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# Conceptual Scheme

## SW 17-52-21-W4

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October 2006

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### 1. PURPOSE

**1.1** The purpose of a Conceptual Scheme (CS) is to provide supporting rationale for the potential subdivision of this land to accommodate rural residential/agricultural development and to coordinate development planning of adjoining lands. The CS, as stated in Council Policy statement SER-008-019, is required:

- a)** To provide a framework for the subsequent subdivision and/or development of land within the Country Residential Policy Area and the Agricultural/Large Rural Residential Policy Area of the Municipal Development Plan;
- b)** To establish a potential plan of future subdivision or development that applies to a specific parcel of land;
- c)** To ensure that the subdivision under review does not prohibit the ability of remnant parcels, or adjacent parcels, to be further subdivided in the future. This can be achieved through improved subdivision design and the protection of land for future road dedication to provide access to remnant lands owned by the applicant or adjoining lands.

**1.2** Furthermore, as per Council Policy statement SER-008-019, the proposed Conceptual Scheme is essential for the following reasons:

- a)** The land being proposed for redistricting or subdivision is within the Agricultural/Large Rural Policy Area of the MDP and is 16 ha (40 ac) or more in size; or
- b)** The land being proposed for redistricting or subdivision has the potential to be further subdivided; or
- c)** The proposed subdivision would result in more than two parcels on the quarter section; or
- d)** There is a need to coordinate development planning or servicing of adjoining lands.

### 2. OVERVIEW

**2.1** The proposed Conceptual Scheme has been prepared by Strathcona County Planning and Development Services in support of a Land Use Bylaw Amendment application and future proposed subdivision. Keleigh Cormier & Jay Paulson have submitted an application on behalf of J & P Cattle Company Ltd. to rezone 61.8 hectare (153 acre) parcel from AG Agriculture: General District to DC Direct Control District in order to allow the future subdivision of eight (7) parcels ranging in size from approximately 3.6 ha (8.8 ac) to 9.0 ha (22.2 ac).

### 3. CONCEPTUAL SCHEME (DESIGN CONCEPT)

**3.1** The proposed Conceptual Scheme encompasses the entire SW ¼ of Section 17, Township 52, Range 21, West of the 4 Meridian (Figure 2) and has been prepared in consultation with the affected and adjacent landowners of the quarter section. The goal of the Conceptual Scheme is to establish a framework for the potential future subdivision and development of the land while ensuring that the policies and guidelines within the applicable statutory plans and bylaws are adhered to. The objectives of the Conceptual Scheme are to illustrate the potential developable area(s), potential lot yield, potential access locations and potential reserve land (Environmental Reserve, Municipal Reserve and Conservation Lot).

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### 4. BACKGROUND INFORMATION

- 4.1 Legal Description: SW 17-52-21-W4
- 4.2 Canada Land Inventory Rating: Class 4 & 5
- 4.3 Adjacent Land Uses:
- a) North: Four (4) AG Agriculture: General District parcels consisting of approximately 40.0 acres.
  - b) South: Township Road 522.
  - c) East: Six (6) parcels; one AG Agriculture: General District parcel and five RA: Rural Residential/Agriculture consisting of one 40 acre parcel and four 20 acres parcels
  - d) West: Range Road 215.

### 5. MUNICIPAL DEVELOPMENT PLAN

5.1 The subject land is located within the Agricultural Large Rural Residential Policy Area of the Municipal Development Plan. The policy area supports large rural residential development subject to:

- a) Section 10.18(a): Maximum parcel density shall not exceed eight (8) parcels per quarter section.
- b) Section 10.18(b): Suitable environmental conditions exist for on-site water supply and on-site sewage disposal.
- c) Section 10.18(c): The subject land is redistricted under the Land Use Bylaw, to an appropriate land use district other than an AG Agriculture: General District or AD Agriculture: Future Development District.
- d) Section 10.18(d): The subject land contains one contiguous developable acre (0.4 ha) of land.
- e) Section 10.18(1)(c): The related subdivision and development is designed in such a way so as to minimize the amount of tree removal; and,
- f) Section 10.18(1)(d): Internal road access is provided to each of the existing and proposed lots that are part of the subject lands.
- g) Section 10.18(3): Council may establish a policy in the Council Policy Handbook outlining the circumstances, under which a Conceptual Scheme is required, as well as the purpose, general content and procedures required for the preparation and adoption of a Conceptual Scheme.

