

NORTH BONNYVILLE INDUSTRIAL

AREA STRUCTURE PLAN

TOWN OF BONNYVILLE

January 2007



Scheffer Andrew Ltd.
Planners & Engineers

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1 INTRODUCTION

This area structure plan (ASP) provides guidance for a municipally serviced (water, storm, and sanitary) industrial development on the N ½ -18-61-5-4 in the Town of Bonnyville.

2 LOCATION

The subject land (approximately 124 ha) is located in the northern portion of the Town limits. The plan area is bound by Highway 41 to the west, 46 Street to the east, the municipal boundary with the Municipal District of Bonnyville to the north, and 56 Avenue to the south.

3 FACTORS INFLUENCING DEVELOPMENT

3.1 Policy Context

3.1.1 Municipal Government Act

This area structure plan meets the provincial requirements outlined in Section 633 of the MGA. Land use, transportation routes, municipal services and utilities, and development sequence are addressed within the framework of this area structure plan.

3.1.2 Municipal Development Plan

Applicable Municipal Development Plan (MDP) policies were reviewed during the development of this area structure plan. The policy and concepts proposed within this plan are in general compliance with the approved policy of the MDP.

The Town of Bonnyville MDP, Bylaw 1261-05, designates the plan area as Long Term Development Policy Area. The subject area is also identified (policy 10.6.1) as an expansion area for the developed Industrial North area.

3.1.3 Land Use Bylaw

The Land Use Bylaw (No. 1262-05) presently districts the plan area as Urban Reserve District (UR). An amendment to the land use bylaw, redistricting the land to appropriate industrial, commercial, or institutional districts will be required prior to subdivision.

3.2 Ownership

There are currently three parcels of land within the plan area. The NW ¼ 18-61-5-4 and NE ¼ 18-61-5-4 are currently owned by Skuba Properties Inc. (the proponent of this area structure plan). In addition to these two larger parcels, there is an existing acreage lot (1.6ha) in the northwest corner of the plan area under the ownership of Richard and Margo Mazurek.

In addition to the above noted parcels, there are two properties that lie within the MD of Bonnyville notched out of the southwest plan area. Although these parcels have not been included within the boundary of this ASP, they have been considered in the overall planning.

3.3 Resource Extraction

Information received from the Alberta Energy Utilities Board (February 2006) indicated that there are no sour gas facilities in the vicinity and that there are no active wells within 100m of the area structure plan area.

An existing natural gas line operated by ALTAGAS Utilities runs north/south in the central plan area. The right-of-way for this gas line is currently registered as a utility right-of-way on the current title.

3.4 Adjacent Land Use

Immediately south of the ASP area is the existing Industrial North area. This area has been developed as a serviced industrial park with lots ranging in size from 3.6 ha to 0.2 ha.

The lands to the east, west, and north are in agricultural production, each with an associated farmstead.

