Century Road.

There is an existing unnamed creek in the southeast portion of the plan in SW 1/4 12-53-27-4. This creek will be retained in accordance with the Water Act and Public Lands Act Alberta legislation.

The details of the stormwater management system will be included in the Stormwater Management Plan and planned through coordination with the City of Spruce Grove, Alberta Environment, and Alberta Sustainable Resources Development.

5.3 Sanitary

As shown in Exhibit 7, the direction of sanitary flow in Gateway Lands will be split. One sanitary trunk extends west in the major collector road and outlets to the north. A second sanitary trunk extends east to connect to a major sanitary trunk also extending north.

5.4 Noise Attenuation

A noise attenuation study was performed with the original Pioneer Lands ASP. It recommends a berm and noise attenuation fence, planned along Highway 16 at the north boundary of the neighbourhood. This berm will reduce traffic noise for the residential portions of Pioneer Lands along the highway. The berm and fence end where commercial uses are planned to begin. This will ensure that passing motorists on the highway will have clear visibility to the commercial business.
6.0 PHASING

The Gateway Lands are scheduled to begin development in Fall 2011. The proposed Phasing Plan is included as Exhibit 8.

The southwest parcel of commercial in Gateway Lands is likely the first phase of commercial development, providing retail and services for local residents.

Residential development will likely progress east from Greenbury, proceeding in a logical sequence of infrastructure construction.
7.0 IMPLEMENTATION

The proposed plan will be implemented through applications for redistricting and subdivision as per the City of Spruce Grove standards.
CITY OF SPRUCE GROVE

BYLAW C-745-10

PIONEER LANDS AREA STRUCTURE PLAN AMENDMENT

Being a bylaw to amend Pioneer Lands Area Structure Plan C-686-08, of the City of Spruce Grove in the Province of Alberta.

NOW THEREFORE pursuant to Sections 633 and 692 of the Municipal Government Act, R.S.A. 2000, c M-26 and any amendments thereto, the Municipal Council of the City of Spruce Grove, duly assembled, hereby enacts as follows:

1) THAT Bylaw C-745-10 be adopted as the amendment to the Pioneer Lands Area Structure Plan, attached as Schedule A.

This bylaw comes into effect upon being given third reading and is duly signed.

First Reading Carried 26 April 2010
Public Hearing Held 25 May 2010
Second Reading Carried 25 May 2010
Third Reading Carried 28 June 2010
Date Signed Jul 08 2010

Signed by City of Spruce Grove Mayor and City Clerk
Beaverbrook

PIONEER LANDS

AREA STRUCTURE PLAN AMENDMENT
MARCH 2010
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1.0 BACKGROUND

The area included in the approved Pioneer Lands Area Structure Plan is a part of those lands annexed from Parkland County by Provincial Order in Council 390/2007 signed September 12, 2007 and delineated in Exhibit 1.

The Pioneer Lands Area Structure Plan (ASP) was approved in February 2009 as Bylaw No. C686-08 to guide development of predominantly residential uses in the north portion of the annexation lands.

The approved Area Structure Plan is included as Exhibit 2.

1.1 Amendment

This proposed amendment to the Pioneer Lands ASP continues to follow the vision and principles developed to create a smart-green community as approved in the ASP.

This amendment proposes changes to the sector of the approved Plan designated as Urban Village. As a result of more detailed planning and research on housing types, this amendment proposes application of a Mixed Residential designation to the first phase of the ASP called Greenbury.

Also as a result of more detailed design work, this proposed amendment includes the following:
- realignment of the collector road in Greenbury;
- reduction of Municipal Reserve parks within Greenbury;
- redesignation of medium density and high density residential sites to the Mixed Residential land use designation;
- reconfiguration of the stormwater management facility;
- relocation of the commercial site;
- a revised phasing sequence for the neighbourhood;
- the addition of an entry park in the median.
2.0 LOCATION AND CONTEXT

The proposed amendment to the Pioneer Lands Area Structure Plan affects the west half of SE-11-53-27-4, north of Grove Drive, west of Range Road 271 (future Pioneer Road) and south of future Vanderbilt Common.

The amendment area encompasses approximately 30 ha of land located directly east of the City’s Jubilee Park as Phase 1 of development. An air photo of the neighbourhood is shown as Exhibit 3 – Aerial Photo.

2.1 Land Ownership

IBI Group is applying for this amendment to the Pioneer Lands ASP on behalf of the owners, and private developers of the land.
3.0 POLICY CONTEXT

This proposed ASP amendment describes the land uses, density of development, location of major roads and utilities and the proposed sequence of development in accordance with the City of Spruce Grove “Area Structure Plan Guidelines”.

3.1 Municipal Development Plan

This amendment conforms to the goals and objectives of the City's Municipal Development Plan (Bylaw C-327-98) and the subsequent MDP amendment, Bylaw C-668-07:

3.2 The City of Spruce Grove Parks & Open Space Master Plan

The City of Spruce Grove Parks and Open Space Master Plan was approved by Council on March 26, 2007. This document guides the development of parks, open space and recreation facilities in the City of Spruce Grove. This proposed amendment continues to follow principles of the Open Space Master Plan.

3.3 The City of Spruce Grove Land Use Bylaw No. C-600-06

The City of Spruce Grove Land Use Bylaw C-600-06 contains zoning regulations and land use information for the City of Spruce Grove. The current zoning for the amendment area is AGR – Agricultural Restricted.

A new land use zone is being created to allow for development of the Mixed Residential area. The regulations for this zone are being developed through consultation with City of Spruce Grove administration. The new zone will allow for development of several street-oriented housing types within one zone using regulations to increase efficiency and flexibility of lots for innovative design of dwelling units. Applying this new zone to the mixed residential areas should result in more affordable choices for consumers.
4.0 DEVELOPMENT CONCEPT

4.1 Land Use Concept

This amendment continues to follow the development goals and planning principles of the approved ASP. For reference, these are included in the Appendix.

The proposed Land Use Concept for the amendment area is presented as Exhibit 4 and proposed Land Use and Population Statistics are presented as Exhibit 5.

The following provides a brief description and rationale for the land use amendments proposed for the Pioneer Lands ASP.

4.1.1 RESIDENTIAL

Residential development comprises approximately 61% of the Gross Developable Area (GDA), with a planned yield of 3,296 units and a population of 9,422 residents.

The Area Structure Plan, when fully developed, is projected to provide approximately:

- 1,581 single and semi-detached housing units;
- 989 mixed residential units;
- 193 medium density residential units;
- 465 high density residential units;
- 68 mixed-use residential units

Due to the dimensions of Greenbury it would be inefficient for houses to front onto Pioneer Road. Houses fronting onto Pioneer Road will be explored at subdivision of future phases of the ASP.

4.1.1.1 Mixed Residential

The Mixed Residential component of the ASP, totalling 38 ha, is planned throughout Greenbury replacing designated high, medium, and low density residential components of the approved ASP. The overall decrease in residential density is minimal, at 2.8 units per net residential hectare. A residential density of 26.0 units per hectare is proposed for the mixed residential area, based on a blend of the average densities for single-detached, small single-detached, semi-detached and town house units.

Advantages of using the Mixed Residential land use designations in place of the segregated, high and medium density sites include:

- provides flexibility in types of housing used throughout the area including single detached, semi-detached, town housing, and stacked townhousing, and the ability to mix various forms of housing along one streetscape;
- creates opportunities for street-oriented housing with innovative design features promoting an attractive and inviting streetscape setting for pedestrians and motorists;
- promotes a mix of housing at different levels of affordability;
Exhibit 5
Pioneer Lands ASP Amendment - Proposed Land Use Statistics

