

SNOW

AREA STRUCTURE PLAN

PTN NE ¼ Section 8, Township 20, Range 29, W4M

Prepared by:
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D.A. Badke Enterprises Ltd

On behalf of:
Debra Snow

Presented to:
The Municipal District of Foothills No. 31

March 2005

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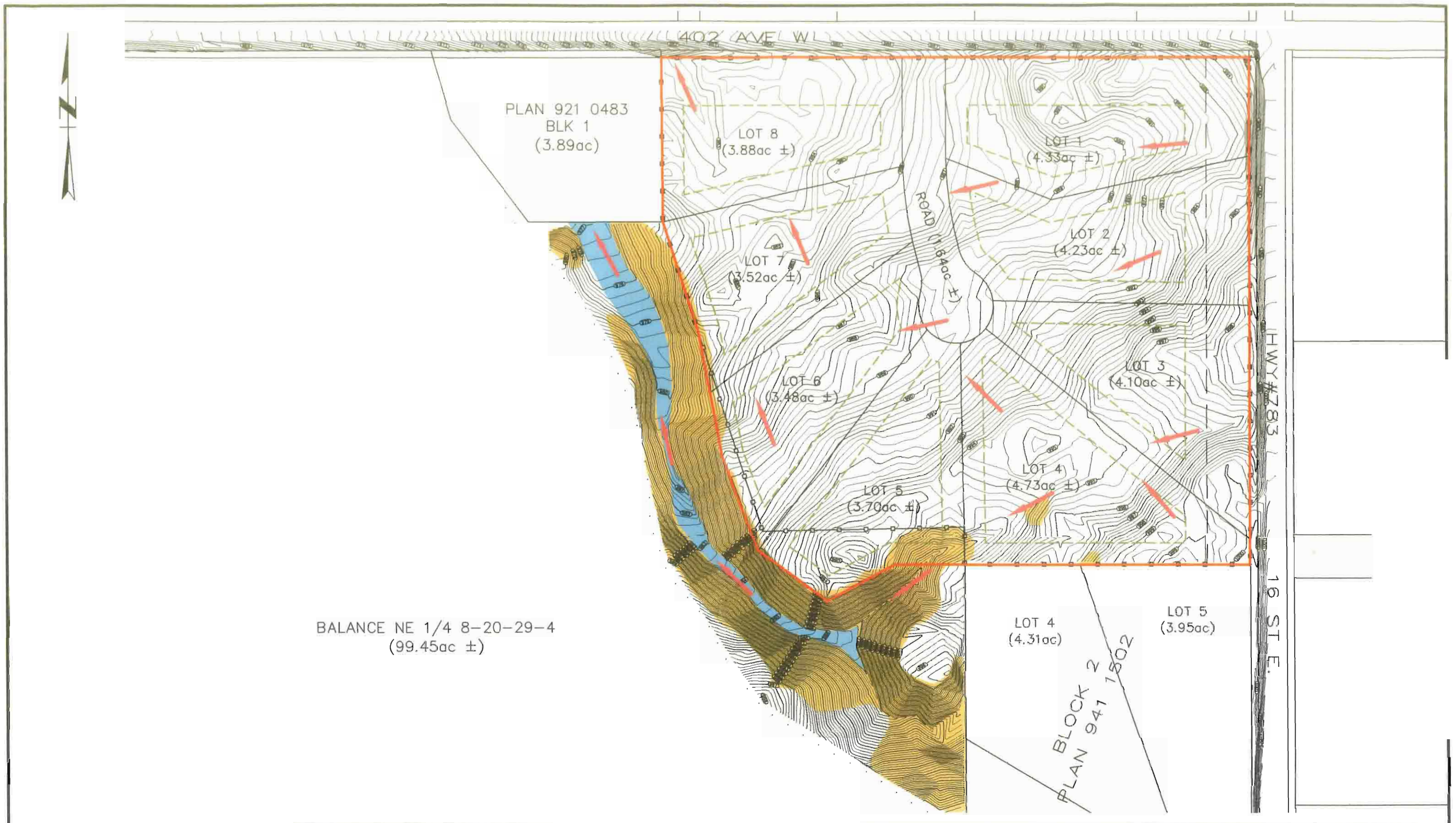
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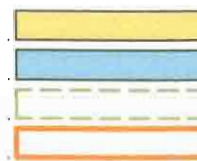
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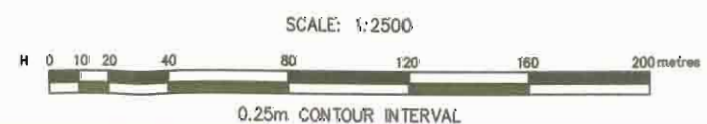
LEGEND

FENCE....
DRAINAGE
STREAM (INDEFINITE).
INDEX CONTOUR.

AREAS IN EXCESS OF 15%
LOW LYING AREAS.
BUILDING ENVELOPE.
PLAN AREA.



AREA STRUCTURE PLAN Municipal District of Foothills No. 31



Snow CONTOUR MAP AND DEVELOPMENT CONSTRAINTS

PTN N.E. 1/4 8-20-29-4

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FIGURE 5

1.0 INTRODUCTION

1.1 CONTEXT

The “Plan Area” referred to in this document, the Snow Area Structure Plan, is located within the Northeast Quarter of Section 8, Township 20, Range 29, West of the 4th Meridian (the “Subject Quarter”).

The Subject Quarter has been subdivided in the past as follows:

- Widening of the road allowance in 1972 along the east side of the Subject Quarter (1.01 acres);
- Subdivision in 1992 of a one lot country residential parcel from the north west portion of the Subject Quarter (3.89 acres);
- Subdivision in 1994 of a five lot country residential subdivision from the south east portion of the Subject Quarter (22.3 acres in total with individual lot sizes in the range of 3.0 to 4.9 acres);
- Widening of the road allowance in 2002 along the north side of the Subject Quarter (0.79 acres).

The Plan Area does not include any of these subdivided parcels.

The Plan Area is located in an area of the Municipality that has already experienced significant fragmentation of the agricultural lands. Figures 1 and 2 show the existing subdivision patterns in the general area and show the Plan Area as crosshatched. As shown in these figures, the lands within one half mile of the Subject Quarter contain some 62 parcels; 54 of which are Country Residential parcels. With the creation of these existing country residential parcels, this general area appears well on its way in transition from purely agricultural uses, to a mixture of country residential uses with some agricultural pursuits. This transition is fuelled by the increasing land values in the general area and the close proximity of the Subject Quarter to a prosperous major urban center (Calgary), as well as being located one mile from a rapidly growing town (Okotoks).

1.2 PURPOSE OF PLAN

The Snow Area Structure Plan was prepared at the request of the Municipal District of Foothills Council. The purpose of this Area Structure Plan is to act as a planning guide and to set parameters for future developments by establishing a range of compatible and appropriate land uses for the Plan Area. The Snow Area Structure Plan is necessary to establish an orderly approach with respect to subdivision and development within the Plan Area, addressing land use, servicing, access and density.

1.3 LEGISLATIVE FRAMEWORK

The Snow Area Structure Plan has been prepared in accordance with the provisions of the Municipal Government Act (Statutes of Alberta, 1994, Chapter M-26.1), which reads:

633(1) For the purpose of providing a framework for subsequent subdivision and development of an area of land, a council may, by bylaw, adopt an area structure plan.

(2) An area structure plan

(a) must describe

- (i) the sequence of development proposed for the area,*
- (ii) the land uses proposed for the area, either generally or with respect to specific parts of the area,*
- (iii) the density of population proposed for the area either generally or with respect to specific parts of the area,*
and
- (iv) the general location of major transportation routes and public utilities*

and

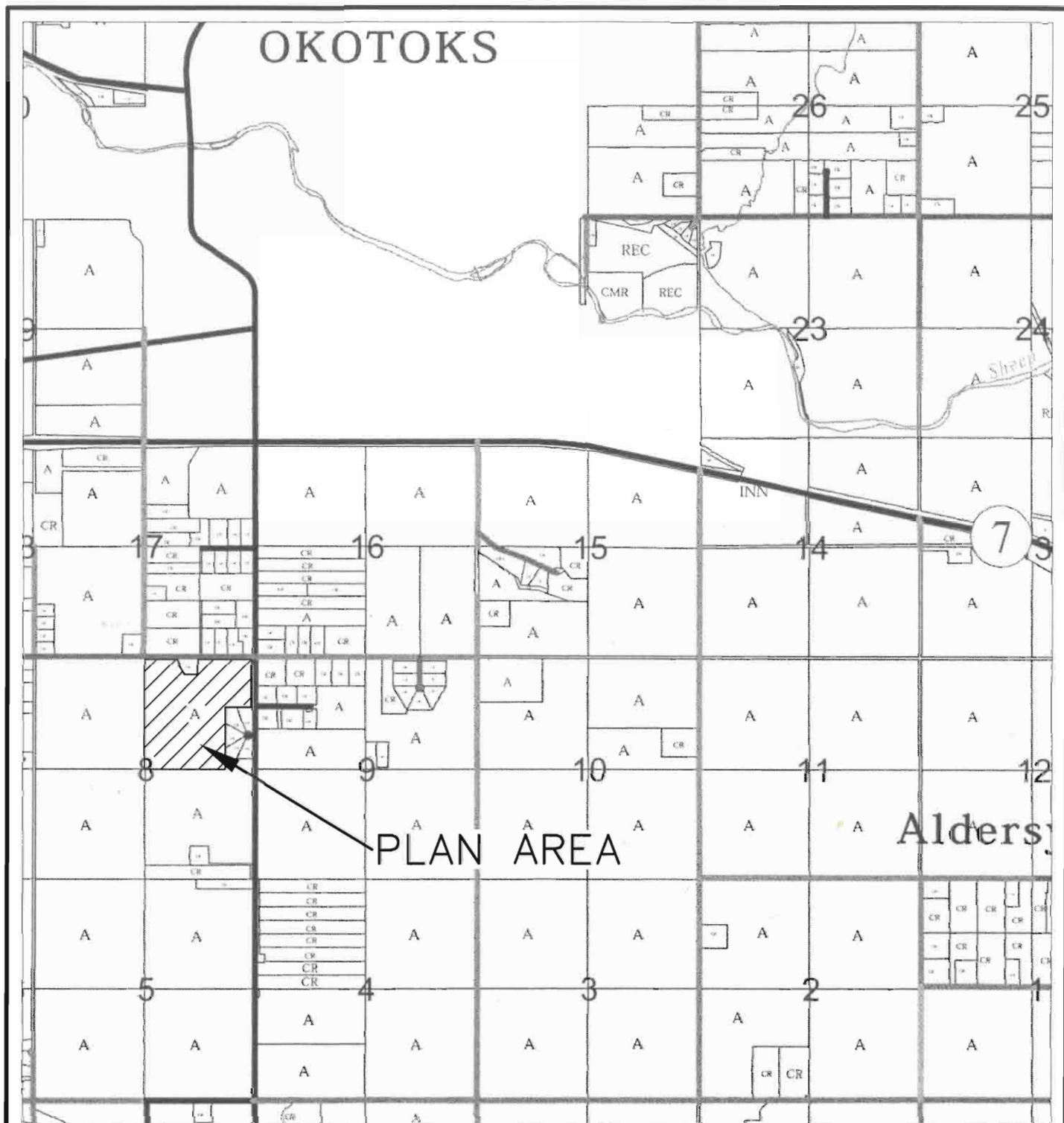
(b) may contain any other matters the council considers necessary

As well, this Area Structure Plan complies with the Municipality's Guidelines for preparation of Area Structure Plans.

1.4 INTERPRETATION

Within this document, The Snow Area Structure Plan:

- **ASP** means Area Structure Plan;
- **Plan Area** means those lands located within the Northeast Quarter of Section 8, Township 20, Range 29, West of the 4th Meridian, excepting thereout those lands contained within Plans 1603LK, 921 0483, 941 1502 and 021 2184, containing a net acreage of 132.01 acres more or less, which lands currently stand in the name of Debra Anne Snow;
- **Developer** means the owner of the Plan Area;
- **Subject Quarter** means the NE¼ Section 8, Twp 20, Rge 29, W4M;
- **Municipality** means the Municipal District of Foothills No. 31;
- **Council** means the Council of the Municipal District of Foothills No. 31;
- **MDP** means the Municipal Development Plan of the Municipal District of Foothills No. 31;
- **CLI** means the Canada Land Inventory soil classification for agriculture;
- **Development** means subdivision and installation of roads and services;



Snow		
PTN N.E. 1/4 SEC 8, TWP 20, RGE 29, W4M		
AREA STRUCTURE PLAN Municipal District of Foothills No. 31		
SCALE 1:40,000	ZONING MAP	
D.A.BADKE ENTERPRISES LTD. (403)271-8708	MARCH 2005	FIGURE 2

2.0 THE PLAN AREA

2.1 REGIONAL SETTING

The Plan Area is located in the central portion of the Municipal District of Foothills No. 31. The Plan Area is located one mile (1.6 km) south of the Town of Okotoks south limits. Figure 1 shows the municipal setting of the Plan Area.

2.2 PLAN AREA BOUNDARIES

The Plan Area for The Snow Area Structure Plan is defined as the Northeast Quarter of Section 8, Township 20, Range 29, West of the 4th Meridian, excepting thereout those lands contained within Plans 1603LK, 921 0483, 941 1502 and 021 2184. The Plan Area contains a net acreage of 132.01 acres (53.42 hectares) more or less and currently stands in the name of Debra Anne Snow as shown on the Certificate of Title contained in Appendix 1.

2.3 DESCRIPTION OF PLAN AREA

The topography of the Plan Area is gently rolling and northwest sloping. The Plan Area is bisected by a 6 metre deep draw which drains in a northwesterly direction. This draw is dry for most of the year, except when carrying seasonal melt water or storm runoff water. The lands east of this draw, in which subdivision is proposed, are hummocky, CLI Class 5E pastureland with erosion damage. The lands west of this draw are mostly CLI Class 4T grassland with some CLI Class 2T land in the northwest corner of the Plan Area. An agrologist has determined these CLI ratings of the soils within the Plan Area and the supporting report is enclosed in Appendix 2. Figure 3 is an enlarged aerial photograph of the Plan Area on which the proposed subdivision has been superimposed. The Plan Area is bounded on the north by an oiled municipal road (402 Ave E) and on the east by paved Highway #783 (16 Street E). Except for perimeter and cross fencing, there are no improvements within the Plan Area.

3.0 PLAN GOALS AND OBJECTIVES

3.1 GOALS AND OBJECTIVES

The Snow Area Structure Plan attempts to achieve the orderly, economical and beneficial development and use of the lands within the Plan Area. It is intended to be a flexible, long-term framework for the development and patterns of human settlement within the Plan Area. The goals and objectives of this Area Structure Plan are as follows:

- 3.1.1 To conform to the provisions of the Municipal Government Act (MGA) Statutes of Alberta, 1994, Chapter M-26.1, as amended and the Subdivision and Development Regulation, Alberta Regulation 43/2002.*
- 3.1.2 To define a land use strategy that conforms to the general principles contained in the MD of Foothills No. 31 Municipal Development Plan.*
- 3.1.3 To provide guidance for subdivision and development of lands within the Plan Area which will result in an orderly and sequential development pattern.*
- 3.1.4 To ensure that all future development of lands within the Plan Area will conform to the Policies contained in this Area Structure Plan.*
- 3.1.5 To establish high quality developments that are compatible with and which will harmonize with existing developments and natural features in the Plan Area and immediately surrounding areas.*
- 3.1.6 To preserve and protect existing natural features.*
- 3.1.7 To provide an efficient and safe internal road network that yields a minimum of future road maintenance for the Municipality.*
- 3.1.8 To establish policies that will direct proposed land uses, open spaces, transportation patterns, servicing, development phasing, population densities, and wildlife impact, as well as any other matters that the Municipality deems necessary.*

BLK 5 PLAN 1048 LK

LOT 1

LOT 2

LOT 3

LOT 4

PLAN 981 1902

402 AVE W

PLAN 921 0483
BLK 1
(3.89ac)

LOT 8
(3.88ac ±)

FUTURE SERVICE
ROAD ROW

LOT 1
(4.33ac ±)

LOT 7
(3.52ac ±)

PHASE 1

LOT 2
(4.23ac ±)

LOT 6
(3.48ac ±)

LOT 3
(4.10ac ±)

LOT 5
(3.70ac ±)

LOT 4
(4.73ac ±)

PPD. SUBDIVISION

DRAW

BALANCE NE 1/4 8-20-29-4
(99.45ac ±)

LOT 4
(4.31ac)

LOT 5
(3.95ac)

LOT 3
(3.2ac)

BLOCK 2
PLAN 941 1502

LOT 2
(3.2ac)

LOT 1
(3.2ac)

HWY#783

16 ST E.

**Snow
AERIAL PHOTOGRAPH**

PTN N.E. 1/4 SEC 8, TWP 20, RGE 29, W4M

AREA STRUCTURE PLAN
Municipal District of Foothills No. 31

SCALE 1:4000

PHOTO DATE: AUG. 2001

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FIGURE 3

4.0 PLAN POLICIES

4.1 THE PLAN CONCEPT

The Snow subdivision is a planned country residential development that is proposed to be developed in two phases which are described as follows.