5.2 The Conceptual Scheme illustrates the proposed land use bylaw amendment application and future proposed subdivision for the balance of the quarter section (Figure 2). The maximum lot yield (maximum parcel density for the quarter section) shall not exceed ten (10) parcels for the entire quarter section. **Please note that the developable areas are approximate and may change at the subdivision stage.**

### 6. LAND USE BYLAW

6.1 Pursuant to the Land Use Bylaw 8-2001, the subject lands are proposed to be redistricted to DC Direct Control District. The purpose of the DC District is to foster a rural residential lifestyle on properties smaller than rural residential parcels that provides for the preservation and protection of environmentally sensitive lands and habitat that are of significant ecological value to the community

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### LAND USE BYLAW CONT'D

**6.2** The DC District requires lots to be a minimum of 60 metres in width except in the case of an irregular shaped lot (such as a pie lot) and have a minimum area of 2.0 hectares (5 acres).

**6.3** A Land Use Bylaw Amendment has been submitted concurrently to rezone approximately 62.0 hectares (153 acres) of the SW 17-52-21-W4 from AG Agriculture: General District to DC Direct Control District.

### 7. CURRENT SITE USES

**7.1** The quarter section is currently divided in two AG Agriculture: General District parcels, a 6.99 acre parcel and a remnant parcel of 153.0 acres.

**7.2** There are no dwellings on the subject lands

**7.3** **The Conceptual Scheme proposes an Environmental Reserve (ER) dedication of 11.8 ha +/- (29.1 ac +/-) and proposed Municipal Reserve (MR) dedication of 6.2 ha +/- (15.3 ac +/-) as required under section 661(a) and (b). The proposed reserve areas are subject to change based on the required Biophysical Assessment and subject to final calculation upon subdivision.**

### 8. SITE CONSIDERATIONS & PROPERTY INFORMATION

**8.1** The general topographic relief of the quarter section is characterized as knob and kettle topography with numerous ridges alternating with low swales and pockets that form wetlands and watercourses typical of the Beaver Hills Moraine.

**8.2** A first parcel out of 6.99 acres has been previously subdivided from the quarter section and has an established residence on it. The property gains access via Range Road 215.

**8.3** The subject property contains some priority upland and wetland habitat, as identified in the Priority Landscape Ecology Assessment (PLEA) of Strathcona County.

### 9. ENVIRONMENTAL CONSIDERATIONS

**9.1** The Strathcona County Prioritized Landscape Ecology Assessment (PLEA) identifies lands within the quarter section that have significant ecological value and should be protected by municipal reserve, environmental reserve, conservation easements and environmental reserve easements.

**9.2** The (PLEA) identifies the following features in the SW 17-52-21-W4M:

- a) Ua:** Upland Poplar
- b) Uc:** Upland Forest with Small Wetlands
- c) Wa:** Marsh
- d) Wc:** Slough

**9.3** Pursuant to the MDP, Section 4 — Environmental Management, “in areas where native vegetation is important for soil conservation, water resource protection or wildlife habitat,

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### ENVIRONMENTAL CONSIDERATIONS CONT'D

Strathcona County will discourage further clearing or development, unless it is demonstrated to the County's satisfaction that these resources will not be negatively affected."

**9.4** Subject to the MGA Section 664(1), the owner of the parcel of land that is the subject of a proposed subdivision may be required to provide part of that parcel of land as Environmental Reserve if it consists of: a swamp, gully, ravine, coulee, natural drainage course, land that is subject to flooding or is unstable, a strip of land, not less than 6 metres in width abutting the bed or shore of any lake, river, stream or other body of water for the purpose of preventing pollution or providing public access to and beside the bed and shore. In addition, the applicant will be required to provide Municipal Reserve.

**9.5** **A Biophysical Assessment was conducted on the subject parcel April 25, 2006.** The purpose of the site assessment was to determine the potential for lands to be claimed by Strathcona County as reserves and/or for the conservation of environmentally significant areas during the subdivision process as provided under the Municipal Government Act and Municipal Development Plan.

