

Central Springbank

Springbank Creek Conceptual Scheme

BYLAW C-7298-2013, ADOPTED OCTOBER 1, 2013



ROCKY VIEW COUNTY
Cultivating Communities

OFFICE CONSOLIDATION

This document has been consolidated for convenience only. A copy of the original Bylaw and all amending Bylaws can be obtained from Rocky View County. This office consolidation comprises the following Bylaws:

Bylaw	Amendment Type	Date of Approval
C-7298-2013	Original Bylaw	October 1, 2013
C-8117-2020	Amendments throughout to allow for the development of a private school and the associated recreational Facilities	March 9, 2021
<u>TBD</u> <u>PL202200028</u>	<u>Amendments throughout to allow for the Land Use Redesignation and Concept Plan on PLAN 0310130, BLK 1, LOT 1.</u>	<u>TBD</u>

Bylaw C-7298-2013

A Bylaw of Rocky View County to adopt the Springbank Creek Conceptual Scheme

WHEREAS the Council deems it desirable to adopt the said Bylaw, and

WHEREAS the Council of Rocky View County has received an application to adopt the Springbank Creek Conceptual Scheme for the purpose of providing a framework for subdivision and development of residential lots, road network, utility servicing and open space, within portions of Sections 15-24-3-W5M and 22-24-3-W5M, as attached in Schedule 'A' of this bylaw; and

WHEREAS Council held a Public Hearing and has given consideration to the representations made to it in accordance with Section 692 of the Municipal Government Act, being chapter M-26 of the Revised Statutes of Alberta, 2000, and all amendments thereto.

NOW THEREFORE the Council enacts the following:

1. This Bylaw shall be known as the Springbank Creek Conceptual Scheme.
2. The Springbank Creek Conceptual Scheme is attached as Schedule 'A' to this bylaw.
3. Bylaw C-6478-2007 is rescinded.
4. The Bylaw comes into effect upon the date of its third reading.

Division: 2

File: 04715001/003/004/005/006/022/023/04722001/002/004/045/048

First reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on July 30, 2013, on a motion by Councillor Magnuson.

Second reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on October 1, 2013, on a motion by Councillor Magnuson.

Third reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on October 1, 2013, on a motion by Councillor Bahcheli.

Schedule 'A'

Forming part of Bylaw C-7298-2013

A Conceptual Scheme affecting the area within portions of Sections 15-24-3-W5M and 22-24-3-W5M, herein referred to as the “Springbank Creek Conceptual Scheme”.

Prepared for:

Rocky View County

911 - 32 Avenue NE Calgary, AB T2E 6X6

Prepared by:

Brown & Associates Planning Group

Suite 600, 940 – 6 Avenue SW Calgary, AB T2P 3T1

On Behalf of:

Paleozo Developments Inc.

In association with:

MMM Group

HAB-TECH Environmental

Bunt & Associates

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Springbank Creek Conceptual Scheme

1.0 INTRODUCTION AND VISION

The Springbank Creek Conceptual Scheme has been prepared for Rocky View County. The Springbank Creek Conceptual Scheme is prepared in recognition of all policies of the Central Springbank Area Structure Plan, and the Municipal Development Plan.

Open space in Central Springbank is a common resource that binds the community. The landscape, the land, magnificent views, and access to natural areas are components of 'open space' and their maintenance are a high priority in the Plan Area. Open space can be enjoyed and appreciated through physical and visual access.

*Parks, walkways, environmentally sensitive sites, natural areas, playgrounds, and play fields are some of the opportunities that provide physical open space... There is a strong desire to establish a comprehensive and connective open space system within the Plan Area. **Central Springbank Area Structure Plan; Chapter 2.6.***

THE VISION: Community Development

The residential community of Springbank Creek will be a model of open space and environmental stewardship for Rocky View County.

Rocky View County is exploring new forms and patterns of development to accommodate a growing population without compromising its rural character and agricultural heritage. Springbank Creek will manifest approved Rocky View County policies and will reinforce the commitment to make the County "a vibrant and desirable community in which to live" as stated in the Municipal Development Plan. Springbank Creek will meld creative design and innovation with land stewardship and environmental restoration. Central to the design of this community is the use of the open space guidelines identified in the Central Springbank Area Structure Plan.

Springbank Creek will be a comprehensively planned community. Through more efficient residential design, over 25 percent of the area will be conserved in naturalized open spaces. Springbank Creek will feature approximately 20 kilometres of interconnected pathways within this extensive open space network connecting residential development to the Springbank Creek valley and a private school site. Springbank Creek will employ tertiary level waste water treatment and disposal technologies that are environmentally sustainable and fiscally responsible in its servicing that can form the basis of a decentralized wastewater servicing solution.

Running diagonally through the Conceptual Scheme Area, the Springbank Creek valley is a major amenity for all residents of Springbank. Although much of the native habitat and wildlife in this area has been degraded due to cultivation and cattle grazing, with the development of Springbank Creek, this area will be rehabilitated back to its natural state. Concentrations of Environmental Reserve and Municipal Reserve land dedication in this valley together with a significant planting program will allow the creation of a district park.

Springbank Creek will offer high quality architecturally controlled single-family development. Residential development within Springbank Creek will blend with the open space and natural areas providing a variety of single-family housing types and configurations to address a

range of market segments in terms of lifestyles, price points, and demographics. Residential and school development will be sited based on a respectful proximity to the natural areas, as well as with sensitivity to specific site characteristics and optimal views.

2.0 PURPOSE AND OBJECTIVES

The purpose of the Springbank Creek Conceptual Scheme is to provide a comprehensive planning framework for specific land development projects. This Conceptual Scheme will be adopted by Council, and appended to the CSASP.

Policies in this Conceptual Scheme will:

- Provide a land use plan that is in conformity with the Municipal Development Plan and the CSASP.
- Provide a document that generally repeats the vision and policies of the Springbank Creek Conceptual Scheme as approved in June 2007 (Bylaw c-6478-2007) while providing a wastewater servicing concept and phasing plan.
- Identify and describe the transportation and infrastructure connections across shared property lines.
- Summarize community input and public participation initiatives that were undertaken as part of the plan preparation process.
- Provide policy statements as to the Developer's commitment during the development of the subject lands.
- Address the dedication of public roadways, environmental reserve, municipal reserve, and public accessible open space.
- Address requirements for amendments to this conceptual Scheme, as well as land use amendments and subdivision applications.
- identify interim and long term servicing alternatives.

POLICY

- 2.0.1 An amendment to the Springbank Creek Conceptual Scheme will be required for development Cells C and D. The landowners of development Cells C and D shall provide greater detail in an amendment to this plan should they choose to develop their property.
- 2.0.2 This Conceptual Scheme outlines a land use development Concept for development Cell A & E, which includes Springbank Creek Valley.

3.0 CONCEPTUAL SCHEME PLANNING AREA

3.1 Local Context

The lands within the Conceptual Scheme have historically been used for agricultural purposes. Remnants of the original residence and outbuildings circa 1920 are located in the centre of the lands. The first of the three existing residences in the homestead located in southeast area of the Conceptual Scheme area appeared in the mid-1940's, with the last home being moved onto the site in early 1980's. The homestead area was used as a dairy operation until the mid-1990's. The dairy operation ceased in 1995.

The Historic subdivisions for the portions of the quarter sections excluded from the Conceptual Scheme boundary date back to 1902 when a 20 acre parcel was subdivided from the balance of the southwest quarter of Section 22. The subdivision of the triangular portion excluded from the northwest quarter of Section 15 was completed in 1982. The subdivision of the 34 acres within the northwest quarter of section 15 occurred circa 1941. The residential lot in the southeast corner of the Conceptual Scheme was approved in 1983.

3.2 Area Structure Plan

This conceptual Scheme is included within the boundary of the Central Springbank Area Structure Plan (CSASP). Council adopted the CSASP on October 2, 2001 as Bylaw C-5354-2001. The CSASP was adopted in conformity with the MDP.

The CSASP provides the policy framework for this Conceptual Scheme. This Conceptual Scheme has been prepared in recognition of all policies of the CSASP.

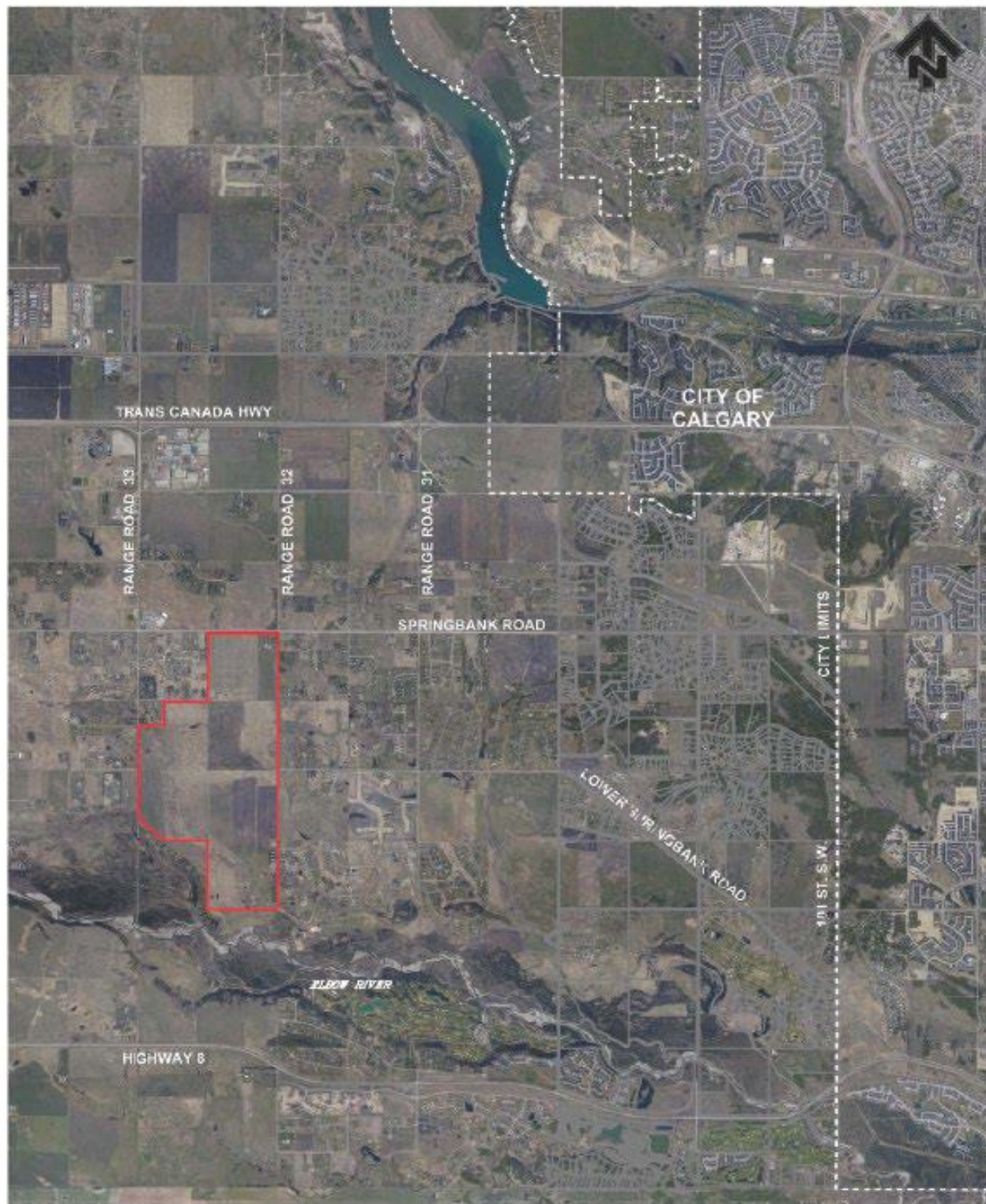
3.3 Location and Boundaries

The CSASP defined Conceptual Scheme boundaries for new residential development as illustrated on **Figure 1** and generally described as follows:

- Range Road 33 to the west
- Range Road 32 to the east
- Mountain River estates and the elbow River valley to the south
- Springbank Road to the north
- On the northwest by the boundary of Plan 9510094, and the west boundary of the NE 22 24-3-W5M and Township Road 243A.