The Phase 1 development will consist of 4 country residential lots located in the eastern portion of the Plan Area. Each lot in this phase is planned to be between 4.1 and 8.43 acres (+/-) in size and all lots are clustered around an internal road as shown in Figure 4A. Lot 4 is oversized in Phase 1 to allow for the development of a residence in the western portion of the lot. Lot 4 will eventually be split into two lots in Phase 2.

The Phase 2 development will consist of 4 country residential lots located in the western portion of the proposed subdivision. Each lot in this phase is planned to be between 3.48 and 3.88 acres (+/-) in size and all lots are clustered around the internal road as shown in Figure 4B. In Phase 2, the 8.43 acre (+/-) Lot 4 from Phase 1 will be split to create 4.73 acre (+/-) Lot 4 and a 3.7 acre (+/-) Lot 5.

The remainder of the Plan Area (99.45 acres +/-) is proposed to remain unsubdivided. The draw which forms the west boundary of the Phase 2 development, is proposed to remain in its natural condition and remain in the title of the balance lands.

POLICIES:

- 4.1.1 *All developments within the Plan Area shall conform to all provincial and municipal requirements, specifically, the Municipal Government Act, the Subdivision and Development Regulation, the MD of Foothills Municipal Development Plan, the Foothills Land Use Bylaws, as well as any other relevant statutory provisions adopted by the Province or the Municipality.*
- 4.1.2 *All subdivision and development within the Plan Area shall be in conformity with the guidelines of Alberta Environment.*
- 4.1.3 *Uses on each new lot developed shall comply with the Restrictive Covenants included in Appendix 5 and these Restrictive Covenants shall be registered as encumbrances on the titles of each new lot.*

4.2 LAND USE COMPONENT

All developments within the Plan Area will be for country residential uses, except for the use of the balance lands which will be for agricultural uses, more specifically, for pastureland and crop production.

Once the Plan Area is fully developed to its planned potential, the population within the 8 lot country residential development is estimated at 23 people. This estimate assumes an average household size of 2.9 persons per household as indicated by the 2003 M.D. of Foothills census.

POLICIES:

- 4.2.1 Development of the country residential lots shall be in two phases.*
- 4.2.2 Following development of the 8 country residential lots within the Plan Area, the continued use of the balance lands for agricultural pursuits such as pastureland or hay and crop production, shall be allowed.*
- 4.2.3 Each of the country residential lots shall contain a minimum 3.0 acres (1.21 hectares).*
- 4.2.4 All future developments on the balance lands will require Council approval prior to implementation.*
- 4.2.5 Phase 2 development shall not begin until 50% of the lots in Phase 1 have been sold.*

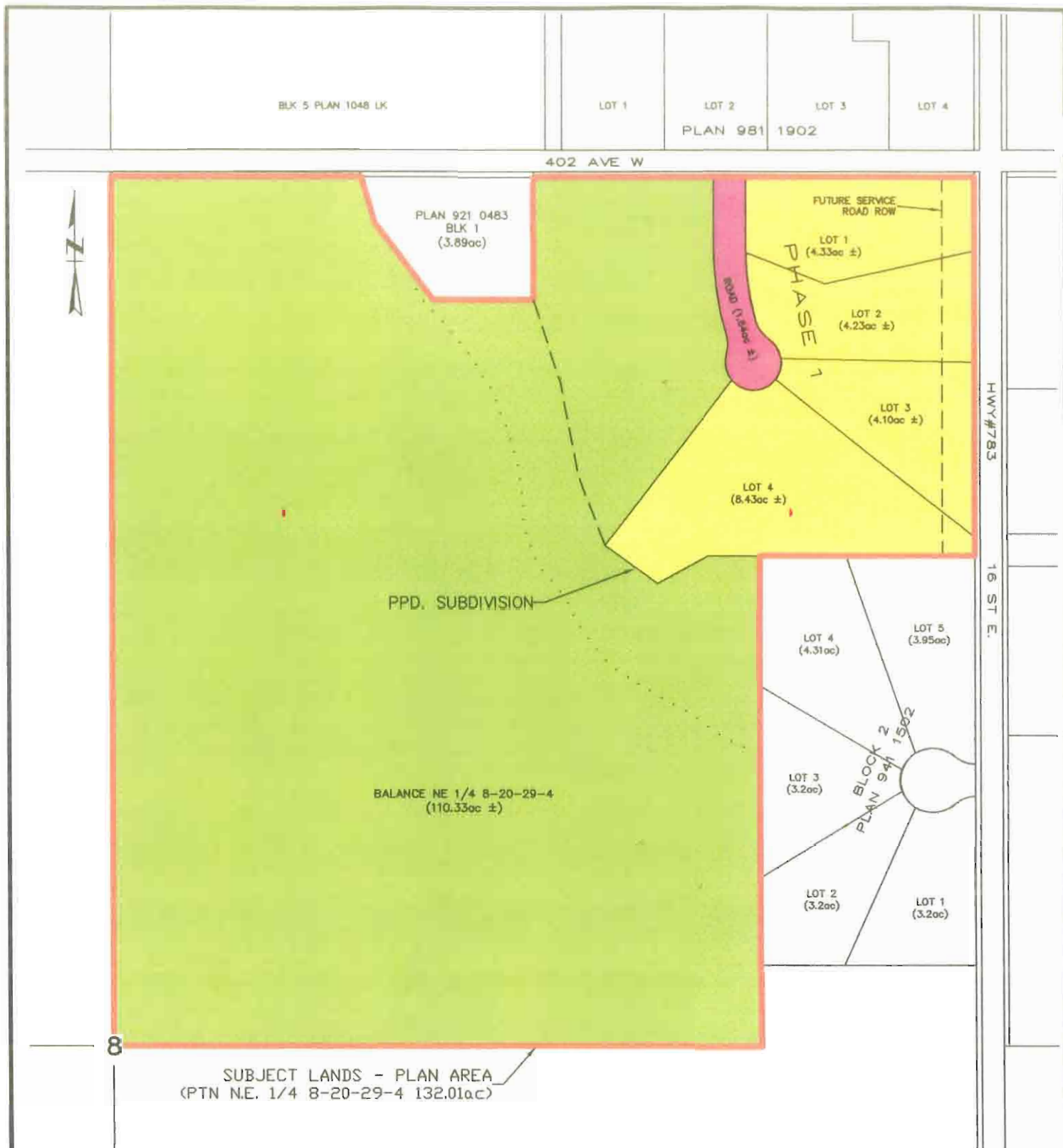
4.3 ENVIRONMENTAL CONSIDERATIONS and RESERVE LANDS

The topography of the Plan Area is gently rolling and northwest sloping with a 6 metre deep draw located along the west side of the proposed Phase 2 lot developments. This draw is dry for most of the year, except when carrying seasonal melt water or storm runoff water.

Municipal Reserves are outstanding for any lot developments within the Plan Area.

POLICIES:

- 4.3.1 The existing drainage patterns within the Plan Area shall be protected by way of a Restrictive Covenant to be registered on each of the proposed lots and the balance lands. Appendix 5 contains a copy of this proposed Restrictive Covenant.*
- 4.3.2 Municipal Reserves shall be satisfied by payment of cash in lieu of land dedication in accordance with the provisions of the Municipal Government Act.*



LEGEND

- PROPOSED COUNTRY RESIDENTIAL LOTS
- ROADS
- BALANCE

Snow PHASE 1 - SUBDIVISION PATTERNS

PTN N.E. 1/4 8-20-29-4

AREA STRUCTURE PLAN

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DRAWN: JDB	SCALE: 1: 5000
DESIGN: DAB	DATE: MARCH 2005
D04001	FIGURE 4A

4.4 DEVELOPMENT CONSTRAINTS

Policies of the Municipality require that all building sites be a minimum of one contiguous acre in size. These building sites must not contain a high water table or ground slopes of more than 15%. Figure 5 shows the layout of the proposed lots and roadways within the Plan Area. This plan shows quarter metre interval contours and delineates the areas which have ground slopes greater than 15%, areas that are wetlands and areas along the natural draws that are unsuitable for building sites. Figure 5 also shows the allowable building envelope on each lot as prescribed by the MD of Foothill's Land Use Bylaw. The proposed lots within the Plan Area have all been designed such that each lot has an acceptable building site as defined by the Municipality.

POLICIES:

- 4.4.1 *If deemed necessary by Council, a geotechnical report shall be prepared by a qualified professional, in areas where adverse topography or steep slopes are a factor in development on any lot within the Plan Area.*
- 4.4.2 *If deemed necessary by Council, a storm water management report shall be prepared by a qualified professional, in areas where overland drainage is a factor in development on any lot or roadway within the Plan Area. This is to be done in conjunction with the road engineering.*
- 4.4.3 *Each lot within the Plan Area shall contain a building site having a minimum area of one acre within which the ground slopes are less than 15% and a high groundwater table is not present.*
- 4.4.4 *A Restrictive Covenant shall be registered on the titles of each lot and the balance lands within the Plan Area indicating that the lot owners shall not interfere with any natural or manmade drainage courses approved by the Municipality, which cross their respective lots. A draft of such a Restrictive Covenant is included in Appendix 5.*

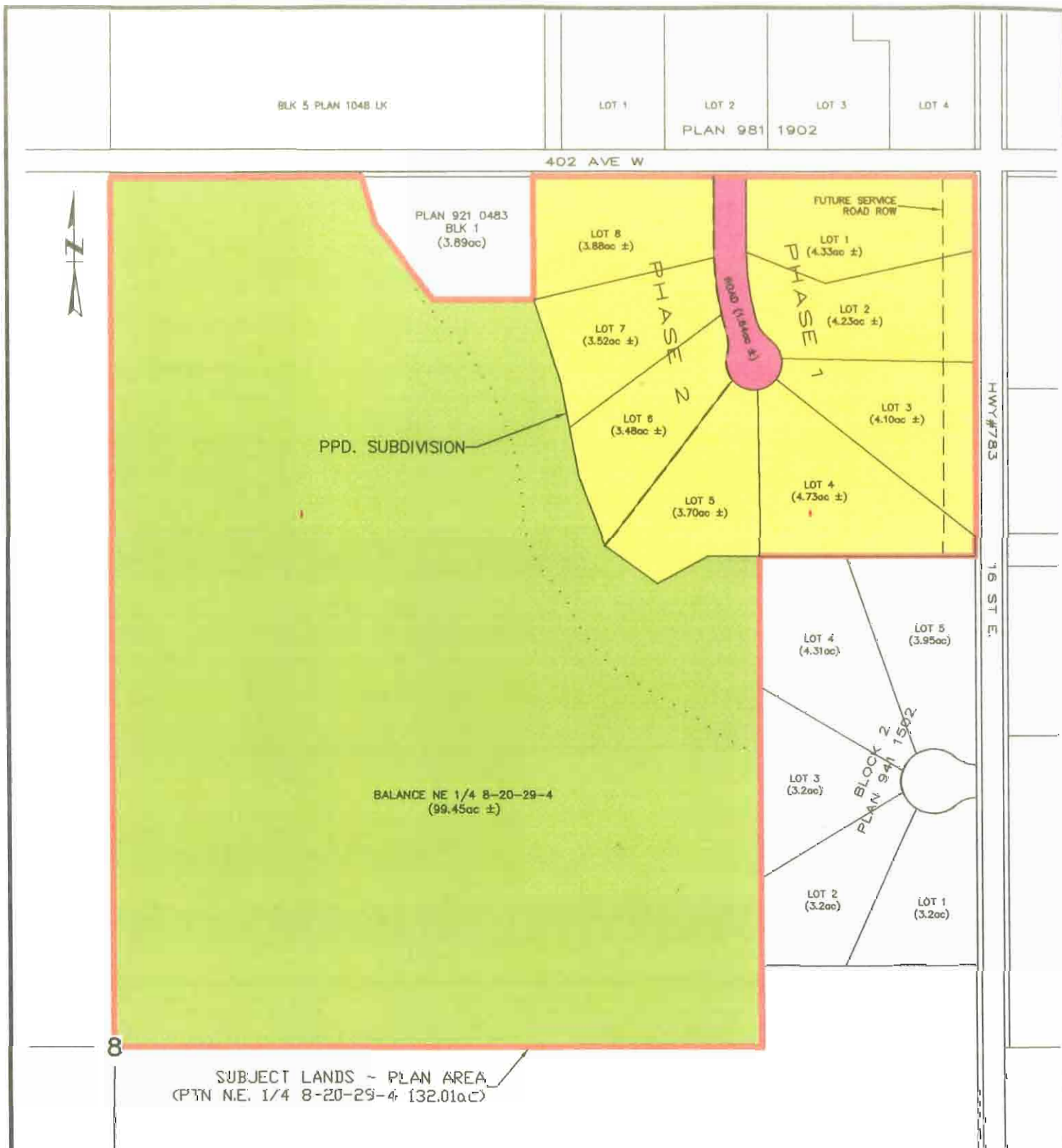
4.5 TRANSPORTATION

The Plan Area is bounded on the north by an oiled municipal road (402 Ave E) and on the east by paved Highway #783. Access to the 8 lot subdivision is planned via an internal roadway with access directly onto 402 Ave E as shown on Figure #4A and 4B. The approach onto 402 Ave E is a safe intersection with acceptable sight distances each way from the intersection. The existing approach onto Highway #783 near the southeast corner of the Plan Area is to be removed. The internal road will provide for safe and efficient movement of traffic as well as reliable access for emergency vehicles.

There were no traffic surveys conducted by the Municipality on 402 Ave E near the subject lands. Traffic surveys conducted by Alberta Transportation in 2002, indicated 2,250 vehicles per day on Highway #783, at a point just south of Highway #7. A copy of this traffic survey is included in Appendix 3. Assuming an average 10 trips per household per day, it is projected that the traffic on 402 Ave E will increase by 80 vehicles per day once all the proposed lots within the Plan Area have been developed. As well, the traffic on Highway #783 will increase by 80 vehicles per day as a result of the subject developments or an increase of 3.6%. It is anticipated that most of the traffic generated by the proposed subdivision will travel east on 402 Ave E to Highway #783, then northwards on Highway #783.

POLICIES:

- 4.5.1 All internal roads within the Plan Area shall be designed and constructed at the sole cost of the Developer in accordance with MD of Foothills Municipal Standards, generally as shown on the attached drawings.*
- 4.5.2 For Phase 1, the entire internal road and all approaches shall be constructed in accordance with MD of Foothills Municipal Standards for gravelled roads, with sufficient width to accommodate future pavement.*
- 4.5.3 For Phase 2, the entire internal road and all approaches shall be upgraded in accordance with MD of Foothills Municipal Standards for paved roads.*
- 4.5.4 All internal roads and approaches within the Plan Area shall be maintained throughout the maintenance period prescribed by the Municipality, at the sole cost of the Developer. Following issuance of the Final Acceptance Certificate by the Municipality for the internal roads and approaches, maintenance of all internal roadways and approaches shall be conducted at the sole cost and responsibility of the Municipality.*
- 4.5.5 All lots shall have direct access onto the internal roadway via approaches built to the Municipalities standards.*
- 4.5.6 The easterly 30 metres in perpendicular width throughout the Plan Area shall be dedicated as a service road right of way and taken by way of caveat. This proposed right of way is shown on Figure 5.*
- 4.5.7 All development setbacks shall be in accordance with the MD of Foothills and Alberta Transportation requirements as shown on Figure 5.*
- 4.5.8 All developments within 300 metres of the west boundary of Highway 783, or within 800 metres of the center of the intersection of Highway 783 and 402 Ave E, will require a permit from Alberta Transportation.*



LEGEND

- PROPOSED COUNTRY RESIDENTIAL LOTS
- ROADS AND WALKWAYS
- BALANCE

Snow PHASE 2 - SUBDIVISION PATTERNS

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AREA STRUCTURE PLAN

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SCALE: 1:5000

DESIGN: DAB

DATE: MARCH 2005

DO4001

FIGURE: 4B

- 4.5.9 *Written verification shall be provided, indicating that the existing direct access onto Highway #783 has been removed to the satisfaction of Alberta Transportation; this verification shall be provided prior to endorsement of the plan of subdivision by the Municipality.*
- 4.5.10 *If deemed necessary by Council, the Developer shall enter into a Development Agreement with the Municipality with respect to a contribution for upgrading and maintenance of external roadways.*
- 4.5.11 *If required by Alberta Transportation or the Municipality, the Developer shall conduct traffic studies or a Traffic Impact Assessment with respect to access onto Highway 783, all at the sole cost of the Developer.*

4.6 SERVICING

The Developer proposes to service the country residential developments within the Plan Area by way of conventional servicing techniques.