<table>
<thead>
<tr>
<th>Land Use</th>
<th>GDA (ha)</th>
<th>% of GDA</th>
<th>Units/ha</th>
<th>Units</th>
<th>m²</th>
<th>Unit %</th>
<th>Pop/Unit</th>
<th>Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Density Residential</td>
<td>87.84</td>
<td>38.7%</td>
<td>18.0</td>
<td>1,581</td>
<td>-</td>
<td>48.0%</td>
<td>3.0</td>
<td>4,743</td>
</tr>
<tr>
<td>Mixed Residential Component</td>
<td>38.02</td>
<td>16.8%</td>
<td>26.0</td>
<td>989</td>
<td>-</td>
<td>30.0%</td>
<td>2.8</td>
<td>2,768</td>
</tr>
<tr>
<td>Medium Density Residential (Townhouse)</td>
<td>6.42</td>
<td>2.8%</td>
<td>30.0</td>
<td>193</td>
<td>-</td>
<td>5.8%</td>
<td>3.0</td>
<td>578</td>
</tr>
<tr>
<td>High Density Residential (Apartments)</td>
<td>5.35</td>
<td>2.4%</td>
<td>87.0</td>
<td>465</td>
<td>-</td>
<td>14.1%</td>
<td>2.5</td>
<td>1,164</td>
</tr>
<tr>
<td>Mixed Use Residential</td>
<td>0.78</td>
<td>0.3%</td>
<td>87.0</td>
<td>68</td>
<td>1,950</td>
<td>2.1%</td>
<td>2.5</td>
<td>170</td>
</tr>
<tr>
<td><strong>Total Residential</strong></td>
<td><strong>138.41</strong></td>
<td><strong>61.0%</strong></td>
<td><strong>23.8</strong></td>
<td><strong>3,296</strong></td>
<td>-</td>
<td><strong>100.0%</strong></td>
<td><strong>2.8</strong></td>
<td><strong>9,422</strong></td>
</tr>
<tr>
<td><strong>Commercial</strong></td>
<td><strong>1.35</strong></td>
<td><strong>0.6%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parks and Recreation (MR)</td>
<td>22.70</td>
<td>10.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3,375</td>
</tr>
<tr>
<td>Entry Median Feature Park</td>
<td>0.63</td>
<td>0.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stormwater Management Facilities</td>
<td>18.46</td>
<td>8.1%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Roads</td>
<td>27.11</td>
<td>12.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collector Roads</td>
<td>18.20</td>
<td>8.0%</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>Total Non Residential</strong></td>
<td><strong>88.45</strong></td>
<td><strong>39.0%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Net Developable Area</strong></td>
<td><strong>226.86</strong></td>
<td><strong>100.0%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Study Area*</td>
<td>52.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipeline</td>
<td>1.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arterial Road (Grove Drive)</td>
<td>2.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Gross Area</strong></td>
<td><strong>282.60</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

* Could include retail, commercial, business, and residential uses. Requires further study.
• de-emphasizes the creation of homogeneous single residential forms, thereby providing visual interest in the streetscape and the potential for integration of a population consisting of diverse families, ages and lifestyles;
• allows for a continuous public street pattern that promotes connectedness for pedestrians and vehicles by avoiding the development of individual large homogeneous sites of medium or high density housing blocks.

Design objectives proposed for the Mixed Residential designation are described below:

• An architectural theme should be established for the overall area;
• New buildings should harmonize with adjacent developments by ensuring that siting and massing of new structures are compatible with each other;
• Buildings should generally be located closer to the street to help reinforce and enhance pedestrian relationships to the building and the street, where appropriate. Buildings should frame the street and be sited to enhance natural surveillance;
• Street oriented garages should be de-emphasized through the use of architectural design features and integrating the garage into the house, while balancing consumer preferences for the provision of garage space;
• Development within this district shall ensure that the design of the pedestrian environment is comfortable, convenient, visually attractive and safe for human activity;
• Buildings and site amenities should be scaled to enhance the pedestrian environment;
• Safe and direct pedestrian connections should be provided throughout the district to unify urban design and landscape elements on site and to other neighbourhood facilities and amenities;
• Individual building entrances should be defined and highlighted through the use of architectural elements such as but not limited to, roffline features, doors with glazing and/or treatment(s) that emphasize the entry way, and special lighting.

4.1.2 COMMERCIAL

The neighbourhood commercial site is relocated to the east side of Pioneer Road. This location is convenient as a quick stop for residents as they enter and leave Pioneer Lands. This location is more attractive for commercial developers with complementary high and medium density uses located adjacent.

This commercial site will be designed to be integrated with the adjacent medium and high density land uses. With large scale commercial development anticipated for the special study area in the northwest portion of Pioneer Lands, the intent of this neighbourhood commercial site is to provide convenient services and amenities for residents.

4.1.3 MIXED USE

The mixed-use site has been removed from Greenbury. In anticipation of future commercial development in the Special Study Area, it is proposed that the neighbourhood commercial at the south entrance is all that is required as a commercial use in Pioneer Lands for the initial stages.
4.1.4 OPEN SPACE

The amount of park space in the Greenbury amendment area is reduced from 2.84 ha to 1.47 ha. The 1.4 hectares will be applied to other areas of the ASP at zoning and subdivision stages to create a better dispersal of green space opportunities for residents. With direct access to Jubilee Park, there is less need for large park spaces in Phase 1. The new configuration of park space allows for higher residential densities in Phase 1 and improves open space opportunities throughout the ASP.

The storm pond in the north of the first phase and the entry meridian also provide opportunities to enjoy open space amenities and passive recreation.

The revised open spaces proposed are consistent with the City of Spruce Grove Parks and Open Space Master Plan, which defines seven categories of open space. The open space categories planned to be included in the Pioneer Lands fall under categories ‘C’, ‘D’ and ‘E’.

Type C parks include parks, gardens, and civic spaces serving social, aesthetic and informal recreation purposes.

Type D parks include outdoor sports and recreation facilities. This could also include school sites.

Type E parks are classified as linear systems, green corridors, paths, and streets.

The types of park in the Pioneer Lands ASP are identified in Exhibit 6 - Transportation, Parks, & Open Space.

Changes to the Municipal Reserve and open space within Greenbury include:

- The east/west greenway is a major pedestrian connector that is part of a direct linkage system to other areas of Pioneer ASP. This greenway connects residential areas of the Neighbourhood to Jubilee Park, the neighbourhood commercial area and other park spaces;
- A 0.22ha park is added to the east/west greenway to provide a recreational amenity area for residents in Greenbury;
- The park near the stormwater management facility can be used for active recreation by the residents of Greenbury;
- The park space in the centre median is for passive recreation, and will provide educational and interpretive opportunities for visitors and residents to learn about the use of bioswales in low impact neighbourhood drainage design. Because of its use in the storm water management system, this open space will not receive Municipal Reserve credit.

Overall, the amount of park to be dedicated as Municipal Reserve in the ASP is 22.7 ha, accounting for 10% of the Gross Developable Area. The amount of park moved from Greenbury and dispersed to other areas of the plan is 1.4 ha.

The 1.4 ha will be dedicated as smaller parks at zoning and subdivision as detailed planning throughout Pioneer Lands progresses. It is difficult to determine the best location for pocket parks at ASP stage without local road configuration. The total MR to be dedicated as land will be 10%. Adding parks as Municipal Reserve at the zoning stage will help avoid unnecessary administrative work at the ASP level requiring less Plan amendments.
4.1.5 COLLECTOR ROAD/ENTRY PARK

The re-configured collector road provides an entry feature park providing a 40 m wide focal point in the centre median. This entry park promotes the innovative and environmentally friendly focus of Greenbury. The separated lanes of the collector road help to slow down traffic, creating a more pedestrian friendly atmosphere and providing a high profile open space element at the entry point of Greenbury.

The median is planned to provide a visual link to the natural areas of Jubilee Park through planting of trees with a forest theme. This median is located along the major pedestrian greenway connection to Jubilee Park.

This median is planned to be incorporated into the storm water management system of the neighbourhood as a modified bioswale where storm water will serve to irrigate the plantings and provide an opportunity for infiltration, improving storm run-off water quality.

4.1.6 TRANSPORTATION SYSTEM

The amendment does not increase residential or commercial densities for the Neighbourhood, therefore increased road widths or additional connections are not required.

The collector road is reconfigured in the amendment to provide a straighter and more efficient route for residents. An entry median is incorporated into the collector, slowing down traffic by splitting the directions of traffic and creating a narrower field of view for motorists. Pedestrians crossing the road will have a shorter distance to cover with a rest area and park amenity between the north and south lanes. This median is located along the major pedestrian greenway connection to Jubilee Park.

The roads within the amendment area are primarily through roads, creating a connected system for motorists and pedestrians to access the collector and arterial roads.

Consideration will be given to innovative road cross-sections with enhanced landscaping and boulevard treatments within the Pioneer Road right-of-way.
5.0 SERVICING

The servicing concepts are graphically presented in Exhibit 7.

5.1 Water & Sanitary

Water and sanitary services will follow the alignment of the collector road in the amendment area. In general, the water and sanitary services are unchanged by this amendment.

5.2 Stormwater Drainage

The stormwater facilities are designed to accommodate a 100 year storm event.

The storm pond in the northeast of Greenbury is reconfigured but maintains the same size as in the approved ASP.

