

# **AREA STRUCTURE PLAN**

FOR PROPOSED

## **SAWBACK RIDGE**

MUNICIPALITY OF CROWSNEST PASS

PREPARED BY:



**DOUGLAS J. BERGEN  
& ASSOCIATES LTD.**  
ARCHITECTURAL TECHNOLOGY

December 2007



P.O. BOX 600  
CROWNSNEST PASS, ALBERTA  
T0K 0E0  
PHONE (403) 562-8833  
FAX (403) 563-5474

COPY

January 29<sup>th</sup>, 2008

Mr. Doug Bergen  
Douglas Bergen & Associates Ltd.  
Box 1667  
Coaldale, Alberta  
T1M 1N3

Fax: 403-345-2125

Dear Mr. Bergen:

**RE: SAWBACK RIDGE AREA STRUCTURE PLAN – REQUESTED CHANGES**

As you are aware, the required Public Hearing for the proposed Sawback Ridge Area Structure Plan was held during the regular Council meeting of Tuesday, January 22<sup>nd</sup>, 2008.

A number of presentations were made and several written concerns were also received regarding the Plan.

Please be advised that Council, when considering Bylaw 745, 2007 for adoption of the Area Structure Plan, approved second reading conditional on a number of amendments being incorporated, including the report from HV Consulting Ltd. relative to a Storm Water Management Plan.

Other amendments include:

1. the area road width, although a rural cross section, should follow the Urban Standards. The traveling surface therefore should be 9.5 metres wide with a 1 metre ditch;
2. a second water feed for Sawback Ridge should be installed to ensure service during any breaks in both Sawback Ridge and Kananaskis Wilds;
3. engineered assessment to be carried out relative to Highway 40 in lieu of a traffic impact assessment;
4. a standard playground area to be installed;
5. an emergency access be provided to the Sawback Way cul-de-sac;

I would appreciate it if you could arrange to meet with me to review these changes to the Sawback Area Structure Plan as soon as possible so that any amendments can be presented to Council for final reading. If you have any questions please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be "G. Lundy".

Gordon O. Lundy  
Chief Administrative Officer

cc: Shane Stewart FAX: (403) 564-4849  
Development Officer

GOL/lo

Office of the Regional Director  
SOUTHERN REGION

Box 314  
3rd Floor, Administration Building  
909 Third Avenue North  
Lethbridge, Alberta T1H 0H5

Toll-Free Connection  
Outside Edmonton - Dial 310-0000  
Telephone 403/381-5426  
Fax 403/382-4057  
www.trans.gov.ab.ca

Our Reference: 2511/2512-SW 16-8-4-W5M (40)

December 17, 2007

Mr. Douglas J. Bergen  
Douglas J. Bergen & Associates Ltd.  
[admin@bergenassociates.com](mailto:admin@bergenassociates.com)  
Box 1667  
Coaldale AB T1M 1N3

Dear Mr. Bergen:

**RE: SAWBACK RIDGE – ACCESS TO HIGHWAY 40**

Further to our telephone conversation regarding the above noted.

As discussed, we are in receipt of your development application for a Type III intersection at 27<sup>th</sup> Avenue. The intersection type and location are acceptable and your application will be approved in due course.

Given that the contours and general topography of the Sawback Ridge lands do not allow for all developable areas to be accessed by a single internal road system, the second highway access location is approved in principle and will receive final approval upon determination of an optimum access location, geometric design requirements and application for same.

Moreover, it is our understanding that you are also in the process of developing an Area Structure Plan and Storm Water Management Plan to further support the development of Sawback Ridge.

I trust this is the information you require and will allow you to proceed with the approval process required by the Municipality of Crowsnest Pass land use authority.

If I could be of further assistance in the meantime please contact me, otherwise we will await your further direction in this matter.

Yours truly,

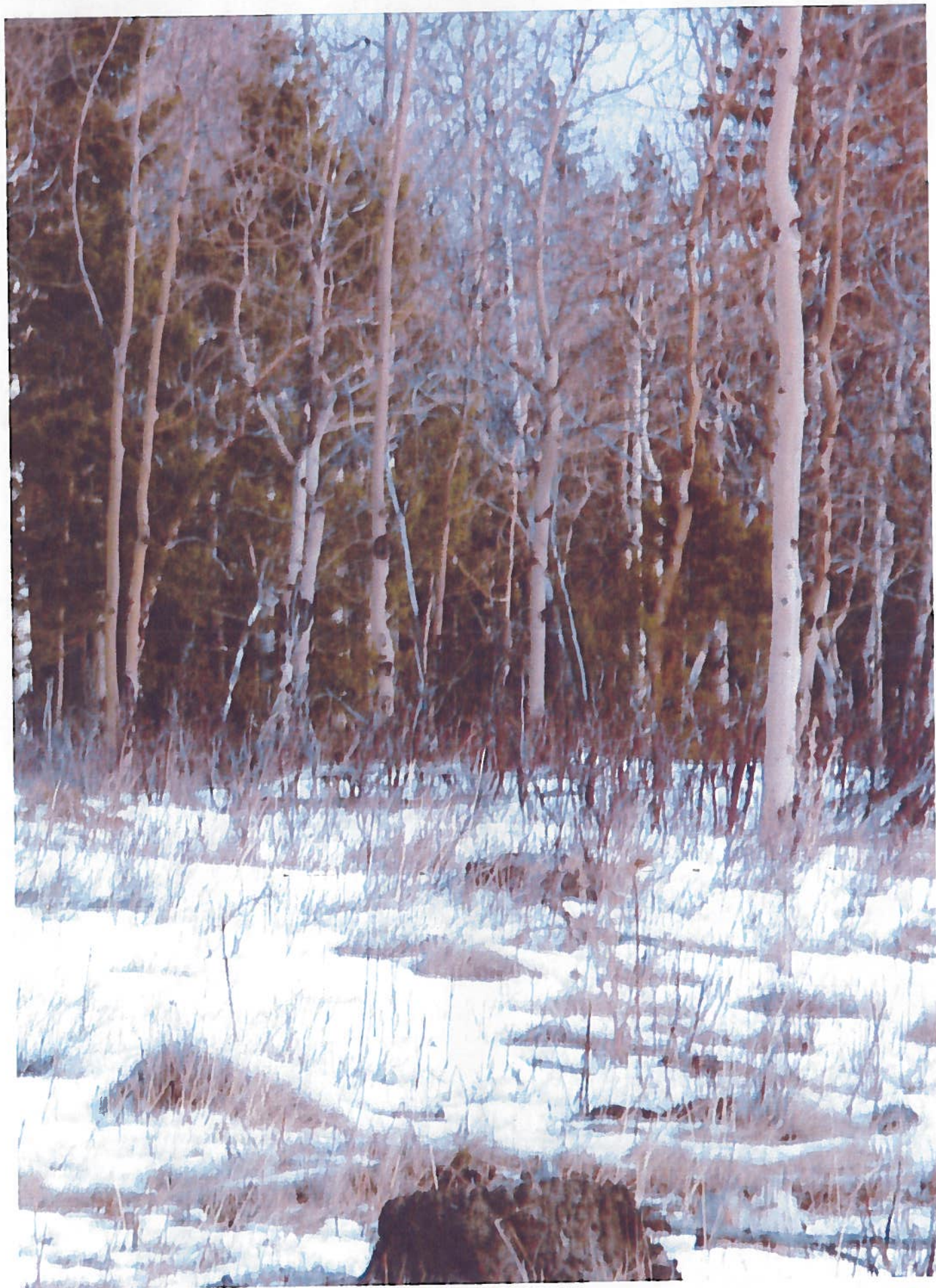


John Thomas  
Development/Planning Technologist

JT/bc

cc: Municipality of Crowsnest Pass – Bev Cole – [cao@crowsnestpass.com](mailto:cao@crowsnestpass.com)  
Stantec Consulting Ltd. – Jeff Drain – [jeff.drain@stantec.com](mailto:jeff.drain@stantec.com)  
Terry Becker – e-mailed  
Rick Lemire – e-mailed