The development cells are illustrated on Figure 5 as follows.

- Cell A: 478 acres
- Cell B: 79 acres
- Cell C: 140 acres
- Cell D: 158 acres
- Cell E: 85 acres



— Springbank Creek Conceptual Scheme

Figure 1:
Location



Springbank Creek
Conceptual Scheme
October 1, 2013

3.4 Current Ownership

The current ownership is illustrated on **Figure 2** as follows:

CELL A

- Paleoza Properties Inc. 445 acres
 - NE 15 24-3-5. Plan 9411634 Lots 1 and 2. 160.52 acres.
 - Portion of NW 15 24-3-5. 150.27 acres.
 - Portion of SE 15 24-3-5 and closed road allowance. 134.61 acres.
- Wilbur Willick, Descriptive Plan 0310130 Block 1 Lot 1; containing the original homestead.
- Susan Willick, Portion of SE 15-24-3-5.
- 1885807 ALBERTA LTD., Portion of SE 15 24-3-5

CELL B

- Masters Academy education Society, Portion of East half of SE 22 24-3-5.
- Paleoza Properties Inc., Portion of East half of SE 22 24-3-5. 1.5 acres.

CELL C

- Marlaine Mackay, Susan Lucas. Portion of Sw 22 24-3-5.

CELL D

- 1250895 Alberta Ltd., Portion of NE 22 24-3-5.
- Bradley Uoung, Plan 0613841 Block 1 Lot 1.

CELL E

- Paleoza Properties Inc. 84.63 acres
- *West half of SE 22-24-3-5. 84.63 acres*

3.5 Land Use Context and Adjacent Land Uses

The majority of the Conceptual Scheme Area is designated RF Ranch and Farm District. Cell E is designated for private school and athletic park and associated uses (DC116 as is currently zoned). Cell A is currently zoned as DC 154, A-SML and A-Gen, which remains unchanged. The east half SE 22 24-3-5 known as Cell B is designated for a private school (Direct Control District DC 116).

The surrounding lands are mostly designated Rural & County Residential District.

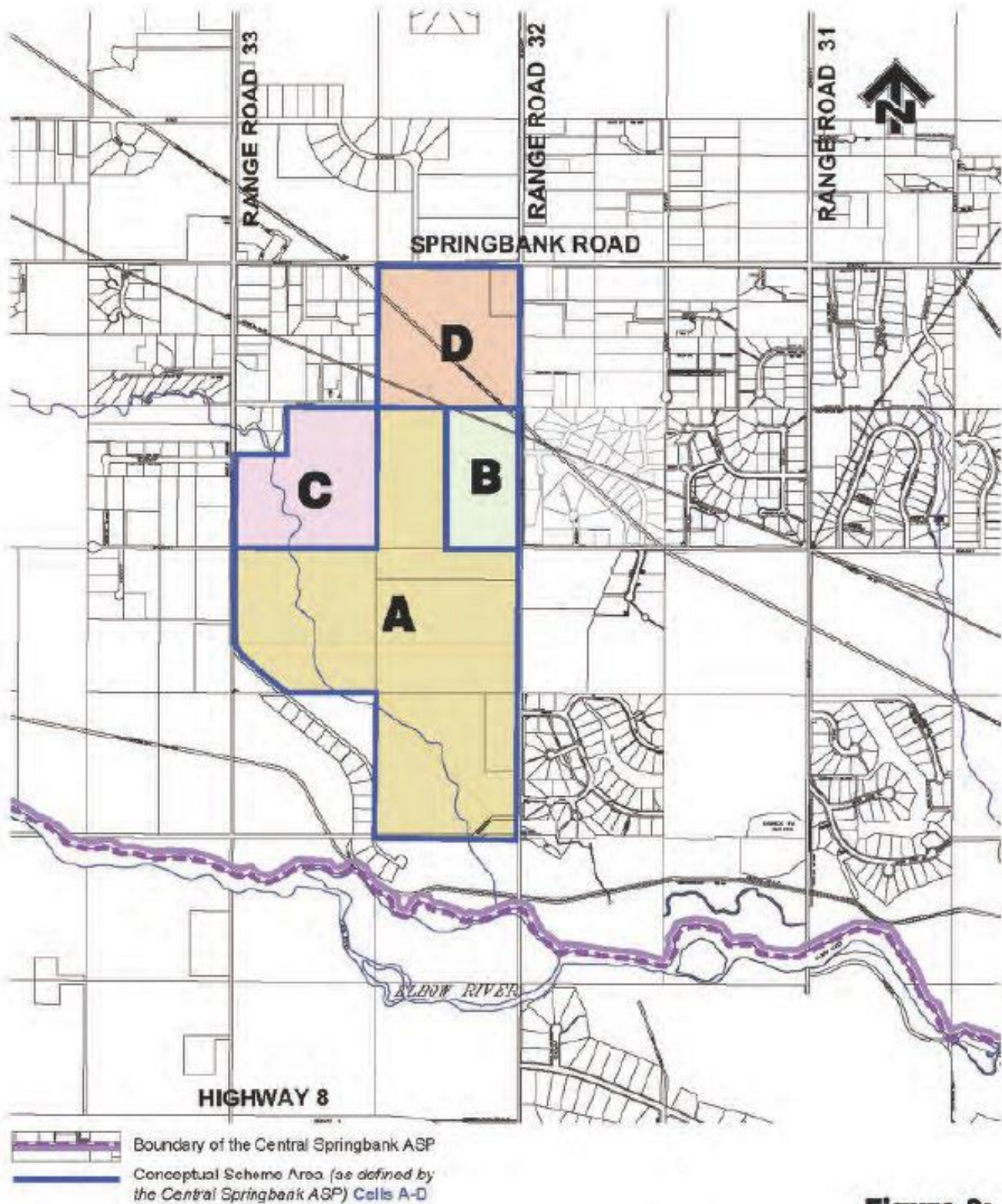


Figure 2:
**CONCEPTUAL SCHEME
 LOCATION and BOUNDARY**

Springbank Creek
 Conceptual Scheme
 October 1, 2013

4.0 SITE ASSESSMENT

4.1 Topography and Drainage

The dominant topographic feature is the Springbank Creek valley. the complete drainage basin for Springbank Creek as identified in the CSASP Sub-Basin Study includes approximately 8,000 acres, or 50-quarter sections as shown on Figure 3.

The Springbank Creek valley floor ranges in width from approximately 18 to 83 metres. The valley depth varies from 6 metres in the northerly sections to as deep as 15 metres in the southerly sections where Springbank creek meets the Elbow River valley. The slopes of the valley walls are generally in the range of 10% and, in some areas, vary to greater than 15% slope. Within the Conceptual Scheme boundary, the Springbank Creek bed slopes from northwest to southeast at less than a 1% grade.

Most of the Conceptual Scheme Area drains to Springbank Creek with gentle slopes of 2 to 6 %, including some large areas that are almost flat (Figure 4). Approximately 200 acres along the east side naturally drain eastwards to Cullen Creek. The landform generally slopes downwards from the highest portions in the northeast corner of the Conceptual Scheme Area (elevation 1191 metres) in a southwest direction towards the Springbank Creek Valley. The southerly upland section is generally lower (elevation 1156 metres). The elevation of the creek bed as it leaves the Conceptual Scheme Area to the south is 1140 metres. A small hill in the centre of Development Cell A is the highest landform in the southerly portion of the Conceptual Scheme Area at elevation 1179 metres.

This Conceptual Scheme Area is generally lower in elevation than lands to the north and northeast and higher than lands to the east, which drain towards Cullen Creek. Lands to the west are generally at the same elevation.

Outside of the Springbank Creek valley, topography and drainage do not limit development of the Conceptual Scheme Area.

4.2 Biophysical Assessment

DEVELOPMENT CELLS A AND C

The Springbank Creek Conceptual Scheme is located in the Okotoks Upland Sub-region of the Parkland Eco-region. The Springbank Creek valley is identified as a Wildlife Movement Corridor and Wildlife Sensitive Area in the CSASP. The CSASP Sub-Basin Study identified wildlife habitat, vegetation, and fisheries potential in the Springbank Creek drainage basin.

For Cells A, B and C, Ducks Unlimited Canada prepared a Biological report for Development in April 1998. The report provides a biophysical assessment as related to waterfowl habitat within the creek valley and natural low area. A copy of this report is provided under separate cover.

For Cell A and E, HAB-TECH Environmental completed the “Biophysical impact Assessment and Species at Risk Surveys Springbank Creek Lands”, August 2009. A copy of the report is provided under separate cover. For Cell C, HAB-TECH Environmental completed field studies and an addendum to the report in June 2013.

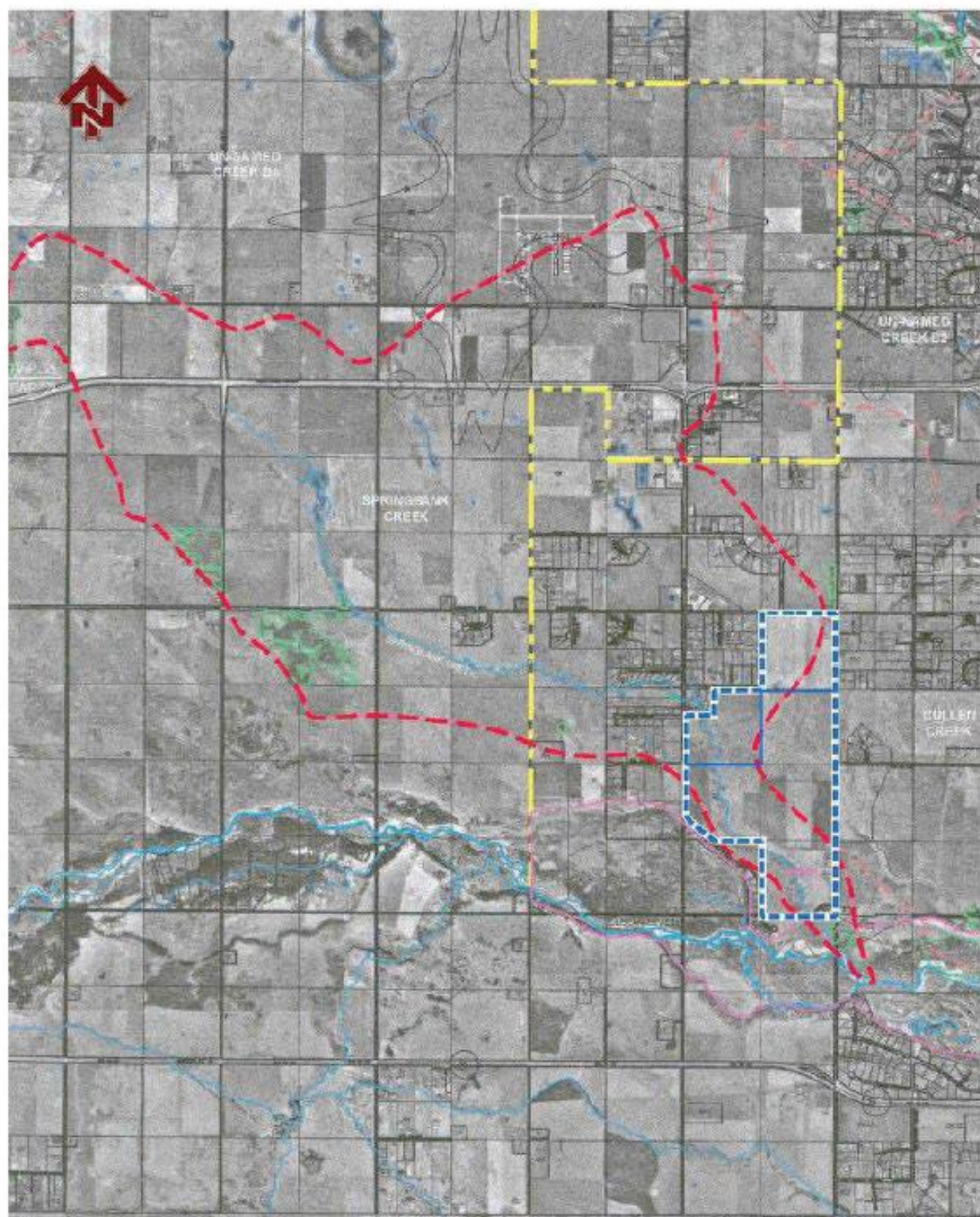


Figure 3:
SPRINGBANK CREEK
SUB-BASIN AREA

- - - - - Conceptual Scheme Boundary
 - - - - - Springbank Creek Sub-Basin Area
 (± 50 1/4 sections)
 - - - - - Springbank Creek Sub-Basin Area Study Area Boundary
 Image from the Central Springbank Area Structure Plan Sub-Basin Study (March, 2000)

