



BYLAW C-8016-2020

A bylaw of Rocky View County, **in the Province of Alberta**, to ~~amend Bylaw C-5354-2001, known as the “Central Springbank Area Structure Plan”, and adopt a Conceptual Scheme known as the “Riverside Estates Conceptual Scheme”.~~

The Council of Rocky View County enacts as follows:

~~PART 1 – TITLE~~

Title

1 This Bylaw shall be know as Bylaw C-8016-2020.

~~PART 2 – DEFINITIONS~~

~~In this Bylaw the definitions and terms shall have the meanings given to them in Land Use Bylaw C-4841-97, and the *Municipal Government Act*.~~

Definitions

2 Words in this Bylaw have the same meaning as those set out in the *Land Use Bylaw* and *Municipal Government Act* except for the definitions provided below:

- (1) **“Council”** means the duly elected Council of Rocky View County;
- (2) **“Land Use Bylaw”** means Rocky View County Bylaw C-8000-2020, being the *Land Use Bylaw*, as amended or replaced from time to time;
- (3) **“Municipal Government Act”** means the *Municipal Government Act*, RSA 2000, c M-26, as amended or replaced from time to time; and
- (4) **“Rocky View County”** means Rocky View County as a municipal corporation and the geographical area within its jurisdictional boundaries, as the context requires.

~~PART 3 – EFFECT OF BYLAW~~

Effect

- 3** THAT Bylaw C-5354-2001, known as the “Central Springbank Area Structure Plan”, be amended in accordance with the amendments contained in Schedule ‘A’, attached to and forming part of the Bylaw.
- 4** THAT the “Riverside Estates Conceptual Scheme” be adopted to provide a policy framework for future redesignation, subdivision, and development proposal within N ½ -01-25-03-W05M consisting of an area of approximately ± 54.20 hectares (± 133.94 acres) as defined in Schedule ‘B’ attached to and forming part of this Bylaw.

~~PART 4 – TRANSITIONAL~~

Effective Date

- 5** Bylaw C-8016-2020 is passed and comes into full force and effect when it receives third reading and is signed in accordance with the *Municipal Government Act*.



SCHEDULE 'A'
FORMING PART OF BYLAW C-8016-2020

Central Springbank Area Structure Plan (Bylaw C-5354-2001)

Amendment #1:

Within Section 3.3, Adopted Conceptual Schemes, add the following:

5. Riverside Estates Conceptual Scheme (C-8016-2020)

Amendment #2:

Attach the "Riverside Estates Conceptual Scheme" as defined in Schedule 'B' attached to and forming part of this Bylaw.



ROCKY VIEW COUNTY

SCHEDULE 'B'
FORMING PART OF BYLAW C-8016-2020

A Conceptual Scheme affecting the area within N ½ -01-25-03-W05M, consisting of an area of approximately ± 54.20 hectares (± 133.94 acres) herein referred to as the “Riverside Estates Conceptual Scheme”.



Riverside Estates Conceptual Scheme

REDLINE VERSION

Note: Cover page, graphics and exhibits have all been revised.



Prepared for Bearspaw Lakefront Estates LP
by IBI Group
December 13, 2019-June 2021

Table of Contents

1	Introduction	1
1.1	Vision for Riverside Estates	1
1.2	Purpose of the Conceptual Scheme	1
1.3	Conceptual Scheme Objectives	1
2	Plan Area and Adjacent Land Use Context	2
2.1	Description of Planning Area	2
2.1.1	Land Ownership	2
2.2	Current Land Use Within the Study Area	2
2.3	Description of Adjacent Land Uses	3
2.4	Central Springbank Area Structure Plan	3
3	Physical Site Features	3
3.1	Topography	3
3.2	Hydrogeological & Geotechnical Considerations	4
3.3	Soils and Vegetation	4
3.4	Environmental Considerations	5
3.5	Historical Use of the Site	5
3.6	Existing Structures	6
3.7	Existing Transportation and Utilities Considerations	6
3.7.1	Transportation	6
3.7.2	Utilities	7
4	Land Use Concept	7
4.1	Design Considerations	7
4.1.1	Community Input	8
4.1.2	Incorporate and Conserve Site Attributes	8
4.1.3	Open Space, Trails, and Recreation	8
4.1.4	Transition and Compatibility with Surrounding Uses	8
4.1.5	Innovatively Minimize Country Residential Development Footprint	9
4.1.6	Respect the Nature and Culture of Central Springbank	9
4.2	Development Goals and Objectives	9
4.3	Concept Plan Design	10
4.4	Municipal Reserve, Open Space, and Pathways	12
4.4.1	Open Space	12
4.4.2	Pathways and Trails	12
4.4.3	Recreation	13

Table of Contents (continued)

