STURGEON COUNTY

NORTHERN LIGHTS ESTATES

AREA STRUCTURE PLAN



Bylaw 1039/04 Adopted January 10, 2005

Amended July 8, 2005 by Bylaw 1060/05

Amended March 31, 2011 by Bylaw 1187/09

Submitted by:



Revised by:



Submitted to:





ACKNOWLEDGEMENTS

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1 INTRODUCTION

1.1 Purpose and Scope

The purpose of this Area Structure Plan is to provide guidance for how future growth and development will take place in the Northern Lights Estates development. This ASP contains a review of the existing conditions and factors influencing development and outlines a development concept and associated policies which provide for:

- Residential and complimentary uses;
- Lot yield, phasing and density of the plan area;
- Utility servicing (municipal and franchise);
- Demands for educational, recreational and social services;
- Transportation issues and impacts;
- Municipal reserve and recreational issues;
- Procedural matters dealing with plan process, plan implementation and plan review, amendment and repeal;
- Direction for the development of the required amendments to other statutory plans including the creation of a Specific Direct Control District.

2 PLAN AREA

The subject land is located southwest of the St. Albert Airport as illustrated in *Figure 1 – Location Plan*. It is bounded on the west by Range Road 261 and on the north by Township Road 544, approximately 4 km west of Highway 2 and 2.4 km north of Secondary Highway 633 (Villeneuve Road).





3 BACKGROUND

3.1 Policy Context

The ASP area is subject to the provisions and policies contained in the Sturgeon County Municipal Development Plan Bylaw 818/96 (MDP), Sturgeon County/City of St. Albert Intermunicipal Development Plan Bylaw 906/01 (IDP), and the Sturgeon County Land Use Bylaw 819/96. Amendments to these documents are required to satisfy Section 636 of the Municipal Government Act (MGA) which states that "....all statutory plans adopted by a municipality must be consistent with each other."

Amendments to the aforementioned documents are required to satisfy the obligations pursuant to the mediated agreement between Sturgeon County, City of St. Albert and the Town of Morinville.

3.1.1 Municipal Development Plan Bylaw 818/96

The Municipal Development Plan (MDP) designates the subject area for Agriculture, therefore an amendment to the MDP to allow residential development is required.

3.1.2 Land Use Bylaw 819/96

The current districting of the subject land under the Land Use Bylaw (LUB) is AG – Agricultural District. Implementation of this area structure plan will require the redistricting of the subject land.

It is proposed that a "Specific - Direct Control" land use district (S-DC) be developed and applied to this ASP area. Ownership

The current ownership of the land affected by this area structure plan is provided in *Table 1 - Ownership*. All landowners within the area structure plan boundary have been consulted and are agreeable to inclusion in the area structure plan.





TABLE 1 OWNERSHIP

Legal Description	Owner	Area
Lot 2, Plan 972 4236	Vito & Mirella Daniele	23.3 ha
Lot 3, Plan 972 4236	Giovanni & Assunta Daniele	23.3 ha

Registered rights of way and easements are shown in *Figure 2 – Ownership*. There are no restrictive covenants or caveats applicable to the subject lands that would affect development.

3.2 Existing Land Use

There are two existing residences on the subject land, one on Lot 2, Plan 972-4236 in the north central plan area, and the second on Lot 3, Plan 972-4236 in the southwest. The remainder of the land is in agricultural use as pasture.

3.3 Adjacent Land Use

Two residences are located immediately adjacent the ASP area. These are identified in *Figure 1 – Location Plan* as Lot 4 Plan 982 6489 and Lot 1 Plan 932 1422.

There is also an existing residence south of the plan area along Range Road 261. To the west, across Range Road 261, there are two dwellings and extensive agricultural lands. North, across Township Road 544, and to the east and south, the land is generally in agricultural use.

To the northeast is the St. Albert Airport Industrial Park. This land is being utilized for rural industrial development, some of which is associated with the airport. The area is not presently serviced with municipal water. However the recently completed Villeneuve water supply line passes through the industrial park and it is anticipated that some of the business located in the industrial park will connect to the water line. Sewer is managed via individual onsite sewage disposal.

The airport itself is a small private airstrip. Developments in the vicinity of airports are regulated by Sections 6.24.2(b) and 6.25 of the LUB.