Springbank Creek Conceptual Scheme

October 1, 2013

DEVELOPMENT CELLS B AND D

A biophysical site assessment for Cells B and D is to be provided by those developers prior to development.

POLICY

- 4.2.1 For Development Cells B and D, a Biophysical Site Assessment must be prepared by the developer in accordance with County standards.

4.3 Vegetation

Large tracts of the upland areas have been cultivated and beef and dairy cattle have heavily grazed the remainder of the area including the Springbank Creek valley for a number of years. Consequently, native vegetation has been replaced by smooth brome grass. Remnant native species that survived extensive grazing are only found on the steepest slopes in the creek valley. In wet seasons, small ponds that form in topographic lows support semi-aquatic marsh plants. Poplar and caragana shelterbelts are associated with the homestead site. Poplar trees, spruce trees, willows, cinquefoil, and buckbrush are thinly scattered in the southern portions of the creek valley.

The CSASP Sub-Basin Study states:

“Within the [Fisheries] R1 Reach area, mixed deciduous and coniferous cover is interspersed with complex wetlands. Highly complex riparian zone grasses, shrubs, and sedges also exist within this reach. The west bank of the creek bounded by Range Road 33 and Township Road 242 (Closed Road Allowance) contains mixed upland cover and grasses interspersed throughout an extensive dry (seasonally) coulee system. The vegetation of the remainder of the sub-basin (the uplands) is primarily grazed grassland with occasional forested blocks in the southern portion of the catchment.”

The Ducks Unlimited study states:

“The property consists largely of degraded grasslands with only limited woody vegetation along the lower end of Springbank Creek. There is almost no under story vegetation remaining in the aspen clones.”

It is anticipated that the recovery of the creek valley to a natural state will occur following the cessation of heavy grazing. The sensitive addition of native plant species in the valley as well as on residential lots will accelerate the natural processes.

The Ducks unlimited study states:

“With removal of the heavy grazing pressure, the potential exists for the recovery of this native zone to a more or less natural state, although species undoubtedly have become depleted or lost from the original native seed bank. The southern pasture located in the southeast ¼ of Section 15, if cleaned up a little and simply protected, would not only be aesthetically very beautiful, but would eventually develop into an excellent semi-wooded wildlife area similar to portions of the Elbow River valley to the south. Over a longer period, it is likely that the woodlands would spread along

this valley offering very attractive wildlife habitat. Protection of this stretch of the Springbank Creek valley would also provide a wildlife travel corridor linking the Springbank Creek and woodlands to the west with the extensive woodlands along the Elbow River. Such a protected wildlife corridor along the creek valley is not incompatible with low-density housing development on the adjacent higher ground.”

HAB-TECH reports that the majority of the planned development is located on habitats with low overall relative ecological significance largely because of past land disturbances. Development of the areas outside of the creek valley will not result in a significant negative effect on wildlife or vegetation in the study area. Riparian grasslands and wetlands in the Springbank Creek Valley should be retained through dedication of Environmental Reserve.

4.4 Wildlife

The Springbank Creek valley provides a wildlife movement corridor and day shelter for deer and coyotes that travel throughout the Springbank area and the Elbow River valley.

The CSASP Sub Basin Study states:

“There is high potential for fur-bearers, raptors, song birds, small mammals and ungulates within the lower reaches of Fisheries Reach 1. The remainder of the range provides migratory routes for high concentrations of ungulates (deer) that occupy the lands to the west.”

The author of the study has confirmed that while the upper limits of Fisheries Reach 1 are within the Conceptual Scheme Area, the lower reaches as referenced is to lands located south of the Conceptual Scheme Area within the Elbow River valley.

Raptor and magpie nesting sites have been identified in the treed portions of the Springbank Creek valley. While the songbird population has increased steadily in the surrounding residential areas because of year-round bird feeders and seasonal lawn and garden irrigation, songbird habitat within the Conceptual Scheme Area is currently limited due to historic overgrazing. Development with extensive landscaping, hedgerows, and seasonal irrigation will greatly improve habitat for songbirds, deer, and other small mammals.

As the Springbank Creek valley becomes re-vegetated with native species, the wildlife habitat will continue to improve. in accordance with Policy 2.1.2 d) and 2.5.4 l) of the CSASP, development adjacent to known habitat areas should consider restricting the number and/or range of domestic pets reducing any potential wildlife conflicts.

4.5 Waterfowl

Waterfowl habitat potential is limited to the creek channel and wetlands that may be present in the springtime. Historically, a seasonal wetland in Development Cell A may have supported waterfowl production; however, the area was drained for agricultural purposes. Any lands favourable to waterfowl production are limited to an unusually wet season that may occur from time to time. The establishment of permanent ponds in the creek valley and stormwater ponds in the upland areas would create potential waterfowl nesting areas.

The Ducks unlimited study states:

“There is almost no permanent water on this property and any wetlands are seasonal in nature. The Creek and some of the peripheral wetlands present in the springtime do

provide temporary habitat for returning spring migrant waterfowl. At the present time, the potential for waterfowl production is severely limited on this property due to the near total absence of suitable nesting cover resulting from the impact of over-grazing on the property, and the lack of permanence of the water bodies.”

4.6 Fisheries

This Conceptual Scheme Area is contained within the “Elbow River Special Planning Area” as defined in the CSASP. In the Elbow River valley, riparian habitat is highly developed and diverse. As stated in the CSASP Sub Basin Study:

“Fisheries Reach R1 (lower portion of Cell A) has high sensitivity and potential for sports fisheries usage and requires inventory and mapping. The Upper Reach Boundary is defined by winter base flow conditions. Riparian habitat is highly developed and diverse and therefore highly sensitive to sedimentation and increased flows as a result of runoff. It will require a well-developed storm management plan. Above R1 Reach boundary, the fisheries potential is nil.”

The author of the study has confirmed that the Upper Reach Boundary within the Conceptual Scheme Area has been heavily grazed and consequently the fisheries habitat, if any remains, has been degraded. A comprehensive multi-purpose storm water drainage plan including upland, creek channel, and riparian BMPs will greatly improve the creek corridor, increase overall wildlife habitat potential, reduce erosion in the creek channel and contribute to improved water quality and safeguard fisheries habitat in the Elbow River.

4.7 Wetlands

On August 11, 2003, Alberta Sustainable Resource Development Public Lands issued correspondence stating:

“None of the water bodies within the above lands are considered to be permanent and naturally occurring and thus are not claimable under Section 3 of the Public Lands Act. This includes Springbank Creek. Sustainable Resource Development has no claim to these water bodies.”

HAB-TECH reports 1.26 hectares of wetlands located in Cell E outside of the creek valley. For Cell C, there are 5 seasonal and 4 temporary wetlands outside of the creek valley for a total of 3.52 hectares. Approvals from Alberta Environment are required prior to subdivision approval where wetlands are involved.

As a result of discussions with the adjacent residents, the semi-permanent wetland identified by HAB-TECH located in the south end of the Conceptual Scheme Area may be habitat for salamanders. In accordance with Policy 2.5.4 b) of the CSASP, a variety of methods are appropriate to retain and protect this potential sensitive area such as environmental reserve easements, open areas, conservation easements and/or homeowner association caveats.

POLICY

- 4.7.1 Prior to subdivision endorsement, the developer shall compensate Alberta Environment for loss of wetlands in development areas as required by Alberta Environment.
- 4.7.2 The wetland generally as show on Figure 7 located in the southwest portion of Cell E in SE 15-24-3-5 shall be dedicated as Environmental Reserve or Environmental Reserve easement at the subdivision stage to the satisfaction of the County.
- 4.7.3 Wetlands and riparian grasslands in the Springbank Creek valley shall be retained as natural features through the dedication of Environmental Reserve in accordance with County standards.

4.8 Environmental Site Assessment

DEVELOPMENT CELLS A, B and E

Curtis Environmental Engineering Inc. has completed a Phase 1 Environmental Site Assessment, dated January 2004, for Development Cells A, and B. The report is submitted under separate cover. The assessment states:

“Curtis Environmental has found that there are no environmental concerns from past use of the property or surrounding area. From our on-site inspection, Curtis Environmental has found no environmental concerns from present use of the property or surrounding area. However, the following comments are presented regarding the site and surrounding land use:

- a. *The site has historically been used for agricultural purposes.*
- b. *Some lead based paint, asbestos containing material and polychlorinated biphenyls may be found in the building materials of the current residences and farm buildings.*
- c. *No evidence of spills, leaks or releases of any hazardous substances have been noted at the time of site inspection, however, and three (3) underground petroleum storage tanks are located adjacent to Range Road 32 at the original homestead site (Development Cell A). These tanks are not registered with the Petroleum Storage Tank Association of Alberta and do not meet the current requirements of the Alberta Fire Code.”*

DEVELOPMENT CELLS C AND D

An environmental site assessment is for Cells c and D is to be provided by those developers as necessary prior to development.

POLICY

- 4.8.1 For Development Cells C and D, an environmental site assessment shall be prepared by the developer in accordance with County Standards.

4.9 Archaeological and Historical Assessments

DEVELOPMENT CELLS A AND B

In 1997 and 2004, Bison Historical Services conducted Historical Resources Impact Assessments (HRIA) for Development Cell A and B. These HRIA identified prehistoric archaeological sites, and two sites were deemed to have significant scientific and historic potential. Bison Historical Services recommended that development near sites within the Springbank creek valley be avoided.

Three historic standing structures were deemed to have limited historical and architectural significance and no mitigation measures were recommended.

The Bison Historical Services reports are submitted under separate cover.

DEVELOPMENT CELLS C AND D

A Historical Resources overview completed on Development Cell c recommends an Historical Resources Impact Assessment before development approval. An HRIA should also be carried out on Development Cell D prior to development approval.

POLICY

- 4.9.1 For development Cells A and B, archaeological sites shall be identified in the subdivision application and any sites located in the Springbank Creek Valley that have significant scientific potential and should be protected through dedication of Municipal Reserve and Environmental Reserve.
- 4.9.1 For Development Cells C and D, a Historical Resources Impact Assessment should be prepared by the developer in accordance with County standards.