The entry median will be incorporated into the storm water management system as a modified bioswale. This bioswale reduces run-off to the storm ponds, provides natural filtration to storm water and irrigates the plants within the median.
6.0 PHASING

Greenbury is proposed as phase 1 of the ASP. The proposed phasing of the amendment area is presented as Exhibit 8.
Appendix 1 - Development Goals

This amendment continues to follow the development goals and planning principles of the approved ASP.

CREATE A LIVEABLE COMMUNITY THAT IS COMPACT, DIVERSE & CONNECTED

- Plan for transit ensuring that the majority of development is within 400 m of a collector road, which is the typical routing for transit.
- Provide efficient and connected pedestrian access to open space, transit stops and commercial areas.
- Plan for higher residential densities.
- Create neighbourhood focal points with increased housing densities.
- Provide a range of housing types across demographic groups and affordability levels.
- Consider suites in low density housing areas, eg, garage suites.
- Provide a variety of passive/active open spaces within 400 m walking distance of residents.
- Provide the opportunity for mixed use residential and commercial developments including live-work opportunities.
- Create diversity in street types and streetscapes: lane and non-lane development should be accommodated.

BUILD GREENER

- Consider alternative development standards: e.g., bio-swales (see Section 6.3) as a complement to storm sewers; reduced street lighting levels to reduce energy consumption and light pollution; alternative road construction to accommodate recycled material.
- Encourage increased water efficiency through measures such as: requiring multi-family buildings to capture and retain rain water for irrigation and toilets.
- Provide rain barrels for low density residential development.
- Require dual flush toilets.
- Consider the requirement that buildings meet "Built Green" or other recognized standards.
- Orient lots to maximize solar exposure.
- Provide locations for separation of construction waste.
- Encourage efficiency methods to minimize construction waste.

PRESENCE NATURAL AREAS

- Protect the natural water courses by incorporating them into the stormwater management systems and the pedestrian circulation system.
- Ensure natural amenities are at least partially fronted on public spaces.
Appendix 2 - Planning Principles

The amendment incorporates the following planning principles of the approved ASP.

NEIGHBOURHOOD CHARACTER & PLACEMAKING

- Create a neighbourhood with an identifiable heart(s) or focal point(s).
- Provide a variety of different building forms and uses, focusing on compatible integration rather than separation.
- Create a pedestrian friendly environment.
- Plan an integrated community for a diversity of ages, incomes and needs with associated community services that are adaptable over time, such as park and commercial space.
- Through careful design and planning, encourage the development of active community places which are alive and utilized and promote community interaction.

OPEN SPACE

- Provide a simple and understandable pattern of open space nodes, greenways, park sites and walkway connections. Greenways are vegetated, linear green spaces that contain multi-use trails.
- Ensure that park space is accessible to all members of the community.
- Provide a variety of opportunities for passive and active recreation experiences, incorporating a variety of activities to encourage community interaction.
- Design different types of park space to meet the needs of all users within the community.
- Design safe park spaces by implementing CPTED (Crime Prevention Through Environmental Design) principles.
- Include landmarks or visual points of reference within the open space system to provide local context and assist in wayfinding.
- Design a connected and integrated open space system that encourages non-vehicular movement (e.g., pedestrians and bicycles).
- Consider streets and lanes as an extension of the park and circulation system.
- Plan greenways and walkway connections to complement on-street sidewalk routes and connections.
- Treat outdoor space as a positive entity between buildings rather than as a void between buildings.
- Ensure that private amenity space provides an amenity value to building occupants and integrates well with the public open space landscape.
- Encourage biological diversity and natural processes within the natural and planted landscapes in the neighbourhood.
- Ensure that the landscape design of the open space network, particularly the stormwater management facilities and the pathways by which they are connected, includes predominantly native plant material with the intent that over time, this vegetative network seamlessly connects with the existing ecology of the area.
NEIGHBOURHOOD MOVEMENT & CIRCULATION

- Implement the City of Spruce Grove road hierarchy system of an integrated arterial, collector and local roadway network.
- Establish gateways into the neighbourhood that identify a sense of arrival.
- Establish sufficient locations for neighbourhood access by a variety of modes, such as automobiles, transit, bicycle and pedestrian connections.

Safety

- Integrate land use and circulation patterns considering safety of automobiles, pedestrians and cyclists.
- Provide traffic calming at appropriate locations to moderate vehicular speeds.

Pedestrians, Walkability & Cyclists

- Ensure that pedestrian/bicycle connections to the wider community are highly integrated, direct and legible as part of the open space network.
- Accommodate safe pedestrian movement on all roadways through the neighbourhood using the sidewalk network.
- Ensure that off-street bicycle and pedestrian facilities complement on-street circulation patterns.
- Establish integration between the street and urban form respecting human scale to achieve a more walkable neighbourhood.
- Define the interface between public and private property lines with plantings, pavement treatments or fencing.

Transit

- Provide transit stops within approximately 400m walking distance from all residences and schools.
- Initiate transit service at earliest possible date.
- Provide flexibility in neighbourhood transit configurations over time to accommodate convenient bus transit access.

LAND USE

- Provide a variety of housing types in different physical forms to meet the needs of different age and income groups.
- Create a healthy mix of densities to support the provision of hard and soft infrastructure to the neighbourhood in a timely manner.
- Provide opportunities for higher density housing at accessible locations, near community focal points, open space and transit routes.
- Site buildings to optimize views and vistas.
- Provide the opportunity for local commercial needs to be met within the neighbourhood.
- Locate and orient commercial sites along arterial or collector roadways to ensure high visibility and convenient access opportunities.
- Develop built form with a strong relationship to the street, encouraging human scale and having regard for pedestrian mobility, access and streetscaping.

IMPLEMENTATION

- Adopt Pioneer Land Mixed Residential zoning for the initial development phases.
- Determine the extension and upgrading of services by responding to the market schedule for providing serviced sites.
- Develop park facilities at the same time that new housing is developed and as the City budget allows.
- Provide greenways to link newly developing areas of the neighbourhood, open space and the adjacent Jubilee Park.
- Allow for flexibility between developers and homebuilders and the City Administration in regulating the introduction and implementation of alternative designs and technologies that support the ecological sustainability, cost effectiveness and environmental stewardship in the development of the neighbourhood.
CITY OF SPRUCE GROVE

BYLAW C-686-08

PIONEER LANDS AREA STRUCTURE PLAN

Being a bylaw to approve the Pioneer Lands Area Structure Plan in the City of Spruce Grove, in the Province of Alberta.

Pursuant to Sections 633 and 692 of the Municipal Government Act, R.S.A. 2000, c. M-26, including amendments thereto, the Council of the City of Spruce Grove, DULY ASSEMBLED, HEREBY ENACTS as follows:

THAT, Bylaw C-686-08, be adopted as shown in Schedule 1 which is attached as part of this bylaw.

This bylaw shall take effect on the date of its final reading.

First Reading Carried 14 April 2008
Public Hearing Held 24 November 2008
Second Reading Carried 24 November 2008
Third Reading Carried 9 February 2009

[Signature]
Mayor

[Signature]
General Manager of Corporate Services
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1.0 BACKGROUND

The area included in the Pioneer Lands Area Structure Plan is a part of those lands annexed from Parkland County by Provincial Order in Council 390/2007 signed September 12, 2007 and delineated in Exhibit 1. This Area Structure Plan (ASP) is intended as a guide for development of predominantly residential uses in the north portion of the annexation lands.

1.1 An ASP for a Smart-Green Community

This ASP establishes the pillars for smart growth and sustainable, green development focusing on a “triple” bottom line model:

- Social Sustainability;
- Economic Sustainability;
- Environmental Sustainability.

These pillars recognize that:

- land is a scarce and valuable asset that must be used efficiently;
- natural attributes of the land need to be preserved, managed and enhanced where possible;
- the lifestyle demands of people include being able to walk to recreation and other community amenities;
- the near term and long term cost efficiencies can be achieved in development and in the ongoing operations and maintenance of community infrastructure;
- compact, diverse and connected development offers a range of housing types and affordability levels; a diversity of setbacks, building forms and finishes;
• "Greener" development reduces energy and increases the use of simple infrastructure that is ecologically friendly as well as adding to the ambience of the community.

Accordingly this ASP addresses the pillars of smart-green growth as follows:

SOCIAL
• By providing a range of housing across demographic and affordability levels.
• Creating housing affordability through density.
• Creating work, live, and play opportunities within the same geographic area.
• Creating active streets and open spaces fostering public interaction and "know your neighbour opportunities".
• Connecting developments within the ASP and to the City at large.
• Accommodating healthier lifestyles through the use of multi-use trails and walkway linkages to open spaces.
• Providing access to the public transit system.