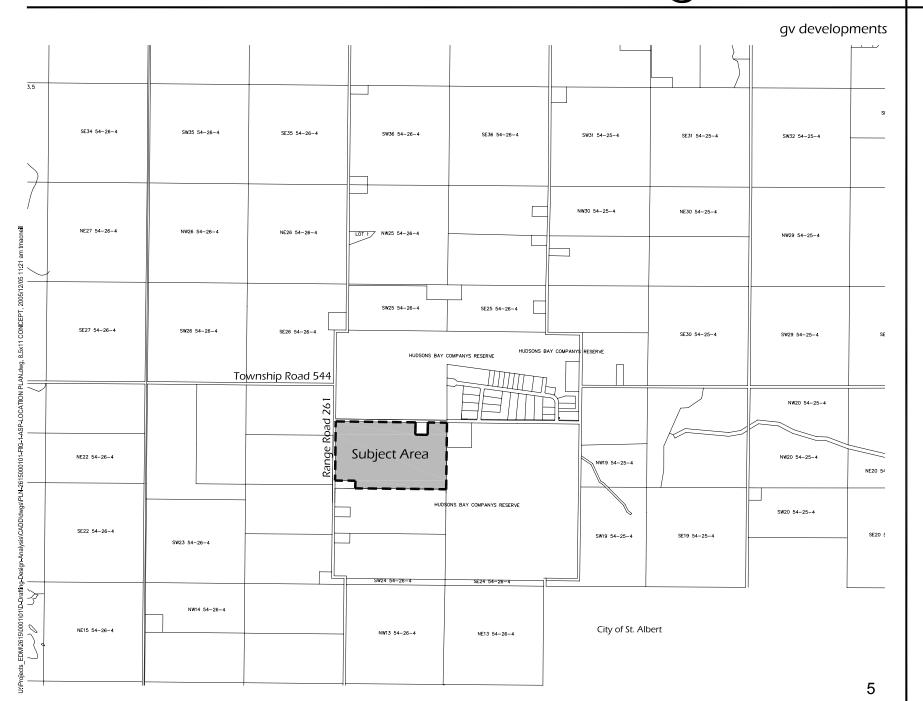
Noise exposure forecasts for the airport indicate that the ASP area is not affected. Thus additional building regulations for sound insulation required by Canada Mortgage and Housing Corporation will not affect future residential development within the ASP area. Conversely, development of the ASP area will not affect operation of the airstrip. Given that approach and departure is from an east to west direction, the Obstacle Limitation Surface, which restricts the height of developments in the vicinity, will not be compromised. However, the airstrip is expected to continue to operate as a privately owned facility for the foreseeable future.

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northern lights estates







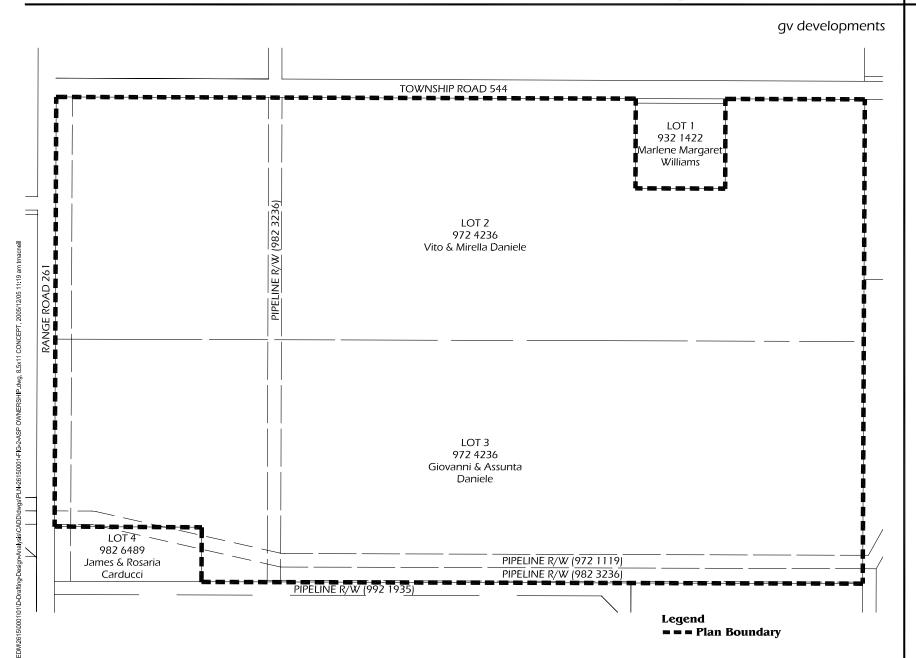
FIGURE

URBANSYSTEMS.