# **TABLE OF CONTENTS**

# TABLE OF CONTENTS

<b>SECTION</b>	<b>TITLE</b>	<b>PAGE NO.</b>
<b>SECTION 1.0 INTRODUCTION</b>		<b>1</b>
1.1	Purpose	1
1.2	Land Use Concept	1&2
<b>SECTION 2.0 EXISTING CONDITIONS</b>		<b>2</b>
2.1	Definition of Plan Area	2
2.2	Land Ownership & Existing Uses	2
2.3	Topography & Vegetation	2 & 3
2.4	Geology & Soils	3
2.5	Historical Context	4
<b>SECTION 3.0 PLANNING CONCEPT &amp; POLICIES</b>		<b>4</b>
3.1	Planning Concept	4
3.2	Land Use Population Densities	5
3.3	Slope Stability	5
3.4	Municipal Reserve	5 & 6
3.5	Roadways	6
3.5.1	Internal Traffic Movement	6
3.5.2	Construction of Surface	7
3.6	Architectural Controls & Development Standards	7
<b>SECTION 4.0 SERVICE REQUIREMENTS</b>		<b>7</b>
4.1	Transportation	7
4.1.1	Road Dimensions	7
4.1.2	Construction of Surface	8
4.1.3	Drainage of Surface Water	8
4.1.4	Road Maintenance	8
4.1.5	Busing	8 & 9
4.2	Storm Water Drainage	9
4.3	Water Supply & Distribution	9
4.4	Sewage Disposal	10
4.5	Garbage Disposal	10
4.6	Energy Supply	10
4.6.1	Electricity	10
4.6.2	Natural Gas	11
4.7	Communications	11
4.8	Fire Protection	11
<b>SECTION 5.0 SEQUENCE OF DEVELOPMENT</b>		<b>11</b>
5.1	Subdivision	11
5.1.1	Application for Re-zoning	11
5.1.2	Application for Subdivision	12
5.1.3	Registration of Restrictive Covenants	12
5.1.4	Construction and Phasing	12

# **LIST OF FIGURES**



## LIST OF FIGURES

<b>NUMBER</b>	<b>TITLE</b>
1.1	Location Map
1.2	Land Location within Municipality
1.3	Legal Survey
1.4	Land Use Bylaw Map
1.5a	Land Use Bylaw Designation Description (GCR)
1.5b	Land Use Bylaw Designation Description (RIA)
2.1	Land Title Certificate
2.2	Color Aerial Photograph
2.3	Contour Plan
2.4	Fire Fuel Map
2.5	Arrow Archeology Letters
2.6	Site Photos
3.1	Subdivision Layout Showing Park
3.2	Municipal Road Standards
3.3	Cabin Styles
4.1	Site Servicing Drawings
4.2	Servicing Drawings
4.3	Electrical Service Diagram
4.4	Atco Gas Distribution Drawing
4.5	Telus Servicing Diagram
4.6	Fire Smart Guideline
4.7	Photos of Highway 40 and Site Access
5.1	Land Use Re-designation Application
5.2	Development Phases



## **SAWBACK RIDGE AREA STRUCTURE PLAN**

Crowsnest Pass, Alberta

---

### **1.0**

## **INTRODUCTION**

### **1.1**

### **PURPOSE**

The purpose of the Sawback Ridge area structure plan is to describe the existing land use and to establish the objectives for the area. The primary goal is to plan a development that is in keeping with and complimentary to its surroundings. It describes the density and layout of the development, proposed land use, roadway access, and basic servicing.

The intent is to create a bare land condominium subdivision of mixed use including large estate lots as well as townhouse clusters for those seeking a non-urban (rural setting) setting as a secluded mountain retreat. Potential purchasers seeking opportunities in the Crowsnest Pass have expressed a desire for such development. The proposed concept provides mountain retreat housing, found previously only in large grouped and country residential developments, in a more efficient and dense manner.

### **1.2**

### **LAND USE CONCEPT**

The Sawback Ridge development applies to an area of land that is approximately 38 acres (15.38 hectares) on the north side of Coleman, Alberta. See figures 1.1 & 1.2 & 1.3. The lands are currently classified as grouped country residential (GCR -1) and the developer has requested reclassification to Residential (R-1A). See figure 1.4, 1.5a, 1.5b, and 5.1.

The parcels to the south and east of the property are zoned (GCR-1). The property across highway 40 to the north is zoned residential (R-1) which forms the sister development of Kananaskis Wilds.

The intent of the Sawback Ridge Project is to respect the natural setting of the landscape on the property and to minimize the impact of the development on the surrounding area. The development will strive to preserve as much of the natural vegetation as possible.

**SAWBACK RIDGE AREA STRUCTURE PLAN**

Crowsnest Pass, Alberta

---

1.2

**LAND USE CONCEPT (CONTINUED)**

Restrictive covenants will be registered against the unit titles to ensure respect for the terrain, wildlife, and vegetation. There will also be an architectural control covenant that will provide for the Alpine setting of the site, as well as to ensure quality of development.

**SECTION 2.0**

**EXISTING CONDITIONS**

2.1

**DEFINITION OF PLAN AREA**

The subject land is located north of Coleman in the Municipality of Crowsnest Pass. Lands described in the Area Structure Plan boundary are located within a 38 acre parcel.

**Legal Description:**

SW ¼ Section 16, Township 8, Range 4, West of 5 M

The property is bounded on the south by a Transalta Utility electrical right-of-way and on the east by two 3-acre parcels previously developed by Mr. Frank Capron. Highway 40 (the Kananaskis Road) borders the west and north side of the property and will provide access to the development at 2 locations.

2.2

**LAND OWNERSHIP & EXISTING USES**

The subject property was purchased from Mr. Ken Bowie by Sic Cor Stewart Investment Capital Corp. of Blairmore and Douglas J. Bergen and Associates Ltd. of Coaldale, Alberta to facilitate the Kananaskis Wilds and Sawback Ridge developments in 2005. See certificate of title figure 2.1.

The land is currently vacant with no existing structures.

2.3

**TOPOGRAPHY & VEGETATION**

The topography of this 38 acre parcel of land lends itself well to development. The terrain is undulating and varies in elevation from 1460 m to 1399 m. See figure 2.2 and 2.3.

**2.3**

**TOPOGRAPHY & VEGETATION (CONTINUED)**

The subdivision layout has been designed to work within the natural features of the site with a mandate to disturb as little as possible. Approximately 25% of the site is prohibitive to development due to topographical features. There exists a deep ravine in the southwest corner of the site which slowly blends with the land as it carries east. This area is well suited for park use for the residents and will include trails and a picnic area. A ridge severs the property diagonally in the north east corner. The upper area will be reserved for multi-family units to capitalize on the spectacular views to the southwest. A second access to the development will be required from Highway 40 at this location.

The natural slopes on the site have been surveyed by Spencer Geometrics Ltd. of Lethbridge and appear to be stable. EBA Engineering Ltd. have been consulted on a preliminary basis for their opinion of the suitability of the land for development. Geotechnical engineers have been engaged to confirm all slopes on site in order to ensure suitability for residential development and establish necessary building setback lines.

Most of the property is located within a high fuel area as noted in the Municipality of Crowsnest Pass Wildlife Urban Interface Hazard Map. See figure 2.4.

The site was selectively logged some 10 years ago and is covered in native grasses and shrubbery natural to the area. Every effort will be made to preserve the natural beauty of the site. Cutting of trees will be prohibited except where absolutely necessary, such as in the roadway corridors. See photos of site figures 2.6.

**2.4**

**GEOLOGY & SOILS**

EBA Engineering Ltd. of Lethbridge has been retained as the geotechnical consultant for the project. Core samples will be taken in several locations to verify the makeup of the substrate along with the recommendations as to its suitability for development. A full report will be provided to the municipality once the study is completed.

## **SAWBACK RIDGE AREA STRUCTURE PLAN**

Crowsnest Pass, Alberta

---

### **2.5**

#### **HISTORICAL CONTEXT**

Dr. Neil Mirau of Arrow Archeology Limited has been retained to study the site for its historical value. Dr. Mirau's initial archival review concluded that the site has been disturbed by existing and previous development and that it has no recorded historical significance. Arrow Archeology will continue its work to exhaust any evidence of archeological value to this property. See letters in figure 2.5.

### **SECTION 3.0**

#### **PLANNING CONCEPT & POLICIES**

### **3.1**

#### **PLANNING CONCEPT**

The intention of the this development is to provide for a quality mountain retreat environment for those seeking escape from the fast pace of the urban life. The estate lots as well as the condominiums allow for privacy for each residence and provide access to the beauty that abounds in the Crowsnest Pass.

The purpose of this development is to ensure owner privacy and to create a feeling of a "mountain retreat". The development is specifically geared toward those seeking to visit the Pass on a regular basis as a second residence.