4.5	Transportation Overview	13
4.5.1	Riverside Estates Site Access and Public Roads	14
4.5.2	Internal Road Hierarchy.....	14
4.6	Traffic Impact Assessment Recommendations	14
4.7	Population and Density Projections	15
4.7.1	Population.....	15
4.7.2	Density.....	15
5	Servicing Strategy.....	15
5.1	Water Supply.....	15
5.2	Wastewater	16
5.2.1	Rocky View County Policy #449 on Decentralized Wastewater Systems.....	16
5.3	Stormwater Management.....	17
5.3.1	Stormwater Management Approach.....	17
5.4	Solid Waste Management	19
5.5	Shallow Utilities	19
5.6	Protective Services.....	19
6	Statutory Plan Compliance	20
6.1	County Plan – Rocky View County.....	20
6.2	Central Springbank Area Structure Plan	21
6.3	Springbank Area Structure Plan.....	21
7	Implementation.....	23
7.1	Proposed Land Use Designations.....	23
7.2	Proposed Architectural and Landscape Design Controls	23
7.3	Subdivision Transitioning and Edge Treatments.....	24
7.4	Subdivision Phasing Strategy	25
7.5	Subdivision Naming.....	25
8	Policy Summary	25

1 Introduction

The proposed project outlined in the Riverside Estates Conceptual Scheme (RECS) follows a conservation design approach which has been identified as desirable for new developments in Rocky View County. As a result of evolving trends and a desire to preserve the site's natural setting, culture and lifestyles as much as possible, this country residential development provides a variety of lot sizes and generous public open space to create a balanced and attractive community in the Central Springbank area of Rocky View County (RVC).

This document has been prepared according to the Rocky View County Format for Conceptual Schemes.

1.1 Vision for Riverside Estates

The Conceptual Scheme for Riverside Estates has been developed with the following vision:

To make the most of the site's unique location overlooking the Bow River and create a high quality residential neighbourhood that builds upon the nature and culture of the Central Springbank community, pursuing the enhancement of the community through a sustainable balance of housing options, amenities, and conserved open space.

1.2 Purpose of the Conceptual Scheme

A Conceptual Scheme provides a comprehensive planning framework for future development of a defined plan area within the County that defines the future land use scenario including lot design and configuration, parcel size, on and off-site visual impacts, open space connections, servicing strategies and compatibility with adjacent land use's. Conceptual Schemes are adopted via Council bylaw and address planning and development issues such as generalized land uses, provision of infrastructure, environmental issues, traffic and the impact of the development on surrounding land uses. The Riverside Estates Conceptual Scheme has been prepared at the request of Rocky View County.

The content and form of this Conceptual Scheme are the result of an extensive consultation process to address and balance the input from the community and recommendations of Council and Administration.

1.3 Conceptual Scheme Objectives

The objectives of the Riverside Estates Conceptual Scheme are as follows:

- a) To facilitate the development of a comprehensively planned, high quality residential community that incorporates the natural setting and attributes of the site and housing alternatives with the highest design, aesthetic, safety, security and environmental standards.
- b) To establish a servicing scheme appropriate to the development proposal and a policy framework for implementation that maintains a sustainable balance with the natural setting.
- c) To establish a stormwater management strategy to respond to the surface drainage requirements within the plan area.
- d) To accommodate connections to existing and future development on adjacent lands.

- e) To address compatibility with adjacent land use and the surrounding community.
- f) To address community concerns and include their suggestions as part of the design process.
- g) To provide an extensive area of publicly accessible open space.

2 Plan Area and Adjacent Land Use Context

2.1 Description of Planning Area

~~The planning area is located in the west portion of Rocky View County, in the community of Springbank, and has a total area of 55.46 ha (137.04 acres), including approximately 1.21 acres of a road right-of-way located along the NW boundary acquired from RVC in 2019. Exhibit 1 illustrates the regional location of the planning area. It is bounded to the north by the Springbank Links Golf Course and the community of Emerald Bay Estates, at the south end of Emerald Bay Drive; to the west by the community of Calling Horse Estates; to the south by a portion of Rodeo Dr. and adjacent private lands; and bounded to the east by the Bow River as it flows into the Bearspaw Reservoir.~~ The planning area is located in the west portion of Rocky View County, in the community of Springbank, and has a total area of 55.46 ha (137.04 acres), including approximately 1.21 acres of a road allowance located along the NW boundary acquired from RVC in 2019. **Exhibit 1** illustrates the regional location of the planning area. It is bounded to the north by the Springbank Links Golf Course and the community of Emerald Bay Estates, at the south end of Emerald Bay Drive; to the west of the community of Calling Horse Estates; to the south by a portion of Rodeo Dr. and adjacent private lands; and bounded to the east by lands owned by TransAlta Corporation before the edge with the Bow River as it flows into the **Bearspaw Reservoir**. The Planning area is identified in **Exhibit 2** and comprises lands legally described as N. ½ Sec. 1, Twp. 25, Rge. 3, W.5M, which lies to the west of the Bow River. The Riverside Estates Conceptual Scheme responds to the existing policy framework defined by the Central Springbank ASP (Bylaw C-5354-2001), as well as to the policy framework proposed by the Springbank ASP (pre-release draft 2019). The subject site falls within the Elbow River/Bow River Special Planning area, and the proposed development addresses the needs of the Special Planning area.