**9.6** The site assessment consisted of an onsite survey of vegetation communities, topographical features, and wildlife on the subject property. An assessment was needed to determine wetlands and watercourses subject to claim as Environmental Reserve. Other environmental features important for conservation, such as potential wildlife corridors, Species at Risk, unique landforms, etc., can be protected through the dedication of Municipal Reserves and/or other conservation mechanisms. An air photo evaluation and literature search were initially undertaken to identify potential areas of interest within the subject property and its relationship to adjacent properties. Wildlife trails, cleared areas, wetland margins and watercourses were traveled in order to access and observe the subject property firsthand.

**9.7** The Prioritized Landscape Ecology Assessment of Strathcona County, 1997 identifies the site to have both priority upland and wetland habitat. The value of the habitat is in the complex of wetlands and upland habitats, its contribution to a larger contiguous habitat that exists on the subject and surrounding properties, and the provision of habitat corridors to facilitate wildlife movement through an increasingly fragmented landscape. Fragmentation and disassociation with other habitat units is listed as the greatest risk to maintaining the rural character, wildlife habitat values and the wildlife populations it supports. Wetlands provide an essential hydrological function in the maintenance of a stable water table and groundwater system. The uplands of the Beaver Hills Moraine are considered a recharge area where water enters the hydrologic system through precipitation for discharge through evapotranspiration, surface runoff, infiltration into the soil profile, and percolation into the groundwater system. Strathcona County is a participant in the Water for Life Strategy, a provincial strategy committed to protecting the quality and quantity of Alberta's water resources. The Outdoor Master Plan (1987), Strathcona Tomorrow (1992), and The Community Consultation Survey (2002) identified the community desire for a higher level of conserving natural areas in conjunction with subdivision and development within the municipality. Therefore, reserve identification and dedication is a priority for water management and wildlife habitat protection.

**9.8** The subject property was cleared in the past for agricultural uses except for two relatively small areas in the northwest and southwest corners which are covered by a mature mixedwood forest stand predominated by aspen and balsam poplar. The southwest wooded area contains a

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### ENVIRONMENTAL CONSIDERATIONS CONT'D

small stand of mature white spruce reflecting the late seral stage of mixedwood forests in Alberta. The entire property is currently used for cattle grazing except an acreage lot, located along the west side toward the northwest corner, that was previously subdivided from the quarter section. The forest structure of the woodlands has been impacted and suppressed by grazing over time and currently lacks diversity in the herbaceous ground cover, low shrub, and tall shrub layers. Typically the forest understory will recover rapidly once grazing is eliminated or controlled with a reduced grazing rate. The age class of this forest is estimated to be between 50 and 80 years. The size and characteristics of the trees suggests a mature stand approaching an old growth or late seral stage where under natural conditions trees die and get blown down or broken off resulting plentiful snags, an abundance of coarse woody materials on the ground, and gaps in the forest canopy. Normally the increased sunlight reaching the forest floor through the gaps promotes suckering of aspen and other trees and an uneven age structure of the trees develops. The increased sunlight also stimulates the growth of the understory, and the release of suppressed or dormant understory species. Grazing and past environmental events, such as late spring snowfalls, drought cycles, winds, etc., may contribute to tree mortality and may influence the transition into old growth characteristics. Within the forested area trembling aspen dominate the upland areas whereas balsam poplar dominates the low, moist areas and the ecotone between the upland and the wetland areas.

**9.9** The most significant wetland features are two freshwater marshes and their associated riparian perimeter located in the southwest and northeast corners of the subject property. These two marshes are linked by a watercourse that originates in the southwest marsh north through the acreage then northeast into the marsh in the northeast corner. This watercourse appears to have been rerouted to its current location from an incised channel that meanders along the south and east edge of the wooded area in the northeast corner. It is not known if the drainage alterations were approved by the Province. Pockets of standing water were observed within this cutoff channel. The southwest marsh receives a significant amount of input from lands to the south through culverts under Township Road 522. A small watercourse located approximately 550 metres east of Range Road 215 on 522, appears on the airphoto to originate in the property to the south and run north through the pasture on the subject property into the northeast waterbody. Upon investigation it appears water no longer flows through this watercourse which may have been cutoff when Township Road 522 was constructed with water flow diverted to the west through the roadside ditch where it joins the watercourse into the southwest marsh. The subject property lies within the headwaters of the Pointe-aux-pins Creek watershed, water in the area generally flows in a northwesterly direction. Several small depressional areas were found elsewhere on the property. The vegetation and soils indicate that these areas are periodically inundated with water and are ephemeral receiving their source of water through spring runoff and periods of high precipitation. Standing open water was observed in both freshwater marshes and water was flowing within the watercourse between the two.