4.10 Geotechnical Investigation

DEVELOPMENT CELL A & E

In 2004, Curtis engineering Associates Ltd. carried out a geotechnical investigation of Development Cell A, B and E. The surface slopes on the uplands region of the site range from 2% to 8% while slopes in the Springbank Creek areas of the development are in a range of 10% to greater than 30%. Upland areas of the site may be developed as residential and institutional, while the Springbank Creek valley should be primarily retained as open space. At the subdivision stage, the County requires a full slope stability analysis by a qualified professional geotechnical engineer, for slopes 15 % or greater and greater than 2 meters in vertical height. A full slope stability analysis is required for any slope greater than 10%, greater than 1m in vertical height with a water body at or near the toe of the slope.

In 2012, Macintosh Lalani Engineering Ltd. investigated bore holes in a portion of Cell A & E for the first phase subdivision on the west facing slopes of the creek valley. They recommend that while there are areas where setbacks are not required in terms of slope stability, there are other areas where a setback of up to 20 metres from the crest of the valley slope is necessary. No disturbance should occur on the slopes in order to maintain a factor of safety of 1.5. Any future disturbance to the slopes should be reviewed by a qualified engineer.

DEVELOPMENT CELLS B, C AND D

Assessments of development Cells B, C and D will be carried out by those land owners.

POLICY

- 4.10.1 Buildings should be setback from the Springbank Creek valley as established by the slope stability analysis. Steeper slopes should be protected from development and retained as open space.
- 4.10.2 At the subdivision stage, the developer shall engage the services of a qualified Geotechnical Engineering. The report shall evaluate the soil characteristics, existing groundwater conditions and development constraints in relation to the Springbank Creek Valley in accordance with County standards.
- 4.10.3 For Development Cell C and D, a Geotechnical Investigation must be prepared by the developer in accordance with County standards.

4.11 Flood Hazard

There is no flood hazard in Cells B and D.

DEVELOPMENT CELLS A AND C

In Cells A and C, in the most severe conditions, floodwaters will be contained within the riparian areas of the Springbank Creek valley. There is no risk to flooding residential lots located on the surrounding upland areas 6 to 15 metres above the creek channel.

POLICY

- 4.11.1 The developer of Cells A and C shall identify flood hazards in accordance with County Standards at the subdivision stage.

4.12 View Plain Impact Analysis

Views of the Elbow River valley, the foothills, and the Rocky Mountain horizon are important to residents of Central Springbank. The visual analysis as shown on **Figure 4** demonstrates that the existing developments to the north and west of the Conceptual Scheme Area are higher in elevation, and therefore, future development will have a minimal impact on their long horizon views.

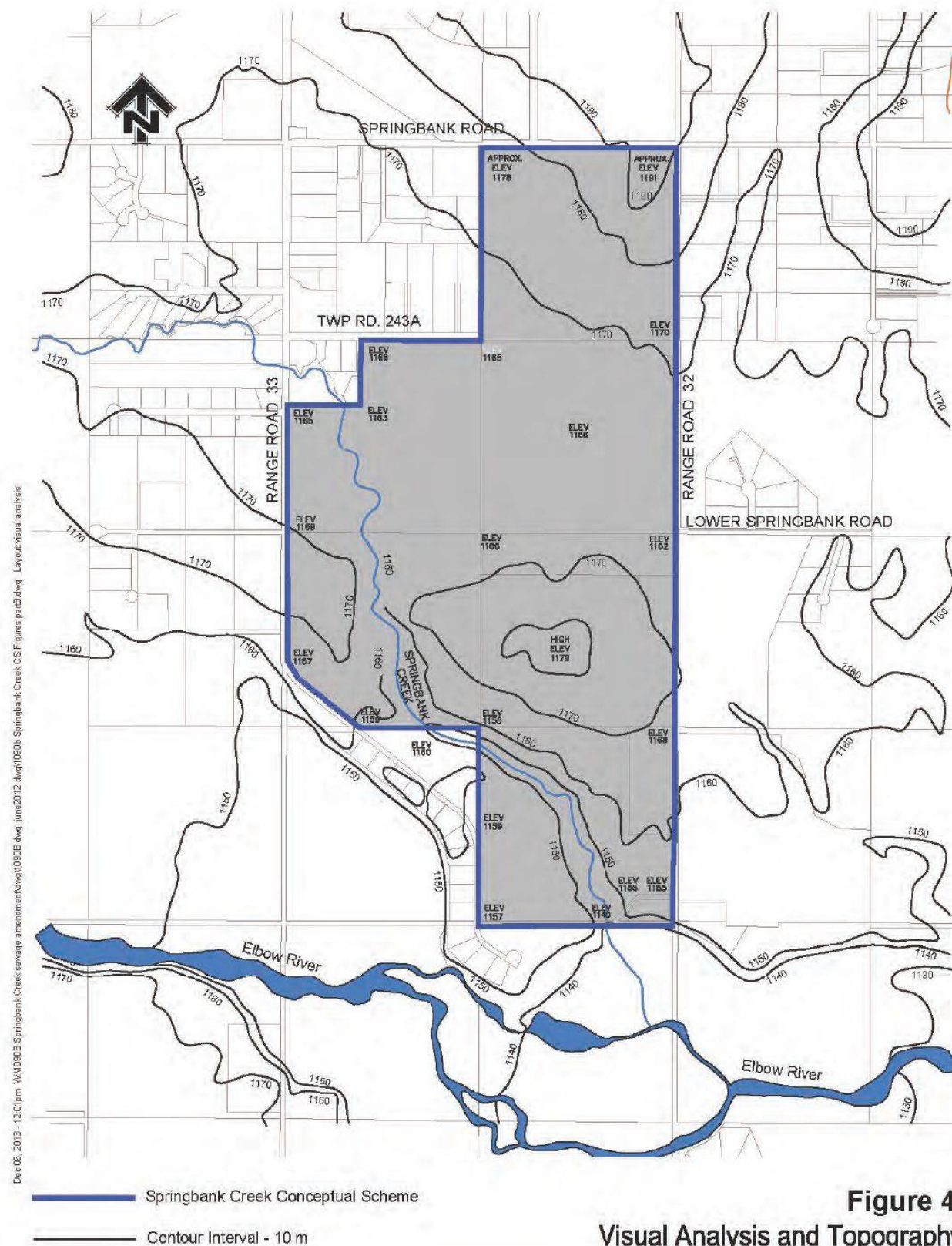


Figure 4:
Visual Analysis and Topography

5.0 LAND USE POLICIES AND GUIDELINES

5.1 Land Use

As a new Residential community the development will be single detached residential housing and open space.

The Conceptual Land Use is illustrated on **Figure 5** Residential lots and natural open space are the primary components of Cells A, C and D.

The Cell B is for a 75-acre campus style institutional area that will retain large areas of open space. The site will allow them to develop an environmentally sensitive campus with ample green space.

Other land uses as described in the Central Springbank ASP, such as seniors housing, may be located within the project area and detailed in subsequent amendments to this Conceptual Scheme.

Preservation of the Springbank Creek valley as a District Park is one of the most significant features of the Conceptual Scheme as illustrated on **Figure 5**. The open space will provide the elements necessary to emulate the rural and country style character envisioned for the Conceptual Scheme Area.

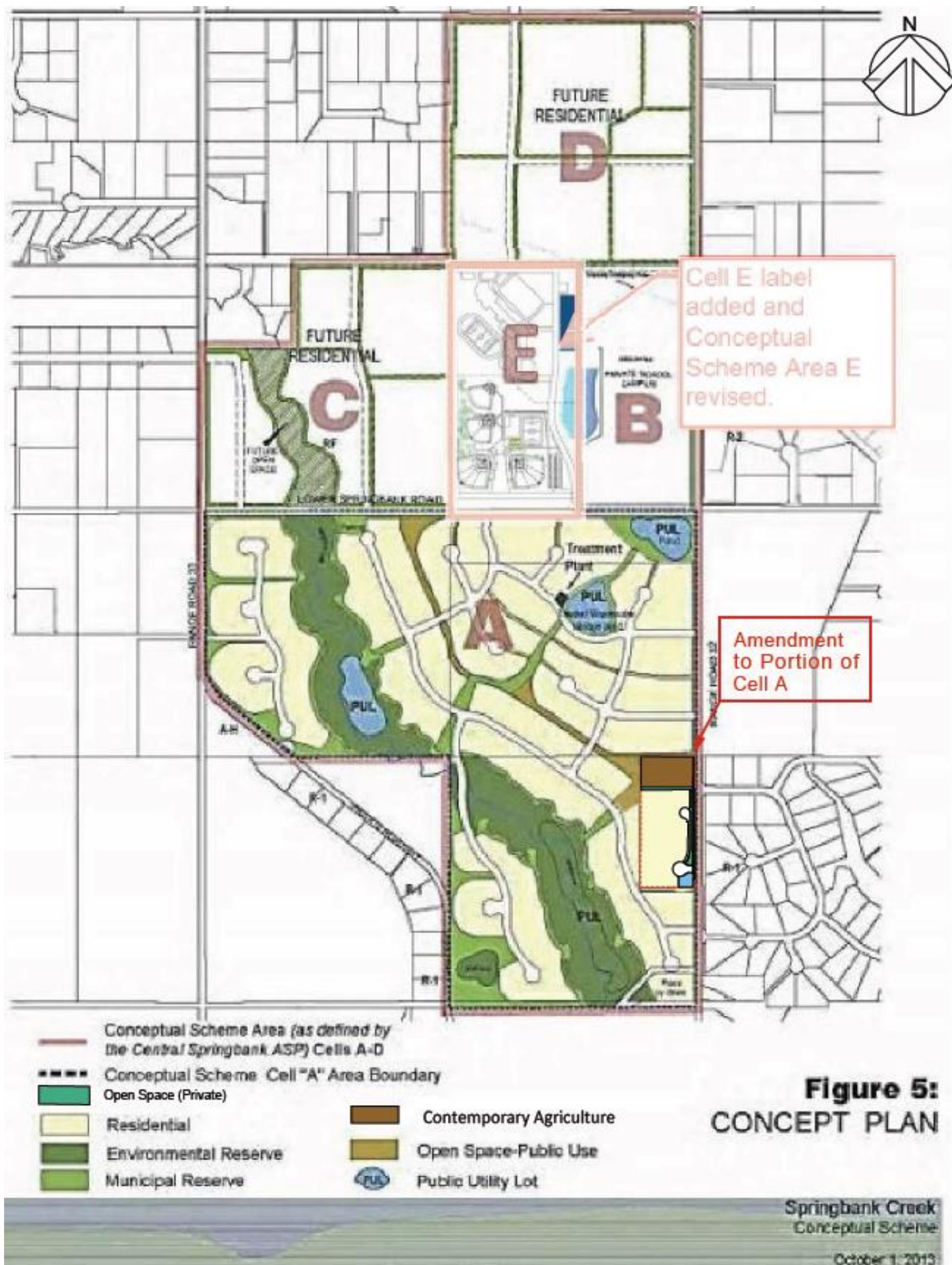
POLICY

- 5.1.1 The Land use Districts Land Use Bylaw ~~C-8000-2020 C-4841-97~~ as amended, as well as Direct Control Districts with Residential Guidelines should form the basis for land use redesignation applications.
- 5.1.2 With the exception of Home-Based Business (Type 1), as allowed within Section ~~294 46, Residential One District (R-1)~~ of Land Use Bylaw ~~C-4841-97-C-8000-2020~~, no applications for Business Development will be accepted within the Conceptual Scheme boundary.
- 5.1.3 Land use redesignation applications which support existing Agricultural developments while achieving the primary Residential components of this plan shall be permitted.