ECONOMIC
• Efficiently using the land through compact, denser development.
• Introducing low technology, eg., surface drainage, bio-swales, and highly effective stormwater management techniques.
• Creating affordability through density.

ENVIRONMENTAL
• Preserving Natural Areas.
• Minimizing stormwater runoff into sewers.
• Planning for transit ensuring that the majority of development is within 400 m of a collector road which is the typical routing for transit.
• Considering alternative development standards: eg. bio-swales as a complement to storm sewers; reduced street lighting levels to reduce energy consumption and light pollution; alternative road construction to accommodate recycled material.
• Encouraging increased water efficiency through measures such as: requiring multi-family buildings to capture and reuse rainwater for toilets and irrigation; providing rain barrels for low density residential development; requiring dual flush toilets.
• Considering the requirement that buildings meet "Built Green" or other recognized standards.
• Providing locations for separation of construction waste.
• Encouraging methods to minimize construction waste.
1.2 Our Vision

Our vision is to create liveable communities by implementing cost effective development techniques and design approaches that integrate the best practices for sustainable development.

Pioneer Lands is an outgrowth of our belief that there is a market for communities with subdivisions and buildings that are ecologically responsible and environmentally intelligent.
2.0 DESCRIPTION OF ASP

The Pioneer Lands Area Structure Plan contains lands located in the east half of 11-53-27-4, north of Grove Drive, west of Range Road 271 (Atim Road) and south of Highway 16 in the City of Spruce Grove. A location plan is included as Exhibit 1.

The Plan area encompasses approximately 283 ha of land and is located directly east of the City’s 24 ha Jubilee Park. While the ASP is intended to follow the framework established by development in the Spruce Village Area Structure Plan to the west, incorporating neo-traditional elements into some parts of this proposed ASP, the emphasis of this ASP is to provide a planning context for a “Smart-Green Community”. The following factors are planning considerations:

- the City of Spruce Grove is growing and demand for housing is high.
- these lands are newly annexed and require a framework for rational development.
- the collector roads have not been established or configured and servicing must be planned and staged to connect from existing infrastructure.
- the parks and land uses must be outlined and determined for future staging based on the market and civic needs.

2.1 Existing & Proposed Surrounding Land Uses

The Grove Meadows area to the southwest of the Pioneer Lands ASP has been substantially developed as a residential neighbourhood and Spruce Village is currently under development to the west. Greystone Centennial School and associated City sports fields are located immediately south of Spruce Village across Grove Drive. The remaining undeveloped land in Spruce Village and Grove Meadows is designated for low-density residential use. Immediately west of Pioneer Lands is City-owned and intended for recreational lands called Jubilee Park. Lands immediately south of the Plan area are presently under cultivation and were included in the annexation from Parkland County. Lands to the east are part of Parkland County, are currently vacant or under cultivation and include the Wagner Natural Area. The proposed land uses in the Plan area will not create problems or incompatibility with surrounding development. The existing conditions are presented graphically in Exhibit 2.

2.2 Land Ownership

An ownership plan showing property lines is included as Exhibit 3. There are two major owners in the proposed ASP area and several owners of smaller parcels of land. Beaverbrook Pioneer Ltd. is the predominant landowner within the ASP owning approximately 54% of the land.

2.3 Natural Areas

There are two natural areas identified within the ASP boundary. One is a creek that crosses from southwest to northeast and eventually drains into Big Lake. There is also a small tree stand in the south east corner of the plan area. The ASP incorporates the creek as part of the stormwater management system.
2.4 Soil Classification

According to the Parkland County soil classification map, soils in the ASP area are predominantly Class 1 which is considered the highest class with "few limitations to production and workability in terms of soil texture, soil moisture, or rocks and are expected to support a variety of cereal crops at relatively high productivity". Notwithstanding this classification, the City has annexed these lands for urban development purposes. The quality of the soil demands that development occurs that is as efficient as possible.
3.0 POLICY CONTEXT

This proposed ASP describes the proposed land uses, density of development, location of major roads and utilities and the proposed sequence of development in accordance with the City of Spruce Grove "Area Structure Plan Guidelines".

3.1 Municipal Development Plan

The newly annexed lands in the Pioneer Lands ASP are identified as mainly residential in the Municipal Development Plan C-668-07. There is a commercial component identified adjacent to Grove Drive and the lands in the northwest, labelled Special Study Area in this ASP, are identified as Urban Expansion.

The ASP conforms and specifically responds to the following goals and objectives of the City's Municipal Development Plan (Bylaw C-327-98) and the subsequent MDP amendment, Bylaw C-668-07:

2.2.1 To create neighbourhoods which have individual identities, but are inter-linked with one another to promote social interaction.

2.2.4 To allow a full range of housing types to meet the needs of various income, age and social groups.

2.5.1 To identify and protect natural vistas.

2.5.2 To create opportunities for a broad range of social and aesthetic community experiences.

2.5.5 To develop and maintain a linked comprehensive open space system which integrates conservation areas, farmlands, community streets and urban parks.

3.4 To encourage diversity in neighbourhood living experiences.

3.5 To recognize and provide a range of parks and recreation experiences varying in scale.

4.1.1 To provide a safe and efficient road system which will also support a desired urban form.

4.1.2 To recognize and enhance the role of community streets as potential social places in addition to their functional role in the urban transportation system.

4.1.4 To ensure that future urban development accommodates a variety of transportation modes.

4.1.5 To promote alternative transportation options.

The ASP conforms to the MDP amendment (Bylaw C-668-07) as it reflects the expansion for the City's boundaries:

- to the northeast for continued residential growth;
- to the north for possible commercial/business growth.
3.2 The City of Spruce Grove Parks & Open Space Master Plan

The City of Spruce Grove Parks and Open Space Master Plan was approved by Council on March 26, 2007. This document guides the development of parks, open space and recreation facilities in the City of Spruce Grove. The following principles are considered in this Area Structure Plan:

- reflect the environmental context of Spruce Grove through the respect of natural features and views, and the use of plants and other materials that are appropriate to the climate and context, and that protect and enhance biodiversity.
- provide a variety of places for recreation, physical activity, and enjoyment of the outdoors, for a diverse population by ensuring that there is a complete range of open space types appropriate for Spruce Grove.
- reflect and respect Spruce Grove’s history and culture.
- recognize Spruce Grove’s existing special places, create new ones, and provide good linkages through paths, good streets and linear parks.
- ensure a walkable and accessible city, neighbourhoods, and streets.
- promote public health objectives through the provision of open space.
- ensure that a range of open spaces are within the appropriate proximity of every citizen.
- ensure that all open spaces are safe for use, and that the urban design of surrounding areas supports the concept of ‘eyes on the street/path/park’; and
- raise the profile of parks, open space and trail systems within The City of Spruce Grove’s Administration to ensure that it is a priority in future planning and development.

The open space system will be linked via walkways and trails to connect with focal points and the major transportation linkages of the neighbourhood.

3.3 The City of Spruce Grove Land Use Bylaw No. C-600-06

The City of Spruce Grove Land Use Bylaw C-600-06 contains zoning regulations and land use information for the City of Spruce Grove. Development within Pioneer Lands will adhere to the general guidelines contained in the Land Use Bylaw. The lands are included in the Land Use Bylaw C-600-06 as AGR - Agricultural Restricted as per Parkland County’s Land Use Bylaw.

In order to achieve higher residential densities in support of the pillars of smart-green development, specific land use zones are created for the Pioneer ASPs and are included in Land Use Bylaw C-600-06.

These land use zones permit higher density development to occur for single detached, semi-detached and street-oriented townhousing enabling higher levels of affordability.
4.0 SUSTAINABILITY

The ASP considers and recognizes many of the principles of LEED.

LEED is the Leadership in Energy and Environmental Design program that is currently conducting a pilot program for green-field development with numerous neighbourhood projects to determine the efficacy of defined prerequisites and credits. There are currently 9 prerequisites in 4 categories of development principles and a minimum point credit system to achieve different levels of LEED certification for the neighbourhood. Many of these that are applicable are recognized in this ASP.

The Pioneer ASP will strive to achieve sustainable and responsible development by following the framework presented by the LEED pilot program and other sustainability programs and incorporating its principles where feasible. The LEED program deals with sustainable neighbourhood design while Build Green, which is referenced in other areas of the ASP deals with building scale sustainable practices.