northern lights estates



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ownership p

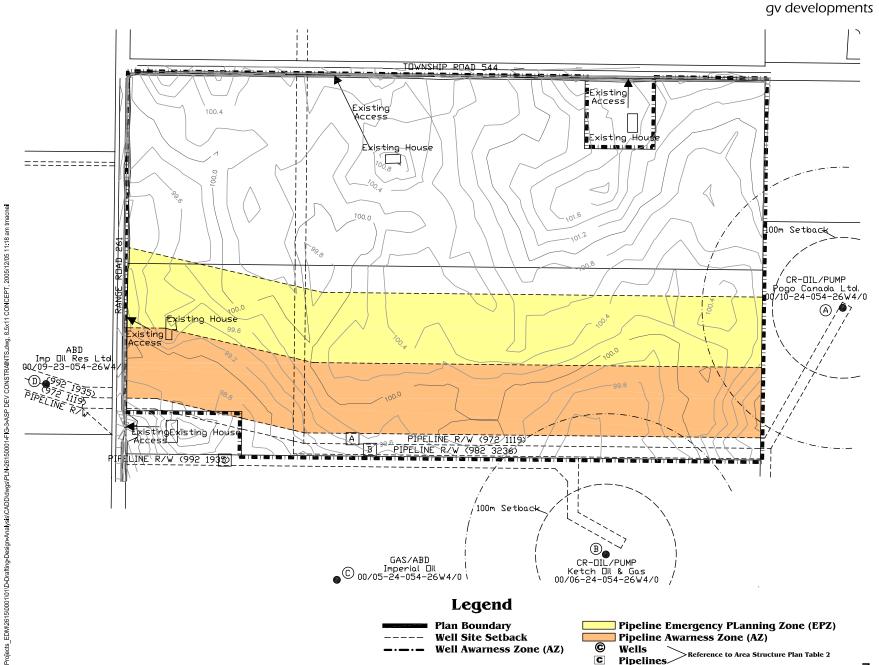
FIGURE







FIGURE







3.4 Resource Extraction

There are three pipeline rights of way within the property (Refer to *Figure 3 – Development Constraints*). As these are not high pressure lines or sour gas, the Alberta Energy Utilities Board recommends the edge of the pipeline right of way as the minimum setback requirement. Section 6.4 of the LUB indicates that "setbacks from pipelines shall be in accordance with appropriate Provincial Regulations or Acts and any regulations or directives established by the Energy Utilities Board."

Information received in November 2001 from the Alberta Energy Utilities Board indicates that there are no sour gas facilities per-se in the vicinity of the proposed development requiring setbacks beyond the right-of-way boundary in the case of pipelines or the minimum setback in the case of other facilities such as wells.

3.4.1 Pipelines

Due to low levels (less than 2%) of sour gas (H_2S) present in pipelines A and C (Refer to *Figure 3 – Development Constraints*) an Emergency Response Plan (ERP) has been compiled by the pipeline operator. The ERP comprises of an Emergency Planning Zone (EPZ) of 100m from the edge of the pipeline right of way and an Awareness Zone (AZ) of 200m from the edge of the pipeline right of way.

3.





TABLE 2 OIL/GAS PIPELINE & WELL SUMMARY

Pipelines	Owner	Status & Content	ROW width	Setback	EPZ	AZ
A	Burlington Resources	Active, oil, low level H ₂ S	15m	Edge of ROW	100m from edge of ROW	200m from edge of ROW
В	ATCO Gas	Active, natural gas	15m	Edge of ROW	N/A	N/A
С	Sifton Energy	Active, oil, low level H ₂ S	15m	Edge of ROW	100m from edge of ROW	200m from edge of ROW
Wells						
Α	Burlington Resources	Active oil, low level H ₂ S	N/A	100m from well head	100m from well head	200m from well head
В	Ketch Oil & Gas	Active oil, low level H ₂ S	N/A	100m from well head	100m from well head	200m from well head
С	Imperial Oil	Abandoned Oil	N/A	N/A	N/A	N/A
D	Imperial Oil	Abandoned Oil	N/A	N/A	N/A	N/A

3.5 Natural Features

There are no significant treed areas, watercourses, or water bodies within or adjacent to the subject land. The topography in the area is virtually flat, with a maximum topographic variation of approximately 3m (refer to *Figure 3 – Development Constraints*). Drainage is generally from the northeast to southwest. With the exception of stormwater drainage, natural features in the plan area will not have a noteworthy impact on development.

Soil capability for agriculture is rated as 2_s (marginal) per the *Canadian Land Inventory:* Soil Capability for Agriculture, Map Edmonton 83H. As such the lands are not defined by the MDP as "better agricultural" lands.

3.6 Natural Areas

The 1989 report titled *Environmentally Sensitive Areas: County of Strathcona and M.D. of Sturgeon* identifies environmentally sensitive areas within the two municipalities. The





report categorises each identified sensitive area as Provincial, Regional, or Local level significance. There are no identified sensitive areas within the ASP area.

The IDP, MDP and LUB do not identify any "natural areas" within the ASP boundary. Nor do the MDP and LUB identify any lands within the ASP area as "Environmental Protection".

3.7 Access

The subject land has access via Range Road 261 south to Secondary Highway 633 (Villeneuve Road) and via Township Road 544 east to Highway 2.

3.8 Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment will be conducted at the subdivision application stage for phase one of the development. The ESA will cover the whole of the ASP area. The ESA report will be submitted to the County as part of the subdivision approval application. Any potential issues identified in the ESA will be addressed prior to the County issuing a decision on the subdivision application.

3.9 Historical/Cultural Resources

In a letter dated January 7, 2002, Alberta Community Development indicated that no specific archaeological, historic period, or paleontological concerns were identified within the plan area, and that a Historical Resources Impact Assessment is not required. Section 2.6 of the *IDP Background Report (September 2000)* confirms that the likely hood of the lands being of historical and cultural significance is negligible. Should any issue arise that might indicate historical or cultural value, an Historical Resource Impact Assessment may be required in accordance with guidelines of Alberta Culture (Historical Resources) prior to development.





4 PUBLIC CONSULTATION

A public information meeting, open to any concerned and/or interested individuals, was held on May 30, 2002 at the St. Albert Alliance Church on Villeneuve Road. This meeting was advertised in both the Saturday, May 23 and Wednesday, May 29 edition of the St. Albert Gazette.

The meeting, attended by ten people, commenced with a brief overview of the proposed project followed by a question and answer period. The following concerns and opinions were voiced:

- the impact that residential development would have on Township Road 544 which is already in poor condition;
- how will the quality of the development be assured; and
- prefer to see the area developed as standard country residential.