5.2 Density and Lot Size

The policies of the CSASP, Section 2.9.4 new Residential Areas state the following:

- “2.9.4.e) Minimum allowable parcel size is 0.8 ha.”
- “2.9.4.f) the number of lots allowed is 64 units on a quarter section.”
- “2.9.4.g) Notwithstanding policy 2.9.4 (e) and (f), the minimum parcel size may be reduced to a minimum of 0.4 ha (1 acre), if justified on a basis of additional open space, subdivision design, or environmental features related to the site through the preparation of a Conceptual Scheme and Direct Control District Bylaw.”



The policies of the CSASP for density shall apply unless otherwise provided in an amendment to this conceptual scheme. CSASP policies may be amended over time. Density will be established for each development phase as a portion of the entire plan area and will adhere to the policies of the CSASP in place at the time of application.

The maximum number of dwelling units based on 64 units per quarter section or equivalent is as follows:

Development Cell	Dwelling Units Maximum
A. 478 acres	183
B. 79 acres	none
C. 140 acres	56
D. 158 acres	63
E. 85 acres	none

DEVELOPMENT CELLS C AND D

The developers of Cell C and D will determine the applicable density and lot size through an amendment to this Conceptual Scheme.

DEVELOPMENT CELL B

Cell B is designated for a private school.

DEVELOPMENT CELL A & E

For Cell A, the lots will range from 1.0 to 2.0 acre. The development of 1.0 acre lots allows more land for open space as compared to a 2.0 acre lot plan.

In conformity with the policies of the CSASP, the 1.0 acre lots are justified on the following basis:

- “*Additional open space*” by the dedication of:
 - municipal reserve (62 acres),
 - environmental reserve (74 acres)
 - additional open space of approximately 27 acres privately owned with public access.
- “*subdivision design*” where all lots are serviced by a shared water, fire-fighting infrastructure and sewer utility that eliminates the need for individual water wells and private sanitary sewage disposal fields.
- “*environmental features related to the site*”. The Cell A concept plan is a classic “conservation cluster” design, which is a balance of residential lots, privately owned open space and publicly owned open space in the creek valley. Each and every residential lot has access to a roadway in the front and a public accessible pathway or walkway in the rear or side of the lot. The creek valley is the highest quality environmental feature that is to be retained, rehabilitated and enhanced through appropriate park features by the developer.
- “*Direct Control District Bylaw*” is proposed for Cell E developments.

POLICY

- 5.2.1 For Development Cells C and D, density and minimum lot size will be determined by the developers through an amendment to this Conceptual Scheme in accordance with County standards.
- 5.2.2 For Cell A, the maximum density is 64 units on a quarter section or equivalent. The maximum number of units is 183.
- 5.2.3 For Cell A, the minimum lot size is 1.0 acre.

5.3 Architectural Guidelines

The house designs will be chosen from a range of styles including French Provincial, Tudor Revival, Craftsman, Colonial, Georgian, and Contemporary Classic. Building areas will be determined in conjunction with the landscaping site development guidelines. Lot orientation and building areas will be established to protect visual corridors to the mountains and the valleys.

Input from adjacent residents identified concerns regarding the impact of lighting on adjacent properties and the desire to maintain a more subdued night time environment. Dark Sky Standards as per international Dark Sky Policy shall be implemented and no street lights standards shall be permitted.

The following design elements will be required for all residential dwellings:

- Elevations of all buildings must demonstrate consistent treatment of exterior materials, window details, reveals, changes in plane, and rooflines.
- Stone and brick will be primary exterior finishing materials. Stucco and wood siding will be secondary finishing materials.
- With exceptions limited by site design, garage doors should not directly face the street. Side or angled entries are preferred.
- Colours shall be based on natural environment earth tones. Bright colours or pastels will only be allowed as trim accents.
- Front entries should be visible from the street.
- Rooftop venting and chimneys shall be finished to match the building style.
- Roof materials shall be fireproofed shakes, tile, slate, concrete, premium asphalt, or metal.
- Houses on the same street frontage shall not have substantially similar elevations within five lots of each other.
- Rainwater leaders and soffit shall be compatible in colour with the trim bands.
- On corner lots, buildings shall have the two elevations facing the street consistent in terms of design, materials, and detailing.

POLICY

- 5.3.1 Architectural guidelines shall be established as part of the tentative plan of subdivision.
- 5.3.2 Development standards and architectural guidelines shall be registered against the title of all properties and administered by the developer and/or a Homeowners Association.
- 5.3.3 Detailed landscaping and water conservation guidelines shall be registered against the title of all properties and administered by the developer and/or a Homeowners Association.
- 5.3.4 The community shall be developed according to a low-light policy (dark skies principles). Associated lighting shall be designed in a manner sensitive to a rural setting, all of which will be ground oriented and offer reduced levels of lighting within the community.

5.4 Landscaping Guidelines

The main concept in the development of a landscape character for the community, on both public and private lands, is to maintain a high percentage of natural and informal landscapes. This approach will reinforce the theme of living in a community that balances new residential development with the natural landscape features in the Springbank area. Through the implementation of landscape guidelines for both public and private lands, the community will develop a consistent character of vegetation and landscape elements that enhance the architectural expression of the community.

Lot landscaping layouts will be designed using hardy plant materials to reflect the natural patterns found regionally. Large areas of turf will be minimized. The visual experience of the community should provide the impression of a landscape that has been retained rather than introduced. The visual quality of the lot from all sides will be carefully considered. Landscape planting will be used to frame and enhance views of the Springbank creek valley, the elbow River valley, and the mountain vistas. Site grading will be minimized and respect the existing slopes and drainage conditions. Wherever possible, existing vegetation is to be retained. Lot layout plans will include designs for on-site storm water BMPs.

The consistent use of plants, shrubs, trees, and grasses appropriate to the region will be part of the detailed Landscape Plan. The use of trees in natural groupings rather than in formal layouts will be encouraged on private lots. If trees are planted in formal lines, they should be placed where long views or axial conditions such as driveways are present. The manicured landscape should be carefully interfaced with the natural landscape. Transitions using natural rock, wildflowers, and native vegetation are encouraged. Vegetation should be placed in natural groupings and should be used to soften structures such as fencing and other site furnishings.

Specific landscaping details will be required for each residential lot in order to provide for consistent, high quality landscaping standards throughout the development and to minimize the use of water for landscaping purposes. More drought resistant plants will be encouraged as well as the use of rain barrels and cisterns to minimize potable water use for irrigation purposes. Best management practices shall be integrated into the residential development and common areas to minimize water consumption.

Driveways and pathways should be laid out to reflect natural grades. Driveways should not be excessive in width and widen only near the garage door and parking areas. Site structures such as gazebos, patios, decks, retaining walls, and planters should be designed to be appropriate to the scale and aesthetic of the house, and complement the existing and proposed landscapes. Additional general landscape guidelines are as follows:

- A minimum of 6 trees per lot will be included in the landscape guidelines for the building and landscaping areas of the lots. Trees should be planted in large groups emulating natural tree stands and complemented by high headed shrubs and grasses within the planting beds. Individual trees should be carefully placed to ensure full maturation and size (Aspen, American Elm) or appreciation of flowering during spring season (Mayday, Dolgo crab.)
- Site grading will be strictly controlled and primarily confined to the building construction area and driveways.
- Impervious surfaces, not including the residence, comprised of asphalt, concrete and/ or paving stones should not exceed 25% of the total lot area.
- Landscaping within the building area should be consistent with the surrounding landscape theme of the lot.
- Planting adjacent to the house and garage should be considered in terms of scale, texture, and colour. Trees planted alongside structures in the building area should be selected for ornamental and complimentary qualities, and also provide practical functions such as shade and wind protection.
- The use of hedgerow shrub planting and vines to soften fencing will be encouraged.
- Site grading will be minimized and appropriate for storm water best management practices.
- The use of manicured turf is to be limited.

POLICY

- 5.4.1 Landscaping guidelines shall be established as part of the tentative plan of subdivision. The landscaping guidelines will ensure a variety of trees will be planted on each lot.

5.5 Compatibility with Adjacent Development

The surrounding subdivisions are zoned Residential One District and Residential Two District In order to achieve compatible Land Use with these existing residents, development proposals should be similar.

5.6 Open Space, Municipal Reserve and Environmental Reserve

In order to facilitate the establishment of a connective open space system, Municipal Reserve and Environmental Reserve will be provided by a full dedication of land as illustrated conceptually on **Figure 7**. Municipal Reserve lands and Environmental Reserve lands within the Conceptual Scheme Area should be concentrated in the Springbank Creek valley to create the Springbank Creek District Park as identified by the Rocky View West Recreational District. Through the creation of the Springbank Creek District Park, the Springbank Creek valley would be conserved as a significant wildlife movement corridor. The valley habitat can be enhanced and improved through a planting program, effectively restoring the open space to a natural rural landscape.

At the subdivision stage, the developer will install corner pin boundary markers adjacent to public lands in accordance with County standards.

An approximately 15-acre site has been identified as a potential Municipal School Reserve site in the Montebello Conceptual Scheme area located east of Range Road 32. Given the proximity of the Conceptual Scheme Area to the existing Rocky View School District sites along Range Road 33 and this additional potential school site, no Municipal School Reserve site is proposed within the Conceptual Scheme Area.

This plan provides a linked open space system of privately owned and publicly accessible open space, municipal reserve and environmental reserve. The lands are accessible to all residents of the County to establish a system of safe and convenient walkways between the Springbank Creek District Park and adjacent developments. Walkways will be constructed to a standard acceptable to the county. the pathway connections will be at the discretion of the County. Lands proposed to be dedicated as open space will be identified with the land use redesignation and subdivision applications. **Figure 11** illustrates typical boundary marker signage.

CELL A

Common ownership of Development Cell A provides the opportunity to transfer Municipal Reserve dedication from 4-quarter sections into the Springbank Creek valley to enhance and enlarge the size of the district park. The policies of Sections 2.6.3, 2.6.4 and 2.6.5 of the CSASP will apply.

The general breakdown of open space in Cell A is approximately as follows:

Total site area: 483 acres

Environmental Reserve dedication: 73 acres

Developable area: 490 acres

Municipal Reserve land dedication: 61 acres

Includes Municipal Reserve deferred from the private school site in Cell B: 5.97 acres

Open space with pathways accessible to the public on private lands: 27 acres.

Public utility lots for storm water management: 16 acres.

CELL B

Most of the municipal reserve dedication in cell B (5.97 acres) has been transferred to cell A in order to create the Springbank Creek park. Municipal reserve land of 1.93 acres is to be dedicated on the west side of Range Road 32 for the regional pathway link.

The general breakdown of open space in cell B is approximately as follows:

Total site area: 79 acres

Environmental Reserve dedication: none

Developable area: 79 acres

Municipal Reserve land dedication: 1.93 acres

Municipal Reserve deferred to cell A: 5.97 acres

Public utility Lot for storm water management: 5.4 acres

CELL C

The Springbank Creek Valley in Cell C should be protected from development by the dedication of private open space, municipal reserve and environmental reserve similar to Cell A. Details are to be determined by the land owner through an amendment to this conceptual scheme in accordance with County standards.

The general breakdown of open space in cell c as is approximately as follows:

Total site area: 139.61 acres

Environmental Reserve dedication: approximately 13 acres

Developable area: approximately 126 acres

Municipal Reserve land dedication required: approximately 12.5 acres

Open space accessible to the public on private lands: to be determined

Public Utility Lot for storm water management: to be determined.

CELL D

For Cell D, open space, municipal reserve and environmental reserve will be determined by the land owner through an amendment to this conceptual scheme.