The target clientele pursued by Sawback Ridge are typically looking for an environment that contradicts the experience of everyday life in the city. The proposed roads in Sawback Ridge will be paved but will maintain a rural cross section with no curbs or street lighting.

The 100-125 owners would be part of a common ownership group referred to as a bare land condominium corporation for legal purposes. This group of buyers would own and maintain the roads which access the property units as per the ownership agreement. The goal is to have as little disruption as possible to the natural surroundings in order to maintain the setting.



**Arrow**  
Archaeology  
Limited

2315 - 20 Street, Coaldale, Alberta, T1M 1G5  
Phone: 403 345 2812 Fax: 403 345 2817  
Cell: 403 330 8376 arrowarchaeology.com  
Email: neil@arrowarchaeology.com

December 10, 2007

Douglas Bergen  
Bergen and Associates  
Box 1667  
Coaldale, Alberta  
T1M 1N3

Dear Mr. Bergen:

Re: Proposed Subdivision Sawback Ridge, Crowsnest Pass

This will confirm that we have conducted an initial assessment and have examined remotely sensed data for the proposed subdivision. We have also reviewed available records for previously recorded sites in the area and have investigated the subdivision's historical resource potential (according to Alberta Tourism, Parks, Recreation and Culture's *Listing of Significant Historical Sites and Areas, 7<sup>th</sup> ed., September 2007*). Although existing site records indicate that there are no recorded historical resources in the area that will be impacted by the development, a site has recently been recorded near the eastern boundary of the subdivision. We cannot, on the basis of the information currently available, determine whether or not this site extends into the proposed subdivision. We will be searching for and investigating this site to determine if it will be impacted by the development. If it is, archaeological mitigation may be required.

In addition, the proposed subdivision has landforms that have potential to contain historical resources. It is also the case, given the long Euro-Canadian history of the Pass, that there is the possibility for the presence of historical (i.e., 19<sup>th</sup> or early 20<sup>th</sup> century) remains in the area. Although there are no known historical resources that would prevent development of the area, the proposed subdivision will be subject to a full Historical Resources Impact Assessment field survey and testing program as soon as surface conditions permit us to complete this work.

In the meantime if you have any questions, please contact me.

Yours sincerely,

  
Neil Mirau  
Senior Archaeologist

  
DOUGLAS J. BERGEN  
& ASSOCIATES LTD.  
ARCHITECTURAL TECHNOLOGY

SAWBACK RIDGE  
CROWSNEST PASS, AB

ARROW ARCHEOLOGY  
LETTER

FIGURE 2.5





Site Vegetation and Topography



Site Vegetation





Existing Trail



Site Vegetation



DOUGLAS J. BERGEN  
& ASSOCIATES LTD.  
ARCHITECTURAL TECHNOLOGY

SAWBACK RIDGE  
CROWSNEST PASS, AB

SITE PHOTOS

FIGURE 2.6



View from Upper Ridge



South boundary along Trans Alta right of way



DOUGLAS J. BERGEN  
& ASSOCIATES LTD.  
ARCHITECTURAL TECHNOLOGY

SAWBACK RIDGE  
CROWSNEST PASS, AB

SITE PHOTOS

FIGURE 2.6

## **SAWBACK RIDGE AREA STRUCTURE PLAN**

Crowsnest Pass, Alberta

---

### **3.2**

#### **LAND USE POPULATION DENSITIES**

The plan area has been designed to accommodate 100-125 residential units varying in size from 1/4 to 1/2 acres (0.135 - 0.202 hectares) to typical single unit condos. All units are in accordance with Land Use Bylaw No. 481 prepared by Oldman River Regional Services Commission (ORRSC).

The frontage of the units varies from 6.1 meters to 34 meters and vary in depth from 30 meters to 84 meters.

Housing density based on one dwelling per unit works out to 3.3 units per acre (8.1 units per hectare).

A population figure of three people per residence results in a population density of 375 people for this 38 acre development. It is not likely however that this magnitude of density will be realized given the nature of the target clientele.

### **3.3**

#### **SLOPE STABILITY**

The slope of the land from the upper bench to the meadow below varies from 18 % to 30%. The grade of the proposed roads shall not exceed municipal standards within the development area. The slopes consist of considerable vegetation in most areas and show no signs of detrimental erosion. These types of slopes are considered safe provided that geotechnical recommendations are followed. EBA Engineering Ltd. of Lethbridge is addressing these issues for the project and each of the builders will be required to follow the geotechnical recommendations..

### **3.4**

#### **MUNICIPAL RESERVE**

In accordance with the Municipal Government Act, a minimum 10% of the gross developable land will be dedicated as municipal reserve to the local Municipality. As illustrated within the proposed plan, the retention of significant natural site features and vegetation is of primary



## **SAWBACK RIDGE AREA STRUCTURE PLAN**

Crowsnest Pass, Alberta

---

**3.4**

### **MUNICIPAL RESERVE (CONTINUED)**

importance. The proposed plan will likely exceed the Municipal Reserve (MR) area requirement. A detailed analysis of proposed Municipal Reserve Lands will be provided at the subdivision stage to the satisfaction of the Subdivision Approving Authority. See figure 3.1.

**3.5**

### **ROADWAYS**

**3.5.1.**

#### **INTERNAL TRAFFIC MOVEMENT**

The north and west border of the proposed Sawback Ridge development follows the Highway 40 corridor extending north to south.

The approximately 115 individual units will be serviced via 2 private residential roads which would extend from Highway 40 throughout the development as seen in figure 3.1.

An easement would be registered as required to provide a right-of-way access to each lot. The internal roads will be owned and maintained by the condominium corporation. All unit owners will contribute to the maintenance costs.

The proposed private roads have been positioned to extend from the existing highway at locations that optimizes the sight distances for safe entry and exit from the property. The grade on the road throughout the development will not exceed 10%, which meets the municipal road standard. See figure 3.2.

The road will have a 26-0' (8.0 m) surface with properly designed drainage swale on each side. Civil engineering for this project will be provided by Mr. Henry Vanderpyl, C.E.T., P. Eng., of HV Consulting Ltd. of Coaldale. The swale will facilitate run-off during precipitation or snow melt events with drainage culverts provided as required.



**Table 2.2.2 - General Design Guidelines**

Application / Typical Use	Roadway Classification					
	Urban			Rural		
	Local	Collector	Arterial	Local	Collector	Arterial
Design Speed (km/h)						
Minimum	30	50	50	50	60	80
Maximum	50	70	100	80	80	100
Maximum Allowable Gradient						
Minimum Design Speed	10	10	10	10	10	7
Maximum Design Speed	10	6	6	7	7	6
Minimum Horizontal Curve Radius (m)						
Minimum Design Speed	30	115	75	120	120	230
Maximum Design Speed	115	290	440	230	230	390
Maximum Super-elevation (m/m)						
Minimum Design Speed	0.02	N/A	0.06	0.06	0.06	0.06
Maximum Design Speed	0.02	N/A	0.06	0.06	0.06	0.06
Vertical Crest Curve Minimum k						
Minimum Design Speed	3	7	7	7	15	35
Maximum Design Speed	7	22	85	35	35	75
Vertical Sag Curve Minimum k						
Minimum Design Speed	4	11	11	11	20	30
Maximum Design Speed	11	25	50	30	30	50
Minimum Decision Sight Distance (m)						
Minimum Design Speed	90	140	140	140	170	230
Maximum Design Speed	140	200	300	230	230	300
Minimum Pavement/Surface Width (m)						
Minimum Lane Width (m)	10.5	12.5	15	8	9	10
Minimum Shoulder Width (m)	3.3	3.5	3.7	3.5	3.5	4
Minimum Shoulder Width (m)	N/A	N/A	N/A	0.5	1.0	1.0
Ditch width (m)	N/A	N/A	N/A	N/A	1.0	1.0
Maximum Side slope Ratio (m)	N/A	N/A	N/A	3:1	3:1	3:1
Maximum Back slope Ratio (m)	N/A	N/A	N/A	2:1	2:1	3:1
Minimum Right of Way Width (m)	20	20	25	20	25	30
Minimum Cross fall (%)	2	2	2	2	2	2

1. Decision Sight Distance is based on driver's decision to stop and stopping distance required.

2. Horizontal Curve Radius is based on reverse crown (+0.02 m/m)

3. These guidelines may not be appropriate in retrofit or reconstruction projects.

4. If side slopes of less than 3:1 are proposed guard rails may be required

5. Where side slopes are required, the Right-of-Way must be extended to include the side slope

**FIGURE 3.2**

**MUNICIPAL ROAD  
STANDARDS**

**SAWBACK RIDGE  
CROWSNEST PASS, AB**

## **SAWBACK RIDGE AREA STRUCTURE PLAN**

---

Crowsnest Pass, Alberta

### **3.5.2.**

### **CONSTRUCTION OF SURFACE**

In order to maintain a rural flavour the roads will be paved with a rural cross section. The substructure of the road will be engineered to meet the required standards for private roads.