Water Service:

The Developer proposes to supply water to each lot by way of an individual well drilled on each lot. New water wells have been drilled on Lots 1, 2 and 5, at the locations shown on Figure 6. Each of these wells was pump tested for 12 hours and each well was found to have a supply of water sufficient for a country residential development. The hydrologist's report summarizing the testing of the 3 new wells and a review of water wells in the area is included in Appendix 4. The key points contained in this report are as follows:

- *"On an individual basis, all three flow tests indicate that the respective wells are capable of supporting a domestic allocation of 1250 m³/year or 3.42 m³/day." These comments were made relative to the testing of the new wells drilled on Lots 1, 2 and 5.*
- *"Theoretically, there exists sufficient groundwater reserves to serve the existing and proposed parcels of land in the NE-08 quarter section based on existing information."*
- *"It is strongly recommended that a cistern storage be utilized in association with all low yield wells of less than 6.5 m³/day". As the production flow from the wells on Lots 1, 2 and 5 was relatively low, the developer is committed to supplying a 500 gallon plastic water tank for each lot at the time of development. It is also recommended that a one gallon per minute flow regulator be placed in the supply line for each of the wells.*

Sewage Disposal:

Sewage disposal on the proposed lots is planned by way of conventional septic fields or treatment mounds, all in accordance with the provisions as set out in Alberta Environment's guidelines and the publication entitled "*Alberta Private Sewage Systems Standard of Practice 1999 Handbook*". Field percolation and near surface water table testing was not conducted on the Plan Area lands as these lands are well drained uplands and appear to be suitable to accept sewage by way of conventional septic fields or treatment mounds.

Storm Water Management:

Storm water drainage is currently handled by way of naturally occurring surface drainage courses passing through the Plan Area, generally draining from southeast to northwest. These drainage courses are dry for most of the year, except when carrying seasonal melt water or in extreme cases, storm runoff water. These drainage courses will generally be left intact. Storm water from each of the lots will either be channelled to the road ditches or will continue to flow toward the existing drainage course west of the Plan Area. Where the roads cross these drainage courses, appropriate sized culverts will be utilized to pass the storm water beneath the roads. All storm water drainage after development of the Plan Area will continue to be handled by way of surface drainage.

Solid Waste:

Solid waste from the Plan Area development will be hauled by the individual landowners or a waste disposal contractor, and disposed at the nearest approved waste transfer or landfill site.

POLICIES:

- 4.6.1 Proof of an adequate water supply shall be provided to the Municipality for each country residential lot within the Plan Area, at the sole cost of the Developer. This shall include a water well drilled on each lot. Pump testing of each well, plus well interference and yield calculations, shall all be done by the Developer in accordance with the Water Act, as amended. A qualified professional shall prepare a report at the cost of the Developer, to confirm that an adequate water supply is available on each lot.*
- 4.6.2 At the time of development on each lot, the Developer shall, at its cost, provide each lot with a 500 gallon plastic water storage tank and a one gallon per minute flow restrictor, for installation in the water supply system on each lot.*

- 4.6.3 *If required by the Municipality, the Developer shall conduct field percolation testing and near surface water table testing, all in accordance with Alberta Environment's guidelines and the guidelines contained in the publication entitled "Alberta Private Sewage Systems Standard of Practice 1999 Handbook", in order to properly design the sewage disposal system for each lot. A qualified professional shall prepare a report at the cost of the Developer, to confirm that the soils on each lot are acceptable for installation of a sewage disposal system in accordance with Alberta Environment's guidelines and the guidelines contained in the publication entitled "Alberta Private Sewage Systems Standard of Practice 1999 Handbook".*
- 4.6.4 *Septic pump-out tanks will not be permitted within the Plan Area due to the road damage caused by tank trucks.*
- 4.6.5 *Lagoons and open discharge from septic tanks shall not be permitted in the Plan Area.*

4.7 UTILITIES

FortisAlberta Inc. currently supplies power throughout the Municipality by way of an overhead power line grid. The Developer proposes to obtain power from these existing facilities and distribute underground power to the property line of each new country residential lot developed within the Plan Area.

ATCO Gas and Pipelines Ltd. currently supplies natural gas throughout that portion of the Municipality surrounding the Subject Quarter, by way of a network of underground service pipelines. The Developer proposes to obtain natural gas from these existing lines and distribute underground gas service to the property line of each new country residential lot developed within the Plan Area.

Telus Communications Inc. currently supplies telephone service throughout the Municipality by way of an underground phone line grid. The Developer proposes to distribute an adequate number of phone lines to the property line of each new country residential lot developed within the Plan Area.

The Developer reserves the right to select other service providers.

Figure 6 shows the location of the existing services within the Plan Area.

POLICIES:

- 4.7.1 *The Developer shall at its sole expense, design, construct and install underground power, natural gas and phone service lines to the property line of each new country residential lot developed in the Plan Area.*

- 4.7.2 The Developer shall register easements on each lot within the Plan Area to the satisfaction of all utility companies.*

4.8 PROTECTIVE SERVICES

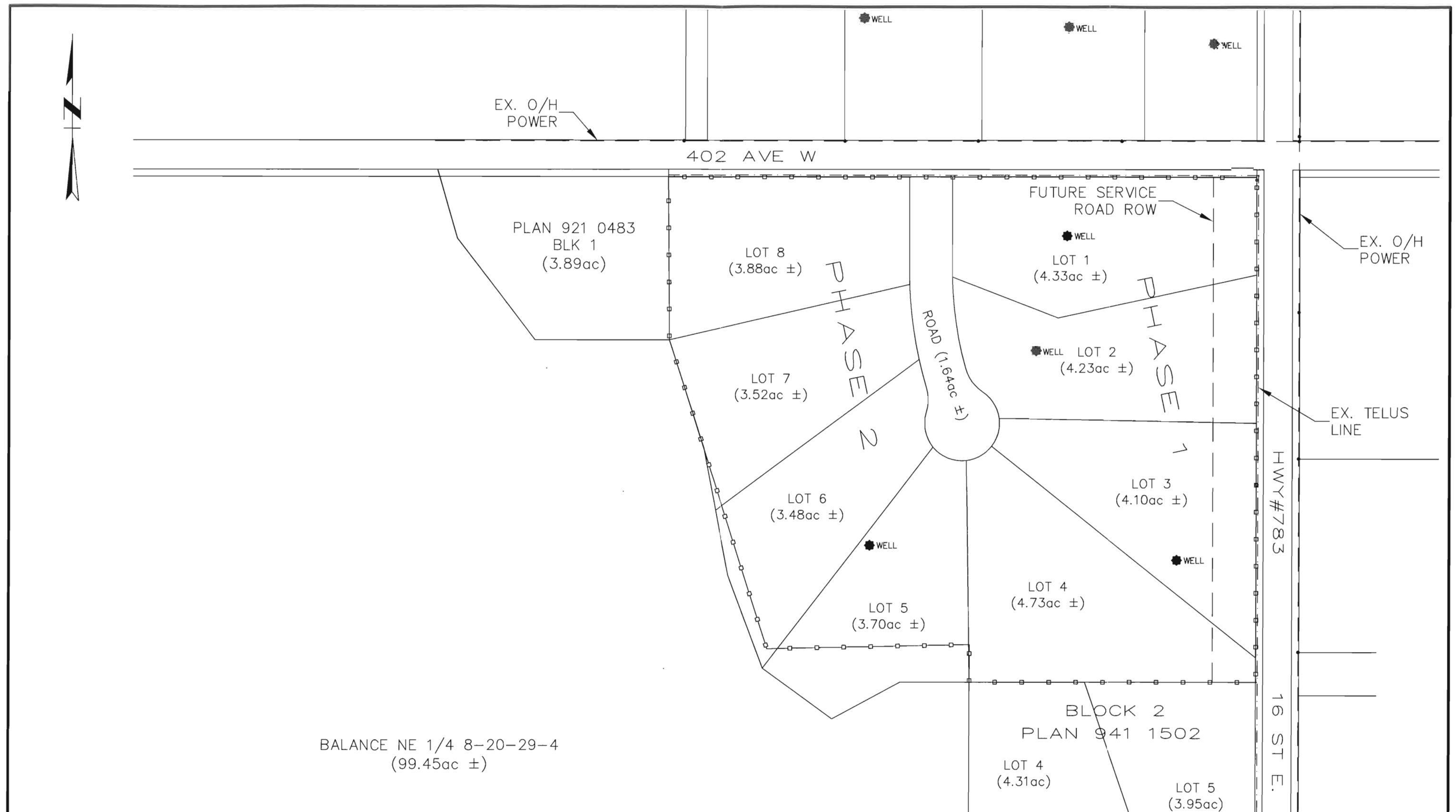
Police service to the Plan Area is provided by the Royal Canadian Mounted Police and is available through the RCMP's Okotoks detachment. The MD of Foothills Special Constables provide additional protective services.

Fire fighting service is available from the Town of Okotoks Fire Department under contract to the MD of Foothills. This provides 24-hour service to the subject area.

Ambulance service is available from the Foothills Emergency Medical Services in Okotoks with backup service from the Okotoks FREMS station.

POLICIES:

- 4.8.1 The design of the subdivision shall ensure that emergency vehicles have all weather developed public access to each lot created in the Plan Area.*



LEGEND

FENCE



EXISTING WATER WELL



AREA STRUCTURE PLAN

Municipal District of Foothills No. 31

SCALE: 1:2500



Snow

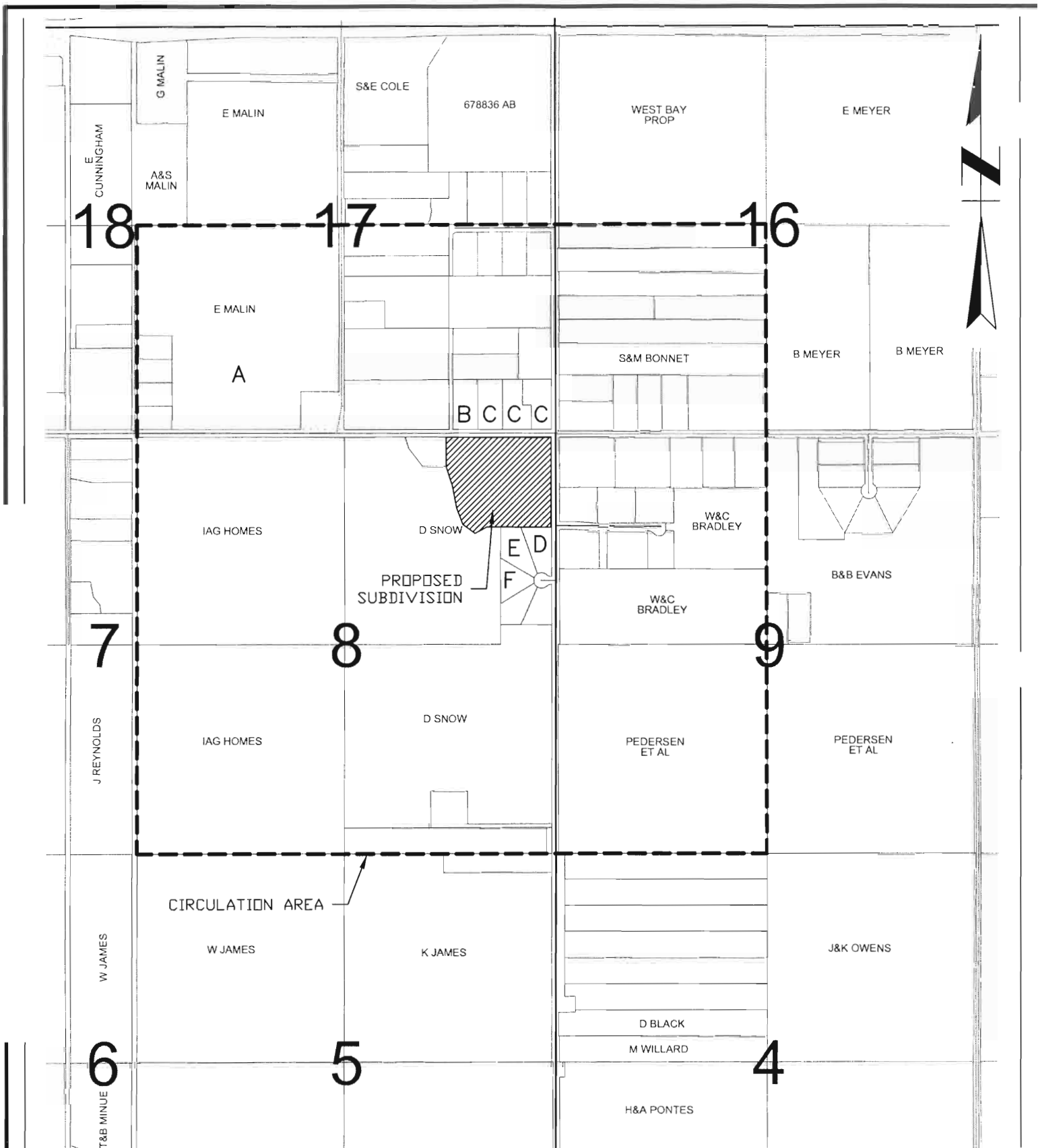
EXISTING SERVICES AND WELL LOCATIONS

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FIGURE 6



LEGEND

A LOCATION OF RESPONDANT

Snow LOCATION OF RESPONDANTS

PTN N.E. 1/4 8-20-29-4

AREA STRUCTURE PLAN

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DRAWN: JDB
DESIGN: DAB
D04001

SCALE: 1:20,000
DATE: MARCH 2005
FIGURE 7

5.0 PUBLIC CONSULTATION

A program of public consultation was undertaken to inform the neighbours surrounding the Plan Area, of the proposed land use changes and subdivision patterns contemplated within the Plan Area. This public consultation program consisted of the following:

- A mail-out was made to all neighbours within one half mile of the Subject Quarter Section, informing each as to the subdivision proposal, by way of a written description and tentative plan. Comments were received from 6 of the 57 landowners circulated. These comments are summarized below and the location of the respondents is shown on the plan attached as Figure 7:
 - A. **SW 17-20-29-4:** Totally supportive.
 - B. **Lot 1 Plan 981 1902:** most aspects of the subdivision were listed as “good” except the respondent was opposed to the internal road having access to 402 Ave E;
 - C. **Lot 2, 3, 4 Plan 981 1902:** opposed to the internal road having access to 402 Ave E; would like their 3 wells monitored during further drilling or testing; would like to see less lots. As a result of these concerns, the three wells within the Plan Area were pumped a second time for 12 hours each while monitoring of the wells on Lots 2 and 4; the well on Lot 3 was not accessible and therefore was not monitored. There was negligible drawdown in the wells on Lots 2 and 4 during pumping in the Plan Area.
 - D. **Lot 5 Blk 2 Plan 9411502:** all aspects of the subdivision were listed as “good”; would like to see a sports field in the MR lot and a place to walk; no comments regarding water;
 - E. **Lot 4 Blk 2 Plan 9411502:** concerned with supply of water in the area;
 - F. **Lot 3 Blk 2 Plan 9411502:** concerned with supply of water in the area;
- Review of comments and concerns from neighbours to the Plan Area;
- Personal contact with some of the immediate neighbours to the Plan Area;
- Submit draft copy of ASP to the MD of Foothills Planning Staff and review of comments from the Planning Staff.
- Incorporate changes to the ASP as suggested by Planning Staff and neighbours.