The general breakdown of open space in Cell D as is approximately as follows:

Total site area: 158 acres

Environmental Reserve dedication: none

Developable area: 158 acres

Municipal Reserve land dedication: 15.8 acres

Open space accessible to the public on private lands: to be determined

Public utility Lot for storm water management: to be determined.

POLICY

- 5.6.1 Dedication of environmental reserve and municipal reserve lands in Cell A, Cell B and Cell C is primarily to create the Springbank Creek District Park and the regional pathway network.
- 5.6.2 In Cell A, privately owned lands to be dedicated with full public access will be identified at the subdivision stage and conform generally to the images shown in this Conceptual Scheme.
- 5.6.3 In Cell C and Cell D, lands to be dedicated as private open space, municipal reserve and environmental reserve are generally shown on Figure 7 and will be identified in an amendment to this Conceptual Scheme.
- 5.6.4 Environmental Reserve in Cell A and C will be dedicated on the steep slopes of the Springbank Creek Valley and the floodplain of the Springbank Creek in accordance with County standards.
- 5.6.5 The developer shall establish a home-owners association charged with the responsibility for operation and maintenance of public open space and private open space.
- 5.6.6 The privately owned open space shall include public access agreements that function to connect to municipal reserve and environmental reserve lands and pathways.
- 5.6.7 The developer of Cell A and Cell C shall provide amenities related to the Springbank Creek District Park including but not limited to signage, parking areas, benches, receptacles, and other items as determined by the County.
- 5.6.8 The wetland generally as show on Figure 7 located in the southwest portion of Cell A in SE 15 24-3-5 shall be dedicated as Environmental Reserve or Environmental Reserve Easement at the subdivision stage in accordance with County standards.

5.7 Transportation Network and Improvements

In 2007, MMM Group completed the 2007 TIA Update Report for 42 lots in Cell A located north of Lower Springbank Road, which is designated Direct Control District (DC 116).

In 2009, a Traffic Impact Analysis (TIA) was carried out by Bunt & Associates and is submitted under separate cover. While the tiA was based on an earlier and larger scale development concept, the conclusions drawn in the TIA will not be substantially different on this Conceptual Scheme. Updates to this original TIA reflecting more current and specific development plans for each Development Cell may be provided, if required, at the tentative plan stage.

In 2012, MMM Group completed the 2012 TIA Update Report for the proposed 43 lots in Cell A located south of Lower Springbank Road. The conclusions of both reports are relevant and largely unchanged over the time period. The extension of Lower Springbank Road is required to the access point of Cell A, B and C. An emergency access may be required. The capacity analysis shows that all intersections will operate at LOS "C" or better, post development by the year 2015. There are no significant differences between the results from the 2015 post development scenario compared to those previously forecast for the 2009 post-development scenario. Cell E as amended by Bunt & Associates TIA.

POLICY

- 5.7.1 The County will require updates to the TIA reflecting current and specific development plans for each development Cell at the land use application or subdivision application stage in accordance with County standards.
- 5.7.2 The County shall establish the required upgrades and resurfacing of municipal roadways and intersections in conjunction with the phasing of developments. The County shall establish the timing of these improvements. The costs will be borne by the developer. Cost may be recovered through the Infrastructure Cost Recovery Policy.

5.8 Roadway Connections

Access to the Conceptual Scheme Area will be provided from Range Road 33, Range Road 32, Lower Springbank Road and Springbank Road.

The private school site in Cell B will access primarily to Range Road 32 and Lower Springbank Road. The private school site is anticipated to have two entrances along Range Road 32 at approximately 400 meters and 600 meters north of the intersection with Lower Springbank Road. The exact spacing and access details of the entrance locations and timing for any required improvements on Range Road 32 such as turning lanes will be addressed at the development permit stage.

Access between Development cells can be accommodated at the locations generally as shown on **Figure 5**. Emergency access and evacuation links are proposed generally as shown on **Figure 5**.

The Conceptual Scheme envisions vehicular crossings of Springbank Creek, generally as shown on **Figure 5**. Locations of Creek crossings are selected to reduce disturbance to the Creek valley and steep slopes. These vehicular crossings will be designed sensitively to accommodate pedestrian trails and wildlife movement.

Roadway crossings of the Springbank Creek valley are essential to provide a safe and efficient transportation network for Central Springbank as well as provide access to lands on both sides of Springbank Creek. The Lower Springbank Road creek crossing provides an alternative access to the existing and future developments along Range Road 33, south of Springbank Road, as was identified in the Central Springbank Transportation Network Study. The creek crossing in cell A is required to provide access to the southwest corner of the Conceptual Scheme Area that would otherwise be isolated, as no other public road access exists.

The exact details of the creek crossings will need to be approved by all necessary regulatory agencies including the County, Alberta Environment and the Federal Department of Fisheries and Oceans to ensure there is minimal impact on the creek valley and wildlife movements while ensuring safe vehicular crossings. These details will need to be provided before land use approval for any of the residential lands requiring an access roadway across the creek valley.

Development Cell D can obtain access from Springbank Road, Range Road 32, and through Cell A. Development Cell A will provide access to adjacent Development Cells as deemed necessary by the County.

POLICY

- 5.8.1 If necessary, access to adjacent Development Cells may be provided at temporary locations until such time as the County approves permanent connections.
- 5.8.2 Detailed designs of the creek crossings will be to the satisfaction of regulatory agencies including the County, Alberta Environment and the Federal Department of Fisheries and Oceans.
- 5.8.3 Deep utilities may be permitted inside or outside of the road structure in accordance with County standards.
- 5.8.4 No emergency access linkage shall be provided to the Mountain River Estates private road at the request of those residents.
- 5.8.5 For residential lots, there will be no direct access to Springbank Road, Lower Springbank Road, Range Road 32 and 33.
- 5.8.6 A turn-around bulb at the south end of Range Road 33 at the entrance to Mountain River Estates shall be provided.

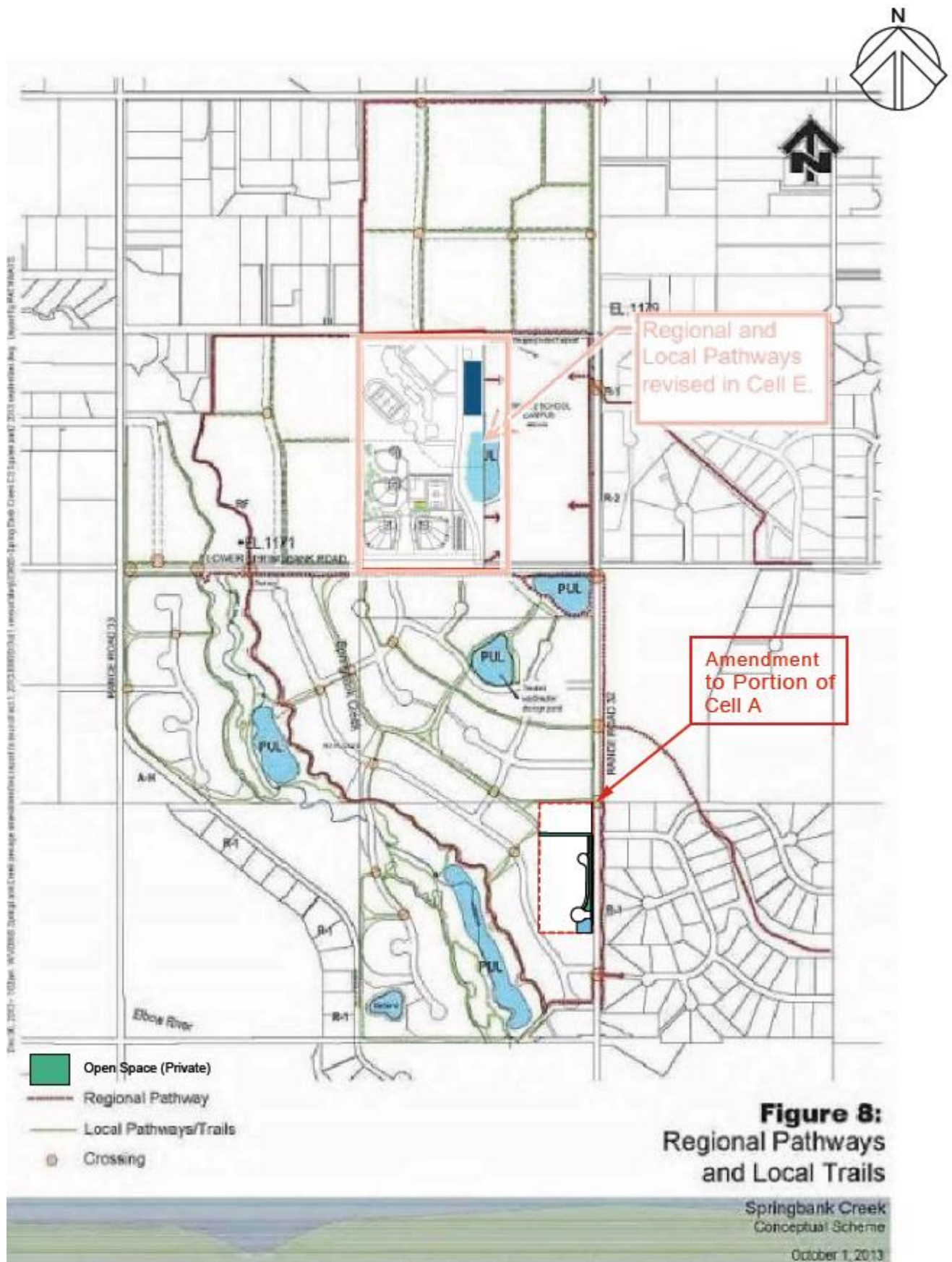
5.9 Pathway Connections

In accordance with Policies 2.6.5 and 2.9.4 i) of the CSASP, a connective walkway system is illustrated conceptually on **Figure 8**. The Springbank Creek valley offers an opportunity to create a walkway and open space connection. As illustrated in **Figure 8**, a linkage through Development Cell A and along the Springbank Creek valley is provided. The location of the Regional Pathway link within the Springbank Creek Valley will be detailed at the subdivision stage.

Regional pathway linkages across all development cells must be included with subdivision plans. Extensions of the internal pathway networks between all development cells are required.

POLICY

- 5.9.1 The location of the pathway linkages shall be established generally as shown on **Figure 8** in accordance with County standards and to complement the adjacent subdivision plan.
- 5.9.2 The developer at his sole cost, shall construct regional pathways and local trails including road crossings, and parking lots in accordance with County standards.
- 5.9.3 The developer shall provide signage, pavement markings, and other safety features at pedestrian crossings at locations.
- 5.9.4 Pathways and trails shall be designed as a fully connected network.



5.10 Wastewater Servicing

Developments within the Conceptual Scheme Area will be designed as part of a regional wastewater system. Pending the development of a regional system, a tertiary level wastewater treatment system using sprinkler irrigation of forage crops and evaporation of treated wastewater will be considered by the County as shown generally on **Figure 9**. There is no traditional lagoon for treating wastewater.

Over-sizing of the wastewater mains may be required to accommodate adjacent developments in addition to any offsite areas included in the regional servicing strategy.

The treatment plant and disposal area as shown on **Figure 9** is primarily for Cell A development. The system in cell A is an incremental contribution to a Regional servicing solution for all of Springbank.