At the meeting, it was indicated by the developer that upgrading of Township Road 544 would be discussed further with the County as the development progressed; quality of the development would be assured by means of direct control districting, the imposition of architectural controls via caveat; and the creation of a home owners' association. The developer was not prepared to propose standard country residential development as this would compromise the fundamental development and marketing concept.

A formal Public Hearing is scheduled for January 10, 2005 so that interested parties can make final representations on the Area Structure Plan prior to Council considering first reading of the Northern Lights Estates Area Structure Plan Bylaw.





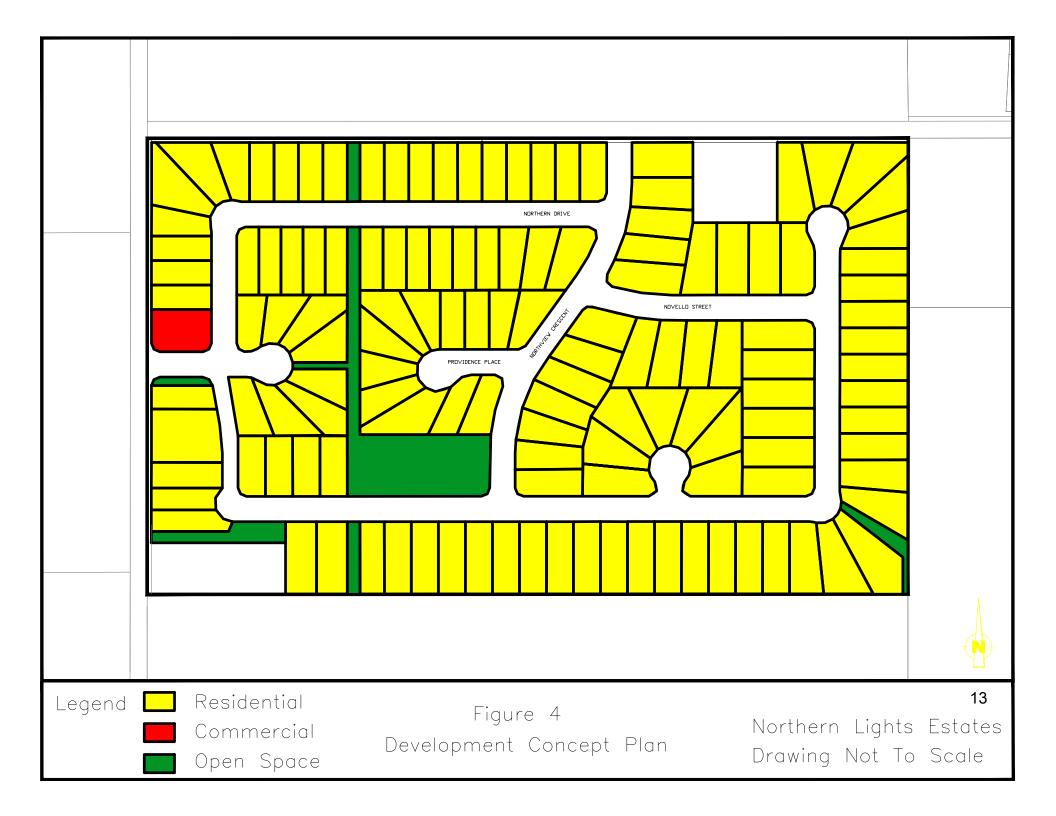
5 DEVELOPMENT CONCEPT

Figure 4 – Development Concept Plan, illustrates the conceptual design of the development. It is important to note that the development concept is subject to change, pending detailed engineering design and subdivision approval.

The majority of the plan area will consist of residential development in the form of lots having an area of at least 0.2ha. A small park of approximately 1 ha and connecting walkways will be provided as municipal reserve. The remainder of municipal reserve owing will be provided as cash in lieu of land. A small convenience retail site located at the west entrance to the neighbourhood may serve local residents and others living and working in the vicinity. The remainder of the plan will consist of internal roads and land for public utilities, including a storm water management facility.

5.1 Demography

Approximately 37 ha of the area will be devoted to residential use, generating approximately 133 units. At 3.2 persons per unit, the expected population is 435. The maximum allowable residential density is 3.5 dwelling units per gross ha.







5.2 Transportation

Overview

The existing transportation network consists of Township Road 544 and Range Road 261. Highway 2 is located 2.5 miles east along Township Road 544. Secondary Highway 633 is located 2 miles south along Range Road 261.

Although Township Road 544 and Range Road 261 are in good condition they will require upgrades as the proposed development matures and traffic volumes utilizing these roads increase.

Access from the development to the surrounding network will be via three connections. Internal circulation will be via local roads designed and constructed to appropriate standards.

Policies

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Road widening

A road widening of 5.0 m will be required on the north and west boundaries of the plan area along Township Road 544 and Range Road 261.

5.2.2

Access

- a) Two accesses from the internal road network to the county grid roads will be permitted in locations in accordance with *Figure 4 Development Concept Plan*.
- b) Access to Range Road 261 from the existing residence in the southwest corner of the plan area (refer to Figure 4 – Development Concept Plan) shall be retained. Access to the existing residence shall only be permitted from the county grid road and not from the internal road network.
- c) No new access will be required or permitted directly from individual lots to Township Road 544 and Range Road 261.