Mr. Ed Drain of Drain Brothers Construction Ltd. has visited the site to determine the suitability of the existing terrain for this type of development and confirmed that it would work well.

### **3.6**

### **ARCHITECTURAL CONTROLS & DEVELOPMENT STANDARDS**

The development of each individual site is paramount in the final concept and appearance of Sawback Ridge. Each unit development will be governed by the land use bylaw as well as additional restrictions in the form of a restrictive covenant which will be registered against the title. Every effort will be made to maintain the natural setting as well as carefully assess each building placement. See figure 3.3 for examples of architecture and placement.

## **SECTION 4.0**

### **SERVICE REQUIREMENTS**

### **4.1**

### **TRANSPORTATION**

#### **4.1.1**

### **ROAD DIMENSIONS**

As mentioned in Section 3.5.1. Internal Traffic Movement, a private road will service the units and connect to the existing Highway 40. See highway photos in figure 4.7. The road surface will measure 26'-0" (8.0 m) on the surface and have a slight crown. There will be an 85'-0" (26.0 m) diameter turn around at the end of each cul-de-sac which meets the municipal guideline and provides adequate turning radius for a fire truck. See figure 4.7.

Mr. John Thomas of Alberta Infrastructure and Transportation was consulted on the proposed site access and capacity of Highway 40. Highway 40 is well within its design capacity to handle the additional traffic proposed by the development.

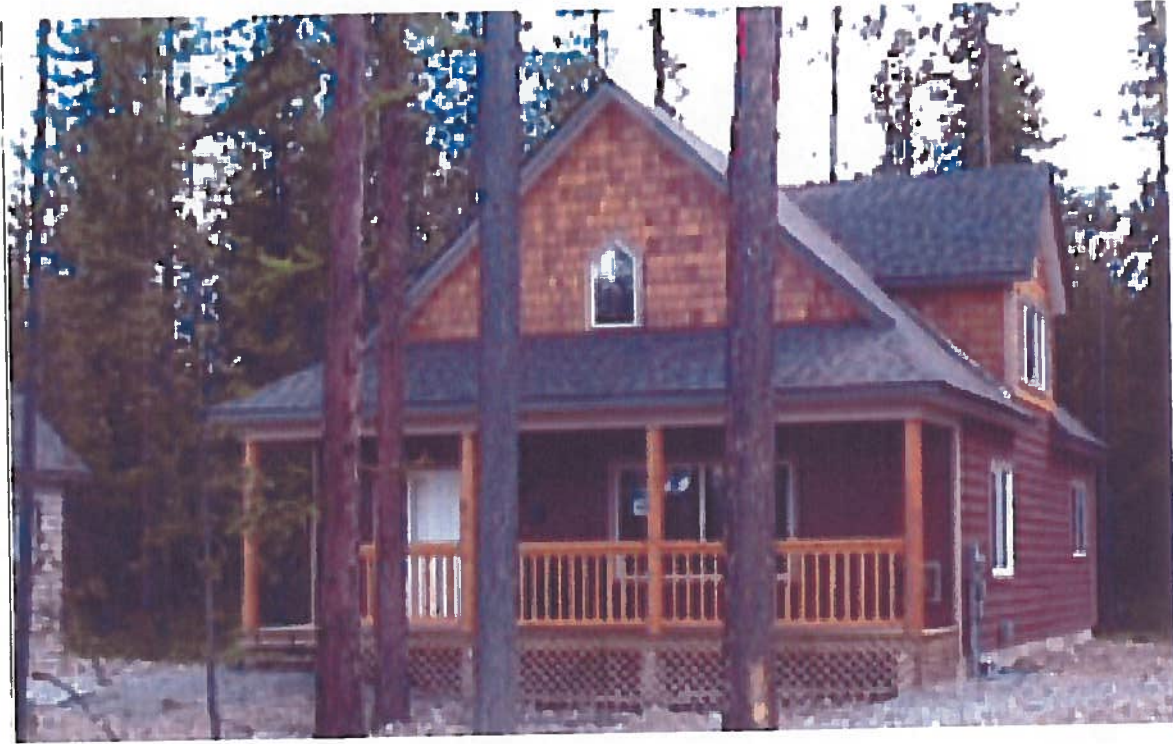


**FIGURE 3.3**

**CABIN STYLES**

**SAWBACK RIDGE  
CROWSNEST PASS, AB**





SAWBACK RIDGE  
CROWSNEST PASS, AB

CABIN STYLES

FIGURE 3.3

## **SAWBACK RIDGE AREA STRUCTURE PLAN**

Crowsnest Pass, Alberta

---

### **4.1.2**

#### **CONSTRUCTION OF SURFACE**

The internal roadways will consist of a 75 mm type III asphalt surface consistent with the City of Lethbridge specifications for paving in this region. The substructure would meet or exceed the criteria for a private municipal roadway.

### **4.1.3**

#### **DRAINAGE OF SURFACE WATER**

Surface water would find its way to either side of the road and be carried to a natural drainage facility via the drainage swale at each side of the road. Culverts will be installed at driveway crossings and where needed to ensure proper drainage of the surface water. Driveway crossings will be 20'-0" or 6.1 meters wide to allow for fire truck maneuvering.

### **4.1.4**

#### **ROAD MAINTENANCE**

A road maintenance agreement will be registered against the land titles as an encumbrance. This will ensure that regular maintenance takes place.

Each resident will be required to become a mandatory member of a homeowner's association in order to be legally bound to contribute to road maintenance.

### **4.1.5**

#### **BUSING**

The current school bus service provided by Livingstone Range School Division #68 does not provide door-to-door pickup of children in this area.

School age children are currently picked up by the bus system at a common drop off area. It is the responsibility of the parent to ensure safe passage to the pick up location.

Sawback Ridge residents would be a part of this system and thus the school bus would not travel the private road. In the event that the bus service is altered to accommodate door-to-door pick up in the area the bus would also service the neighbouring Kananaskis Wilds area.



## **SAWBACK RIDGE AREA STRUCTURE PLAN**

Crowsnest Pass, Alberta

---

### **4.1.5.**

#### **BUSING (CONTINUED)**

Mr. Dale Slade, Superintendent of Busing for the Livingstone Range School Division #68, assured the developers that the 10% grade private road would not be an issue for their busses as they currently service areas with steeper grades than Sawback Ridge is proposing.

### **4.2**

#### **STORM WATER DRAINAGE**

The subject lands currently drain naturally and do not create unusual problems relative to storm and surface drainage. The proposed road and unit layout will work with the existing contour of the land as not to disturb this natural movement of water on the property. Proper swale design and culvert placement will allow for this movement. Natural vegetation and the limited footprint of impervious surfaces within the development will also contribute to water absorption and retention. A storm pond will be created in the existing north reach of the ravine to act as a settlement pond and allow for the controlled flows off the site. A storm water management plan will be completed identifying pre-development and post-development flows. This study will be submitted to Alberta Environment for review, comment and approval prior to construction commencement.

### **4.3**

#### **WATER SUPPLY & DISTRIBUTION**

The homeowners at Sawback Ridge will enjoy the excellent water provided by the Municipality of the Crowsnest Pass via an underground pipeline distribution system. The system would tie into the existing water system installed across Highway 40 in the Kananaskis Wilds development. The existing pump station has been adequately sized in order to supply the increased demands of this development on the current system. See figure 4.1.

**4.4**

**SEWAGE DISPOSAL**

Municipal sewer service will be provided by the developer. The system will gravity drain into the existing municipal system to the south of the site. See figure 4.1. The developer is working with Mr. Ralph Tiegen and Mr. Barry Remus to provide a corridor for the sewer trunk line to be installed through their properties to connect into the municipal system at the bottom of the hill. This will assist all parties in economically providing sanitary servicing to their respective sites.

A portion of Kananaskis Wilds will also tie into this system to provide sanitary services to the remaining 12 units which are unserved. The developer is open to working with the municipality to solve any current sanitary sewer servicing issues realized at 27A Avenue. See figure 4.2.