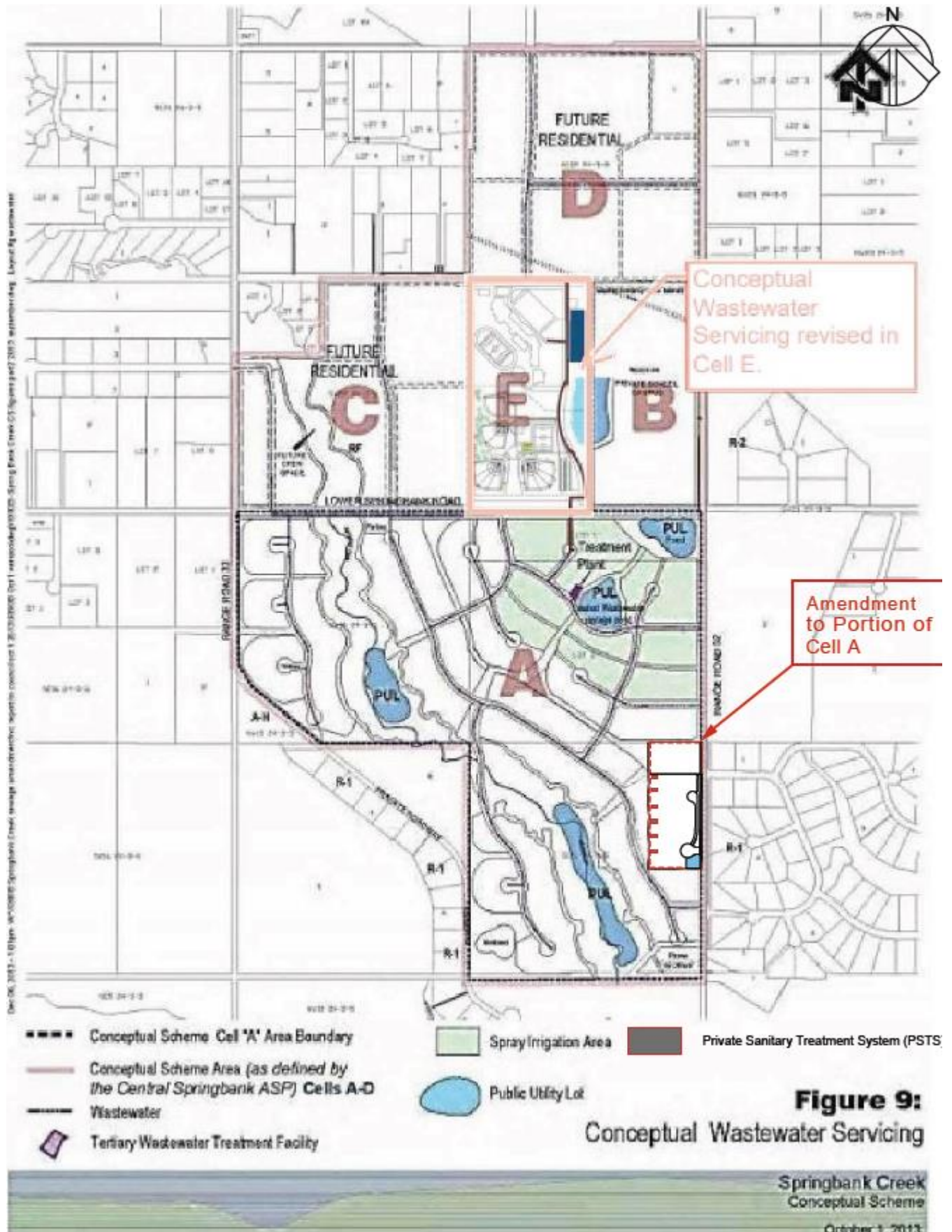
The wastewater treatment plant can be enlarged to treat wastewater from Cell B, Cell C, Cell D and other local subdivisions. The disposal of treated wastewater by spray irrigation must be handled on the development cells where the wastewater originates, or, alternately, disposal of treated wastewater to the Elbow River valley.

Individual private sanitary disposal systems will ~~not~~ only be accepted as an interim solution, at the discretion of the Approving Authority.

POLICY

- 5.10.1 Sanitary sewer servicing within the Springbank Conceptual Scheme shall be designed to connect to regional servicing systems.
- 5.10.2 Notwithstanding Policy 5.10.1, sanitary sewer servicing may be provided by a tertiary level treatment system and using spray irrigation and evaporation of treated wastewater, or an approved Private Sewage Treatment System, during the interim stage, pending ultimate availability of a regional servicing system and, or disposal to the Elbow River valley. Irrigation will take place on a dedicated area generally as shown on **Figure 9**.
- 5.10.3 Internal servicing systems and networks within the Springbank Conceptual Scheme shall be in accordance with county standards for connection to regional systems.
- 5.10.4 Cost recovery will be implemented from future development cells to assist in over sizing of mains. Cost may be recovered through the infrastructure cost Recovery Policy.
- 5.10.5 Each home will connect to a ~~shared~~ wastewater treatment system designed by qualified professionals in accordance with Alberta Environment guidelines.
- 5.10.6 The wastewater treatment facility is to be located on a Public Utility Lot to the satisfaction of the County. The spray irrigation field will be designated in a Direct Control District that allows for phasing-out or reduction in whole or in part of the spray irrigation area, and allowing the land to be developed for residential uses in accordance with the policies of the conceptual Scheme and a Direct Control Bylaw.
- 5.10.7 Each residential parcel shall contain a minimum of one (1) contiguous acre in accordance with the County servicing standards.

- 5.10.8 Under no circumstances will septic pump out systems, treatment lagoons or open discharge from septic tanks be permitted.
- 5.10.9 The wastewater treatment system shall be constructed by the Developer and turned over to the County as the plant will be owned and operated by the County at a point determined by Council.
- 5.10.10 The wastewater treatment facility shall be designed to accommodate surrounding developments through expansions. However, the spray irrigation area is sufficient to serve Cell A development only. Spray irrigation of treated effluent accruable to other developments, including Cell B, Cell C, Cell D, Cell E or other local developments must be handled by other means including but not limited to spray irrigation on other sites or discharge of treated water to the Elbow River Valley.
- 5.10.11 A sludge disposal plan will be prepared to the satisfaction of the County prior to the approval of the construction of the wastewater treatment system.



5.11 Potable Water Servicing

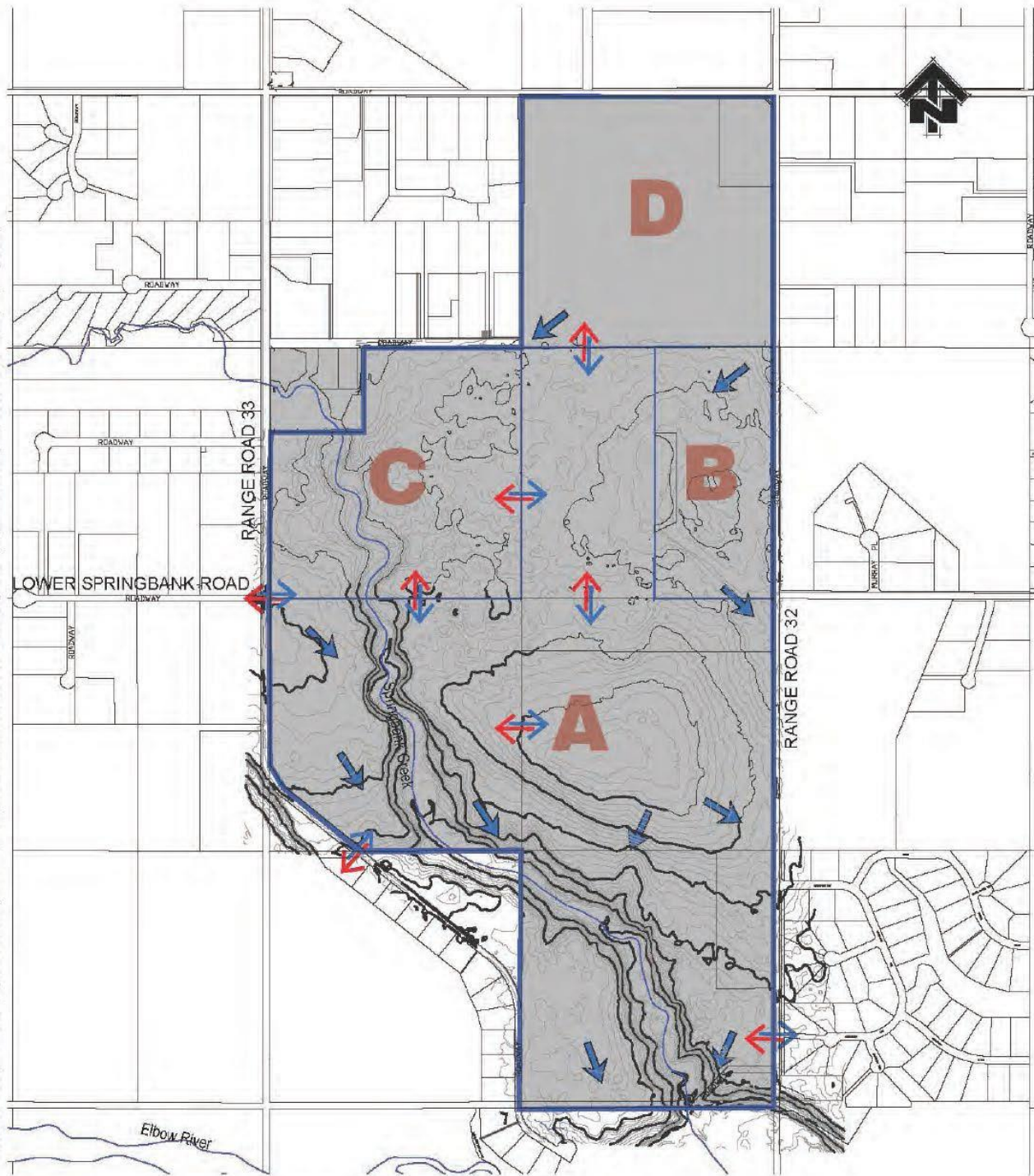
All developments within the Conceptual Scheme Area will be designed to be serviced with an approved piped potable water service in accordance with County standards. The piped water service shall be capable of providing the required fire flow via hydrant suppression system in accordance with County standards.

Extensions of the potable water mains within each development cell will be required to accommodate adjacent development cells in addition to any offsite areas. Connections will be provided generally as indicated on **Figure 10**.

POLICY

- 5.11.1 All developments shall be serviced with an approved potable water service in accordance with County standards.
- 5.11.2 Water shall be supplied through a water distribution system in accordance with the Rocky View County Servicing Standards.
- 5.11.3 The piped water system shall provide for fire flow requirements via a hydrant suppression system in accordance with County standards.