5.2.3

Road standard

Internal roads will be constructed to the RLU 209(c) standard (or approved equivalent) per Sturgeon County General Municipal Servicing Standards as amended.

5.2.4 a) Internal and external pedestrian linkages will be provided to ensure





Pedestrian linkages

safe movement of pedestrians within the plan area. These linkages will be designed and located to provide access to the Municipal Reserve and commercial site while reducing potential pedestrian and vehicular conflict.

b) The pedestrian linkages will be designed to allow access by emergency vehicles.

5.3 Utility Servicing

Overview

Groundwater investigations conducted by Sabatini Earth Technologies Inc. indicate that groundwater supplies in the area are not sufficient to support the proposed development by way of individual wells. As such, the plan area will be developed with a piped water distribution system. An existing water supply line located in Township Road 544 brings City of Edmonton water west from the Morinville water line to the Hamlet of Villeneuve. This line has been designed and constructed to provide potable water only. This level of service can be extended to the plan area from this existing line.

Sanitary sewer does not exist in the vicinity of the plan area. Percolation tests conducted on site indicate that conditions for approximately 50% of the plan area are not ideal for septic systems. It is proposed that the plan area be served via a sanitary force main to be constructed along Township Road 544 and connecting to a trunkline west of Coalmine Road in the vicinity of Greystone Manor.

The development will require storm water management including taking steps to plan for water quality enhancement features in storm water management facilities.

Franchise utilities currently available include telecommunications, power and gas.

Policies

5.3.1

a) Piped water and sewer systems will be required for all new development within the ASP plan area.

Level of servicing





b) Municipal improvements, including storm water management, will provide a high level of servicing that minimizes the negative environmental impact resulting from residential development.

5.3.2

Water servicing

- a) The plan area will be serviced with potable water via a connection to the existing 200m supply line in Township Road 544 in the northeast corner of the plan area (refer to *Figure 5 Water Network*).
- b) Internal alignments of all distribution lines shall satisfy the design standards of the Sturgeon County General Municipal Servicing Standards as amended.
- c) Internal water distribution may be via a direct pressure system with a reservoir connected to the existing 200mm supply in the Township Road. This system shall be designed and constructed such that it provides municipal water to the plan area only. It will not be oversized to allow additional development to connect to it and shall satisfy the design standards of the Sturgeon County General Municipal Servicing Standards as amended.

5.3.3 Sanitary sewer

servicing

- a) The plan area will be serviced with a low pressure sewer main to be constructed east along Township Road 544 to a connection point east of Coal Mine Road in the vicinity of the Greystone Manor subdivision. The low pressure main will commence adjacent to the northeast corner of the plan area (refer to Figure 6 Sanitary Sewers). This system shall be designed and constructed such that it provides municipal sanitary sewer service to the plan area only, (it shall not be oversized to allow additional development to connect to it) and shall satisfy the design standards of the Sturgeon County General Municipal Servicing Standards as amended.
- b) Internal alignments, design and construction of sanitary sewer lines shall satisfy the design standards of the Sturgeon County General Municipal Servicing Standards as amended.





5.3.4

Stormwater management

a) In accordance with Provincial standards, post development flow rates shall not exceed pre-development flow rates.

- b) Storm water that does not infiltrate may be directed to a storm water management facility (dry pond) via a system of back of lot swales, roadside drainage ditches and public utility lots or it may be conducted by roadside drainage ditches to the west entrance and southwest corner of the Plan Area where it will enter the drainage ditch existing along the east side of Range Road 261. Design and construction of the storm water management system shall satisfy the design standards of the Sturgeon County General Municipal Servicing Standards as amended.
- c) Prior to subdivision approval for any lands within the plan area, a detailed storm water management plan shall be compiled and submitted to the County and Alberta Environment for review and approval. This storm water management plan must address both on site and off site impacts of storm water management resulting from development of the entire plan area.

5.3.5

Development costs

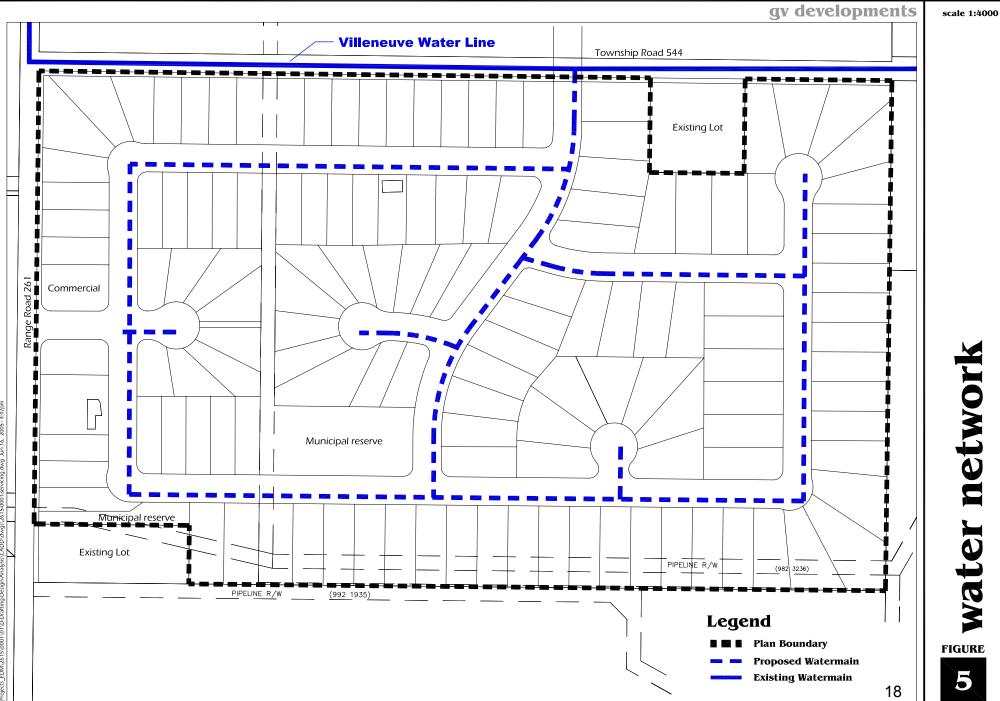
All on-site and off-site costs directly associated with servicing the plan area will be borne by the developer so that undue financial burden is not placed upon the County.