**4.5**

**GARBAGE DISPOSAL**

Garbage will be collected on a scheduled basis by the Municipality. Each individual homeowner will receive a bill monthly for utilities including water, sewer, and garbage pickup. Bear smart containers will be encouraged by the Condo Association. Excessive waste will not be permitted to be stored on site. Temporary storage facilities for small amounts of waste will be required to be screened from view.

**4.6**

**ENERGY SUPPLY**

**4.6.1**

**ELECTRICITY**

The municipality worked with the developer in 2007 to provide electrical service to the neighbouring Kananaskis Wilds via the existing grid. The service to Kananaskis Wilds was sized to accommodate the further servicing of Sawback Ridge to the east. See figure 4.3.

MVA Consulting Ltd. of Calgary (electrical engineers) has been retained to design the system to the satisfaction of the municipality and its consultants.

## **SAWBACK RIDGE AREA STRUCTURE PLAN**

---

Crowsnest Pass, Alberta

### **4.6.2**

#### **NATURAL GAS**

A gas main currently exists under Highway 40 which will allow Atco Gas to provide service to residences on an individual basis. The current line is adequately sized to service the development. Services are installed by Atco Gas construction division at a per meter rate. See figure 4.4.

### **4.7**

#### **COMMUNICATIONS**

Telus currently has facilities along Highway 40 and would provide underground services to homeowners via that installation. Telus has provided the developer with a letter outlining the procedure for service installation. See figure 4.5. Shaw cable will also be installed to each unit for high speed internet communication as well as cable television. Small (18") satellite dish applications will be permitted on the units for those wishing to receive signals in this manner.

### **4.8**

#### **FIRE PROTECTION**

Fire protection will be provided to the development via fire hydrants connected to the municipal water distribution system. Homeowners will also have to be familiar and abide by the FireSmart Regulations under Section 14 of the Land Use Bylaw No. 632-2004. See figure 4.6.

## **SECTION 5.0**

### **SEQUENCE OF DEVELOPMENT**

#### **5.1**

#### **SUBDIVISION**

##### **5.1.1**

#### **APPLICATION FOR RE-ZONING**

An application for re-zoning this property from GCR1 to R-1A has been filed with the Municipality of the Crowsnest Pass. The re-designation request will be accompanied by this Area Structure Plan and all required supporting documents. See figure 5.1.



**FIGURE 4.7**

**PHOTOS OF HWY 40  
AND SITE ACCESS**

**SAWBACK RIDGE  
CROWSNEST PASS, AB**

MUNICIPALITY OF CROWSNEST PASS  
APPLICATION FOR A LAND USE BYLAW AMENDMENT

SCHEDULE 13

Form G

APPLICATION NO. \_\_\_\_\_

APPLICANT: DOUGLAS J. BERGEN & ASSOCIATES LTD

ADDRESS: Box 1667, CALDAVE, AB. T1M 1N3

REGISTERED OWNER: SAME

ADDRESS: \_\_\_\_\_

LEGAL DESCRIPTION: Lot(s) \_\_\_\_\_ Block \_\_\_\_\_ Plan \_\_\_\_\_

Quarter SW Section 16 Township 8 Range 4 W5

PROPOSED AMENDMENT:

FROM: GROUPED COUNTRY RESIDENTIAL (GCR-1)

TO: RESIDENTIAL (R-1A)

APPLICANT'S SUBMISSION:

Please state your reasons for applying for this amendment. Attach a separate sheet if necessary.

TO CREATE A QUALITY RESIDENTIAL DEVELOPMENT  
THAT MEETS THE MANDATE OF THE MUNICIPALITY.

REGISTERED OWNER OR PERSON ACTING ON BEHALF OF:

I certify that I am the registered owner or that the registered owner(s) of the land described above is aware of this application.

Fees Submitted \$ 600.00

Receipt No. \_\_\_\_\_

DATE: NOV 8 '07

SIGNED:   
Applicant



SAWBACK RIDGE  
CROWSNEST PASS, AB

LAND USE RE-DESIGNATION  
APPLICATION

FIGURE 5.1



## **SAWBACK RIDGE AREA STRUCTURE PLAN**

Crowsnest Pass, Alberta

---

### **5.1.2**

#### **APPLICATION FOR SUBDIVISION**

An application for subdivision will be submitted to the Oldman River Regional Service Commission after re-zoning is approved. The application will comply with all requirements as a result of the re-zoning.

### **5.1.3**

#### **REGISTRATION OF RESTRICTIVE COVENANTS AND EASEMENTS**

Prior to the sale of any of the individual units the developer will arrange to register a restrictive covenant on the title to include the architectural controls and development controls.

The private road easement as well as any other servicing easements that require registration will also be filed.

### **5.1.4**

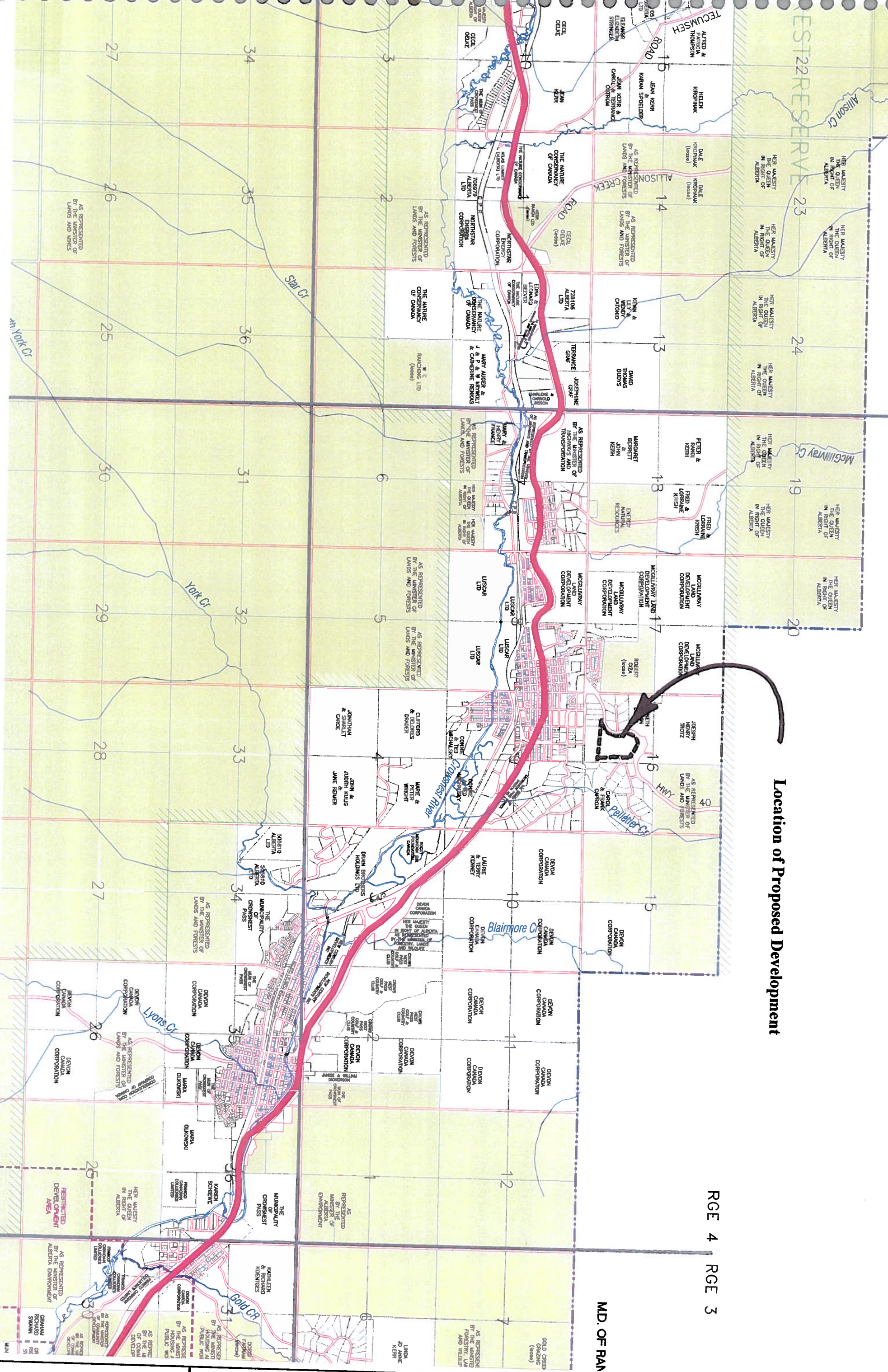
#### **CONSTRUCTION AND PHASING**

Construction of the access road as well as the underground servicing will commence shortly after subdivision approval and a development agreement is granted. All design and construction will be monitored by a qualified professional engineer. Phasing of the development will proceed as demand for lots is dictated by the market. See figure 5.2.