6.0 PLAN IMPLEMENTATION

6.1 PLAN IMPLEMENTATION

The Snow ASP is an intermediate step between the Municipal Development Plan and the Land Use Bylaws as illustrated on the attached Figure 8. The MD of Foothills Municipal Development Plan (MDP) establishes general planning policies which provide guidance for the subdivision and development of lands within the Municipality as a whole. The Snow ASP supports the MDP by adding another layer of detail to the guidelines for subdivision and development, specifically within the Plan Area. The Snow ASP does not supersede, repeal, replace or otherwise diminish any other statutory plan in effect for the Plan Area.

POLICIES:

6.1.1 The policies contained in The Snow Area Structure Plan shall be reviewed and implemented by the Municipal District of Foothills Council at their discretion.

6.2 PLAN REVIEW AND AMENDMENT

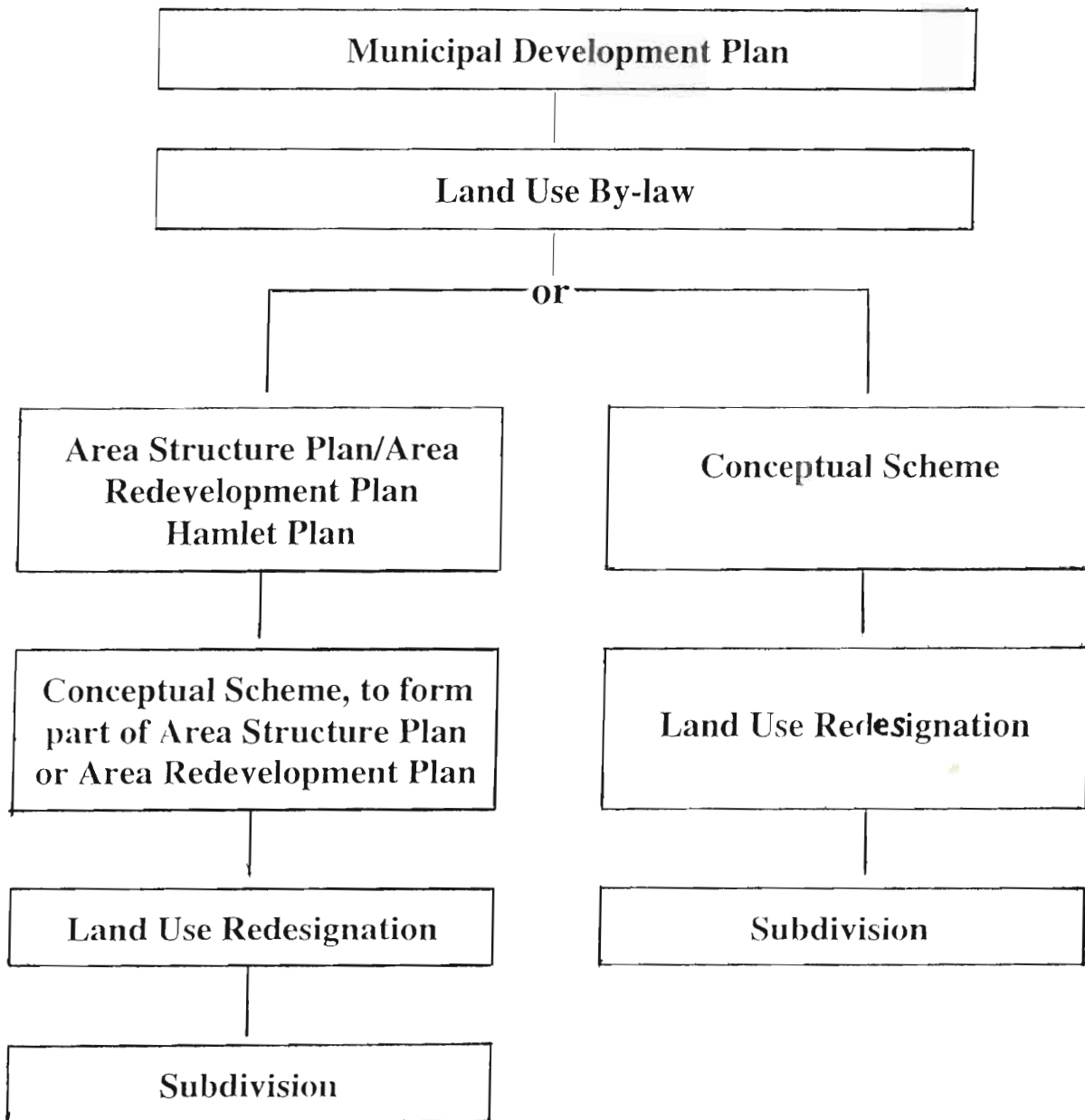
Following approval by Council, the Snow ASP will become a Bylaw of the Municipal District of Foothills. This ASP is prepared to address long-term future land use and development within the Plan Area. A formal process as outlined in the Municipal Government Act, is required to amend this ASP.

POLICIES:

6.2.1 Any application for subdivision and development within the Plan Area that is contrary to the land use strategy and policies contained in this ASP, will require a formal application to the Municipality for an amendment of the Snow Area Structure Plan.



Snow		
PTN N.E. 1/4 SEC 8, TWP 20, RGE 29, W4M		
AREA STRUCTURE PLAN Municipal District of Foothills No. 31		
SCALE 1:80,000	LOCATION MAP	
D.A.BADKE ENTERPRISES LTD. (403)271-8708	MARCH 2005	FIGURE 1



HIERARCHY OF PLANNING PROCESS

Figure 8

APPENDIX

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CERTIFICATE OF TITLE



ALBERTA REGISTRIES
LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0029 372 711 4;29;20;8;NE 021 221 921 +2

LEGAL DESCRIPTION

MERIDIAN 4 RANGE 29 TOWNSHIP 20
SECTION 8
QUARTER NORTH EAST
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

PLAN	NUMBER	HECTARES	(ACRES)	MORE OR LESS
ROAD	1603LK	0.409	1.01	
SUBDIVISION	9210483	1.57	3.89	
SUBDIVISION	9411502	9.04	22.3	
ROAD	0212184	0.321	0.79	

EXCEPTING THEREOUT ALL MINES AND MINERALS
AND THE RIGHT TO WORK THE SAME

ESTATE: FEE SIMPLE

MUNICIPALITY: MUNICIPAL DISTRICT OF FOOTHILLS NO. 31

REFERENCE NUMBER: 001 322 672

REGISTERED OWNER(S)
REGISTRATION DATE(DMY) DOCUMENT TYPE VALUE CONSIDERATION

021 221 921 26/06/2002 ROAD PLAN

OWNERS

DEBRA ANNE SNOW
OF BOX 28, SITE 6, RR #1
OKOTOKS
ALBERTA T0L 1T0

(CONTINUED)

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

021 221 921 +2

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS

941 142 954 02/06/1994 UTILITY RIGHT OF WAY
GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY
LIMITED.

941 190 163 20/07/1994 CAVEAT
RE : AGREEMENT UNDER PLANNING ACT
CAVEATOR - THE MUNICIPAL DISTRICT OF FOOTHILLS NO.
31.
BOX 5605
HIGH RIVER
ALBERTA T1V1M7

001 158 615 13/06/2000 CAVEAT
RE : PURCHASER'S LIEN
CAVEATOR - THE MUNICIPAL DISTRICT OF FOOTHILLS NO.
31.
BOX 5605
HIGH RIVER
ALBERTA T1V1M7

TOTAL INSTRUMENTS: 003

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE
REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED
HEREIN THIS 18 DAY OF MARCH, 2005 AT 05:34 P.M.

ORDER NUMBER:2351618

CUSTOMER FILE NUMBER: 799



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE
SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS
SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION, APPRAISAL OR
OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS PART OF THE ORIGINAL
PURCHASER APPLYING PROFESSIONAL, CONSULTING OR TECHNICAL EXPERTISE FOR

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AGROLOGIST'S REPORT



July 28, 2003

D. A. BADKE ENTERPRISES LTD.

160 Park Estates Place S.E.

Calgary, Alberta

T2J 3W5

Attention: Mr. Doug Badke

Dear Doug:

Re: Agricultural Capability Assessment for Arability on a Portion of the NE1/4 08-020-29 W4M - Snow Property (Matrix 3291-402)

On July 22, 2003, Matrix Solutions Inc. (Matrix) conducted an agricultural capability assessment on a portion of land at the above captioned location. A parcel of approximately 138 acres was assessed in the quarter section. The subject property is located south of Okotoks in the Municipal District of Foothills, No. 31. It is situated 1 mile south of the junction of primary Highways 7 and 2A. The parcel is bound by 16 Street E (SR 783) to the east and 402 Avenue E to the north, both of which are paved. The assessment was conducted by Mr. Blair Nicholson, Senior Agrologist of Matrix. This letter summarizes the findings of the data collected during the site evaluation.

The Canada Land Inventory (CLI) Soil Capability for agriculture in Alberta system of rating was used to classify the subject property. The primary objective of this system is to provide the facts on which to base decisions concerning the utilization of land resources. The field inspection consisted of walking over the subject property, describing soil profiles according to the Canadian system of classification, noting landforms, taking slope readings, measuring slope lengths, taking photographs and, in general, looking for any of the fourteen limitations recognized in the CLI rating system.

At the time of inspection, the subject property was in grass production on both native and improved rangeland. The land is presently used for cattle grazing. The perimeter of the subject property is fenced except for the south boundary. There are no buildings or trees on the subject property. Cross fences are in place to separate grazing pastures.

The property is characterized by the irregular topography of a glaciated landscape. The northeast portion of the subject property is separated from the remainder of the parcel by a glacial meltwater channel, which cuts diagonal through the quarter section. It connects a 5 lot subdivision along the east boundary and a single acreage along the north boundary of the quarter section (Figure 1). The till plain surface expression is one of ridges and knolls on an inclined landform. East and west of the central drainage channel, a channelled landscape which carries water downslope has developed. The stronger upland topography is found west of the channel. The more broken

D. A. Badke Enterprises Ltd.

Mr. Doug Badke

July 28, 2003

Page 2

upland topography is located east of the channel. In this east unit, farming practices have resulted in erosion damage. The topsoil is now thin, low in organic matter, grayish in colour and calcareous to the surface due to subsoil mixing. The erosion damage is so severe that the profile B horizon is completely absent throughout the unit.

The site specific CLI classification for the subject property is presented in Figure 1. Four separate class ratings were determined for the subject property. The limitations recognized were due to unfavourable landscape characteristics, namely erosion damage (E) and adverse topography (T). The adverse topography limitation applies to areas where topography, both steepness and pattern of slopes, is considered to be a limitation to agricultural use. Assessment of the limitation includes evaluation of the hazards imparted to cultivation by the degree of slope as well as those due to irregularity of field patterns and lack of soil uniformity as a result of complex landform patterns. Erosion damage is a landscape limitation which is applied in evaluating soils where actual damage by erosion has resulted in a limitation to agricultural use.

In summary, the CLI classification for the 138 acres of the NE1/4 08-020-29 W4M investigated is as follows, with the boundaries as shown on Figure 1. The rating symbol shows class placement and limitation.

12 acres - 2T
78 acres - 4T
40 acres - 5E
8 acres - 6T

A Class 2 rating indicates moderate limitations to arable agriculture. The soils can be managed and cropped with little difficulty. Class 4 lands have severe limitations that restrict the range of crops. Class 5 lands have very severe limitations for sustained arable agriculture. Annual cultivation using common cropping practices is not recommended. A Class 6 rating indicates a severe limitation to crop production such that improvement practises are not feasible. Class 6 soils are capable only of producing perennial forage crops.

I certify that I inspected the NE1/4 08-020-29 W4M on July 22, 2003. The classification of arability of the subject property was done using one system of classification, the Canada Land Inventory Soil Capability for Agriculture in Alberta. I further certify that I have no undisclosed interest, either actual or contemplated, in the property being inspected, nor is the fee contingent on the conclusions reached.

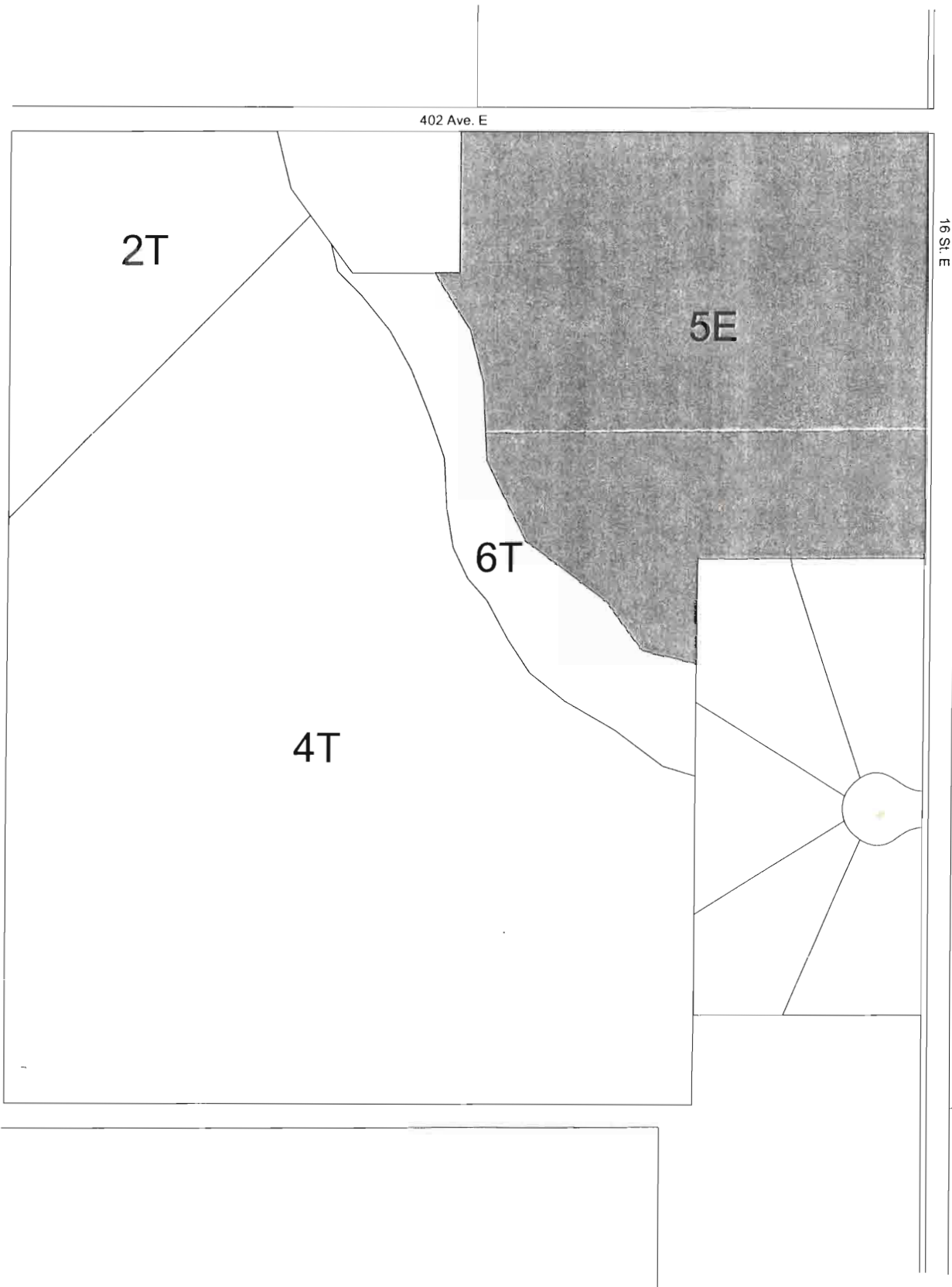
Yours truly,

MATRIX SOLUTIONS INC.



Blair Nicholson, P.Ag.
Senior Agrologist





DATE: JULY 2003			CLIENT: D. A. BADKE ENTERPRISES LTD.	
JOB NO: 3291			PROJECT: NE1/4 08-020-29 W4M	
CAD FILE: 3291-site-02.dwg			SITE SPECIFIC CLI RATING OF THE SUBJECT PROPERTY	
DESIGN: BN	DRAWN: HW	CHECK: ##		
			FIGURE: 1	

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TRAFFIC SURVEY

ALBERTA HIGHWAYS 1 TO 986
TRAFFIC VOLUME HISTORY 1993 - 2002

Alberta Transportation
Program Management Branch
Highway Asset Management Section

Produced: 14-Feb-2003 By CornerStone Solutions Inc.