5.3.6

Franchise utilities

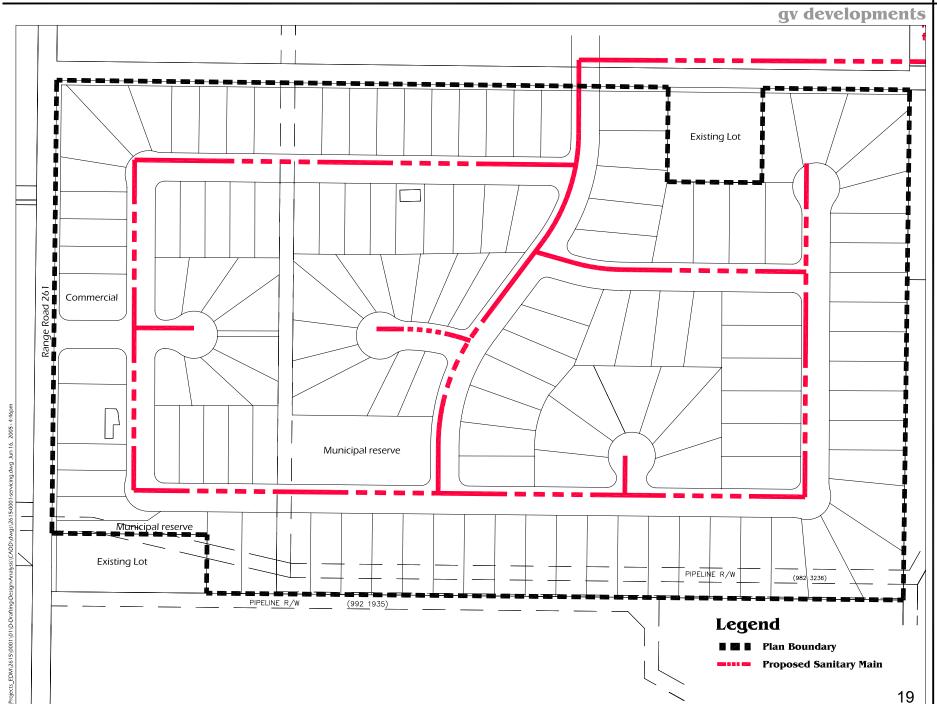
- a) At the subdivision stage the applicant will be responsible to determine the provision of shallow utilities based upon capacities and right-ofways required. All lots must be capable of being serviced with telecommunications, power and gas.
- b) The internal power distribution system shall be an underground service consistent with Sturgeon County General Municipal Servicing Standards as amended.
- c) The internal natural gas distribution system shall be within easements adjacent to internal roadways consistent with Sturgeon County General Municipal Servicing Standards as amended.

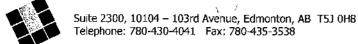




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sanitary plan







May 20, 2005

MAY 2 4 2005
STURGEON COUNTY

File: 2615.0002.01

Sturgeon County 9613 – 100th Street Morinville, AB T8R 1L9

Attention:

Debra Korevaar, Planning Officer

RE:

GV DEVELOPMENTS – NORTHERN LIGHTS ESTATES

STORMWATER MANAGEMENT PLAN

As per your request of May 5, 2005, we have provided the proposed Stormwater Management Plan for the Northern Light Estates in Sturgeon County.

- 1. Since the drainage area is less than 65 ha, the Rational Method has been used to estimate the runoff for this site (Sturgeon County's General Municipal Servicing Standards).
- 2. The Edmonton Municipal Airport's IDF curve has been used for runoff calculation.
- 3. Runoff coefficients have been chosen in accordance with Sturgeon County's General Municipal Servicing Standards and are shown below.

Land Use	Area (ha)	Runoff Coefficient Calculation (C)
Roads	3.02	0.9
Residential	41	0.3
Commercial	0.5	0.4
Parks	1.65	0.15
Total Area	46.17	
Weighed C Average		0.335

4. A ditch system on each side of all interior roads has been chosen for drainage. The ditches have been designed to convey the design flow of a 1 in 5 year storm in a way that when the water velocity is 1.0 m/s, the water depth does not exceed 0.32 metres (safety measures mentioned in Stormwater Management Guidelines for the Province of Alberta, 1999).