**9.10** The subject property has an undulating topography with numerous ridges alternating with low swales and pockets that form wetlands and watercourses typical of the Beaver Hills Moraine. This topographical expression, commonly referred to as knob and kettle topography, often results in a convoluted and interconnected network of watercourses, wetlands, and waterbodies which have widely variable characteristics on spatial and temporal scales. The topography increases the difficulty in determining specific drainage courses particularly in forested areas where sightlines are obstructed. The bed and shore of the freshwater marshes and watercourse leading to it may be subject to claim by the Province, irregardless, the marsh, watercourses, and surrounding floodable

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### ENVIRONMENTAL CONSIDERATIONS CONT'D

areas are clearly subject to Environmental Reserve dedication as per the Municipal Government Act.

**9.11** Evaluating wildlife and Species-at-Risk in the area was limited by the time of year and the absence of a majority of migrants. Ungulates specifically moose (*Alces alces*) and white-tailed deer (*Odocoileus virginianus*) appear to be the dominant mammals found on the property, their presence was noted through observation of bedding areas, browse, scat and trails in the forested areas. Similar signs of coyote (*Canis latrans*) were observed. The freshwater marshes appear to harbor a broad diversity of waterfowl and other wetland dependant species. Due to the complex habitats, songbirds, woodpeckers, waterfowl and raptors are expected to be diverse and abundant. Connection with upland and wetland wildlife habitat units on surrounding lands provides wildlife corridors between large habitat blocks, thereby increasing the significance of the subject property.

#### **9.12 Reserve Recommendation**

**a)** Environmental Reserve (ER) be dedicated for the marshes, adjacent wetland areas, and the primary watercourse to the full extent described under the Municipal Government Act. It is recommended that a 7.5 to 10.0 m buffer adjacent to all ER areas be taken for access purposes. If there is a disagreement with this assessment, the exact area to be dedicated would require a more detailed site assessment through a topographical survey and/or a more detailed biophysical survey of plant communities, this would be the responsibility of the landowner to provide. Municipal Reserve (MR) should be dedicated to the full extent owing for the maintenance of upland habitat, based on 10% of the land area less that area owing as ER and/or lands claimed by the Province. Since the area subject to ER dedication has not been determined, the amount of land to be dedicated as MR is difficult to quantify. The configuration and location of MR lands to be dedicated should complement the lands dedicated as ER to form one larger habitat block and maintain its function as a wildlife corridor. The most important upland habitat area is the forested lands located in the southwest corner and should encompass the land surrounded by the major watercourse to the north and west to the minor watercourse that runs through the forested lands and connects to it.

**b)** An Environmental Reserve Easement (ERE) and/or a Conservation Easement Agreement (CE) between the landowner and Strathcona County could be considered as alternate mechanisms for wetland and upland habitat conservation. The agreement would be registered against the title of the lots being created.

### **10. TRANSPORTATION**

**10.1** A 5 meter road widening will be required adjacent to Range Road 215 and Township Road 522 at the time of future subdivision.

**10.2** At the time of future subdivision, all existing and proposed access locations and proposed internal roadways will be identified and must be to the satisfaction of Strathcona County's Engineering Servicing Standards.

### **11. SERVICING**

**11.1** The appropriate servicing for water and sewer will be determined at the time of subdivision to the satisfaction of Strathcona County.

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### 12. DEVELOPMENT CRITERIA

To assist in the preparation of future redistricting and subdivision applications the following list of Development Criteria have been developed for reference. The criteria was developed from policies, standards and regulations within the various applicable bylaws and statutory plans and from information gathered at meetings with landowners within the SW 17-52-21-W4 and the surrounding area. Additional development criteria may be identified at a more detailed subdivision stage.