The following are LEED and smart growth principles reflected in this ASP:

4.1 Smart Location & Linkage

The following are key LEED and smart growth location and linkage principles of the ASP:

- encourage development within and near existing communities or public transportation infrastructure. Reduce vehicle trips and miles traveled and support walking as a transportation choice.
- encourage new development within and near existing communities in order to reduce multiple environmental impacts caused by sprawl. Conserve natural and financial resources required for construction and maintenance of infrastructure.
- protect imperilled species and ecological communities.
- conserve water quality, natural hydrology and habitat and preserve biodiversity through conservation of water bodies or wetlands.
- protect life and property, promote open space and habitat conservation, and enhance water quality and natural hydrological systems.

4.2 Neighbourhood Pattern & Design

The following are LEED and Smart Growth neighbourhood pattern and growth principles of the ASP:

- use the land resource efficiently.
- promote communities that are physically connected to each other. Foster community and connectedness beyond the development.
- promote livability, transportation efficiency, and walkability.
- create a range of housing opportunities and choices.
- foster distinctive, attractive communities with a strong sense of place.
- mix land uses.
- preserve open space, natural beauty and critical environmental areas.
• take advantage of compact building design.

4.3 Green Construction & Technology

The following construction and technology principles of LEED in the ASP:

• reduce pollution from construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.
• manage construction waste through a site development recycling program.
• encourage sustainable products in development and construction.

4.4 Community Sustainability

The following are Smart Growth principles in the ASP to promote community sustainability:

• provide a mix of housing forms across income levels so that families can mature in place.
• provide opportunities for employment generating land uses.
• integrate housing forms to encourage a blend of family and non-family households.
• achieve densities that will support local retail opportunities, transit and other municipal services.
5.0 DEVELOPMENT GOALS & CONCEPT

5.1 Development Goals

The development goals of the ASP are:

CREATE A LIVEABLE COMMUNITY THAT IS COMPACT, DIVERSE & CONNECTED

- Plan for transit ensuring that the majority of development is within 400 m of a collector road which is the typical routing for transit.
- Provide efficient and connected pedestrian access to open space, transit stops and commercial areas.
- Plan for higher residential densities.
- Create neighbourhood focal points with increased housing densities.
- Provide a range of housing types across demographic groups and affordability levels.
- Consider suites in low density housing areas, e.g., garage suites.
- Provide a variety of passive/active open spaces within 400 m walking distance of residents.
- Provide the opportunity for mixed use residential and commercial developments including live-work opportunities.
- Create diversity in street types and streetscapes: lanes and non-lane development should be accommodated.

BUILD GREENER

- Consider alternative development standards: e.g. bio-swales (see Section 6.3) as a complement to storm sewers; reduced street lighting levels to reduce energy consumption and light pollution; alternative road construction to accommodate recycled material.
- Encourage increased water efficiency through measures such as: requiring multi-family buildings to capture and retain rain water for irrigation and toilets.
- Provide rain barrels for low density residential development.
- Require dual flush toilets.
- Consider the requirement that buildings meet “Built Green” or other recognized standards.
- Orient lots to maximize solar exposure.
- Provide locations for separation of construction waste.
- Encourage efficiency methods to minimize construction waste.
**Preserve Natural Areas**

- Protect the natural water courses by incorporating them into the stormwater management systems and the pedestrian circulation system.
- Ensure natural amenities are at least partially fronted on public spaces.

**5.2 Planning Principles**

**5.2.1 Neighbourhood Character & Placemaking**

- Create a neighbourhood with an identifiable heart(s) or focal point(s).
- Provide a variety of different building forms and uses, focusing on compatible integration rather than separation.
- Create a pedestrian friendly environment.
- Plan an integrated community for a diversity of ages, incomes and needs with associated community services that are adaptable over time, such as park and commercial space.
- Through careful design and planning, encourage the development of active community places which are alive and utilized and promote community interaction.

**5.2.2 Open Space**

- Provide a simple and understandable pattern of open space nodes, greenways, park sites and walkway connections. Greenways are vegetated, linear green spaces that contain multi-use trails.
- Ensure that park space is accessible to all members of the community.
- Provide a variety of opportunities for passive and active recreation experiences, incorporating a variety of activities to encourage community interaction.
- Design different types of park space to meet the needs of all users within the community.
- Design safe park spaces by implementing CPTED (Crime Prevention Through Environmental Design) principles.
- Include landmarks or visual points of reference within the open space system to provide local context and assist in wayfinding.
- Design a connected and integrated open space system that encourages non-vehicular movement (e.g. pedestrians and bicycles).
- Consider streets and lanes as an extension of the park and circulation system.
- Plan greenways and walkway connections to complement on-street sidewalk routes and connections.
- Treat outdoor space as a positive entity between buildings rather than as a void between buildings.
- Ensure that private amenity space provides an amenity value to building occupants and integrates well with the public open space landscape.
- Encourage biological diversity and natural processes within the natural and planted landscapes in the neighbourhood.
• Ensure that the landscape design of the open space network, particularly the stormwater management facilities and the pathways by which they are connected, includes predominantly native plant material with the intent that over time, this vegetative network seamlessly connects with the existing ecology of the area.

5.2.3 NEIGHBOURHOOD MOVEMENT & CIRCULATION

• Implement the City of Spruce Grove road hierarchy system of an integrated arterial, collector and local roadway network.
• Establish gateways into the neighbourhood that identify a sense of arrival.
• Establish sufficient locations for neighbourhood access by a variety of modes, such as automobiles, transit, bicycle and pedestrian connections.

SAFETY

• Integrate land use and circulation patterns considering safety of automobiles, pedestrians and cyclists.
• Provide traffic calming at appropriate locations to moderate vehicular speeds.

PEDESTRIANS, WALKABILITY & CYCLISTS

• Ensure that pedestrian/bicycle connections to the wider community are highly integrated, direct and legible as part of the open space network.
• Accommodate safe pedestrian movement on all roadways through the neighbourhood using the sidewalk network.
• Ensure that off-street bicycle and pedestrian facilities complement on-street circulation patterns.
• Establish integration between the street and urban form respecting human scale to achieve a more walkable neighbourhood.
• Define the interface between public and private property lines with plantings, pavement treatments or fencing.

TRANSIT

• Provide transit stops within approximately 400m walking distance from all residences and schools.
• Initiate transit service at earliest possible date.
• Provide flexibility in neighbourhood transit configurations over time to accommodate convenient bus transit access.

5.2.4 LAND USE

• Provide a variety of housing types in different physical forms to meet the needs of different age and income groups.
• Create a healthy mix of densities to support the provision of hard and soft infrastructure to the neighbourhood in a timely manner.
• Provide opportunities for higher density housing at accessible locations, near community focal points, open space and transit routes.
- Site buildings to optimize views and vistas.
- Provide the opportunity for local commercial needs to be met within the neighbourhood.
- Locate and orient commercial sites along arterial or collector roadways to ensure high visibility and convenient access opportunities.
- Develop built form with a strong relationship to the street, encouraging human scale and having regard for pedestrian mobility, access and streetscaping.

5.2.5 IMPLEMENTATION

- Adopt Pioneer Land zoning for the initial development phases.
- Determine the extension and upgrading of services by responding to the market schedule for providing serviced sites.
- Develop park facilities at the same time that new housing is developed and as the City budget allows.
- Provide greenways to link newly developing areas of the neighbourhood, open space and the adjacent Jubilee Park.
- Allow for flexibility between developers and homebuilders and the City Administration in regulating the introduction and implementation of alternative designs and technologies that support the ecological sustainability, cost effectiveness and environmental stewardship in the development of the neighbourhood.

5.3 Land Use Concept

The land use concept for the Plan area is presented as Exhibit 4.

The ASP comprises four major components:

- an urban village in the southwest accommodating higher density residential, retail, and mixed-use development, developed in a neo-traditional manner with good access from Grove Drive and Pioneer Road;
- residential development providing diverse housing and recreation opportunities connected by a collector road and trail system;
- a green space open space framework offering a hierarchy of recreational opportunities to residents. A major locational attribute for the ASP is adjacency to Jubilee Park. Linkages to Jubilee Park from the residential components integrate the Pioneer community with this major recreational feature;
- a special study area in the northwest comprised of small holdings, where future land uses have yet to be determined. This area may consist of business/commercial, retail, and residential uses.

The ASP is accessed from the north via Vanderbilt Common and from the south by way of Grove Drive and Pioneer Road. The north access serves the employment centre node and residential component. The south access serves the urban village and residential component.