DOUGLAS J. BERGEN  
& ASSOCIATES LTD.  
ARCHITECTURAL TECHNOLOGY





Location of Proposed Development

RGE 4 RGE 3

MD. OF RAN

FIGURE 1.2

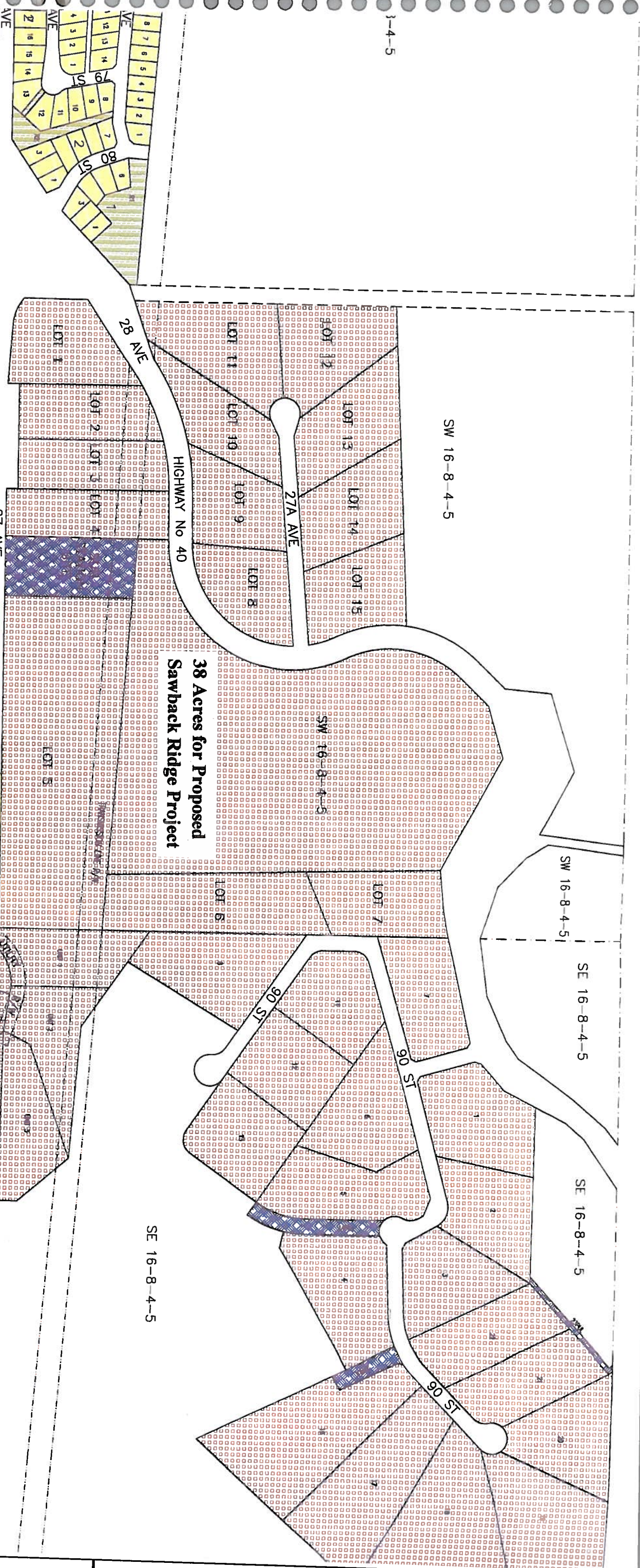
LAND LOCATION WITH MUNICIPALITY

SAWBACK RIDGE CROWSNEST PASS, AB









**LAND USE DISTRICTS**  
 BYLAW NO. 632, 2004, SEPTEMBER 7, 2004  
 With Amendments To Bylaw # 640, 2004.

- Residential
- Multiple Residential
- Mobile Home
- Grouped Country Residential
- Retail Commercial
- Drive-In Commercial
- Industrial
- Recreation & Open Space
- Public
- Non-Urban Commercial
- Non-Urban Recreation
- Direct Control

- R-1
- R-3
- R-4
- GCR-1
- C-1
- C-2
- I-1
- RO-1
- P-1
- NUCR-1
- NUA-1
- DC-1

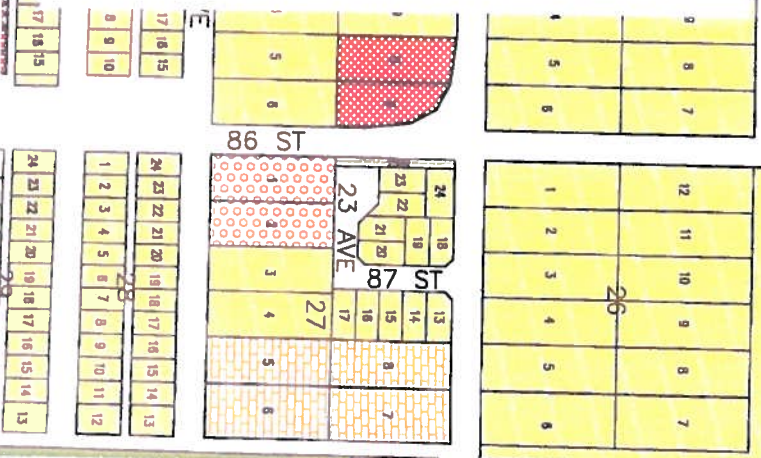


FIGURE 1.4

LAND USE  
 BYLAW MAP

SAWBACK RIDGE  
 CROWNEST PASS, AB

DOUGLAS J. BERGEN  
 & ASSOCIATES LTD.  
 ARCHITECTURAL TECHNOLOGY



**GROUPED COUNTRY RESIDENTIAL – GCR-1**

**PURPOSE:** To provide for a high-quality of clustered residential development in designated areas where no conflicts with adjacent urban or non-urban uses can be anticipated.

- 1. PERMITTED USES**  
 Accessory buildings not over 13.9 m<sup>2</sup>  
 (150 sq. ft.) in area  
 Garages accessory to a single-family dwelling  
 Single-family dwellings
- DISCRETIONARY USES**  
 Accessory buildings over 13.9 m<sup>2</sup>  
 (150 sq. ft.) in area  
 Home occupations  
 Mobile homes  
 Modular homes  
 Moved-in buildings  
 Signs
- PROHIBITED USES**  
 Shipping containers  
 Wind energy conversion systems (WECS)

**2. MINIMUM LOT SIZE**  
 1.2 hectares (3 acres).

**3. MINIMUM BUILDING SETBACKS**

Use	Front Yard		Side Yard		Rear Yard	
	m	ft.	m	ft.	m	ft.
Principal use	15.2	50	15.2	50	15.2	50
Accessory buildings over 9.3 m <sup>2</sup> (100 sq. ft.)	15.2	50	15.2	50	15.2	50

**4. MINIMUM FLOOR AREA**  
 As required by the Municipal Planning Commission.

**5. OFF-STREET PARKING AND LOADING**  
 As required by the Municipal Planning Commission.

- 6. GENERAL REQUIREMENTS**
- (a) The Municipal Planning Commission may require the developer to prepare a detailed area structure plan which must accompany the initial development application.
  - (b) The Municipal Planning Commission should request comments from the appropriate provincial government department as to the effect of a development on wildlife habitat before approving a grouped country residential development.
  - (c) Prior to dealing with an application for a development in the vicinity of a major pipeline, sour gas pipeline or sulphur extraction plant, the Development Officer shall request comments from owners of the utility and the Alberta Energy and Utility Board.
  - (d) Percolation tests to determine suitability for sewage disposal may be required by the Municipal Planning Commission prior to dealing with a development application.

- (e) The Municipal Planning Commission may require the developer, as a condition of any approval, to enter into a development agreement with the municipality.
- (f) The Municipal Planning Commission may request a Wildland Urban Interface Risk Assessment for any grouped country residential subdivision and/or development.