Hwy	CS	TCS	Muni	From	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
					AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	ASDT
778	2	8	Ledc	N OF 616 E OF ITASKA NJ	750				960	1010	1090	1060	1100	1120
778	2	8	Ledc	9.6 KM S OF 39 & 778 THORSBY	950			1050	1130	1190	1180	1160	1220	1260
778	2	8	Ledc	S OF GLEN PARK RD 34-48-1-5000000000	1190	1000	1030		1350	1360	1350	1350	1410	1560
778	2	8	Ledc	N OF GLEN PARK RD 34-48-1-5000000000	1420				1600	1420	1420	1410	1490	1670
778	2	12	Ledc	E OF 39 N OF THORSBY	1680		1200		1280	1380	1670	1650	1710	1280
779	2	4	Park	N OF 627 S OF STONY PLAIN	2090				2300	2400	1980	2280	2390	2180
779	2	4	Park	S OF 628 S OF STONY PLAIN						2310	2300	2410	2540	2630
779	2	4	Park	N OF 628 S OF STONY PLAIN						4670	4640	4840	5080	2780
779	2	6	Park	S OF 16A AT STONY PLAIN	13010		12960	13080	14330	14650	12760	12370	12820	12990
779	2	8	Park	N OF 16A AT STONY PLAIN	5490		5470	5510	5740	5860	6550	6360	6600	13760
779	2	8	Park	S OF LOCAL RD 1-53-28-50000000805	5490					4140	6000	6180	6680	7750
779	2	8	Park	N OF LOCAL RD 1-53-28-50000000805	5190				4100	3940	5840	6010	6560	7820
779	2	8	Park	S OF LOCAL RD 1-53-1-5000000000	3920				4110	3000	5840	6020	6950	7680
779	2	8	Park	N OF LOCAL RD 1-53-1-5000000000	3930				4550	3020	5870	6060	6500	8130
779	2	8	Park	S OF SEED CLEANING PL ACC 12-53-1-5000001000					4500	4450	5870	6050	6570	7610
779	2	8	Park	S OF SEED CLEANING PL ACC 12-53-1-5000001000					5010	4400	5800	5980	6430	7690
779	2	8	Park	S OF 16 N OF STONY PLAIN	3930		4640	4830	5010	5390	6040	6580	7090	7530
779	2	12	Park	N OF 16 N OF STONY PLAIN	1900		2720	2820	2920	3140	3810	4180	4600	8470
779	2	12	Park	S OF HWY 16 N SIDE SERV RD 13-53-28-403201037									4730	5490
779	2	12	Park	N OF HWY 16 N SIDE SERV RD 13-53-28-403201037									4730	5490
779	2	12	Park	S OF 633 N OF STONY PLAIN	590				910	930	1300	1400	1910	4860
779	2	16	Stur	N OF 633 N OF STONY PLAIN	490				750	770	1210	1300	1760	2230
779	2	16	Stur	S OF 37 NW OF CALATHO	260		260	590	650	650	650	670	1010	2060
780	2	4	Weta	N OF 13A NF OF MAWE-O BEACH	510		560	560	600	620	540	550	570	1190
780	2	4	Weta	S OF 516 W OF MILLET	540				550	590	440	460	470	680
781	2	4	Rdur	N OF 54 SE OF MARKERVILLE	1240		1130	990	1050	1090	1130	1150	1350	530
781	2	4	Rdur	S OF 592 NW OF PENHOLD	1130				1010	1100	1130	1150	1350	1530
781	2	8	Rdur	N OF 592 NW OF PENHOLD	1050				940	1110	1430	1620	1770	2000
781	2	8	Rdur	S OF 596 S OF SYLVAN LAKE	1490				1340	1420	1560	1630	1600	1810
781	2	12	Rdur	N OF 596 S OF SYLVAN LAKE	1470				1320	1400	1570	1640	1630	1870
781	2	12	Rdur	S OF 11 S OF SYLVAN LAKE	1580		1380	1400	1460	1570	1850	1990	1990	1880
781	2	16	Rdur	N OF 11 S OF SYLVAN LAKE	3630		3360	3400	3760	3990	4520	4700	4690	2260
781	2	16	Rdur	S OF 11A SYLVAN LAKE						4580	4710	4770	5010	5310
782	2	4	Rkyv	N OF LOCAL RD 33-25-1-5000000000	840				780	960	600	640	660	5820
782	2	4	Rkyv	S OF 566 W OF BALZAC	990				920	990	610	630	650	1540
783	2	4	Fthl	N OF 543 W OF HIGH RIVER	1020				1140	1220	1280	1280	1170	710
783	2	4	Fthl	S OF 2A & 7 S OF OKOTOKS	1720		1930	2110	2140	2370	2460	2310	2240	1300
785	2	4	71C	E OF 6 AT PINCHER CREEK			2370	2370	2440	2420	2340	2690	2690	2460
785	2	8	PrCr	S OF 3 NE OF PINCHER CREEK	720		730	750	850	900	910	890	890	3350
785	2	8	PrCr	N OF 3 NE OF PINCHER CREEK	370		380	380	440	450	390	390	390	910
785	2	8	PrCr	W OF 510 NW OF BROCKET	410				490	560	330	330	330	480

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HYDROLOGIST'S REPORT

#03-172

**Groundwater Feasibility Assessment
Snow property: Area Structure Plan
NE-08-20-29-W4M**

Submitted to:

**DA Badke Enterprises and
Deb Snow**

Prepared by:

Groundwater Exploration & Research Ltd
June 2004



June 30, 2004
File No: 03-172

DA Badke Enterprises Ltd
160 Park Estates Place SE
Calgary, AB.
T2J 3W5

Attention: Doug Badke

RE: Snow property: NE-08-20-29-W4M
Area Structure Plan - Groundwater Feasibility Assessment

Enclosed find our report which addresses a groundwater feasibility assessment in the immediate area of the Snow property at NE-08-20-29-W4M in the Municipal District of Foothills.

Background Information

An 8-lot subdivision is being proposed for a +/-12.59 hectare parcel [31.10 acres] in the northeast corner of the NE-08 quarter section. There are currently 8 lots in the NE-08 quarter section; 7 of those lots forming a subdivision in the southeast corner of the NE-08 quarter section. If subdivision is approved, the maximum number of parcels in the quarter section would be 15 lots.

In accordance with the Municipal District of Foothills regulations, there is a requirement to prepare an Area Structure Plan for subdivisions with 8 or more parcels. This report addresses the feasibility of finding sufficient volumes of groundwater to sustain an additional 8 lots plus a municipal reserve in NE-08-20-29-W4M.

In accordance with the Water Act, a household is allowed to withdraw up to 1250 m³/year without requiring a license to divert water. Based on the maximum allocation of 1250 m³/year or 3.42 m³/day, the total water requirement for the proposed 8-lot subdivision is 27.4 m³/day [4.2 Cgpm] using a scheme of individual wells per lot. For a licenced communal well, the water requirement is 1.818 m³/day per lot [400 gpd/lot] or a total of 14.5 m³/day [2.2 Cgpm].

This report addresses an assessment of the groundwater feasibility of finding sufficient volumes of groundwater to sustain the proposed 8-lot subdivision. The assessment, outlined in the Alberta Environment document: Draft Environmental Guidelines for the Review of Subdivisions in Alberta, September 1998, should evaluate the following five criteria:

- [1] the potential of one or more aquifers to provide a sufficient supply of groundwater to meet the needs of any existing development and proposed unserved residential subdivision within a quarter section during peak demand periods and over the long term;

- [2] the extent to which each aquifer is continuous beneath the proposed development area;
- [3] the potability of each aquifer's water in its current state considering its natural quality and possible existing anthropogenic contamination;
- [4] the feasibility of treating groundwater if needed;
- [5] the susceptibility of each aquifer to potential contamination (particularly from private sewage disposal systems).

Criteria [3] and [4] are more adequately addressed once a well has been drilled and a flow test completed.

The guidelines also state: Groundwater resources vary across the province and even local differences can be extreme. The threat of groundwater shortages and contamination grows with the density of wells and their collective demand on the local groundwater resources."

Meneley [1963] states: "The safe yield of an aquifer over a long period of time is primarily dependent upon the physical dimensions of the aquifer and the average natural recharge to the aquifer." Unfortunately, the aquifer boundary conditions and average natural recharge are seldom known.

Geomorphic/Geologic Setting

The land in the area of the NE-08 quarter section occupies the northwest sloping face of an upland area. An unnamed drainage channel is found through the north-central portion of the quarter section. The elevation change across the NE-08 quarter section is up to 38 meters [High River 82 I/12; 1:50,000 topographic map sheet] based on contour interval spacing; and up to 84 meters within a block of nine quarter sections.

The bedrock in the area [Hamilton, Price & Langenberg, 1999: Geologic Map of Alberta; 1:1,000,000] is mapped as the Porcupine Hills Formation. The Porcupine Hills Formation consists of pale grey, thick-bedded, cherty, calcareous sandstone; and pale grey calcareous mudstone.

Ozoray and Lytviak [1974: Hydrogeology of the Gleichen area, Alberta; Alberta Research Council, Report 74-9] maps the area as having a groundwater potential of 33 to 164 m³/day [5 to 25 Cgpm]. The property lies along the northwest flank of a groundwater mound [elevation contour 3600 ft] with a local flow component to the northwest. The total annual precipitation in the area is 38 to 51 cm.

Pertinent Regulations

Country residential subdivision and groundwater supply is regulated by Section 23(3) of the Water Act and stated as follows:

"If, after this Act comes into force, a subdivision of land of a type or class of subdivision specified in the regulations is approved under the Municipal Government Act, a person residing within that subdivision on a parcel of land that adjoins or is above a source of water described in section 21 has the right to commence and continue the diversion of water under section 21 only if

- (a) a report certified by a professional engineer, professional geologist or professional geophysicist, as defined in the Engineering, Geological and Geophysical Professions Act, was submitted to the subdivision authority as part of the application for the subdivision under the Municipal Government Act, and the report states that the diversion of 1250 cubic meters of water per year for household purposes under section 21 for each of the households within the subdivision will not interfere with any household users, licensees or traditional agriculture users who exist when the subdivision is approved, and
- (b) the diversion of water for each of the households within the subdivision under section 21 is not inconsistent with an applicable approved water management plan.

Water Regulation [AR 205/98]

- 9(1) Subject to subsection (2), a type of subdivision of land for the purposes of section 23(3) of the Act is a subdivision that results in 6 or more parcels in a quarter section or in a river lot.

In essence, Section 23(3) of the Water Act asks three basic questions:

- [a] Is there sufficient water to satisfy the maximum requirement of 1250 m³/year for each lot in the proposed subdivision?
- [b] Will the allocated volume of water per lot result in a significant adverse effect on neighbouring wells and licensed users existing at the time of subdivision application?
- [c] Is the diversion of groundwater consistent with an approved water management plan?

Groundwater Well Data

A survey of groundwater well data in NE-08 and the surrounding 8 quarter sections of land was undertaken utilizing available information from Alberta Environmental Protection's groundwater database file. A total of 62 well records were available for review, including 16 well records from the NE-08 quarter section. It is noted that a significant number of abandoned holes have been drilled in the area, including 8 in the NE-08 quarter section for the former land owner, Utley; and 8 in the NW-09 quarter section. A summary of available water well information is summarized in Table 1, appended to this report.

- [1] Well depths vary significantly from 11.3 to 109.8 meters over the nine quarter sections. Within the NE-08 quarter, the well depths vary from 21.3 to 109.8 meters. The variability in well depth exceeds the topographic relief across the site, indicating that the water-bearing zones are not continuous across the immediate area. The geometric mean well depth is 30.9 meters which gives an indication of the anticipated well depth for future well drilling on proposed lots.
- [2] Preliminary flow estimates vary from 6.5 to 196.4 m³/day over the regional nine-block section with a geometric mean of 42.7 m³/day ; and 19.6 to 52.4 m³/day over the NE-08 quarter section. The well data yield for the NE-08 quarter section is less optimistic than that found in the block of 9 quarter sections.
- [3] The variability in well depth implies that water-bearing zones are multi-story through-out the geologic section. The "layer-cake" hydro-stratigraphic geology can be summarized based on 15 meter depth increments using either the bottom of the perforated zone or the total depth of the well.

The relationship between depth of completion and flow estimates are tabulated as follows:

Depth Increment (m)	Number of Wells	Flow Estimate (m ³ /day)
0-15	4	40.5
15-30	30	54.5
30-45	16	43.7
45-60	6	26.4
60-75	3	21.4
75-90	2	16.0
90-105		
105-120	1	19.6

- [4] The above data indicates that the majority of water wells are completed over a depth range of 15 to 45 meters. Based on layer-cake hydro-stratigraphic geology, the block of nine-quarter sections has a cumulative production potential of 98.2 m³/day per quarter section, over this depth interval.

- 5] It was indicated that there were 8 existing parcels in the NE-08 quarter section with the intent to create 8 additional lots. The Water Act, under section 21(2) allocates a maximum of 3.42 m³/day [753 Cgpd/lot] to each existing and proposed parcel of land for household use. The total groundwater requirement is therefore 51.3 m³/day [15 parcels x 3.42 m³/day] which is less than the total cumulative production potential of 98.2 m³/day per quarter section within the 15 to 45 meter depth of the geologic profile. Theoretically, there are sufficient water reserves to service the 8-lot subdivision. Of concern, is the number of abandoned wells drilled in the NE-08 quarter section.

It is recognized that the short term tests given on the water well records may not be indicative of longer term pump tests and sustainable flow rates. However, site-specific wells and flow testing will be required in order to substantiate adequate groundwater reserves.

- [6] The water well data was also reviewed to determine if a drop in regional groundwater table was evident with increased country residential subdivision. The historic non-pumping water level data, for the NE-08 quarter section, is tabulated as follows:

Year	Well Depth (m)	Non-Pumping Water Level (m)	gm Well Depth (m)
1970s	17	6.2	21.5
1980s	10	11.0	26.5
1990s	30	10.0	36.5
2000s	5	14.5	49.4

There is some evidence for a decline in regional water level since at least the 1970s.

Based on the evaluation criteria [AEP; June 27, 1994], there exists more than one water-bearing zone; and the zones are not continuous beneath the quarter section. This conclusion is based on the variability in well depth, completion interval and preliminary flow rate estimates.

Water well records within the immediate area of the NE-08 quarter section indicate overburden deposits that vary from 0.3 to 43.7 meters in thickness. When the overburden thickness exceeds 3 meters, this depth of overburden is generally sufficient to accommodate septic field disposal systems.

At least 12 well records out of 75 indicated an overburden thickness of 3.0 meters or less. In accordance with subdivision regulations, site-specific percolation tests should be undertaken to confirm the suitability of the overburden material for septic field disposal.

Existing Flow Test Results

GERL has undertaken a total of twenty Q_{20} flow tests in the immediate area. Transmissive capacity values vary significantly from 0.9 to 202.9 m²/day. Calculated sustainable flow rates varied from 4.2 to 196.4 m³/day. The variability in transmissive capacity values, production intervals and calculated sustainable yields supports an argument for laterally discontinuous water-bearing zones.

Existing Q_{20} flow test data is tabulated as follows:

Location	Landowner	Transmissivity (m ² /day)	Q20 flow Rate (m ³ /day)
SW-16	Byam	0.32	1.0
SW-16	Byam	0.93	4.2
SW-16	Thomas	32.6	44.5
NW-09	Bradley	14.3	30.0
NW-09	Bradley	52.4	30.0
NW-09	Bradley	16.6	30.0
SE-17	Maveety	3.3	32.7
SE-17	Maveety	4.0	13.7
SE-17	Maveety	3.6	24.6
SE-17	O'Connor	78.4	40.9
SE-17	Jonker	1.9	25.7
SE-17	Jonker	0.9	13.0
SE-17	Gardner	6.4	43.2
SE-17	Gardner	6.5	48.1
SE-17	Gardner	9.5	36.0
SE-17	Malin	202.9	196.4
SE-17	Malin	90.7	76.8
SE-17	Malin	17.1	20.4
SE-17	Malin	36.6	32.7
SE-17	Harvey	35.5	58.9

Badke Enterprises has conducted three flow tests on the NE-08 quarter section. None of the wells, on their own, was capable of sustaining a yield that would be capable of supporting all 8 lots. The test results are summarized as follows:

Lot 4: $T = 1.53 \text{ m}^2/\text{day}$; tested at $6.5 \text{ m}^3/\text{day}$; Q20 at $5.6 \text{ m}^3/\text{day}$

Lot ²7: $T = 2.36 \text{ m}^2/\text{day}$; tested at $6.5 \text{ m}^3/\text{day}$; Q20 at $7.9 \text{ m}^3/\text{day}$

Lot ¹8: $T = 1.65 \text{ m}^2/\text{day}$; tested at $6.5 \text{ m}^3/\text{day}$; Q20 at $8.3 \text{ m}^3/\text{day}$

On an individual well basis, all three flow tests indicate that the respective wells are capable of supporting a domestic allocation of $1250 \text{ m}^3/\text{year}$ or $3.42 \text{ m}^3/\text{day}$.