The following provides a brief description of the various land uses in the ASP area. Land use and population statistics are presented as Exhibit 5.
## Exhibit 5

Pioneer Lands ASP Proposed Land Use Statistics

<table>
<thead>
<tr>
<th>Land Use</th>
<th>GDA (ha)</th>
<th>% of GDA</th>
<th>Units/ha</th>
<th>Units</th>
<th>m²</th>
<th>Unit %</th>
<th>Pop/Unit</th>
<th>Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Density Residential</td>
<td>80.05</td>
<td>35.1%</td>
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<td>1,441</td>
<td>-</td>
<td>38.7%</td>
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<td>Medium Density Residential (Townhouse)</td>
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<td>-</td>
<td>12.1%</td>
<td>3.0</td>
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<td>Mixed Use Residential Component</td>
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<td>-</td>
<td>1.8%</td>
<td>2.5</td>
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</tr>
<tr>
<td>High Density Residential (Apartments)</td>
<td>10.15</td>
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<td>-</td>
<td>23.7%</td>
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<td>2,208</td>
</tr>
<tr>
<td>Mixed Residential Component</td>
<td>33.85</td>
<td>14.8%</td>
<td>26.0</td>
<td>880</td>
<td>-</td>
<td>23.7%</td>
<td>2.8</td>
<td>2,464</td>
</tr>
<tr>
<td><strong>Total Residential</strong></td>
<td><strong>139.80</strong></td>
<td><strong>61.2%</strong></td>
<td><strong>26.6</strong></td>
<td><strong>3,721</strong></td>
<td>-</td>
<td><strong>100.0%</strong></td>
<td><strong>2.8</strong></td>
<td><strong>10,512</strong></td>
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<tr>
<td>Mixed Use Commercial Component</td>
<td>0.77</td>
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<td>Commercial</td>
<td>0.95</td>
<td>0.4%</td>
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<tr>
<td>Parks and Recreation (MR)</td>
<td>22.83</td>
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<tr>
<td>Stormwater Management Facilities</td>
<td>18.36</td>
<td>8.0%</td>
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<tr>
<td>Local Roads</td>
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<td>12.3%</td>
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<td>Collector Roads</td>
<td>17.54</td>
<td>7.7%</td>
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<tr>
<td><strong>Total Non Residential</strong></td>
<td><strong>88.45</strong></td>
<td><strong>38.8%</strong></td>
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<tr>
<td><strong>Net Developable Area</strong></td>
<td><strong>228.25</strong></td>
<td><strong>100.0%</strong></td>
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<tr>
<td>Special Study Area*</td>
<td>52.07</td>
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<tr>
<td>Pipeline</td>
<td>1.24</td>
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<tr>
<td>Arterial Road (Grove Drive)</td>
<td>1.04</td>
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<tr>
<td><strong>Total Gross Area</strong></td>
<td><strong>282.60</strong></td>
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</table>

* Could include retail, commercial, business, and residential uses. Requires further study.

* The projected population for the Pioneer Lands ASP lands is consistent with the regional population forecasts for 2041 in the Working Together Report.
5.3.1 RESIDENTIAL

Residential development comprises 60% of the Gross Developable Area (GDA), with a planned yield of 3,700 units and a population of 10,500 residents.

MIXED RESIDENTIAL HOUSING

The initial phase of development as indicated in Exhibit 5 is proposed to be developed as mixed residential. This designation allows an integration of different ground oriented housing forms, i.e., single detached, semi-detached and street oriented townhousing both in non-lane and laned configurations. A new land use district will be developed to accommodate this integration. The new land use will need to be approved by Council.

Mixed residential development allows for increased density housing to be developed in response to market demands, i.e., affordability and trends in sustainable development. Safe, comfortable and attractive pedestrian connections to focal points such as Jubilee Park, the stormwater management trail and others will reinforce the sense of community. Architectural controls will be used to ensure compatibility and thematic continuity.

Too many communities have been developed over the past 50 years which have focused on the automobile:

- garages are the focus from the street rather than the front door;
- sidewalks are constantly crossed by driveway accesses;
- cars are given priority over people on the streets.

Similarly, these communities have tended to be physically homogenous, primarily with a single detached housing characteristic. While it may be acceptable visually to create buildings and streetscapes of like design, developing hundreds of acres in the same manner, creates a visually less appealing environment for residents, visitors and the municipality.

The intent of the mixed residential component includes:

- to allow for the development of single family, semi-detached and street-oriented townhousing to create a diverse and interesting streetscape;
- to achieve higher density and therefore, more affordable housing product, the experience across North America to reducing housing costs has been to increase density, thereby reducing the impact on the consumer of higher land and servicing costs;
- to facilitate a mix of demographics in the community;
- to facilitate an attractive, liveable, sustainable and economic housing community.

The mixed residential development will promote the following performance criteria in the new zoning:

- bring the front entrance of the residential unit closer to the street to improve the pedestrian environment and to reduce the waste of land;
- reducing the impact of the garage by use of lanes and, for street facing garages, how far they may protrude past the front entrance;
- a mix of lot widths and depths to accommodate a range of lot formats including narrow lots, estate lots, wide-shallow lots (maximize street frontage), clustered housing and other single and semi-detached housing forms;
- single and double garages coupled with parking pads at the front or rear of the house;
- attached townhousing of up to eight units to create focus for the streetscape;
- side yards appropriate for the character of the development and housing types;
- private open space for each unit.

The City’s Development Officer would work with builders to enable attractive and well laid out development to occur. Developer administered architectural guidelines will be placed on each title.

Mixed residential provides the City and the developer flexibility to create interesting, attractive streetscapes that are responsive to the demographic shifts that occur in communities in short periods of time.

The mixed residential component represents five years of development. It is possible that the mixed use zone may be adopted by the City in its new Zoning Bylaw and be applicable to the balance of the Pioneer community and elsewhere.

Development density in the mixed residential zone will range from 22 - 30 units per hectare or a planning average of 26 uph.

**Low Density Housing**

The ASP also promotes the creation of other heterogeneous living environments outside the mixed use residential area by integrating various forms of street-oriented dwelling units throughout the residential component of the ASP. This will be achieved by designating “clusters” of single detached and semi-detached or duplex dwellings along a street. Homogenous districts may also be considered if warranted by consumer/demographic demand, eg. lifestyle communities. For this reason, several proposed districts are for single detached dwellings only. For each cluster, the specific zoning regulations of the Land Use bylaw as approved will apply.

The mixing of housing forms brings not only visual diversity to the community, but social and cultural diversity too. Architectural controls will be used to provide the thematic continuity required so that there is no need for “transition” between different districts (e.g. increased side yard setbacks where one district abuts another district).

**Multi-Family Housing**

The multi-family housing comprises about 11% of the approximately 138 ha of land available for residential development. This includes three medium density sites in a proposed urban village setting backing on to Jubilee Park, one as you enter the neighbourhood from Pioneer Road and several along Grove Drive. Higher density projects are incorporated adjacent to collector roads and medium density sites to transition to neighbouring low density residential. There are also several mixed-use sites proposed that include apartments with opportunities for ground-floor commercial/retail.
**Urban Village**

This ASP proposes approximately 20 ha of Urban Village in the southwest area of the ASP. The Village will be a compact and self-contained area providing an opportunity for a mix of complementary land uses such as:

- commercial/retail;
- a variety of low, medium and high density housing;
- open space; and
- mixed use development.

Generally, the combination of these uses, brought together under the umbrella designation of Urban Village Centre, will provide an innovative urban experience employing New Urbanist and Neo Traditional principles in a self-contained, integrated community. A mix of complementary land uses and activities can be developed where the needs of daily life are within walking distance. The compact nature provides walkability between residential, recreation and commercial services. Additionally, the compact design eases requirements on the extension of utility services as less road is needed and more users share from the same utilities.

The key attributes of the Urban Village include:

- higher density housing providing a village atmosphere;
- a focus on building with a street orientation;
- extension/linkage to Jubilee Park;
- compact development which will create street level activity and street level interest;
- diversity of multi-family residential forms including townhousing, apartments and mixed use development;
- major opportunities to work, live and play in the same community;
- immediate access to commercial services;
- immediate access to employment opportunities;
- Village focal point at the "village green";
- walkable access to transit;
- defined edges and Urban Village boundaries; and
- densities of approximately 50 uph that reflect sustainable development, smart growth and transit supportive development.

Development and architectural guidelines will be used to provide an aesthetically pleasing pedestrian-oriented public environment and sense of community.