Sturgeon County File: 2615.0002.01 May 20, 2005 Page 2



- 5. An inlet time of 10 minutes has been used and, by assuming water velocity of 1.0 m/s, travel time has been calculated.
- 6. According to the above assumptions, the 1 in 5 year storm produces 0.675 m³/s flow predevelopment and 1.6 m³/s flow post development.
- 7. To maintain the existing flow discharge rate to Range Road 261, storage has been designed in the ditch. According to Sturgeon County's General Municipal Servicing Standards, when designing a storm water storage system, a 1 in 100 year storm should be used. The ditches are sized in a way that they can store the difference between 1 in 100 year runoff (3.03 m³/s) and the pre-development flow for the time difference between the pre-development and post-development time of concentrations.
- 8. Figure 7 from the Area Structure Plan is attached and shows the ditch alignment in the Stormwater Management Plan along with contours. Figure 7A from the Area Structure Plan is also attached and shows the typical road cross section for this site.

Yours truly,

URBAN SYSTEMS LTD.

Patrick Shaver, P.Eng, MBA, M.Eng.

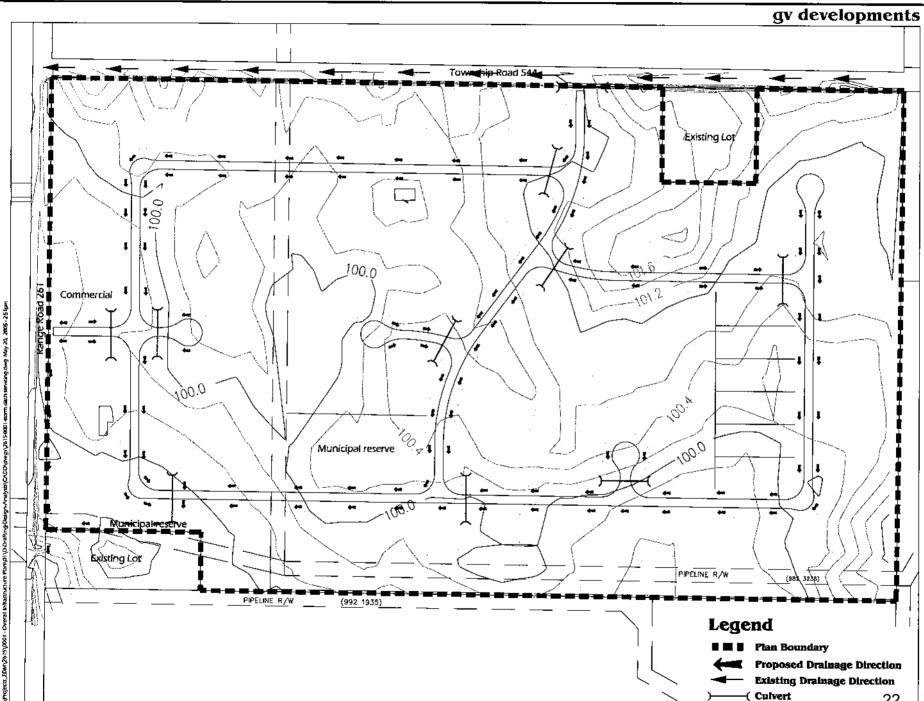
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storm water plan

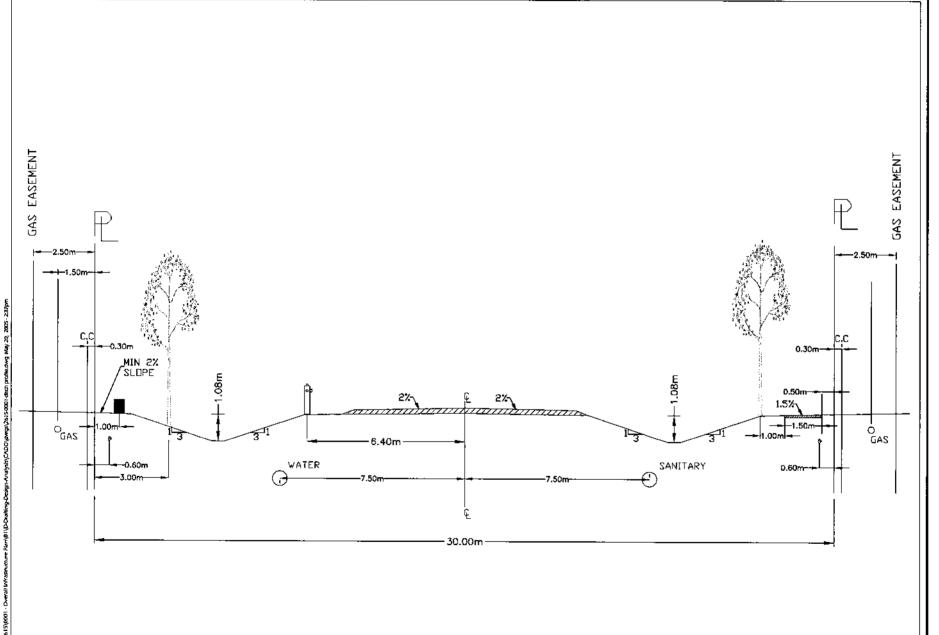
FIGURE

7



gv developments scale 1:4000









5.4 Community Services

Overview

Sturgeon County is committed to ensuring that fire, police, ambulance and other community services are provided to the residents of the Northern Lights Estates area in as optimal manner as possible.