During the testing of the Lot 4 well; both the Lot ²7 and Lot ¹8 wells were used as observation wells; as well as two wells on the Maveety property immediately to the north. For each flow test, the other two Snow wells were used as observation wells in addition to the two Maveety wells. During pumping of the Lot 4 well, there was no response in the Maveety wells. During the pumping of Lot 7, there was a drawdown of 0.11 ^{FEET} meters in the Maveety east well, and 0.30 ^{FEET} meters in the Maveety west well. During the pumping of the Lot 8 well there was a drawdown response of 0.24 ^{FEET} meters in the Maveety west well. The pumping of Lot 4 did not result in any response observed in the Lot 7 and Lot 8 wells. The pumping of Lot 7 did produce a drawdown response of 1.72 ^{FEET} meters in the Lot 8 well. The pumping of the Lot 8 well did produce a drawdown response of 2.22 ^{FEET} meters in the Lot 7 well. In short, there is some hydraulic connection between the three Snow wells and the Maveety wells to the north.

Where transmissive capacity values are less than $4.5 \text{ m}^2/\text{day}$, there is greater risk in the occurrence of production well dewatering than there is in causing well interference in a neighbours well.

Farvolden (1961) states: "Where the apparent transmissibility is less than 300 gpd/ft [equivalent to $4.5 \text{ m}^2/\text{day}$], however, the aquifer cannot transmit water to the production wells as fast as it is being recharged to the aquifer, and thus the rate of recharge is greater than the rate of withdrawal."

He further concludes: "The local dewatering of the aquifer should have no serious consequences as far as the continued availability of water for agricultural or domestic utilization is concerned because the hydraulic gradient toward the well is necessarily very steep where the permeability is low. Thus the cone of influence of a production well cannot be extensive although the drawdown at or very near the well may be large."

Summary of Findings

Based on a feasibility assessment of existing water well information and geologic information, the following conclusions have been drawn:

- [1] There are currently 8 parcels in the NE-08 quarter section. The proposed 8-lot subdivision would bring the total number of parcels to 15 and a total water requirement to $51.3 \text{ m}^3/\text{day}$ [$15 \text{ lots} \times 3.42 \text{ m}^3/\text{day per lot}$] for individual wells; or $38.5 \text{ m}^3/\text{day}$ [$7 \text{ lots} \times 3.42 \text{ m}^3/\text{day} + 8 \text{ lots} \times 1.82 \text{ m}^3/\text{day}$] for a combination of existing individual wells and a communal well.
- [2] Based on existing water well flow test information within a block of nine quarter sections, there is a cumulative groundwater potential of $98.2 \text{ m}^3/\text{day}$ per quarter section within the 15 to 45 meter depth interval. The additional water requirement for the proposed 8-lot subdivision, plus existing lots, is less than the cumulative groundwater potential per quarter section. Theoretically, there exists sufficient groundwater reserves to serve the existing and proposed parcels of land in the NE-08 quarter section based on existing information.
- [3] Site specific testing, with regard to sustainable yields is not as optimistic as the regional data. Given the number of abandoned wells, and other low yield wells, it may be challenging to locate a total of eight wells to meet Water Act requirements.

- [4] If subdivision is to proceed, consideration may have to be given to employing some innovative approaches with regard to water conservation both inside and outside the house. Should subdivision proceed, it is strongly recommended that cistern storage be utilized in association with all low yield wells of less than $6.5 \text{ m}^3/\text{day}$, since it is unlikely that natural flow rates of $32 \text{ m}^3/\text{day}$ or greater could be found to satisfy peak hour water demand.
- [5] Because of the low yield wells and low transmissive capacity values, there is a risk that dewatering of the wells could occur over time. This assumption is based on the lateral discontinuity of water bearing zones. Perspective lot purchasers should be aware of the risks.

DA Badke Enterprises Ltd
Attention: Doug Badke
June 30, 2004
Page 18

Closure

If you have any questions or comments regarding the assumptions and conclusions drawn in this groundwater feasibility assessment, contact the undersigned at your convenience. It should be noted that the assessment of potential groundwater availability is not a guarantee but rather an indication of the probability of securing a sustainable groundwater supply.

If subdivision is approved, it will be necessary to drill and flow test a well on each proposed lot to ensure adequate flows in accordance with the Water Act.

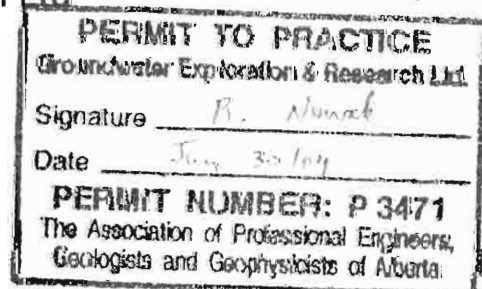
Thanking you for the opportunity to have been of service, we remain,

Respectfully yours,

Groundwater Exploration & Research Ltd.

Bob Nowak

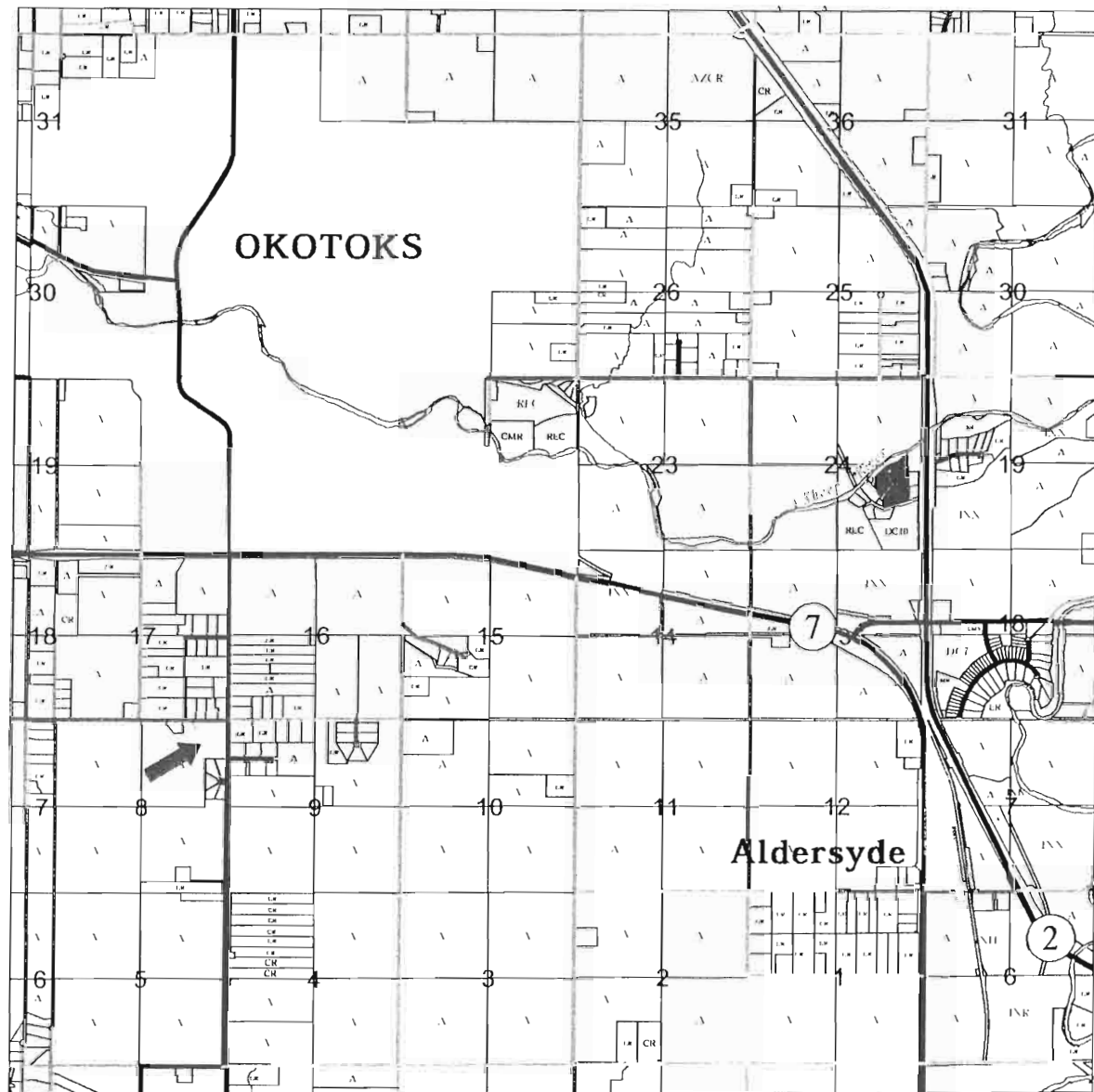
Bob Nowak; Ph.D., P.Geol.
Groundwater Geologist



Appendix

LAND USE MAP No. 2029

(20-29-W4)



Scale 1:60 000

LEGEND

A	Agricultural	DC8	Direct Control - Telecommunications Tower
CMH	Commercial Hamlet	DC9	Direct Control - Nature's Hideaway Campground
CMY	Commercial Highway	DC10	Direct Control - Paradise Ranch Resort
CMP	Commercial Park	EP	Environmental Protection
CMR	Commercial Rural	ER	Environmental Reserve
CR	Country Residential	INH	Industrial - Hamlet
CRA	Country Residential - Subdistrict A	INN	Industrial - Natural Resources
DC1	Direct Control - Spruce Meadows	INP	Industrial - Park
DC2	Direct Control - Aldersyde Industrial	INR	Industrial - Rural
DC3	Direct Control - Smed	MR	Municipal Reserve
DC4	Direct Control - Private Airport	R	Residential
DC5	Direct Control - Airport	RA	Residential - Subdistrict A
DC6	Direct Control - Gravel Pit	REC	Recreation
DC7	Direct Control - Silver Tip Ranch Commercial		Multiple Land Use (ie. A/CR)

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Map Date: Feb 18, 2004

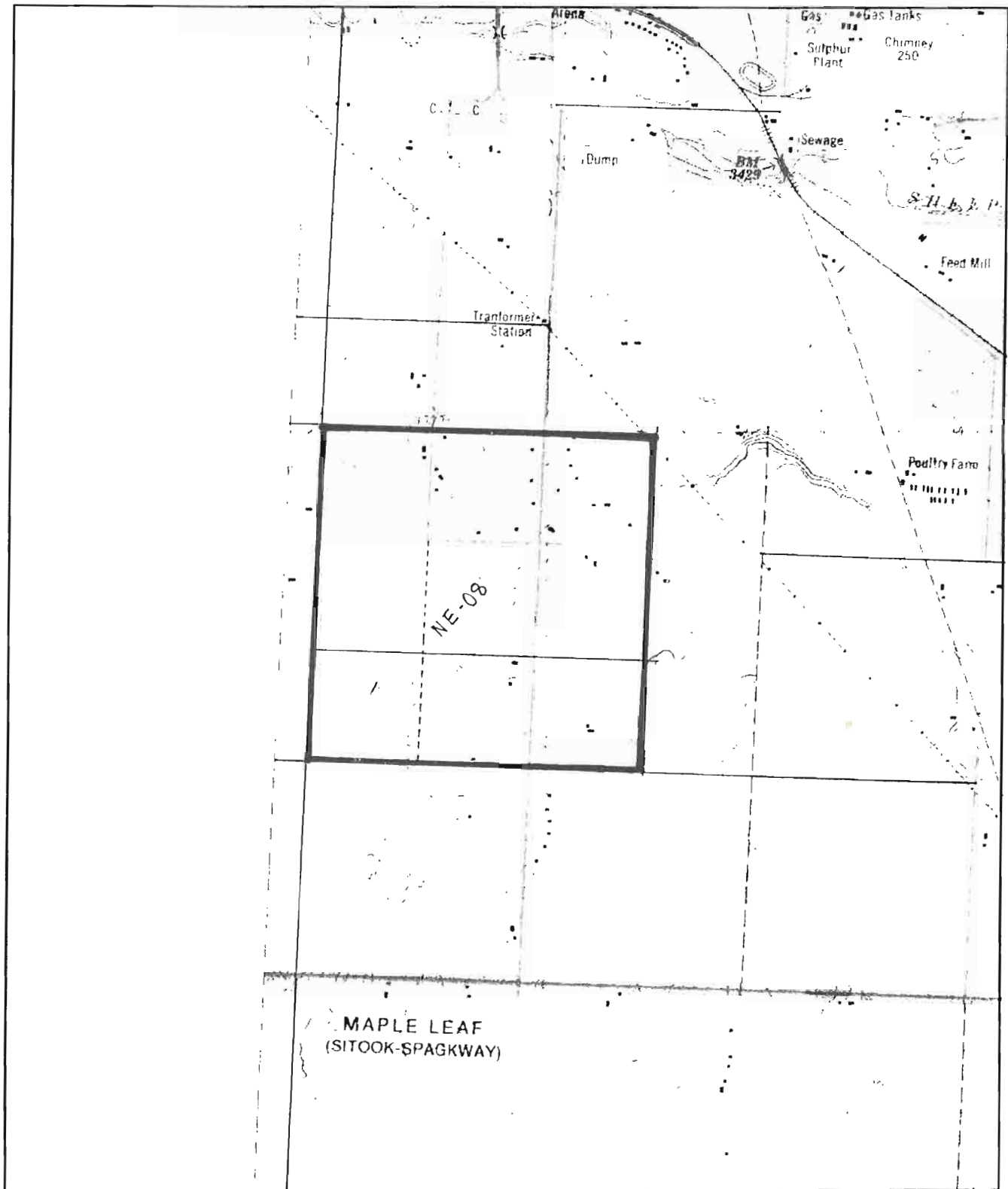


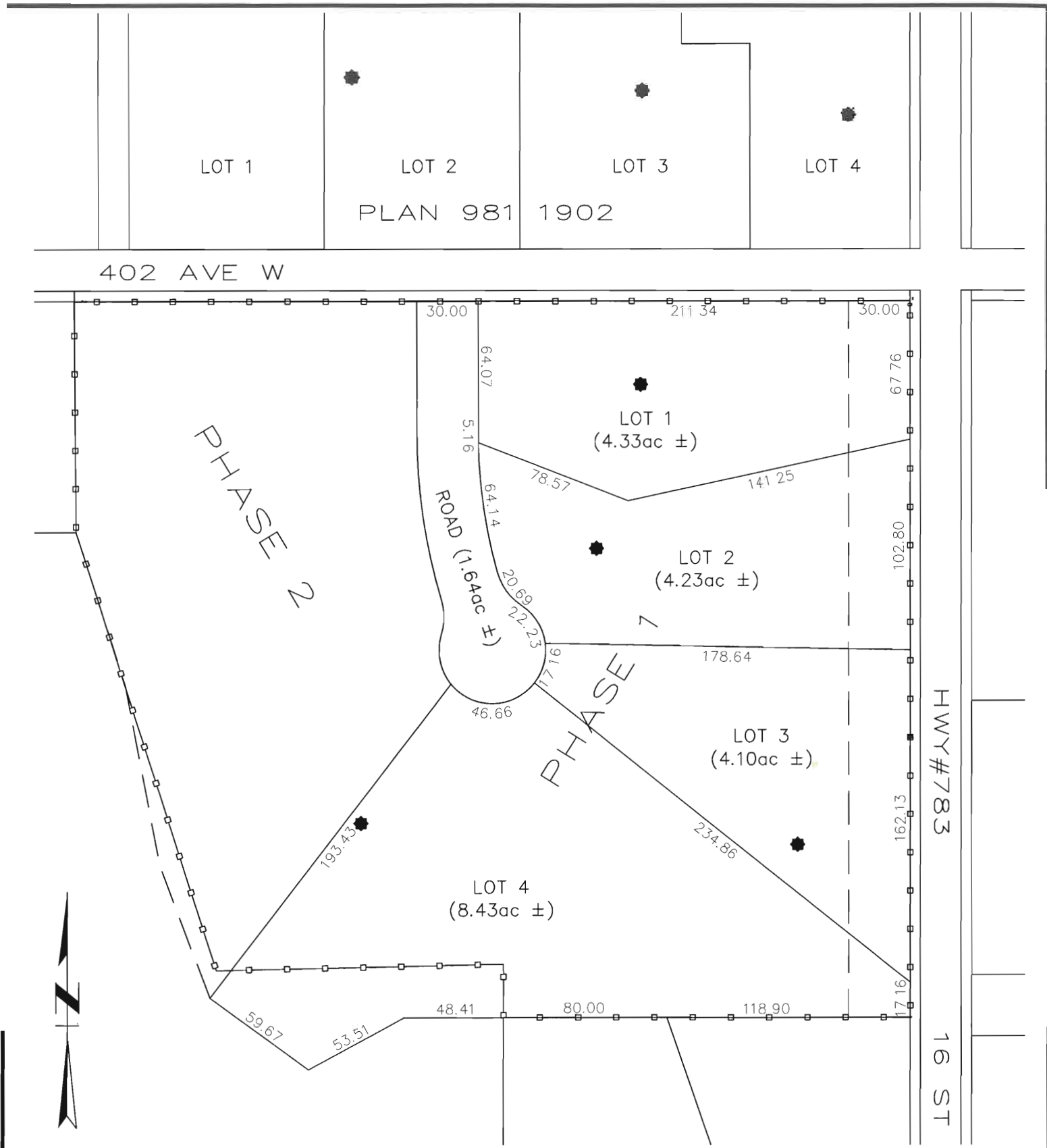
Table 1
Summary of Groundwater Well Data