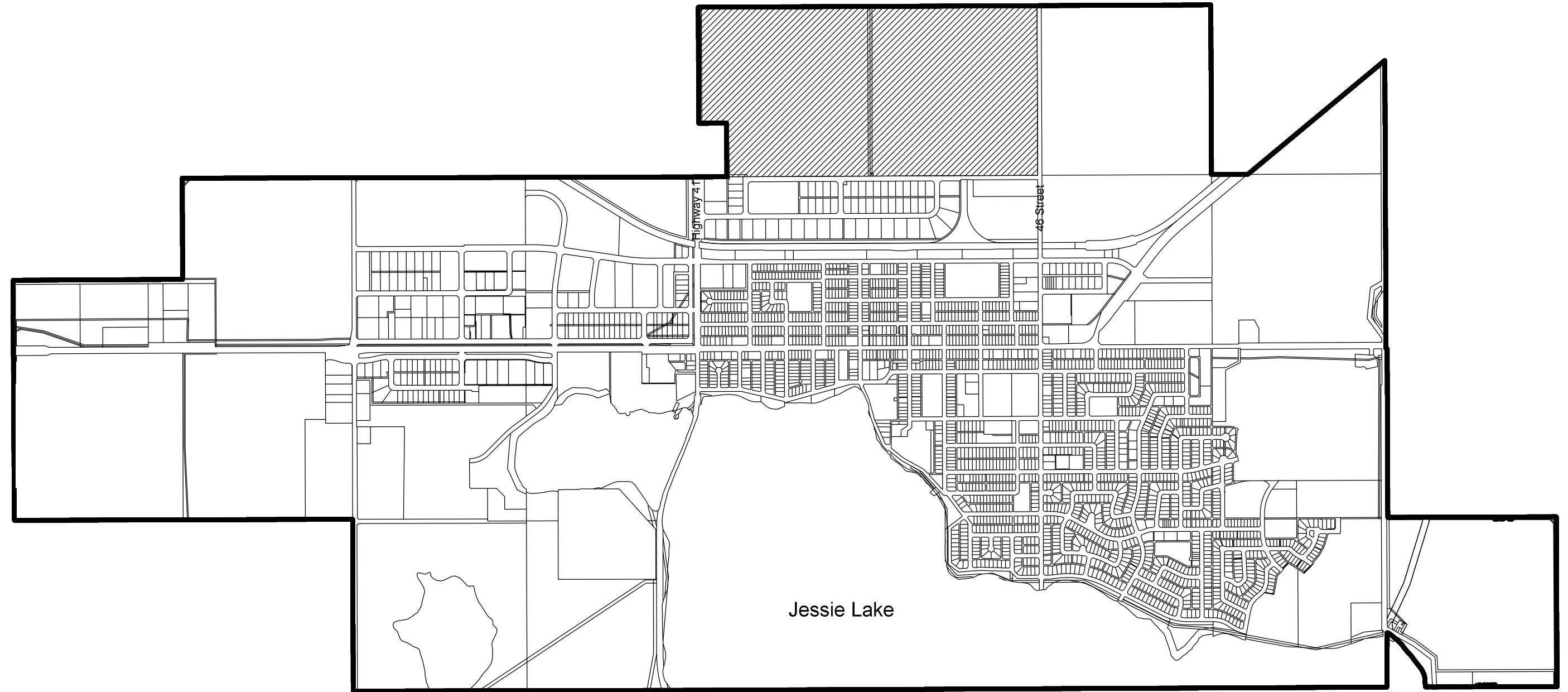
To the southwest there are several existing developments. The southwest corner of NW 18-61-5-4 that is within the MD is occupied by the Bonnyville Municipal Seed Cleaning Co-op and the Bonnyville Veterinary Clinic. West of Highway 41 is an auctioneering business.

3.5 Existing Land Use

The land is presently used for agricultural purposes and also provides storm water management for the existing industrial development to the south. The original farmstead has been subdivided out and is located in the northwest of the plan area.

The existing features are illustrated in Figure 2.

MD of Bonnyville



North Industrial
Area Structure Plan

Bonnyville

Figure 1
Location Plan

Scale 1:20,000
January 15, 2007

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3.6 Natural Features

The topography of the site is relatively flat with a low area in the northeast plan area. Natural vegetation appears to be limited to the low area in the northeast and a small depression through the north central plan area.

As illustrated in Figure 3, there is topographic relief of approximately 3 m in the area with the lowest area in the northeast part of the site and the high area in the west central.

3.7 Access

The subject land has immediate direct access available from 56 Avenue. Access is also available from Highway 41 to the west and 46 Street to the east, although direct access from these is not encouraged.

3.8 Historical/Cultural Resources

In correspondence dated April 3, 2006, Alberta Community Development indicated that a Historical Resource Impact Assessment is not required and granted Historical Resources Act clearance.



Highway 41

46 Street

55 Street

54 Street

56 Avenue

55 Avenue

51 Street

49 Street

North Industrial
Area Structure Plan
Bonnyville
Figure 3
Topography

Scale 1:5000
December 18, 2006
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4 DEVELOPMENT CONCEPT

The development concept is shown in Figure 4 and the associated land use statistics are provided in the following table. Future industrial subdivision and dedication of public land (municipal and environmental reserve, public utility lots) will be in general compliance with the concept but are subject to refinements with subdivision application and detailed engineering.

Land Use Statistics Table

Use	Area (Ha)	% of GDA
<i>Gross Area</i>	<i>126.4</i>	
Road Widening (HWY 41)	0.1	
<i>Gross Developable Area</i>	<i>126.3</i>	<i>100%</i>
Public Utility Lots	13.1	10%
Internal Circulation	18.9	15%
Industrial	94.3	75%

4.1.1 Industrial

The area will generally cater to the needs of the oil and gas, agriculture, forestry, and related industries. It is anticipated that uses for the majority of the plan area will generally be in accordance with the General Industrial district of the land use bylaw. Uses such as light manufacturing, warehousing, green houses, and construction services are encouraged to locate within the plan area.

While not specifically identified on the development concept, this plan recognises that some non-industrial developments may be compatible and may be acceptable uses at the discretion of the Development Authority. Although the area will not have direct access onto Highway 41, nor 46 Street, the entrances into the plan area offer good visibility and have potential to be developed for highway commercial uses.

Businesses that conduct a portion of their operations outdoors or require storage areas would be encouraged to locate on the interior of the plan area, while non-industrial uses are better suited to the periphery of the site to take advantage of the visibility along Highway 41 or 46 Street.