Students living within this area are in the jurisdiction of Sturgeon School Division No. 24. Sturgeon Heights Elementary school in St. Albert and Sturgeon Composite High School in Namao can accommodate these students.

Based on methodology utilized by other municipalities and school boards for similar developments, the development is expected to generate 60-70 elementary school students, and 25-30 each of junior high and high school students. Approximately 40-45 percent of these students will attend the Catholic school system.

Fire service for the proposed subdivision will be from Morinville and Calahoo. The Morinville station would be the first to respond, as they are approximately 15 km from the subject land.

The Morinville detachment of the RCMP will continue to provide police service to the subject land.

Ambulance services will be provided in consultation with Capital Health Authority.

Policies

5.4.1	Continue to use the RCMP to provide policing services in the
Policing services	Northern Lights Estates area.
5.4.2	Continue to use Sturgeon County's bylaw enforcement officers to
Bylaw enforcement	enforce the municipal bylaws within the Northern Lights Estates area.
5.4.3	Work with Capital Health to provide ambulance services to
Ambulance services	Northern Lights Estates area.





5.5 **Intermunicipal Planning and Cooperation**

Overview

The provincial Land Use Policies, the Municipal Government Act and the Sturgeon County/City of St Albert IDP encourage intermunicipal planning efforts to address common planning issues where land use, servicing and transportation issues transcend municipal boundaries. Once this ASP is adopted, it is intended that Sturgeon County will continue to refer any ASP amendments and subdivision applications to affected adjacent municipalities in accordance with the IDP policies.

Policies

5.5.1

Referrals

- a) Refer all applications for amendments to the Northern Lights ASP and subdivision applications within the Northern Lights ASP to the City of St Albert and Town of Morinville for review and comment prior to a decision by the County.
- b) To ensure the municipal water distribution system and sewage collection system (including outfall), are designed and sized such that they provide services to Northern Lights Estates only, and will not be sized to service any additional subdivision or development nor trigger future subdivision/development, both the City of St Albert and the Town of Morinville shall be given the opportunity to examine the design, sizing and specifications of these systems at the development agreement stage, preconstruction stage, or construction stage, or at all three stages.

5.5.2 Sturgeon County will provide 6 months notice of intent to the City of St. Albert and Town of Morinville for review and comment prior to a decision by the County to repeal the Northern Lights ASP.

> Resolve issues of mutual benefit or concern if required, through alternate dispute resolution mechanisms.

Repeal

5.5.3

Dispute resolution





5.6 Implementation

Policies

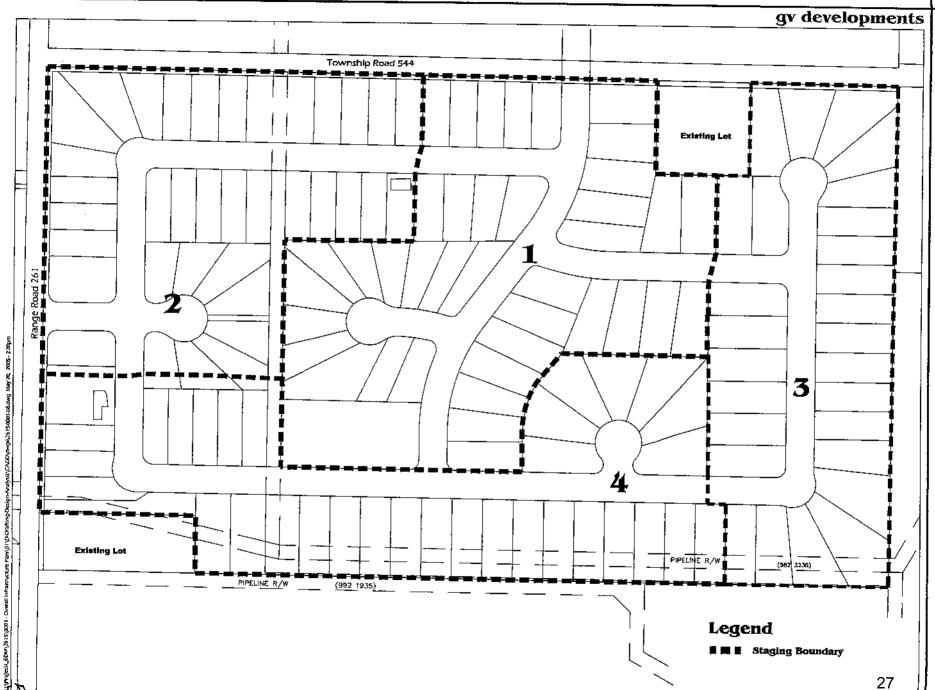
5.6.1

Development sequence

The development sequence will take into account market forces and existing infrastructure capabilities. The development sequence and boundaries indicated in *Figure 8 – Development Sequence*, are provided as an indication of the anticipated staging of development and are subject to change at the subdivision application stage.



scale 1:400



staging plan