Dec 05, 2013 - 12:55pm W:\0000 Springbank Creek sewage amendment\trc report to council\act1 2013\0000 Oct 1 version\dwg\0500 Springbank Creek CS figures part2 2013 september.dwg Layout\trc drainage



- Conceptual Scheme Area as defined by the Central Springbank ASP
- Water/Wastewater connections
- Stormwater Route

Figure 10:
DRAINAGE, WASTEWATER
and WATER MAINS

Springbank Creek
Conceptual Scheme

October 1, 2013

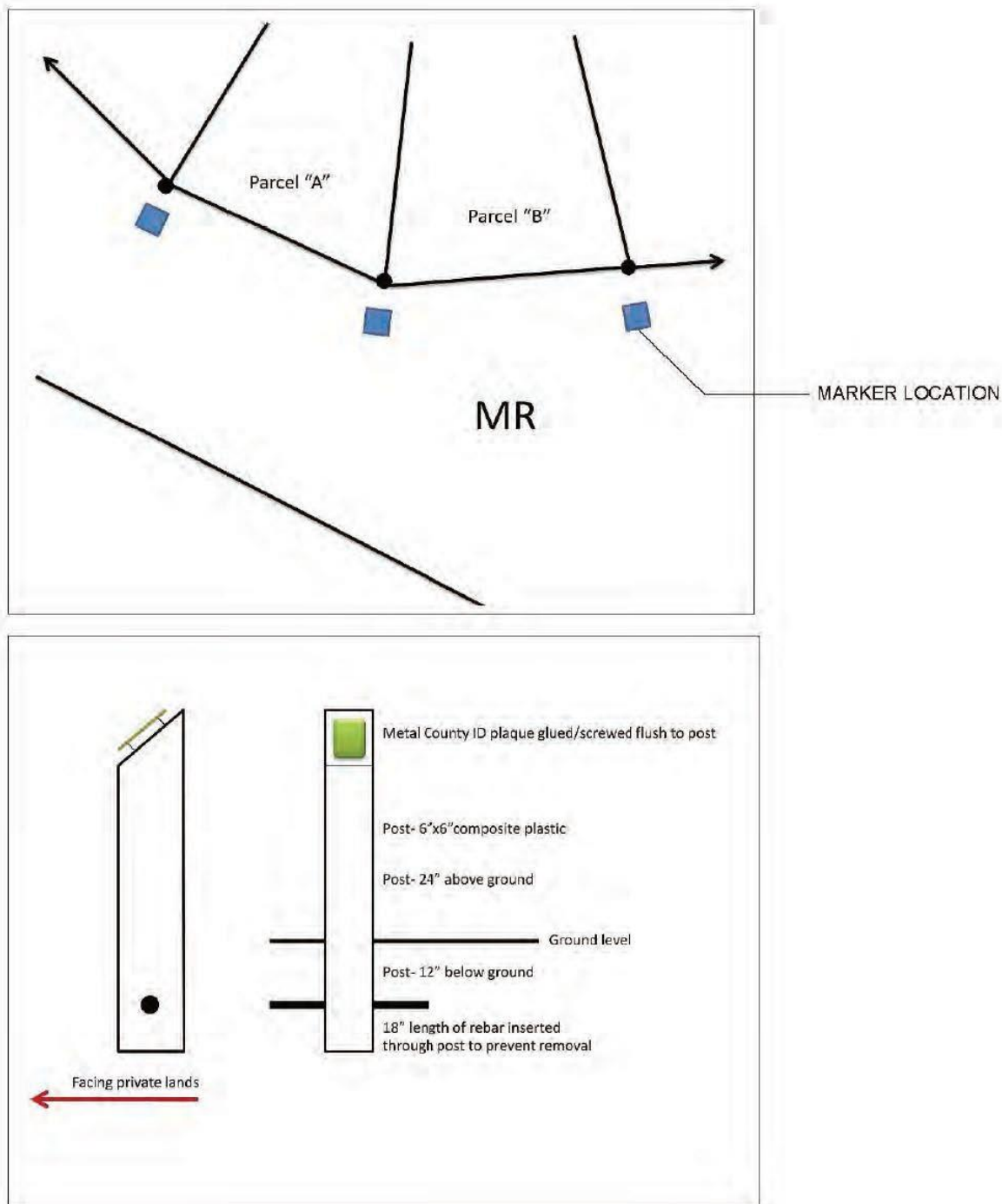


Figure 11:
Boundary Markers Example

5.12 Storm Water Management

Given the location of the Conceptual Scheme Area relative to the Springbank Creek drainage basin and the necessity to safeguard any flows to the Elbow River, a staged master drainage plan is required. Such report shall be consistent with “A Report on Drainage Strategies for Springbank” by Westhoff Engineering Resources Inc. January 2004.

The Central Springbank Area Structure Plan Sub Basin Study identified several drainage strategies for the Springbank Creek sub-basin. Springbank Creek has been identified in the more recent Report on Drainage Strategies for Springbank as a most important stream corridor. The creek conveys runoff from a large sub-basin and will undergo changes because of development. The removal of grazing practices will allow the riparian area to

re-establish the natural vegetation. A comprehensive storm water drainage plan including upland, creek channel, and riparian BMPs will greatly improve the creek corridor, increase overall wildlife habitat potential, reduce erosion in the creek channel and contribute to improved water quality and safeguard fisheries habitat in the Elbow River.

BMPs will divert excess runoff to Springbank Creek while safeguarding pre- development flows to continue the drainage course to Cullen Creek in accordance with the approved drainage strategies.

Conveyance-system BMPs can be integrated into the open space network. they comprise grassed swales that are an excellent conveyance system and where the vegetation filters suspended solids and therefore reduces sediment loads into receiving streams.

The “End-of-Pipe” BMPs comprise ponds. They can be dry ponds, wet ponds or wetlands or a combination of any of these types of stormwater storage facilities. Wetlands have been proven excellent in providing water quantity control and treatment of runoff.

The proposed subdivision design and site characteristics are favourable to integrate many of these BMPs throughout the conceptual Scheme Area. Properly planned, designed, and constructed, they provide benefit to the development, safeguard the environment, and demonstrate water conservation through implementation of Best Management Practices.

The Developer, as part of the tentative plan of subdivision, shall establish detailed erosion and sedimentation control plans during construction to the satisfaction of the County.

POLICY

- 5.12.1 Site grading near the top of slopes adjacent to Springbank Creek should prevent any concentration of stormwater flows and erosion of the existing slopes.
- 5.12.2 Where applicable, swales and ditches within the municipal road allowances may be used for regulation and conveyance of storm water flows and not for storage purposes in accordance with County standards.
- 5.12.3 The Developer, as part of the tentative plan of subdivision, shall establish detailed erosion and sedimentation control plans during construction in accordance with County standards.

- 5.12.4 Stormwater facilities shall be provided in accordance with the recommendations of an approved Stormwater Management Plan and the registration of any overland drainage easements and/or restrictive covenants as determined by the Stormwater Management Plan.

5.13 Shallow Utilities

Appropriate utility service providers will service the Conceptual Scheme Area.

POLICY

- 5.13.1 Shallow utilities will be provided by service providers at the sole expense of the Developer. Easements will be provided as required.

5.14 Solid Waste Management

Solid waste management will be implemented by contract with a private service provider. The Homeowners' Association will manage the contract for services.

POLICY

- 5.14.1 A solid waste management plan is required for the first phase of subdivision. Implementation of the plan shall be the responsibility of the Developer and Homeowners' Association.

5.15 Homeowners' Association

A Homeowners' Association will be established to administer aspects of the design guidelines' restrictive covenant registered against the title of each lot, and to manage all communal aspects of the community which are not otherwise managed by the County.

6.0 IMPLEMENTATION PHASING

Development will be phased according to market demands and logical engineering boundaries for servicing and roadway extensions generally as shown on **Figure 12**.

The first phase will occur on the south side of the Lower Springbank Road.

The phase includes:

- residential lots,
- private open space with public access agreements
- dedication of ER and MR in the Creek Valley, and
- the waste water treatment facility and spray irrigation area.

Subsequent phases will be determined by the developer in response to market demands.

The phasing plan (**Figure 12**) demonstrates how the development could be phased. More than one phase may proceed at the same time and the order and size of the individual phases may change without needing an amendment to the Conceptual Scheme.

POLICY

- 6.0.1 Details regarding internal road systems, servicing, specific lot sizes and distribution of lots shall be finalized at the subdivision stage. As long as the overall intent of the residential concept and lot specifications are respected, final subdivision design details may vary from those depicted in Figure 5 without requiring an amendment to the Conceptual Scheme.
- 6.0.2 To accommodate market conditions, the order of actual development may vary from the proposed phasing plan without requiring an amendment to the Conceptual Scheme.

7.0 PUBLIC CONSULTATION

Paleozo Properties Limited Partnership held public open house meetings on October 17, 2012, and January 17, 2013. An additional open house meeting will be held prior to the public hearing. The developer made special efforts to educate the public regarding the key issues of: residential density, lot size, waste water treatment, and public access to the trail system.

Issues raised in October and January included the location of the proposed waste water treatment facility and the spray irrigation fields. Based on concerns of the neighbours raised at the open house meetings, the location of the waste treatment plant, the treatment pond and the spray irrigation field were shifted eastwards as far as possible from the Springbank Creek valley.

8.0 SUPPLEMENTAL REPORTS

Rocky View County Public Policy Documents:

- Central Springbank Area Structure Plan. Municipal District of Rocky View No. 44. Bylaw C-5354-2001. Adopted October 2, 2001.
- Municipal Development Plan. Municipal District of Rocky View No. 44. Bylaw C-4840-97. July 6, 1998.
- Central Springbank Area Structure Plan – Sub-Basin Study. Westhoff Engineering Resources Inc. March 2000.
- Transportation Network Study for the Central Springbank Planning Area. UMA Engineering Ltd. April 2000.
- Rocky View West Recreation District, Recreation Master Plan. January 2007.
- A Report on Drainage Strategies for Springbank. Westhoff engineering Resources, Inc. January 2004.
- Central Springbank Traffic Impact Assessment. Bunt & Associates Engineering Ltd. February 27, 2002.

Springbank Creek Conceptual Scheme Reports:

- Biological Report. Ducks Unlimited Canada. April 30, 1998.
- Environmental Site Assessment - Phase 1. Curtis environmental engineering Inc. January 2004.
- Historical Resources Overview Report. Bison Historical Services Ltd. December 2003.
- Historical Resources impact Assessment (HRIA). Bison Historical Services Ltd. May 1997.
- Final Report Historical Resources Impact Assessment Creekside Crossing Residential Development (ASA Permit 2004 - 061). Bison Historical Services Ltd. July 6, 2004.
- Geotechnical Investigation. Curtis Engineering Associates Ltd. January 19, 2004.
- Creekside Crossing Traffic Impact Assessment. Bunt & Associates Engineering Ltd. February 26, 2004.
- Staged Master Drainage Plan for Springbank Creek Conceptual Scheme Plan Area, NE 22 24-3-W5M, SE 22-24-3-w5M and Portion of SW 22-24-3-W5M and NE 15-24- 3-W5M, SE 15-24-3-W5M and Portion NW 15-24-3- W4M. Westhoff Engineering. January 2007.
- Biophysical Impact Assessment and Species at Risk Surveys, Springbank creek Lands. HAB-TECH Environmental Ltd. August 2009.
- Springbank Creek Cells B, C, D – Traffic Assessment. Letter report file number 1278-01. Bunt & Associates. February 2, 2009.
- Wastewater Irrigation Assessment Report Springbank Creek, Devonian Properties Inc. NW 15-024-02 w5M. EBA Consulting Engineers & Scientists. August 2011. EBA file C22301339.

- Storm Water Management Report. MMM Group. April 2012.
- Springbank Creek Development Traffic Impact Assessment Phases 2 and 3. MMM Group. June 2012.
- Geotechnical Evaluation and Slope Stability Analysis Springbank Creek Subdivision Phase 1 Calgary. McIntosh-Lalani engineering Ltd. June 2012.
- Habitat Classification, Mapping and Overview – Cell C, Springbank Creek. HAB-TECH Environmental Ltd. July 5, 2013.
- Wastewater Irrigation Assessment Report Springbank Creek NE 15-024-03 W5M. EBA Engineering Consultants Ltd. November 2012. EBA file C22301423.
- Executive Summary Main Report Fiscal impact Analysis of Springbank creek. InfraCycle Fiscal Solutions. April 2013.
- Executive Summary Fiscal Analysis of Spray Field. InfraCycle Fiscal Solutions. April 2013.
- Main Report Fiscal impact Analysis of Springbank Creek, Alberta. Infracycle Fiscal Solutions. May 2013.

ROCKY VIEW COUNTY

**911-32 AVENUE NE, CALGARY, AB
T2E 6X6**

PHONE 403-230-1401 | FAX 403-277-5977 |

WEB www.rockyview.ca



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