4.1.2 Municipal Reserve

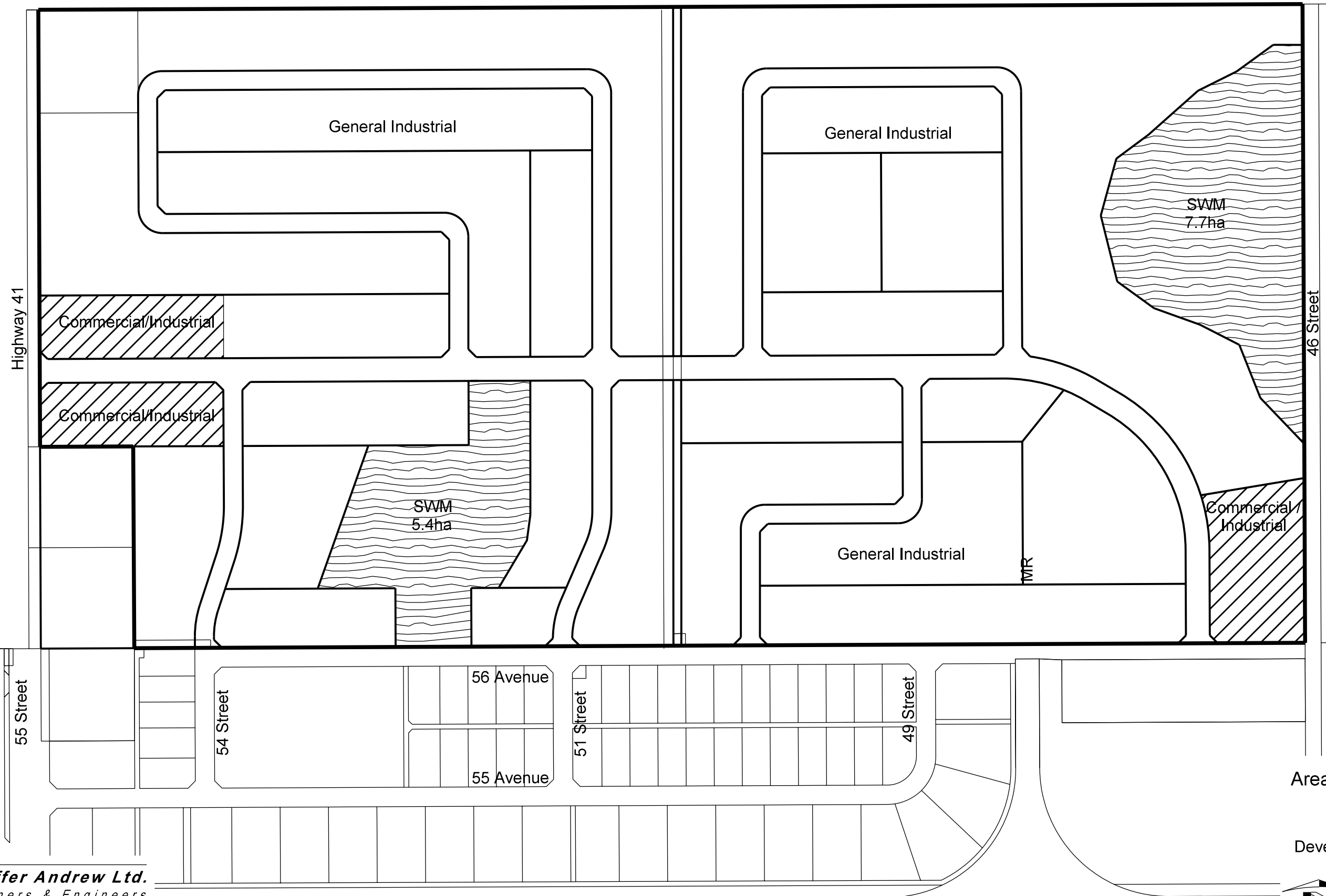
As the plan area is intended for industrial development, with no residential component, the necessity and value of the provision of extensive municipal reserve land for recreational purposes is questionable for the intended development. The Town is requesting that municipal reserve be dedicated as cash-in-lieu of land. These cash-in-lieu payments will be required as condition of subdivision as stages are subdivided. The value of the land will be assessed as per the requirements of the Municipal Government Act.

4.2 Transportation

All lots within the plan area will be accessed via the internal road network. No direct access to private lots will be provided from Highway 41 or the 46 Street arterial. Roadways within the plan area will be constructed to the Town standard for industrial roadways – the collector on a 30 m right-of-way, and locals on 24 m right-of-way. The local road pattern illustrated in this plan may be altered at the subdivision level without a required amendment to the area structure plan.