- 7. ADDITIONAL INFORMATION**  
 Every application for grouped country residential development shall be accompanied by details of how fire suppression and fire protection will be provided.
- 8. STANDARDS OF DEVELOPMENT** – See Schedule 4.
- 9. HOME OCCUPATIONS** – See Schedule 8.
- 10. WIND ENERGY CONVERSION SYSTEMS** – See Schedule 12.



## RESIDENTIAL – R-1A

**PURPOSE:** To provide for a high-quality residential environment with the development of single-family dwellings on standard sized lots and other compatible uses.

**1. PERMITTED USES**

Single-family dwellings  
 Garages or carports accessory to single family dwellings  
 Garden sheds and other accessory buildings with no permanent foundation and not over 13.9 m<sup>2</sup> (150 sq. ft.) in area  
 Sixplex dwellings  
 Triplex dwellings

**DISCRETIONARY USES**

Accessory buildings over 13.9 m<sup>2</sup> (150 sq. ft.) in area  
 Home occupations  
 Modular homes over 9.1 m (30 ft.) wide  
 Private institutional uses  
 Public park, playground or recreational uses  
 Signs  
 Similar uses  
 Utilities and services

**PROHIBITED USES**

Manufactured homes  
 Modular homes under 9.1 m (30 ft.) wide  
 Mobile homes  
 Moved-in buildings  
 Shipping containers

**2. MINIMUM LOT SIZE**

Use	Width		Length		Area	
	m	ft.	m	ft.	m <sup>2</sup>	sq. ft.
Single-family dwelling	13.7	45	30.5	100	418.1	4,500
All other uses	As required by the Municipal Planning Commission					
Corner lots	See Schedule 4					

**3. MINIMUM BUILDING SETBACKS – with developable lane**

Use	Front Yard	Side Yard	Rear Yard
	m	ft.	m
Single-family dwelling	6.1	20	1.5
All other uses	As required by the Municipal Planning Commission		

**4. MINIMUM BUILDING SETBACKS – no lane or undevelopable lane**

Use	Front Yard	Side Yard	Rear Yard
	m	ft.	m
All uses	6.1	20	1.5
			5
			3.0
			10

on one side and  
on the other

**5. MAXIMUM LOT COVERAGE**

Principal building – 35%  
 Accessory buildings – 15%

**6. MAXIMUM BUILDING HEIGHT**

Principal building – 10 m (32.8 ft.)  
 Accessory buildings – See Schedule 4

**7. MINIMUM FLOOR AREA**

As required by the Municipal Planning Commission.

**8. STANDARDS OF DEVELOPMENT – See Schedule 4.**

**9. LOT SETBACK WAIVERS – See Schedule 4.**

**10. OFF-STREET PARKING AND LOADING – See Schedule 6.**







CERTIFIED COPY OF  
Certificate of Title

CERTIFIED COPY OF  
Certificate of Title

LINC  
0032 619 629

SHORT LEGAL  
NAME  
NUMBER

SHORT LEGAL  
5;4;8;16;SW  
TITLE NUMBER: 071 409 620 +79  
CONDOMINIUM PLAN  
DATE: 15/08/2007

SHORT LEGAL 5;4;8;16;SW  
DOUGLAS J. BERGEN & ASSOCIATES LTD. ET AL  
071 409 620 +79  
ENCUMBRANCES, LIENS & INTERESTS

AT THE TIME OF THIS CERTIFICATION

DOUGLAS J. BERGEN & ASSOCIATES LTD..  
OF PO BOX 1667  
COALDALE  
ALBERTA T1M 1N3  
AS TO AN UNDIVIDED 1/2 INTEREST

SIC COR STEWART INVESTMENT CAPITAL CORP..  
OF PO BOX 286  
BLAIRMORE  
ALBERTA T0K 0B0  
AS TO AN UNDIVIDED 1/2 INTEREST

ARE THE OWNERS OF AN ESTATE IN FEE SIMPLE  
OF AND IN

MERIDIAN 5 RANGE 4 TOWNSHIP 8

SECTION 16  
QUARTER SOUTH WEST  
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS  
EXCEPTING THEREOUT  
FIRSTLY: 13.38 ACRES MORE OR LESS FOR ROADWAY AND  
0.41 OF AN ACRE MORE OR LESS FOR CONNECTING ROAD  
ON PLAN 2960JK

PLAN	NUMBER	HECTARES	ACRES	MORE OR LESS
SUBDIVISION	369LK	1.28	3.16	
SUBDIVISION	9611980	27.22	67.26	
CONDOMINIUM	0714098	15.335	37.89	

EXCEPTING THEREOUT ALL MINES AND MINERALS

SUBJECT TO THE ENCUMBRANCES, LIENS AND INTERESTS NOTIFIED BY MEMORANDUM UNDER-  
WRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER.

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER DATE (D/M/Y) PARTICULARS

7098LL 29/09/1972 UTILITY RIGHT OF WAY  
GRANTEE - ALLTALINK MANAGEMENT LTD..  
ATTN: TRANSMISSION LAND DEPT  
PO BOX 20, STATION M  
CALGARY  
ALBERTA T2P2G9  
"WEST 40 FT OF EAST 1425 FT OF NORTH 40 FT OF SOUTH  
590 FT"

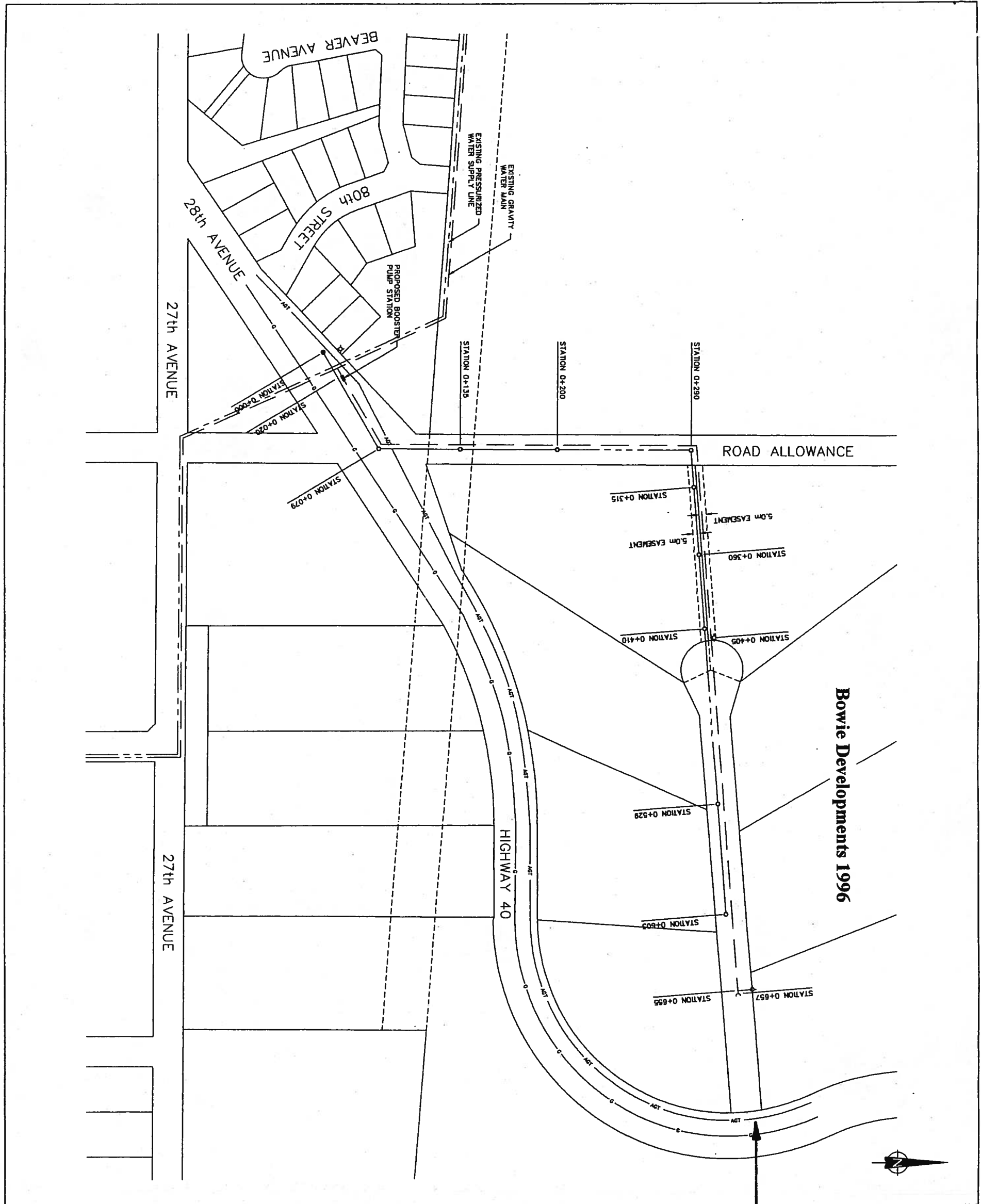
961 192 836 22/08/1996 CAVEAT  
RE : LEASE  
CAVEATOR - ROGERS CANTEL INC..  
ONE, MOUNT PLEASANT RD  
TORONTO  
ONTARIO M4Y2Y5  
AGENT - WALLIS G TOMIE