**Residential Siting & Design Principles**

All housing units will front on public streets. In order to create a varied streetscape, there may be a mix of housing types – single family detached, semi-detached and duplex.
Vehicular access and parking are essential considerations in any residential neighbourhood. However, prominent front and attached garages can be a major obstacle to social interaction between people in private yards and people using public streets. The concept focuses on and encourages non-vehicular traffic (pedestrians, cyclists, in-line skaters, etc.) while providing for safe vehicular movement and parking. Within the ASP area, laned systems will have rear garages only. In laneless systems, some residential development will allow vehicular drive-through access to a rear garage or parking area.

Front garages will also be permitted in the laneless system but will not be prominent. Garages will be incorporated into the front of the dwelling in such a manner as to minimize their influence on the streetscape (e.g., in some districts, the front attached garage cannot protrude more than 2.5 m beyond the front of the porch, veranda or stoop). This and the use of front porches on all dwelling units, are ways of encouraging socializing.

Site specific amendments to the Land Use Bylaw were created to provide new residential districts for Spruce Village. Pioneer Lands will also use these districts in which:

- lot widths and depths are reduced for single and semi-detached uses;
- front yard setbacks are reduced to bring the dwelling units closer to the street;
- side yards are modified to allow vehicular access to rear garages on narrower lots.

The Area Structure Plan, when fully developed, is projected to provide approximately:

- 1440 single and semi-detached housing units;
- 450 medium density residential units; and
- 880 high density residential units;
- 70 mixed use residential units;
- 890 mixed residential units

for a projected population of 10,512.

5.3.2 COMMERCIAL, RETAIL, OFFICE PARK & MIXED USE

The ASP accommodates a hierarchy of commercial, retail and office park opportunities:

- a 1.0 ha arterial commercial site accommodating 2,500 sq. m. of retail/mixed use development at Pioneer Road and Grove Drive in the Urban Village;
- two mixed use commercial sites totalling 0.8 ha, centrally located in the ASP to accommodate approximately 2,000 sq. m total commercial space.
- special study area along Highway 16 and Century Road.

These uses create the opportunity to accommodate City and local development, capitalizing on the location and access attributes of the ASP.

The Urban Village commercial/retail/mixed use will serve a market which will include Pioneer, Spruce Village and portions of Lakewood with district level commercial uses. Some of these may be integrated in multi-family residential structures to assist in creating an attractive and active streetscape. Walkway access to the site will be provided.
The neighbourhood commercial sites will serve the local residential areas in Pioneer, providing lower order, convenience uses.

Exposure to Century Road will allow arterial oriented retail/commercial to occur, attractive to district and regional level markets.

5.3.3 SPECIAL STUDY AREA

The area in the northwest of the ASP comprising 52 ha is designated a Special Study Area. Due to the complex ownership situation in this area, future land uses will be determined at a later date. This site is likely a candidate for business, commercial and retail opportunities, providing a future employment area for Spruce Grove. An amendment to the ASP will need to be approved in the future to allow development to occur in the Special Study Area.

5.3.4 NOISE ATTENUATION

A Noise Impact Assessment was conducted by ACI Acoustical Consultants Inc. The recommendations for noise abatement will be implemented at time of development, including berms and fence at the residential property lines along Highway 16 as noted in Exhibit 4.

5.3.5 OPEN SPACE & SCHOOLS

The Separate and Public School Boards anticipate no need for future school sites within this ASP, however two park sites large enough to accommodate a school are provided in the event schools are needed in the future. An existing school/park site with recreation fields is located to the southwest of the ASP across Grove Drive.

The open space needs of Pioneer Lands residents will be satisfied through a hierarchy of open space arranged in a linear, connected manner. The major elements include:

- a district park called Jubilee Park, abuts the ASP area and will eventually be developed by the City at the western edge of the Plan area. The ASP provides major linkages to Jubilee Park;
- community parks in the north part and the south part of the ASP are planned as "focal" points for the ASP, accessible by walkways and roads. These parks are also large enough to accommodate schools, if deemed necessary in the future;
- dispersed neighbourhood parks and linear greenways are provided to increase social interaction and encourage non-vehicular travel. The parks will be developed as either informal active or passive recreation spaces;
- linear stormwater management facilities will be integrated with the adjoining open space areas.

The open spaces proposed are consistent with the City of Spruce Grove Parks and Open Space Master Plan, which defines seven categories of open space. The open space categories planned to be included in the Pioneer Lands fall under categories 'C', 'D' and 'E'.

Type C parks include parks, gardens, and civic spaces serving social, aesthetic and informal recreation purposes.

Type D parks include outdoor sports and recreation facilities. This could also include school sites.

Type E parks are classified as linear systems, green corridors, paths, and streets.
The types of park in the Pioneer Lands ASP are identified in Exhibit 6 - Transportation, Parks, & Open Space.

5.3.6 TRANSPORTATION SYSTEM

The Area Structure Plan lands are located within 0.5 km of Highway 16, a road identified in the "Working Together Report" prepared for the Capital Region Board. No changes are planned for Highway 16 to 2016 (Ten Year Roads/Highways Improvement Plan), but by 2041 this highway will be upgraded to six lanes (Next 35 Years Roads/Highways Improvement Plan).

A network of roads, trails and sidewalks combine to move people, private vehicles and transit. The major access points are arterial roads:

- Grove Drive from the west;
- Pioneer Road from the south;
- Century Road from the west.

Collector roads will loop through the components providing transit and private vehicles effective and efficient access to the arterial system. Traffic calming measures will be implemented to control and direct traffic to major roadways.

Grove Drive's location, approximately 1 mile between Highways 16 and 16A, may connect to possible future roadways east of the plan area. To ensure that this can be accommodated in the future, Grove Drive is shown conceptually in the ASP, as a full arterial road along the entire southern boundary of the plan area and extending to the municipal boundary.

The extension of Grove Drive beyond the easternmost collector road, shown dashed on Exhibit 6, will depend on future plans approved by Parkland County and the Province of Alberta. Discussions regarding the regional roadway and freeway network are ongoing and may result in future adjustments to Grove Drive.

A TIA was completed for the Pioneer Lands by IBI Group in December 2007.

PM peak hour traffic forecasts have been developed utilizing proposed land use development and the Institute of Traffic Engineers trip rates. Estimates for 2006 traffic were obtained from Alberta Infrastructure and Transportation's website, as well as other sources provided by the City's consultant. These forecasts were grown to the forecast years, 2016 and 2026 at 2.0% per annum.

As part of this analysis, it was assumed that the lands south of the subject site to Highway 16A would also be developed sometime over this period. Accordingly, traffic forecasts were prepared for the subject lands with and without the south lands being developed.

A level of service analysis for at grade intersections on Century Road, Highway 16 and Highway 16A adjacent to the subject lands, was undertaken for the PM peak hour. Also, all day traffic forecasts were prepared for various stages of development, to assist in determining roadway lanes and classification. Based on this information, the following roadway improvements are proposed to accommodate various levels of development by time period:

- Highway 16/Century Road – additional westbound to southbound left turn lane by 2016 to accommodate Background and Pioneer Site traffic, and associated interchange improvements.
- Highway 16A/Century Road – additional left turn lanes by 2016 to accommodate Background traffic, then additional east/west lanes from 6 lanes to 8 lanes by 2026 to accommodate Background plus full Site Development (Pioneer and South Lands).
- Century Road – expansion of roadway from 2 lanes to 4 lanes by 2016 to accommodate Background traffic.
- Vanderbilt Common – signalization and turn lanes in conjunction with 100 dwelling units in the Pioneer site (expected by 2009).
- Grove Meadows – no improvements required.
- McLeod Avenue – no improvements required.
- Central Collector – signalization and turn lanes required to accommodate 2026 Background plus Site traffic.
- Pioneer Road - signalization and turn lanes required to accommodate 2026 Background plus Site traffic.

Transit service should be provided for on all the collector and arterial roadways listed above.

Trails incorporated in the linear park and stormwater management system will provide a significant pedestrian/bicycle circulation opportunity. The majority of these will be located in an amenity rich environment.

Pedestrian links along roads will be along boulevard separated sidewalks so that all streets become part of the walkway system. This separation not only increases pedestrian safety, but with appropriate tree planting creates an attractive streetscape. Additional pedestrian links will be provided, where required, to improve access to open space and other destination areas.

The combination of sidewalks and pathways will link the open space opportunities and features.

A transportation and open space plan is presented in Exhibit 6.
6.0 SERVICING

The servicing concepts are graphically presented in Exhibit 7.

6.1 Water Supply & Distribution

The City has adequate treated water available to accommodate the ASP area.