In an attempt to reduce direct access onto Highway 41, access to the acreage lot (northwest portion of the NW 18) will ultimately be available from the internal subdivision road. Any development in the northwest of the plan area must not prevent future access to this lot from the internal road network. When this second access is provided, the province will have the option of eliminating the existing access onto Highway 41.

This ASP assumes that the speed limit on Highway 41 will be reduced to 50 km per hour south of the proposed access location. A traffic impact assessment (TIA) was prepared and submitted to Alberta Infrastructure & Transportation in August 2006 and a revised report submitted in December 2006. The TIA recommended that the ultimate intersection at Highway 41 and the internal collector road should be designed as a Type IVa intersection with additional storage of 25m. When land in vicinity of this intersection is subdivided, sufficient road right-of-way for this intersection should be provided. The TIA suggests that if a small area is developed at the collector entrance to the area without a connection to 56 Avenue that the collector road intersection with Highway 41 can be temporarily constructed as a Type IIa intersection.



North Industrial
Area Structure Plan
Bonnyville
Figure 4
Development Concept

Scale 1:5000
January 15, 2007
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4.3 Utility Servicing

4.3.1 Water Supply

The proposed development will be connected to the municipal water system. The existing municipal system will be extended north from 56 Avenue and will follow the road network throughout the plan area.

The water system will be built to municipal standards. The proposed onsite water distribution system alignment is illustrated in Figure 5.

4.3.2 Sanitary

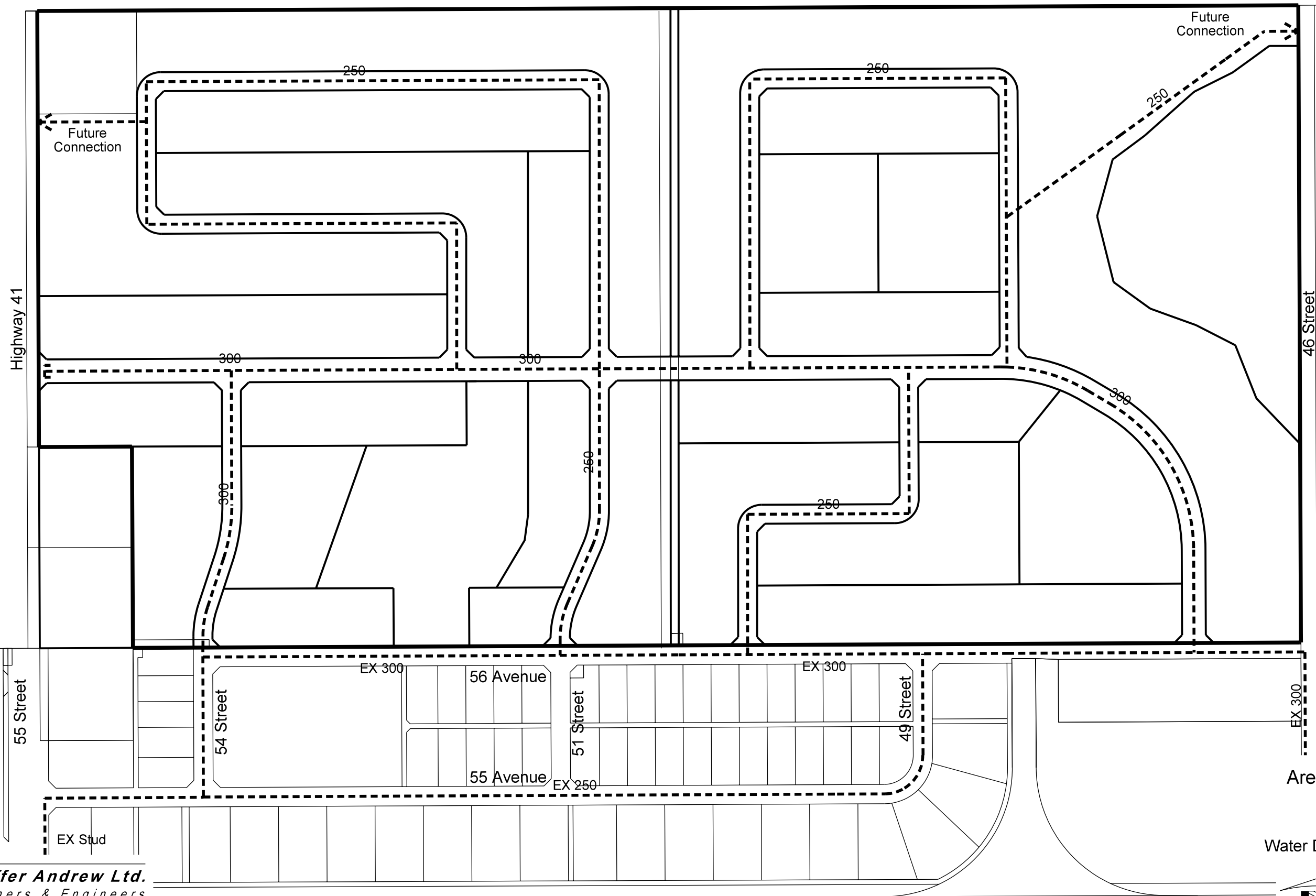
As illustrated in Figure 6, there are two sanitary drainage basins within the plan area.