**12.1** The proposed Conceptual Scheme (Figure 2) illustrates the proposed land use bylaw amendment that has been applied for and the future proposed subdivision. The Conceptual Scheme identifies the potential developable areas on the balance of the quarter section, taking into consideration undevelopable areas such as environmental reserve, municipal reserve and conservation lot, as well as an internal roadway location from Township Road 522.

**12.2** The developer (applicant) will, through the subdivision application process be required to address servicing for water and sewer, access locations, internal road layout, municipal reserve, environmental reserve, environmental reserve easements and potential conservation easement requirements, geo-technical considerations/constraints, approval fees, rural road levies and any other requirements deemed appropriate, to the satisfaction of Strathcona County.

**12.3** Technical considerations including a biophysical assessment or stormwater management report and any other studies deemed appropriate by Strathcona County to be addressed, if required, to the satisfaction of Strathcona County at the time of subdivision. At all times County standards shall be maintained.

**12.4** Future development shall only be allowed based on the provision of internal road access to individual parcels. Potential locations for internal road access are shown on Figure 2.

**12.5** For development to proceed to the level outlined on Figure 2, a 30 metre road right of way must be dedicated at a location suitable to Strathcona County, and a road must be constructed, to County standards, to provide access.

**12.6** Development within the quarter section will maintain a rural residential lifestyle on properties of approximately 2.0 hectares (5.0 acres) or larger

**12.7** For development to proceed to the level outlined on Figure 2, environmental reserve must be dedicated for wetland areas and watercourses to the full extent described under the Municipal Government Act at the time of subdivision.

**12.8** For development to proceed to the level outlined on Figure 2, municipal reserve must be dedicated to the full extent owing for the maintenance of upland habitat, based on 10% of the land area less that area owing as environmental reserve at the time of subdivision.

**12.9** Development adjacent to slopes, wetlands and water courses shall conform with environmental setbacks contained within the Land Use Bylaw 8-2001.

**12.10** For future development to proceed to the level outlined on Figure 2 a development agreement will be required to address the construction of an internal roadway and any offsite improvements required.



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### DEVELOPMENT CRITERIA CONT'D

**12.11** Prior to development, percolation and water table testing will be conducted on the proposed lots by a qualified professional so that suitable locations can be chosen for building sites and for on-site private sewage disposal systems.

**12.12** At all times all lots shall comply with the requirements of the appropriate land use district.

**12.13** The approximate base developable area is 50.0 hectares +/- (121.0 acres +/-). Based on the developable and undevelopable areas illustrated in Figure 2, 8 lots are proposed for the entire quarter section. **Please note that the development concept shown on Figure 2 is conceptual and may change at the time of future subdivision. Further investigation of the quarter section may identify constraints to development on the quarter section.**