Location	Landowner	Date Drilled	Td/Npwl (ft)	Flow Estimate (gpm)	Completion Interval (ft)
TP20, R29					
SE-08	Snow	Nov 91	136/66	10 gpm/2.3 hrs	115-135
NE-08	Snow	Nov 91	90/36	8 gpm/3 hrs	72-90
NE-08	Snow	Aug 01	360/72.5	3 gpm/2 hrs	300-330
SE-08	Snow	Apr 72	80/55	7 gpm/1 hr	45-70
NE-08	Ruitenschko	Apr 69	155/150	6 gpm/2 hrs	135-155
NE-08	Utley	Aug 93	70/30	5 gpm/2 hrs	30-70
NE-08	Utley	Aug 93	140/120	abandoned	
NE-08	Utley	Aug 93	140/50	abandoned	
NE-08	Utley	Sep 93	80/12	abandoned	
NE-08	Utley	Sep 93	200/120	abandoned	
NE-08	Utley	Mar 93	175/116.5	6 gpm/2 hrs	95-165
NE-08	Utley	Nov 92	165/na	abandoned	
NE-08	Utley	Nov 92	165/na	abandoned	
NE-08	Utley	Nov 92	125/na	abandoned	
NE-08	Utley	Dec 92	125/na	abandoned	
NE-08	Utley	Oct 93	208/138	7 gpm/2 hrs	148-198
NE-08	Utley	Oct 93	135/2.7	7 gpm/2 hrs	20-55 and 75-125
NE-08	Utley	Oct 93	98/63	6 gpm/2 hrs	38-88
NW-09	Ambridge	Jul 91	280/56	1.5 gpm/12 hrs	80-100 and 260-280
NW-09	Evans	Dec 74	60/na	abandoned	
NW-09	Bradley	Jan 90	120/57	10 gpm/2.3 hrs	70-110
NW-09	Bradley	Jul 90	105/15	8 gpm/2.3 hrs	22-30 and 70-95
NW-09	Bradley	Jul 90	220/na	abandoned	
NW-09	Bradley	Feb 98	131/33.8	5.5 gpm/12 hrs	50-72 and 95-118
NW-09	Bradley	Feb 98	180/45.7	5.5 gpm/12 hrs	90-115 and 135-155
NW-09	Bradley	Feb 98	216/40.2	2 gpm/2 hrs	38-58 and 80-116 and 160-196
NW-09	Bradley	Mar 98	176/49.9	5.5 gpm/12 hrs	80-110 and 130-165
NW-09	Bradley	Mar 98	136/24	3.5 gpm/2 hrs	40-70 and 95-115

Table 1 [continued]
Summary of Groundwater Well Data

Location	Landowner	Date Drilled	Td/Npwl (ft)	Flow Estimate (gpm)	Completion Interval (ft)
NW-09	Bradley	Mar 98	216/na	abandoned	
NW-09	Bradley	Mar 98	176/na	abandoned	
NW-09	Bradley	Feb 98	216/na	abandoned	
NW-09	Bradley	Mar 98	216/na	abandoned	
NW-09	Bradley	Feb 98	256/na	abandoned	
NW-09	Bradley	Feb 98	216/na	abandoned	
NW-09	Ambridge	Oct 99	105/19	4.25 gpm/48 hrs	70-100
NW-09	Ambridge	Sep 99	225/153.6	2.5 gpm/48 hrs	205-220
NW-09	Ambridge	Nov 99	200/26	4 gpm/48 hrs	75-195
SW-09	Pedersen	Sep 83	200/na	abandoned	
SW-16	Appleby	May 02	280/116.8	4 gpm/17.3 hrs	142-155 and 185-205
SW-16	Bridgewater	Jul 71	60/32	12 gpm/0.45 hrs	40-57
SW-16	Bridgewater	Jul 71	92/72	25 gpm/0.3 hrs	90-92
SW-16	Bridgewater	Oct 71	80/50	7 gpm/2 hrs	60-80
SW-16	Bridgewater	Jun 71	257/na	abandoned	
SW-16	Christensen	Oct 73	65/59	2.25 gpm/2 hrs	
SW-16	Reidlinger	Apr 86	80/27	26 gpm/1 hr	30-75
SW-16	Kennedy	Apr 88	75/23	5 gpm/2 hrs	55-75
SW-16	Gevers	Jul 89	75/50	8 gpm/2 hrs	45-75
SW-16	Gevers	Jun 89	60/20	10 gpm/2 hrs	25-60
SW-16	Drewniak	Mar 80	147/43	30 gpm/2 hrs	120-125
SW-16	Newell	Jun 84	70/25	2 gpm/2 hrs	16-70
SW-16	Weafer	Jun 84	60/25	7 gpm/3 hrs	20-60
SW-16	Byam	May 97	126/23	4 gpm/1.3 hrs	120-126
SW-16	Byam	Oct 90	140/27	6 gpm/12 hrs	60-80 and 100-120
SW-16	Thomas	Jul 95	92/38.6	6.64 gpm/12 hrs	54-80
SW-16	Bridgewater	Jun 71	38/11	6 gpm/1 hr	18-34
SW-16	Bridgewater	Jun 71	37/11	7 gpm/1.3 hrs	19-33
SW-16	Bridgewater	Jul 71	49/23	7 gpm/0.45 hrs	46-49
SW-16	Wardley	Oct 01	190/108	1 gpm/1 hr	90-190
SW-16	Wardley	Nov 01	60/35.7	5.5 gpm/4.3 hrs	40-55
SE-17	Malin	Apr 99	78/46.1	7.47 gpm/2 hrs	55-70
SE-17	Malin	Apr 99	80/47.5	30 gpm/12 hrs	70-80
SE-17	Malin	May 99	78/53.8	25 gpm/12 hrs	60-73
SE-17	Malin	Apr 99	60/38.3	12 gpm/12 hrs	47-57
SW-17	Storey	Apr 94	71/9.2	10 gpm/8 hrs	68-71

Table 1 [continued]
Summary of Groundwater Well Data[illegible]



LEGEND

EXISTING WATER WELL ★ WELL

**Snow
PLAN - PHASE 1 SUBDIVISION**

PTN NE 1/4 SEC 8-20-29-4

SCALE 1:2500

D.A.BADKE ENTERPRISES LTD.
(403)271-8708

MARCH 2005

FIGURE 1

**A
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5**

RESTRICTIVE COVENANTS

RESTRICTIVE COVENANT

PURSUANT TO SECTION 52 AND 71(1) OF
THE LAND TITLES ACT ALBERTA

WHEREAS **Debra Snow**, (hereinafter referred to as the "Developer") is the registered owner of an estate in fee simple, subject however to such encumbrances, liens and interests as are notified by memorandum underwritten or endorsed on the existing certificate of title, of the following lands:

Dominant Tenement: **Lots 1 to 8 inclusive all in Block 1**
as shown on Plan _____,
excepting thereout all mines and minerals,
(hereinafter referred to as the "Lands");

Servient Tenement: **Lots 1 to 8 inclusive all in Block 1**
as shown on Plan _____,
excepting thereout all mines and minerals,
(hereinafter referred to as the "Lands");

(hereinafter individually referred to as the "Lot" and collectively referred to as the "Lots");

AND WHEREAS the Developer is developing a planned housing subdivision on the Lots, (hereinafter referred to as the "Development") and the Developer desires the Development to be well planned and that a uniform high standard of appearance be achieved for all buildings, fences, driveways and landscaping (hereinafter referred to as the "Improvements") on the Lots;

AND WHEREAS to establish such high standards of development, the Developer considers it desirable for the greater enjoyment of the Lots and useful to maximize the value of the Lots, to impose a Restrictive Covenant (hereinafter referred to as the "Restrictive Covenant") against the Lots, such Restrictive Covenant containing certain restrictions, covenants and conditions in respect of the exterior design, use and development of the Lots and the buildings, structures, improvements and premises to be erected on the Lots, all as hereinafter set forth;

AND WHEREAS Section 71(1) of the Land Titles Act, Alberta, provides that an owner may grant to itself a Restrictive Covenant for the benefit of land which it owns and against land which it owns and the Restrictive Covenant may be registered under the Land Titles Act;

AND WHEREAS the restrictions and covenants to be imposed by way of this Restrictive Covenant, are for the benefit of all future owners of the individual Lots and are designed to protect the owners of such Lots against the improper development and use of such Lots and to prevent haphazard or inharmonious improvements and repairs or the use of improper designs or materials;

NOW THEREFORE the Developer as registered owner of the Lots, does for herself, her transferees, assigns and successors in title to the Lots, covenant and agree as follows:

1. The land use and building restrictions and conditions contained herein shall be deemed to be covenants running with and annexed to the Lots (as Servient Tenements) and shall be binding upon the respective owner or owners of all the Lots from time to time (hereinafter referred to individually as "Owner" and collectively as "Owners"), and enure to the benefit of each of the Lots (as Dominant Tenements) and the Owner or Owners thereof from time to time. Such restrictions and conditions, having been imposed as a building scheme with a view to maintaining the general character of all the Lots and to controlling the drainage thereof, may be enforced by the Developer of the Lots or by the Owner of any Lot from time to time. Any waiver by the Developer or any Owner of any of the Lots, of the strict performance of the covenants set out herein shall not of itself constitute a waiver of or abrogate any other covenants set out herein, nor a waiver of any subsequent breach of the same condition.
2. If any provision of this Restrictive Covenant is found to be void, invalid or unenforceable, the remainder of this Restrictive Covenant shall not be affected thereby and each remaining provisions shall be valid and shall be enforceable to the extent permitted by law.
3. No action shall lie against the Developer for damages for breach of any one or more of the covenants contained in this Restrictive Covenant unless the Developer is registered as owner of the Lot alleged and proven by a court of competent jurisdiction to be in breach of this Restrictive Covenant. This covenant shall constitute an absolute defence to any such action and may be pleaded as such.
4. All Improvements on the Lots, and any alterations to such Improvements, shall be constructed in accordance with provisions contained in this Restrictive Covenant and the Architectural Guidelines attached as Schedule A.
5. No initial construction of any Improvements or subsequent alterations of Improvements, shall take place prior to the Owner making written application to the Developer for Development Approval from the Developer for all Improvements in accordance with the provisions contained in this Restrictive Covenant and the Architectural Guidelines contained in Schedule A attached to this agreement. Development Approval in writing from the Developer must be obtained prior to application to the Municipality for a Building Permit.
6. The granting of Development Approval by the Developer does not release the Owner from the obligations to comply with all municipal bylaws, building codes, statutes and regulations that are applicable to construction of the Improvements on any Lot.

7. The Developer may retain an Architectural Consultant to assist in the administration of the Architectural Guidelines on its behalf. Prior to submission of plans to the Municipal authority for a Building Permit, the Owner shall first submit these plans to the Architectural Consultant.
8. No consent or approval given by the Developer or the Architectural Consultant under this Restrictive Covenant shall create any liability on the Developer or the Architectural Consultant or any other consultant and without limiting the generality of the foregoing, such consent or approval shall not constitute any representation of compliance with any laws or the adequacy for construction or other purpose of any plans.
9. The interpretation of the Architectural Guidelines shall be at the discretion of the Developer, acting reasonably, and the Developer shall not have any obligation to provide any consent applied for by the Owner.
10. In the event that the Developer and the Architectural Consultant are no longer in business at the time that the Owner is preparing plans for construction or alterations of the Improvements on any Lot, the Owner shall nevertheless be bound to construct all Improvements or alterations to such Improvements in complete compliance with this Restrictive Covenant and the Architectural Guidelines contained in Schedule A.
11. No more than one private single-family dwelling house with private garage, attached or unattached, shall be erected at any time on any one Lot. This restriction shall not prohibit a single-family dwelling house being erected on any Lot resulting from a re-subdivision of any of the Lots.
12. There shall be no time limit on a building commitment, however, once building has been commenced, it must be completed to the extent that the exterior finish is completed, within one year of the commencement date of that building's construction.
13. No building shall be occupied until it has been completed in accordance with the plans and specifications up to the stage that the exterior of the building is completed.
14. No business or commercial use shall be made of any home or other building on any Lot unless permitted under the applicable municipal land use bylaw and then only if a permit has been obtained from the municipal authority having jurisdiction and provided that such use is wholly contained within the home or other building on any Lot and that such use does not attract the general public to the Lot.
15. No Lots shall be used for stockpiling of any materials, or the storage of supplies, stock-in-trade, machinery or equipment other than that as normally used in

conjunction with a single-family residence. The screened storage of recreational vehicles owned and used by the occupants for their personal use is permitted.

16. No buildings shall be erected, except on permanent foundations and all buildings shall be constructed of new and durable materials conforming in all respects with the relevant provisions of the current edition of the Alberta Building Code, as amended from time to time.
17. No signs or advertising manner of any kind, except the ordinary signs offering the Lots or buildings for sale, shall be placed on any of the Lots or on any buildings, fences or trees on the Lots or internal roadways.
18. All septic systems and sewage disposal fields or sewage treatment mounds shall be installed at the sole cost and expense of the Owner and shall be in compliance with the requirements of the public authorities exercising jurisdiction therein. Septic fields or treatment mounds shall not be installed within 40 metres of a water well on an adjacent Lot.
19. The Developer will install all underground shallow utilities (power, phone and gas) to the property line of each Lot and provide water wells on each Lot. It shall be the sole cost and expense of the Owner of each Lot to connect to these utilities or services and to extend these utilities to the point of service requirement. No utility or services, except transformers and pedestals, shall be installed above ground.
20. The Developer shall provide each lot owner with a 500 gallon plastic potable water storage tank at the time of development on each lot within the Plan Area. The Developer shall also provide each lot owner with a one gallon per minute flow restrictor at the time of development and each lot owner shall provide evidence that that the flow restrictor was installed in the water supply line to each house.
21. Lot owners shall their use best efforts to conserve water by the use of approved water conservation appliances, collection of rainwater from roof runoff and the use xeroscoping or employing low maintenance landscaping techniques that include the use of drought resistant plants and shrubs.
22. Seasonal filling of pools on the Lots shall not be made using water obtained from wells on the Lots. Replenishment of water due to evaporation or spillage may be made using water from a well on any of the Lots.
23. No exterior lighting shall be installed on any of the Lots which would unreasonably illuminate any other Lot and all exterior lighting must be shaded or indirect so as to limit overhead light pollution.
24. No noxious weeds, underbrush or unsightly growths shall be permitted to grow or remain on the Lots.