The first basin, approximately 54 hectares in size, encompasses 40 ha of existing industrial lands south of 56 Avenue, and approximately 14 ha of additional developable land in the southwest of the plan area. This area will tie into and utilise the existing sanitary main within 56 Avenue. The sanitary mains within this basin connect to an existing lift station on the southeast corner of 56 Avenue and 51 Street. The capacity and depth of this lift station limits the amount of developable land that can utilise this existing facility.

The second drainage basin encompasses approximately 96 ha of developable land. This area will drain by gravity to a new lift station to be located in the south-central plan area. The lift station will be built with the first stage of development within this drainage basin. The lift station will pump via force main into the Town's sanitary trunk system. The route of the force main is presently proposed to head south via 51 Street, through the Railway Lands ASP area, and continue south under 51 Street and connect with the sanitary trunk line in Lakeshore Drive.

As the Town is currently reviewing potential upgrades to the existing sanitary lift station, it should be noted that there may be opportunity for the developer and the Town to work together and construct a new sanitary lift station. Such a facility would provide sanitary services for both the existing North Point subdivision and future development within the plan area.

The proposed sanitary system is illustrated in Figure 6.



North Industrial
Area Structure Plan
Bonnyville
Figure 5
Water Distribution System

Scale 1:5000
December 18, 2006
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May Require
Looping