6.2 Sanitary Sewage Collection

Sanitary sewage for the plan area will be directed to the Capital Region sanitary trunk sewer located north of Highway 16. These flows will be directed to the trunk sewer via conventional gravity sewer piped systems. A drainage assessment will be submitted in parallel with the Area Structure Plan circulation to determine the remaining capacity of the 525 mm sewer located in the northwest corner of the plan area which was intended to service a component of the plan area. Flows in excess of the capacity of this connection will be directed via a future second connection to the Regional Sewer. The mandate of the regional sewer commission is to provide sanitary servicing necessary to develop all lands within the service area.

6.3 Stormwater Drainage

The stormwater facilities will accommodate a 100 year storm event. The drainage swales, pipes and detention area form integral components of the overall stormwater management concept. The drainage swales will accommodate overland flows in the ASP to catchbasins connected to the piped stormwater system.

The linear nature of the stormwater management system offer two significant opportunities:

- to minimize the use of piping by incorporating bioswales (definition p. 20) and linear wetlands;
- to maximize the open space in the ASP by incorporating the bioswales and wet lands with the parks and multi use trails.

Planning for alternative stormwater management techniques in the initial stages of land development can yield significant cost and environmental benefits for developers, municipalities, and residents. Stormwater management systems can simultaneously satisfy regulatory requirements, act as site design elements, protect the environment, and reduce infrastructure costs - all the attributes of minimizing the impact of development.

One concept is to implement alternate conveyance systems to slow the erosive velocity of stormwater, increase time of concentrating, and filter pollutants such as sediment. Another initiative is to reduce the quantity of stormwater runoff to reduce the amount of impairment on the quality of water. This can be achieved through the installation of various infiltration systems which encourage the downward movement of water into the underlying soil to reduce the total quantity of overland runoff and pollutants from impervious surfaces. The following paragraphs provide some techniques in alternate conveyance systems and infiltration systems that may be implemented in this ASP.
6.3.1 VEGETATED CHANNELS/BIOSWALES

Vegetated channel systems and bioswales are alternatives for conveying water away from streets, downspouts, and structures. They are low-cost alternatives to conventional conveyance systems, such as curbs or concrete channels. These alternatives reduce storm water velocities and allow sediment and pollutants contained within storm water to be filtered.

In residential settings, swales are an effective way to convey water to bioretention areas sited a short distance away from structures and foundations. When used in conjunction with bioretention areas, swales function as pre-treatment mechanisms that filter sediments from storm water.

Wet swale systems are variants of dry swales and function similarly to a wetlands system. Slightly more expensive to construct than a vegetated channel or dry swale, wet swales are designed with a permanent pool structure and planted with wetlands vegetation for pollutant treatment.

6.3.2 BIORETENTION

Bioretention areas are shallow, topographic depressions filled with engineered soils and vegetation that retain, treat, and infiltrate water. Bioretention systems are designed for the temporary storage of rainwater. They successfully remove pollutants through increased contact time with soils and plant materials. As compared with conventional storm water management systems, bioretention areas more closely mimic the natural hydrologic cycle, allowing soils and plants to filter pollutants from storm water and permitting the processes of infiltration, evaporation, and transpiration to occur. The systems can also create wildlife habitat, minimize erosion, and recharge local groundwater supplies.

For residential applications, treatment areas are generally located some distance away from houses to increase flow paths and treat runoff from rooftops and driveways. In either case, bioretention systems route storm water to bioretention areas that are designed to accumulate water. In the event that storm water volumes exceed treatment capacities, bioretention areas are usually equipped with overflow drop inlets routed to municipal storm water systems.

6.3.3 FILTER STRIPS

Filter strips are low-grade vegetated areas that permit sediment deposition during sheetflow. Usually used as one component of a storm water management system, filter strips are considered pre-treatment devices, meaning that water is routed through them before entering systems such as bioretention areas.

6.3.4 WETLANDS

Constructed wetlands systems use soils, vegetation, and hydrology to remove pollutants from storm water. The systems are effective in attenuating flood flows, reducing pollutant loadings, and providing wildlife habitat. From a community design standpoint, wetlands systems can create open space, offer improved aesthetics over traditional treatment systems, and provide recreational and educational opportunities.

Similar to their natural counterparts, constructed wetlands types can vary from seasonally inundated to year-round, open-water systems. To optimize pollutant removal capacities, engineers usually aim to maximize flow paths through wetlands systems to prolong exposure to soils and vegetation, thereby facilitating nutrient and pollutant uptake, retention, and settling.
6.3.5 RAIN BARRELS

Rain barrels are low-cost retention devices placed below roof downspouts to collect water during storms. Although rain barrels offer no primary pollutant removal benefits during collection times, they act as quantity controls and can help reduce the cumulative effects of storm water on downstream systems.
7.0 STAGING

The proposed staging of the amendment area is presented as Exhibit 8.
8.0 SUSTAINABILITY

The development of the Pioneer Lands ASP will strive to achieve a high level of sustainability.

Development will occur in a manner that is increasingly sustainable and sensitive to the environment through use of design techniques and alternate technologies that are more environmentally intelligent. In order to implement a development of this ecological nature, consideration of servicing techniques, and infrastructure provision in general may be necessary in consultation with the City Engineer. The approach to neighbourhood design in Pioneer is proposed to achieve a higher environmental standard, and, in doing so, requires cooperation and flexibility between City Departments, Utility Agencies and the proponents of this plan in order to achieve this unique design.

Along with the LEED neighbourhood design guidelines listed in Section 3.4, the following principles provide a guideline for sustainability.

- consider the three foundations of sustainability: economy, society and environment in decision making regarding land use and building form.
- balance development and environmental protection by maintaining a vibrant residential community that demonstrates caring stewardship of the environment.
- preserve and enhance environmental resources including watershed, air quality and natural areas.
- ensure a compact, integrated urban form that responsibly uses the land resource.
- maximize the benefits gained from the land resource by having the land accommodate numerous functions where possible.
- ensure sustainable and cost effective landscape development of the open space areas over the long term with the use of native plant species and the added benefit of the re-establishment of natural habitat.
- consider ways to lower consumption and demand in the development of infrastructure for the neighbourhood on all applicable resources, both inputs and outputs.
- provide flexibility for the introduction of new technologies, as they emerge over time, especially with respect to energy inputs and waste outputs.
- consider natural drainage techniques as an alternative to conventional stormwater management collection.
- where stormwater is collected and discharged, provide bio-filtration to filter stormwater prior to discharge.
- where it is desirable to encourage groundwater recharge, provide pervious surfaces as much as possible.

The following are specific initiatives that could add to sustainability in the Pioneer Lands ASP.
8.1 Land Use

The following are land use initiatives embedded in the ASP:

- increased densities for residential development;
- preservation of natural areas through incorporation in the stormwater management system and the use of Municipal Reserve provisions.

The following are initiatives that are encouraged by this ASP and may be pursued at the building stage.

- provide orientation to enhance opportunities for solar power;
- encourage the Urban Village as a focus for such initiatives as district geothermal and other innovations if practical.

8.2 Sanitary System

The following are initiatives that are encouraged by this ASP and may be pursued at the building stage.

- encourage grey water reuse in accordance with the Health Canada Guidelines. Grey water is any water that has been used in the home, except water from toilets. Dish, shower, sink, and laundry water comprise 50-80% of residential "waste" water. This may be reused for other purposes, especially landscape irrigation.;
- specify builder to install low flush toilets and low flow showerheads;
- encourage heat recovery from plumbing down spouts;
- encourage front load washers.

8.3 Stormwater System

The following are initiatives embedded in the ASP:

- Use of bioswales and linear stormwater management facilities.

The following are initiatives to be pursued outside the ASP at a later stage of development:

- rain barrels for every residence to capture water for gardening/domestic use;
- site storage via cistern for larger developments for landscape/domestic reuse.

8.4 Landscape

The following practices will be implemented to respond to smart-green growth challenges:

- maximizing permeable surfaces in park and trails;
- maximizing the use of natural landscape materials.
8.5 Streets

The following opportunities will be pursued with the City:

- incorporate recycled materials into roadwork and trails e.g. crushed concrete, recycled asphalt, etc.;
- determine the most efficient and convenient locations for sidewalks in the context of the total pedestrian system in accordance with City standards to ensure pedestrian connectivity;
- the use of multi-use trails to encourage walking/cycling within the ASP and to other adjacent areas.

8.6 Construction

The following initiatives will be implemented:

- construction waste management to minimize waste and maximize recycling;
- use of “Build Green” builders;
- requiring high efficiency furnaces R 2000 construction and other energy-wise initiatives.

8.7 Public Education

Pursue public education for the construction industry and the general public on the value of smart-green development.