25. No garbage or refuse pile or unsightly objects shall be allowed to accumulate on, or allowed to remain on any of the Lots. Each Owner is responsible for the disposal of their garbage or refuse at an approved off-site disposal site.
26. No fuel, gasoline or chemicals of any nature shall be stored on any of the Lots in amounts exceeding 100 litres.
27. The use of firearms, hunting bows, crossbows or any other weapons is not permitted on any of the Lots.
28. Used car bodies or antiques shall not be stored on any of the Lots, except inside a building.
29. No heavy equipment shall be stored or operated on the Lots, other than for the construction of the Improvements on the Lots.
30. The excavation or removal of any loam, rock, gravel or clay from any of the Lots for commercial purposes, shall not be allowed.
31. Following completion of construction, the Owner of each Lot, shall ensure that all areas of the Lots are left in a natural state or if disturbed, that the disturbed areas are landscaped in a professional manner.
32. No mobile home, ready constructed home or used house shall be moved onto any lot as a temporary or permanent residence.
33. Satellite dishes larger than 24 inches in diameter or high antennas or aerials, shall not be located on any Lot.
34. No more than two (2) dogs and two (2) cats over six (6) months of age shall be allowed on any one Lot. Such dogs and cats shall not run free and must be confined to the Owners Lot by means of a kennel or underground electronic fencing. All dogs must be housed inside at night so that barking does not unreasonably interfere with any neighbours.
35. No livestock or animals shall be kept on any of the Lots for commercial purposes.
36. The Owners of the Lots, shall not make any alterations to the Lots that will impede, impound or divert the natural drainage or storm water drainage across the Lots.
37. Any dispute arising from the interpretation of the restrictions, covenants and conditions contained herein, shall be referred to arbitration pursuant to the Arbitration Act of Alberta and the arbitrator's decision shall be final and binding.

38. In the event that legal proceedings or arbitration is commenced to interpret or enforce this Restrictive Covenant (hereinafter referred to as a "Proceeding"), all legal fees determined on a solicitor and his own client basis, plus disbursements and arbitration costs (hereinafter referred to as the "Costs") incurred by the successful party or parties, whether the Developer, Architectural Consultant, or owner of the Dominant or Servient Tenement, shall be born and paid by the unsuccessful party or parties. When none of the parties is wholly successful in any such Proceeding, the Costs shall be apportioned and shall be the responsibility of the parties in proportion to their respective success, or as may be ordered by a Court of competent jurisdiction or an arbitrator.
39. This Restrictive Covenant may be enforced by the Developer, his successors and assigns, the Owner or Owners of the Dominant or Servient Tenements, or any of them, and the parties agree that any breach of this Restrictive Covenant constitutes irreparable harm to the Developer, his successors and assigns, the Owner or Owners from time to time; that damages are not a sufficient remedy; and that in addition to the Developer, his successors and assigns, the Owner or Owners from time to time of the Dominant or Servient Tenements, or any of them, shall be entitled to relief by way of an injunction or Order in the nature of an injunction against the offending party.
40. Words herein importing a number or gender shall be construed in grammatical conformance with the context of the party or parties affected by this Restrictive Covenant from time to time.
41. No covenants herein shall be deemed to restrict any provision of any laws, bylaws or regulations passed or imposed by any governmental authority, rather the restrictions and covenants contained herein shall be considered as additional restrictions and covenants.

IN WITNESS WHEREOF **Debra Snow** has hereto affixed her signature this _____ day of _____, 2005.

Witness

Debra Snow

AFFIDAVIT OF EXECUTION

CANADA) I, Doug Badke of the City of Calgary
) in the Province of Alberta,
PROVINCE OF ALBERTA) MAKE OATH AND SAY AS FOLLOWS:
)
TO WIT)

1. That I was personally present and did see **Debra Snow** named in the within or annexed instrument who is known to me to be the person named therein, duly sign and execute the same for the purpose named therein.

Or

~~That I was personally present and did see **Debra Snow** named in the within or annexed instrument who, on the basis of identification provided to me, I believe to be the person named in the within instrument, duly sign and execute the same for the purpose named therein.~~

2. That the same was executed at the City of Calgary, in the Province of Alberta, and that I am the subscribing witness thereto.
3. That I know the said **Debra Snow** and she is in my belief of the full age of eighteen years.

SWORN BEFORE ME at the City of)
Calgary, in the Province of)
Alberta, this day of)
2005.)

A Commissioner for oaths in and for the
Province of Alberta

Witness

CONSENT OF SPOUSE

I, _____ being married to the within named _____ do hereby give my consent to the disposition of our homestead, made in this instrument, and I have executed this document for the purpose of giving up my life estate and other dower rights in the said property given to me by The Dower Act, to the extent necessary to give effect to the said disposition.

(Signature of Spouse)

CERTIFICATE OF ACKNOWLEDGEMENT BY SPOUSE

1. This document was acknowledged before me by _____
_____ apart from *her husband/his wife.
2. _____ acknowledged to me that *she/he:
- (a) Is aware of the nature of the disposition;
 - (b) Is aware that The Dower Act gives *him/her a life estate in the homestead and the right to prevent disposition of the homestead estate by withholding consent;
 - (c) Consents to the disposition for the purpose of giving up the life estate and other dower rights in the homestead given to *him/her by The Dower Act, to the extent necessary to give effect to the said disposition;
 - (d) Is executing the document freely and voluntarily without any compulsion on the part of _____
_____ *her husband/his wife.

DATED at _____ in the Province of Alberta,
this _____ day of _____, 19____.

_____ My Commission expires:

A Commissioner for Oaths in and for the Province of Alberta

* Strike out the words which do not apply

DOWER AFFIDAVIT

I, **Debra Snow** of Okotoks in the Province of Alberta, make oath and say:

1. I am the Grantor (or transferor or encumbrancer as the case may be) named in the within instrument.
2. I am (my principal is) not married.

or

Neither myself nor my spouse (or my principal nor his spouse) resided on the within mentioned land at any time since our (their) marriage.

SWORN BEFORE ME at Calgary)
in the Province of Alberta, this)
_____ day of _____ 2005)
_____)

Debra Snow

My Commission expires:

A Commissioner for Oaths in and for the Province of Alberta

* Strike out the clause which does not apply

ARCHITECTURAL GUIDELINES**1. House Area**

Bungalow	1,600 ft ²
Two Storey	2,200 ft ² (Main floor to be a minimum of 1200 sf)
Split on two levels	1,800 ft ² (foot print as per bungalow)

The dimensions of any garage, porch, verandah, sun room or other appurtenant structure shall be excluded in computing the ground area except where the same is wholly within the foundations walls of the dwelling house on any of the Lots.

2. Setbacks

All setbacks shall be in accordance with the MD of Foothills Land Use Bylaw.

3. Exterior Detail and Design

The design/style of the home is to be carried around the home with the detailing on all elevations. Detailing suggestions are as follows:

- i) decorative trusses (gable trim)
- ii) dentil trim
- iii) muntin bars/ window grills
- iv) front porches
- v) shutters
- vi) batten boards, shadow boards at the soffit line, trim boards, batten detailing at windows and joist levels
- vii) columns
- viii) decorative louvers
- ix) dormers
- x) brick or stone
- xi) detailing in the form of a decorative column treatments, porch spindles and handrails etc.
- xii) bay or box windows

4. Roof Design, Material and Colors

- a) The preferred roof overhang is 600mm (24") on the main rooflines, and a preferred minimum of 150mm (6") on boxed out or bay windows.
- b) Minimum roof slope 5:12
- c) Tile, shakes or an architectural asphalt or fiberglass shingles with a 25-year warranty as a minimum. The colors should be equal to Renaissance Weathered Slate, Harvest Slate, Taupe Slate or Black Slate.

5. Exterior Cladding Material and Colors

- a) Exterior cladding colors should be in the earth tone range; bright colors should be avoided.

- b) Finishing materials are to be the same for all elevations except for brick or stone. The following exterior materials will be permitted:
 - i) Horizontal manufactured wood siding
 - ii) Horizontal vinyl/aluminum siding to have a double 4 or triple 5 profile
 - iii) Stucco
 - iv) Brick or stone.

6. Soffit, Fascia, Gutters and Downspouts

Soffits and fascias should be prefinished aluminum or vinyl.

7. Garages and Overhead Garage Doors

- a) A double garage is a minimum requirement.
- b) The maximum space between the overhead garage door and the soffit line is 16”.
- c) Raised panel garage doors are required as a minimum.
- d) The garage shall not block the visibility of the front entry of the home.
- e) Garage doors are to be painted to match the siding or stucco color.

8. Masonry

Brick or stone is to be returned a minimum of 2’0” on corners.

9. Chimneys, Flues and Roof Vents

- a) All chimneys and flues that are visible on the front or side elevations are to be boxed in and at a minimum clad with the siding material. Capping detail required.
- b) All roof stacks, vents and flashings should be painted to blend in with the roof color.

10. Fireplaces

Metal fireplaces flues must be enclosed and finished to the top complete with capping detail.

11. General Notes

- a) Grade should always slope away from the house. Where the rear grade elevation is higher than the grade around the house, swales should be constructed to direct the drainage away from the house. They should be placed approximately 10 feet from the house at a minimum 2% slope away from the house.
- b) The Developer reserves the right to revise these Guidelines from time to time. The Developer reserves the right to refuse a color combination, and/or the siting, and/or detail and/or house style if it does not conform to other developments within the area by the Developer’s standards.

- c) If at the time of construction on site, errors or discrepancies are noticed from information received at the time of approval, or from engineering drawings, or from existing site grading, or existing homes the builder is to contact the Architectural Consultant so that the discrepancy may be reviewed and adjustments made to accommodate the existing site construction.
- d) Unless otherwise noted in writing prior to house construction, all retaining walls are the responsibility of the builder/owner.
- e) Neither the Developer, its Architectural Consultant nor the Developers other consultants take any responsibility for any retaining walls which may be required on or between lots. Any disputes that may arise regarding responsibility for retaining walls are to be resolved by the Builder and their contractors.
- f) No approval by the Developer, its Architectural Consultant or its other consultants shall be other than an approval of the Developer's requirements and in particular shall not be any representation of compliance with any engineering requirements or any legal requirements of the Municipal District of Foothills or any other government agency or body, all of which are the sole responsibility of the Builder. The house plan approval process is provided as a service. While care is taken to provide precise data, the Developer and its Architectural Consultant and other consultants assume no responsibility for the accuracy of the information given in documents, or for any losses or damages resulting from the use thereof. It remains the responsibility of the Builder to ensure that the construction of any buildings on any Lot, conforms with Provincial or Municipal laws, regulations, By-Laws, or other enactments and encumbrances affecting the title to the Lot, including, without limitation, utility rights of way, easements, restrictive covenants and the requirements of the grade slip. The Builder is also responsible for the provision of all bearing certificates and footing elevation certificates which may be required for the installation of sulphate resistant concrete or any other precautions in foundations where necessary. The developer and its architectural consultant and other consultants assume absolutely no responsibility to ensure that the building complies with all the foregoing.
- g) A Security Deposit of \$5,000.00 must be submitted to the Developer prior to the release of the Developer's approval, which is to be held by the Developer to ensure compliance with these guidelines to compensate the Developer for damage to roads and utilities. Following completion of the development, the Security Deposit plus interest at the rate of prime +1%, will be returned to the builder, subject to compliance with these guidelines and no damage to roads and utilities.

- h) The cost to repair damage caused by the Owner or his builders, to any utilities, roads, trees, drainage facility or other items, will be charged back to the Owner or may be deducted from the Security Deposit. The Owner shall be liable for the total cost of repairing such damage and the Owner's liability shall not be limited to the amount of the Security Deposit.

*IN THE MATTER OF THE LAND TITLES ACT, R.S.A. 1980,
c. L-5 AND AMENDMENTS THERETO;
AND IN THE MATTER OF A RESTRICTIVE COVENANT MADE
PURSUANT TO SECTION 52 THEREOF*

RESTRICTIVE COVENANT

The undersigned, as registered owner of an estate in fee simple, subject however to such reservations, exceptions, and encumbrances as are notified on the existing Certificates of Title, of the parcels of land legally described as:

Dominant Tenement: **Lots 1 to 8 inclusive all in Block 1**
as shown on Plan _____,
excepting thereout all mines and minerals,
(hereinafter referred to as the "Lands");

Servient Tenement: **Lots 1 to 8 inclusive all in Block 1**
as shown on Plan _____,
excepting thereout all mines and minerals,
(hereinafter referred to as the "Lands");

the owner desiring to maintain the general character of the natural and man-made drainage course on the Lands, does HEREBY DECLARE, establish, impose and annex to the Lands, and each of the lots comprising the Lands, the stipulations, restrictions and provisions hereinafter provided, such stipulations, restrictions and provisions to be enforced and to run with the Lands and to be binding on the owners of each of the lots comprising the Lands and all persons claiming under them. This covenant shall be binding upon and shall enure to the benefit of any person to whom the Lands, or any of the lots comprising the Lands, are conveyed such that the stipulation, reservation and provision hereinafter described shall run with the Lands and each of the lots comprising the Lands.

The stipulation, restriction and provision is as follows:

- 1. The owners of the Lands and each of the lots comprising the Lands, shall not make any alterations to the Lands that will impede, impound or divert the natural drainage or storm water drainage across the Lands, except for the provisions of Clause 2.*
- 2. The Owners of the Lands and each of the lots comprising the Lands, may construct an access road across the natural drainage course(s) on the Lands, provided that the portion of the access road which crosses the natural or manmade drainage course, shall include a corrugated steel pipe culvert of sufficient size (minimum 450mm) such that it will transmit water flows through the culvert without creating any water ponding upstream of the access road.*

3. *These stipulations, restrictions and provisions may not be altered or deleted without the written permission of the Municipal District of Foothills No. 31, at its office at 309 MacLeod Trail, in the Town of High River, in the Province of Alberta T1V 1M7.*

This covenant is an addition to the requirements of the municipal or other government authorities having jurisdiction in respect of the use of the Lands and nothing herein contained shall be construed as permitting or authorizing anything which is not permitted, controlled or regulated by any statute, bylaw, regulation or like enactment having the force of law.

IN WITNESS WHEREOF the undersigned, have set their hand and seal this ____ day of _____, 2005.

Witness

Debra Snow

AFFIDAVIT OF EXECUTION

CANADA) I, Doug Badke of the City of Calgary
) in the Province of Alberta,
PROVINCE OF ALBERTA) MAKE OATH AND SAY AS FOLLOWS:
)
TO WIT)

4. That I was personally present and did see **Debra Snow** named in the within or annexed instrument who is known to me to be the person named therein, duly sign and execute the same for the purpose named therein.

Or

~~That I was personally present and did see **Debra Snow** named in the within or annexed instrument who, on the basis of identification provided to me, I believe to be the person named in the within instrument, duly sign and execute the same for the purpose named therein.~~

5. That the same was executed at the City of Calgary, in the Province of Alberta, and that I am the subscribing witness thereto.
6. That I know the said **Debra Snow** and she is in my belief of the full age of eighteen years.

SWORN BEFORE ME at the City of)
Calgary, in the Province of)
Alberta, this day of)
2005.)

A Commissioner for oaths in and for the
Province of Alberta

Witness

CERTIFICATE OF ACKNOWLEDGEMENT BY SPOUSE

1. — This document was acknowledged before me by
— apart from *her husband/his wife.

2. — acknowledged to me that *she/he:

- (e) Is aware of the nature of the disposition;
- (f) Is aware that The Dower Act gives *him/her a life estate in the homestead and the right to prevent disposition of the homestead estate by withholding consent;
- (g) Consents to the disposition for the purpose of giving up the life estate and other dower rights in the homestead given to *him/her by The Dower Act, to the extent necessary to give effect to the said disposition;
- (h) Is executing the document freely and voluntarily without any compulsion on the part of
— *her husband/his wife.

DATED at — in the Province of Alberta,
this — day of —, 19 —.

— My Commission expires:

—
A Commissioner for Oaths in and for the Province of Alberta

* Strike out the words which do not apply

DOWER AFFIDAVIT

I, **Debra Snow** of Okotoks in the Province of Alberta, make oath and say:

3. I am the Grantor (or transferor or encumbrancer as the case may be) named in the within instrument.

4. I am (my principal is) not married.

or

Neither myself nor my spouse (or my principal nor his spouse) resided on the within mentioned land at any time since our (their) marriage.

SWORN BEFORE ME at Calgary)
in the Province of Alberta, this)
— day of — 2005)
)

— Debra Snow

My Commission expires:

—
A Commissioner for Oaths in and for the Province of Alberta

* Strike out the clause which does not apply