EX Stud

EX 300

56 Avenue

EX 300

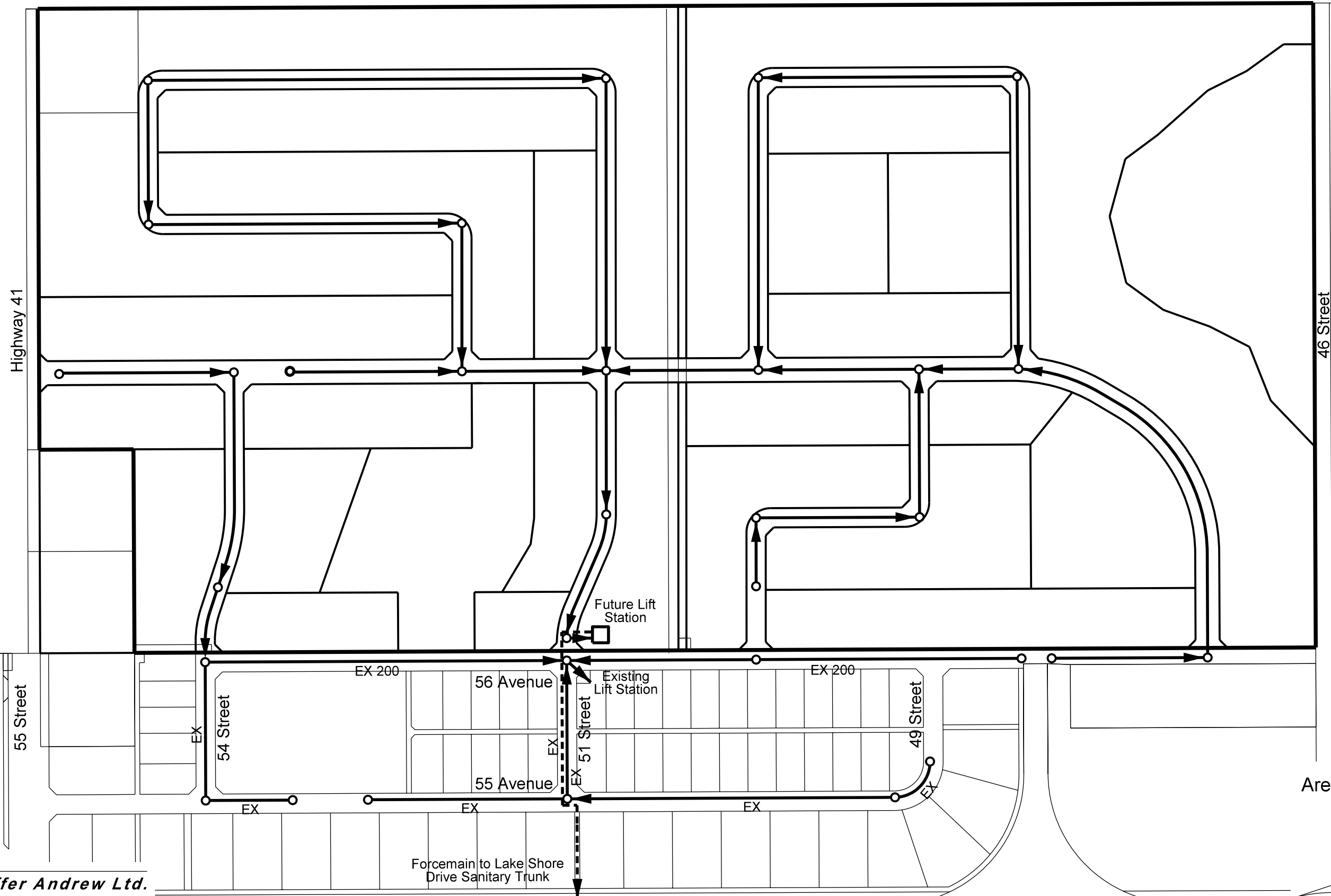
55 Avenue

EX 250

49 Street



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North Industrial
Area Structure Plan
Bonnyville
Figure 6
Sanitary System

Scale 1:5000
January 15, 2007
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4.3.3 Storm Water Management

The plan area straddles the divide between two separate drainage basins. The eastern portion of the plan area naturally drains to the northeast and eventually enters JJ Pond. The north western portion of the plan area drains to the northwest and ultimately into Moose Lake. Storm water management (SWM) for the plan area will involve the redirection of this runoff into Jessie Lake to the south.

The storm water management system for this ASP also incorporates storm drainage from the existing 54 ha of industrial development south of 56 Avenue and north of the former rail right-of-way. This area currently is serviced with roadside ditches that drain into a dugout in the south central portion of the plan area. There is an overflow ditch leading from this dugout to the northeast drainage basin.

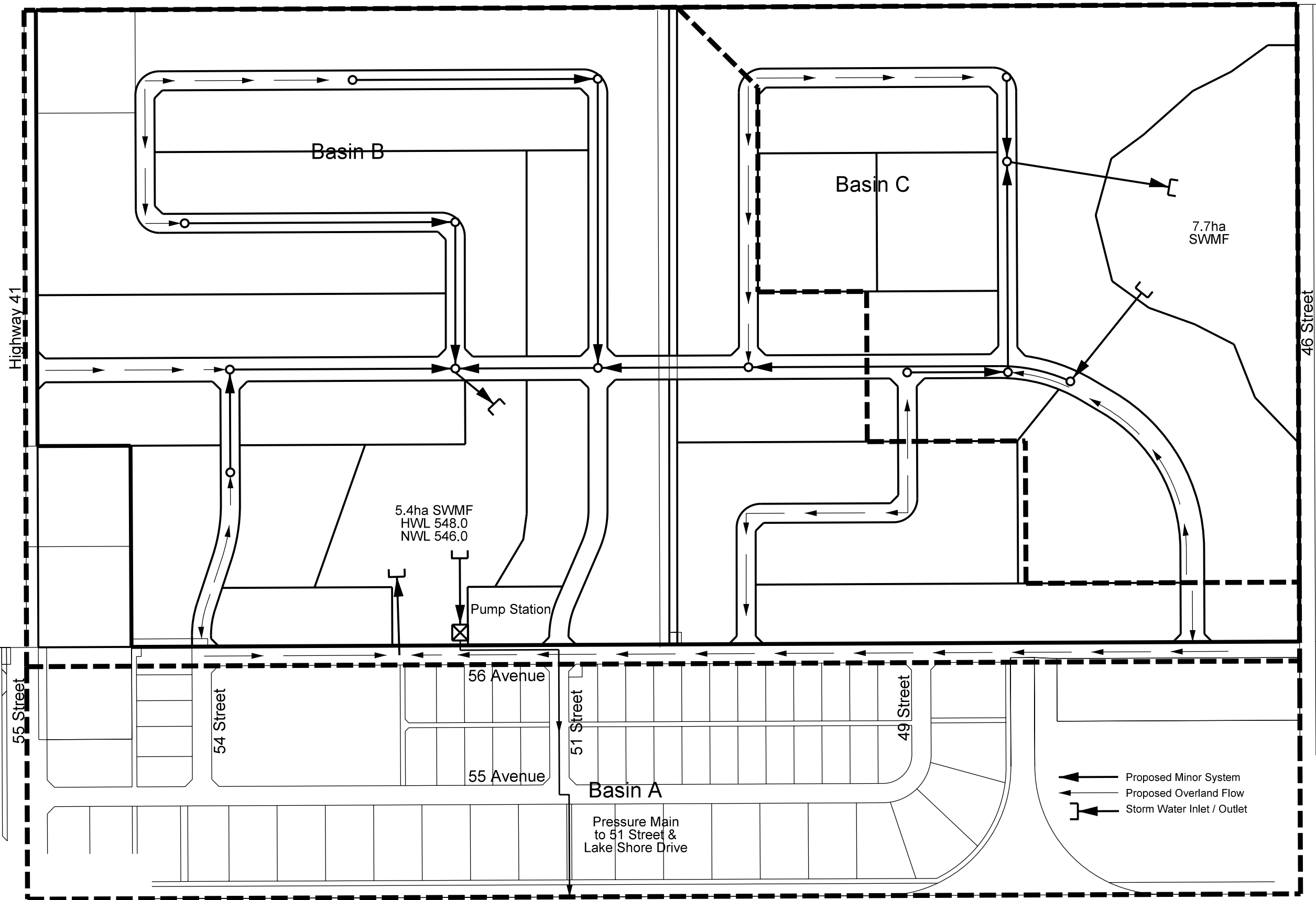
The storm water management proposal for the plan area will maintain two drainage subcatchments. Both basins will ultimately drain south to Jessie Lake. The majority of the plan area (and the existing development south of 56 Avenue) is within the western basin. This area (within the ASP boundary) will drain via an underground piped system into a 5.4 ha SWM facility (wet pond), at the location of the existing dugout.