071 409 618 15/08/2007 CAVEAT  
RE : DEVELOPMENT AGREEMENT PURSUANT TO MUNICIPAL  
GOVERNMENT ACT  
CAVEATOR - THE MUNICIPALITY OF CROWSNEST PASS.  
PO BOX 600  
CROWSNEST PASS  
ALBERTA T0K0E0

\*SUPPLEMENTARY INFORMATION\*

MUNICIPALITY: MUNICIPALITY OF CROWSNEST PASS  
REFERENCE NUMBER:  
061 247 809  
TOTAL INSTRUMENTS: 003





NOTE:  
1. EXISTING UTILITY SIZES AND LOCATIONS TO BE FIELD VERIFIED.

**Telus Servicing Follows  
Highway 40 Directly Past  
Sawback Ridge Entry Road**

2	98-08-30	FOR CONSTRUCTION
1	98-08-10	FOR APPROVAL
ISSUE	DATE	REVISION

**mpa** ENGINEERING LTD.  
Lethbridge, Alberta

**KEN BOWIE DEVELOPMENT**

COLEMAN, ALBERTA  
IN THE MUNICIPALITY OF CROWSNEST PASS  
SITE PLAN

DESIGNED	G.A.	CHECKED	J.P.
DRAWN	P.M.	JOB	1932-001-00
SCALE	1:2500	SHEET	
DATE	AUGUST 1996	DRAWING	1

## FireSmart REGULATIONS

### Schedule 14

1. All subdivision and development located within or adjacent to the Wildland Urban Interface (WUI) shall be subject to the requirements outlined in the schedule as well as those established in the "FireSmart" manuals prepared by Partners in Protection.
2. A Wildland Urban Interface map shall be prepared and adopted within this bylaw to identify critical development areas within the municipality.
3. The municipality, at its sole discretion, may require a developer to provide a higher development standard than those outlined in this schedule or this bylaw.
4. The Municipal Planning Commission may forward any subdivision or development application to Alberta Sustainable Resource Development or any appropriate government department for comment or concurrence prior to rendering a decision.
5. The Municipal Planning Commission may require an applicant to undertake a Wildland Urban Interface Risk Assessment and provide mitigative planning of a specific property as part of the planning approval process.
6. Any development within or adjacent to the Wildland Urban Interface shall be required to use FireSmart building materials and standards for new construction.
7. Any development within or adjacent to the Wildland Urban Interface shall be required to use FireSmart building materials and standards when replacing or retrofitting an existing dwelling unit or structure.
8. The municipality shall supply a potential developer with an itemized list of FireSmart building materials and standards.
9. The municipality may require a developer to remove vegetation or fuel load stockpiles on vacant or developed lots.
10. The Development Authority shall require a minimum of 10 m (32.8 ft.) setback from an established vegetative cover for development within or adjacent to the Wildland Urban Interface.
11. As a condition of subdivision or development approval, the municipality may require a developer to implement specific landscaping standards (plant species, ground cover, fire pits, etc.)
12. As part of the planning approval process, the municipality shall consider infrastructure development (access, egress, water supply, powerlines, propane tanks, water reservoirs, etc.
13. The Subdivision Authority shall consider the provision of land for municipal and environmental reserve purposes adjacent to Wildland Urban Interface areas at the time of a subdivision approval.
14. The developer may be required, as a condition of approval, to fuel modify Environmental Reserve and Municipal Reserve lands in zones 2 and 3 (10 m to 200 m) prior to the commencement of development.
15. The minimum development standards accepted by the Municipal Planning Commission for interface developments are established in "FireSmart – Protecting Your Community from Wildfire" (PIP 1999).

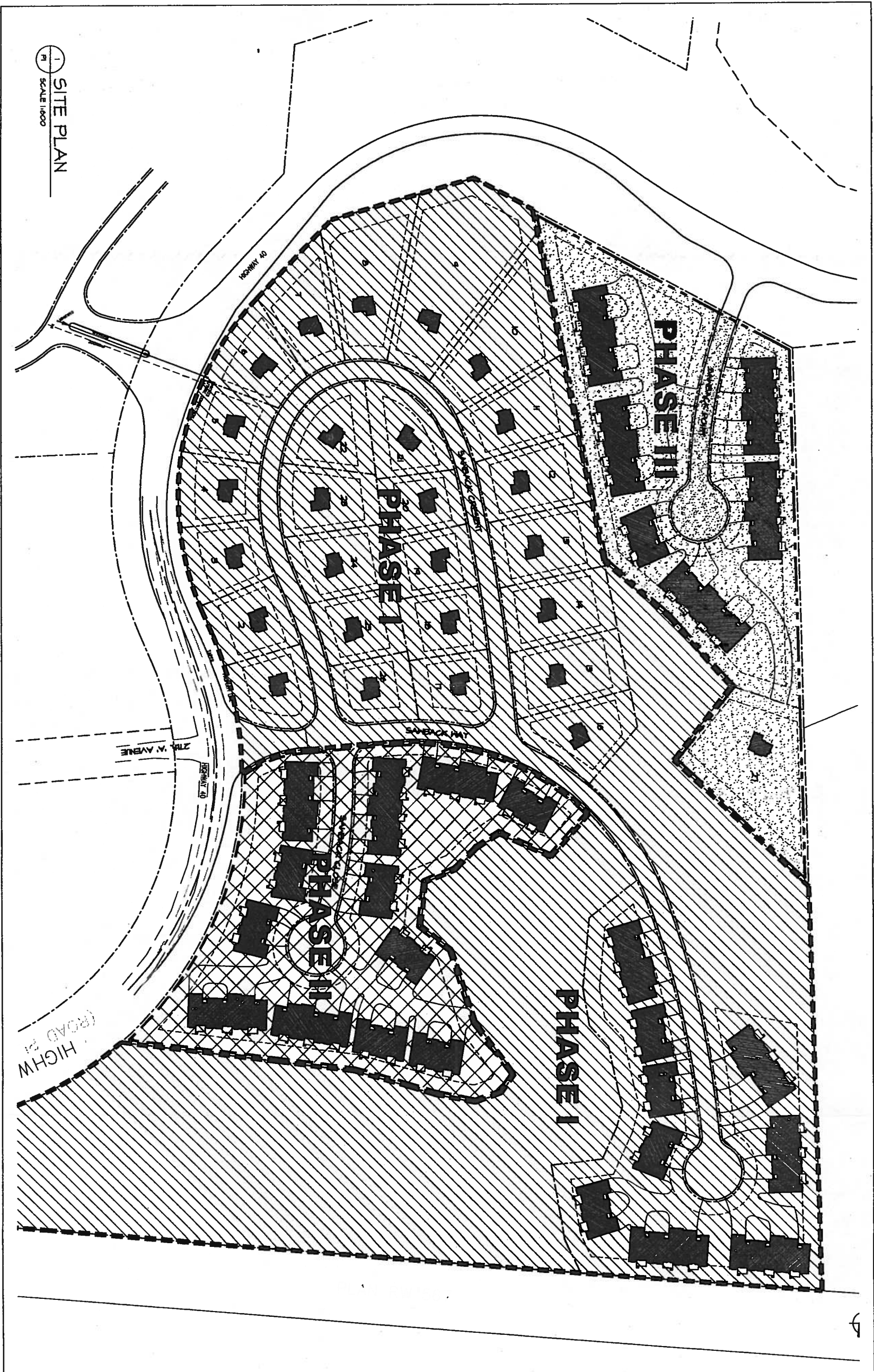


FIGURE 5.2

DEVELOPMENT  
PHASES

SAWBACK RIDGE  
CROWSNEST PASS, AB

DOUGLAS J. BERGEN  
& ASSOCIATES LTD.  
ARCHITECTURAL TECHNOLOGY