### 13. SUBDIVISION APPROVAL

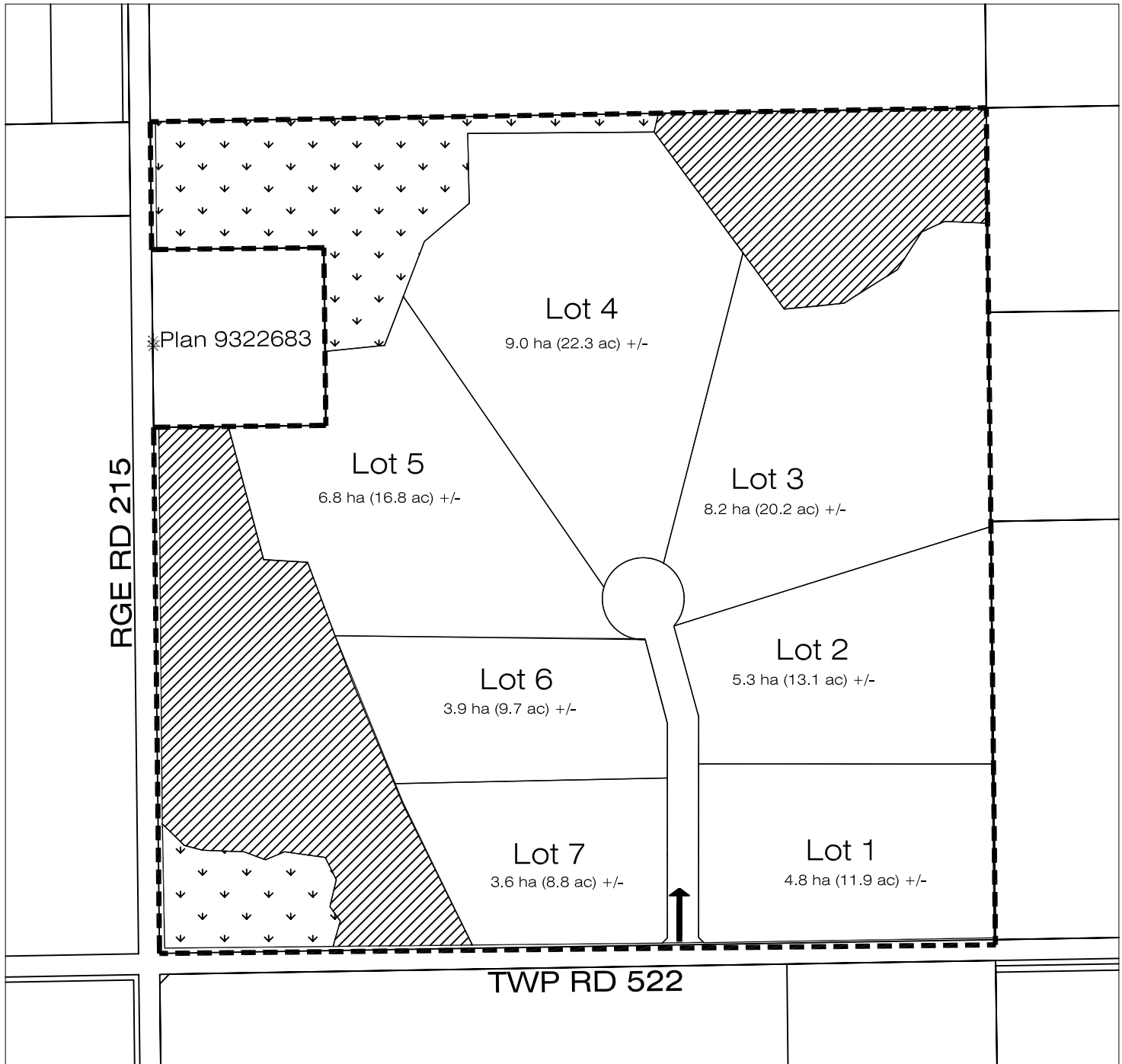
**13.1** Notwithstanding any other issues that may arise through the subdivision review process, the following will be addressed as conditions of subdivision:

- a) Final location of property lines and parcel areas may be adjusted at the time of subdivision, however, shall comply with the maximum density and minimum lot areas of the Land Use Bylaw
- b) District for the lands.
- c) Any other conditions which may be applicable.

### 14. COMPLIANCE WITH OTHER LEGISLATION

**14.1** Nothing in this Conceptual Scheme shall be interpreted as relieving a person from complying with Federal, Provincial or Municipal statutes or bylaws. In the event of a conflict between any of the provisions of this Conceptual Scheme and the provisions of any statute or bylaw, the provisions of the statute or bylaw shall prevail.

# CONCEPTUAL SCHEME PT. SW 17-52-21-W4



**Legend**

- Proposed Subdivision = 61.8 ha (153.0 ac) ±
- Proposed Developable Area = Approx. 44.0 ha (108.6 ac) ±
- Environmental Reserve Area = Approx. 11.8 ha (29.1 ac) ±
- Municipal Reserve Area = Approx. 6.2 ha (15.3ac) ±
- Existing Access
- Potential Access Location

**Figure 2  
CONCEPTUAL SCHEME PT. SW 17-52-21-W4**

PLANNING & DEVELOPMENT SERVICES

Drawn by: Shannyn Ellett	Dwg No.: P21M0003
Date Drawn: 9/05/2006	Adopted: Scale: NOT TO SCALE