The eastern basin will drain, via a piped system, into the low area in the northeast quadrant. The presence of 46 Street to the east forms a barrier to the natural north-eastward drainage patterns, and has created/expanded a trapped low at this location. The SWM concept calls for this area to be utilized as an engineered wetland type SWM facility, to act as a runoff collection point and provide an additional measure of storage. All storage requirements are to be contained within the identified PUL. The development of the storm water management system will restrict the water of the engineered wetland within a specific elevation, with all other lands in the vicinity being developable.

An interconnecting pipe will convey discharge, at a restricted flow rate, from the northeast SWM facility to the central wet pond. This two pond system will be designed to retain all runoff from a 12 hour 1:100 year storm event for the plan area (including the 54 ha of developed lands south of 56 Avenue).

From the central wet pond, the storm discharge will be pumped via force main south via 51 Street, through the Railway Lands ASP area, and continue south under 51 Street and ultimately into Jessie Lake. The discharge rate will be set to provide a specified rate of drawdown in the main SWM facility.

On-site minor system shall be designed to the Town standard for a 5 year, 1 hour storm. The storm water management concept is illustrated on Figure 7.



North Industrial
Area Structure Plan
Bonnyville

Figure 7
Storm Water Management

Scale 1:5000
January 15, 2007



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4.3.4 Shallow Utilities

Gas, electricity, and telephone servicing for the plan area is presently available within adjacent roadways, and will be extended into the proposed development. Alignment of these utilities within the plan area will be in accordance with Town standards.

4.4 Emergency Services

This area falls under the jurisdiction of the Bonnyville RCMP detachment, located at 5408 - 50 Avenue.

Fire service to this area will be provided by the - Bonnyville Fire Department (Station #5), located southeast of the plan area.

5 SUBDIVISION AND DISTRICTING

In addition to the traditional industrial and commercial uses identified in this area structure plan, the plan area offers potential for other compatible institutional developments. Any non-industrial / commercial uses would require specific redistricting and would be considered at the time of redistricting and subdivision applications. If considered appropriate, no amendment to the approved area structure plan would be required.

Future subdivision will be guided by this area structure plan and shall follow the regulations of the appropriate district of the land use bylaw. The current regulations for the General Industrial district identify a minimum parcel width of 30.0m with lot depths as per the approval of the development authority pursuant to the requirements of the land use bylaw.

When development proceeds, the developer will be responsible for the extension of services within the plan area and will have to make provisions for any easements required for utilities. Provisions for future servicing design and requirements such as, but not limited to, service extensions, temporary turn arounds and hydrants for dead-end flushing shall be addressed at the subdivision stage and shall meet the minimum requirements of the Town's design standards.

Upgrading may be required on 56 Avenue. This will be further assessed by the Town when subdivision applications that propose lots fronting on the north of 56 Avenue are submitted.

6 DEVELOPMENT SEQUENCE

Figure 8 illustrates the proposed staging for the development.

The first stage of development will include the development of the western storm water management facility (which may be developed in stages) and associated offsite improvements. This first stage will make a connection onto Highway 41, offering excellent visibility and access to this new developing area.

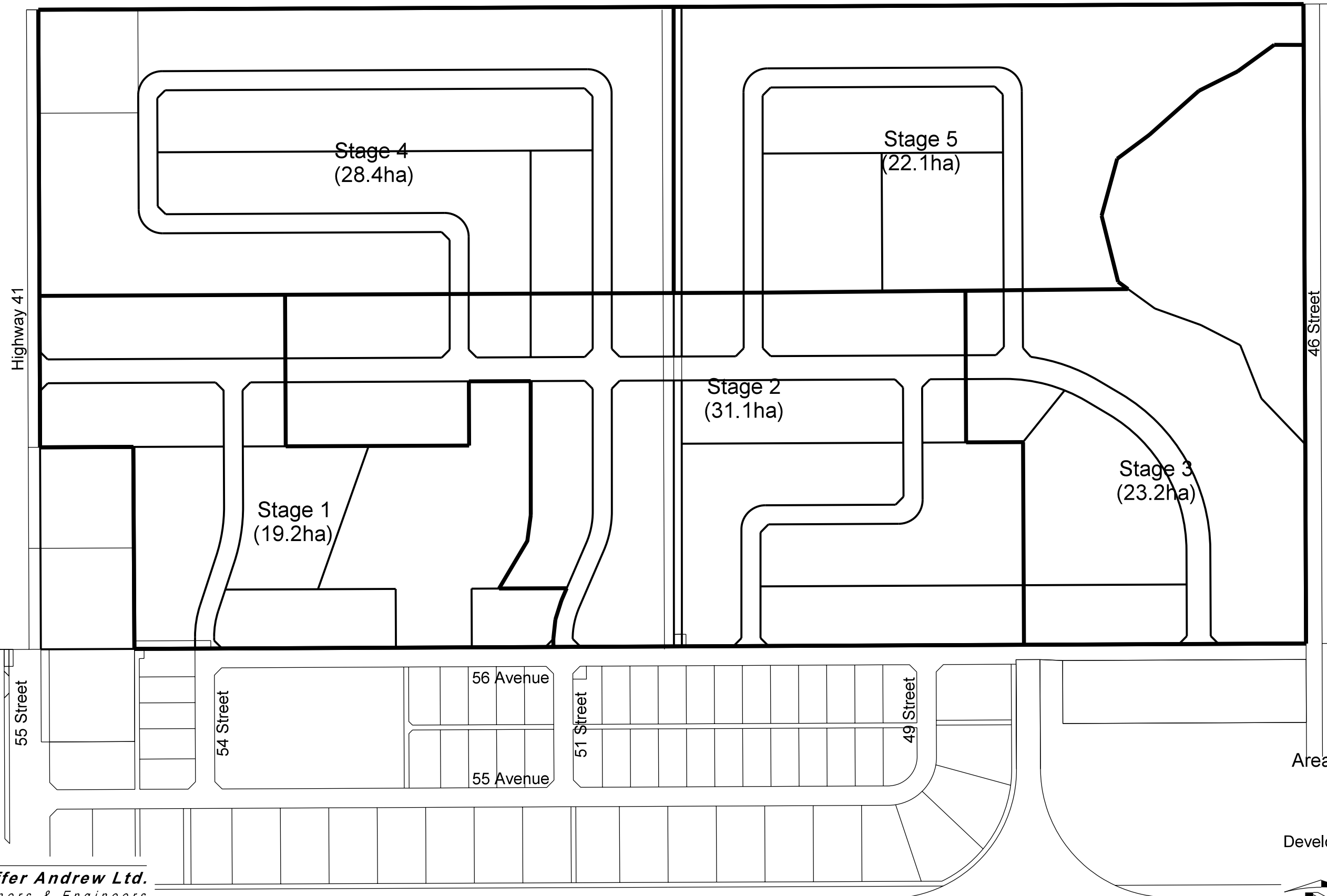
The remainder of the stages will be subdivided, registered, and developed in response to market demand.

7 RATIONALE

Recent resource extraction initiatives in the Cold Lake region have placed a demand on industrial lands in the region. Approval of this area structure plan will enable the immediate development of approximately 14 ha of industrial land to help meet this demand. The remainder of the future industrial lands will be developed in response to market demand.

In addition to providing industrial land to the market, this area structure plan provides a solution to the existing storm water management issue in this area of the Town, and provides for the continuation / expansion of the existing municipal trail system.

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North Industrial
Area Structure Plan

Bonnyville

Figure 8
Development Sequence