2.1.1 Land Ownership

The properties identified as being part of the Riverside Estates Conceptual Scheme are owned by 1226292 Alberta Ltd., General Partner of Bearspaw Lakefront Estates LP.

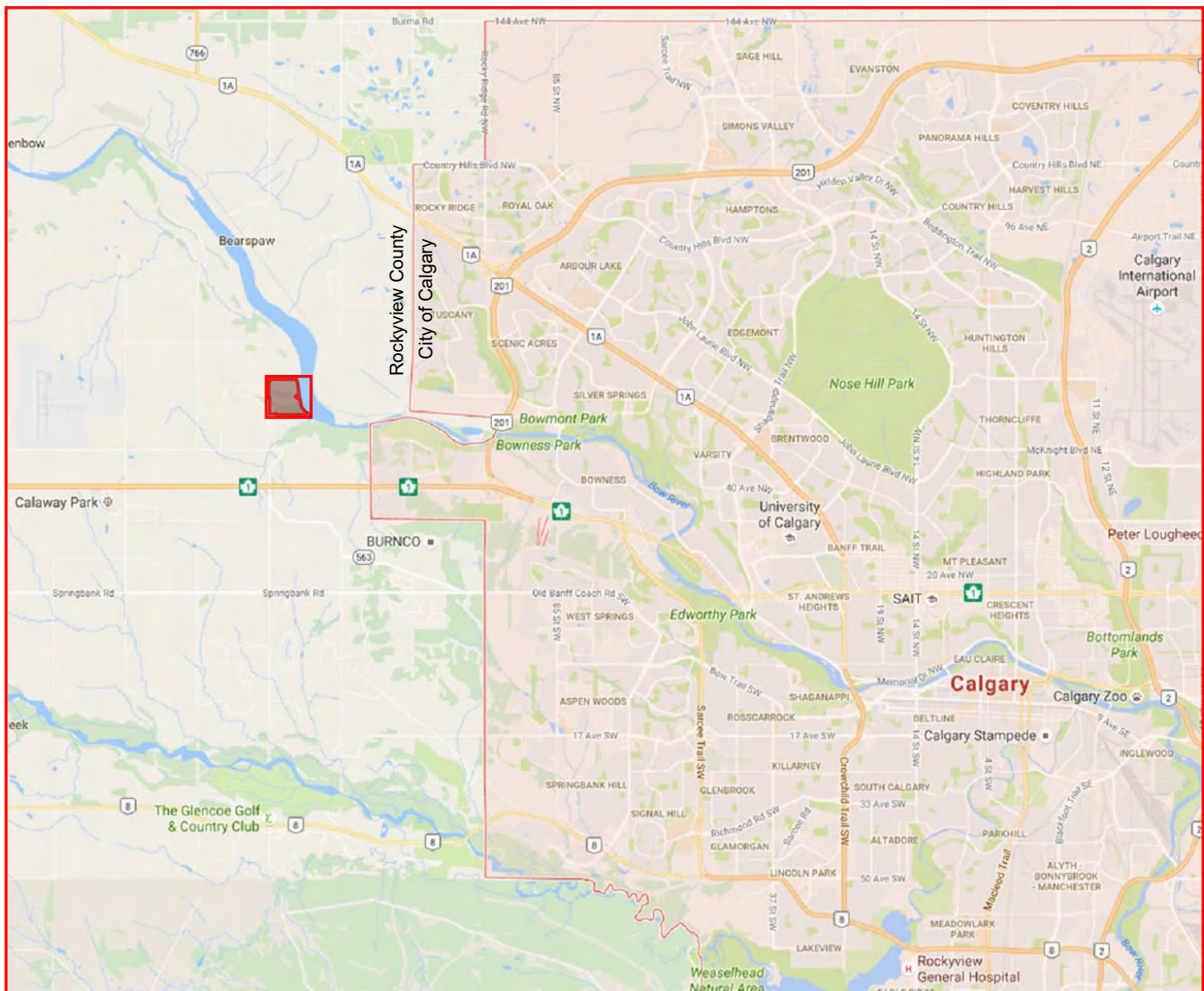
Policy 2.1 Policies contained in this Conceptual Scheme shall apply to lands identified in Exhibit 2 – Planning Area.


2.2 Current Land Use Within the Study Area

~~The current land use designation of the subject lands is Residential One (R-1) District under the current Rocky View County Land Use Bylaw C-4841-97.~~ The current land use designation of the subject lands is Residential, Country Residential District (R-CRD) as per Land Use Bylaw C-8000-2020. The northern portion of the subject lands have been used primarily as marginal pastureland for the grazing of livestock. A steep ravine carved out by a natural drainage course that flows to the Bow River bisects the site in its central area; the undulating topography of the southern portion of the site is mostly treed where a tree farm operated many years ago. There are a couple of structures located on the western shore of the property, remnants of a former summer patio, but no functioning buildings located on site.

An Altalink transmission line right-of-way crosses the site with a southeast-northwest alignment, with three supporting structures located within the property.

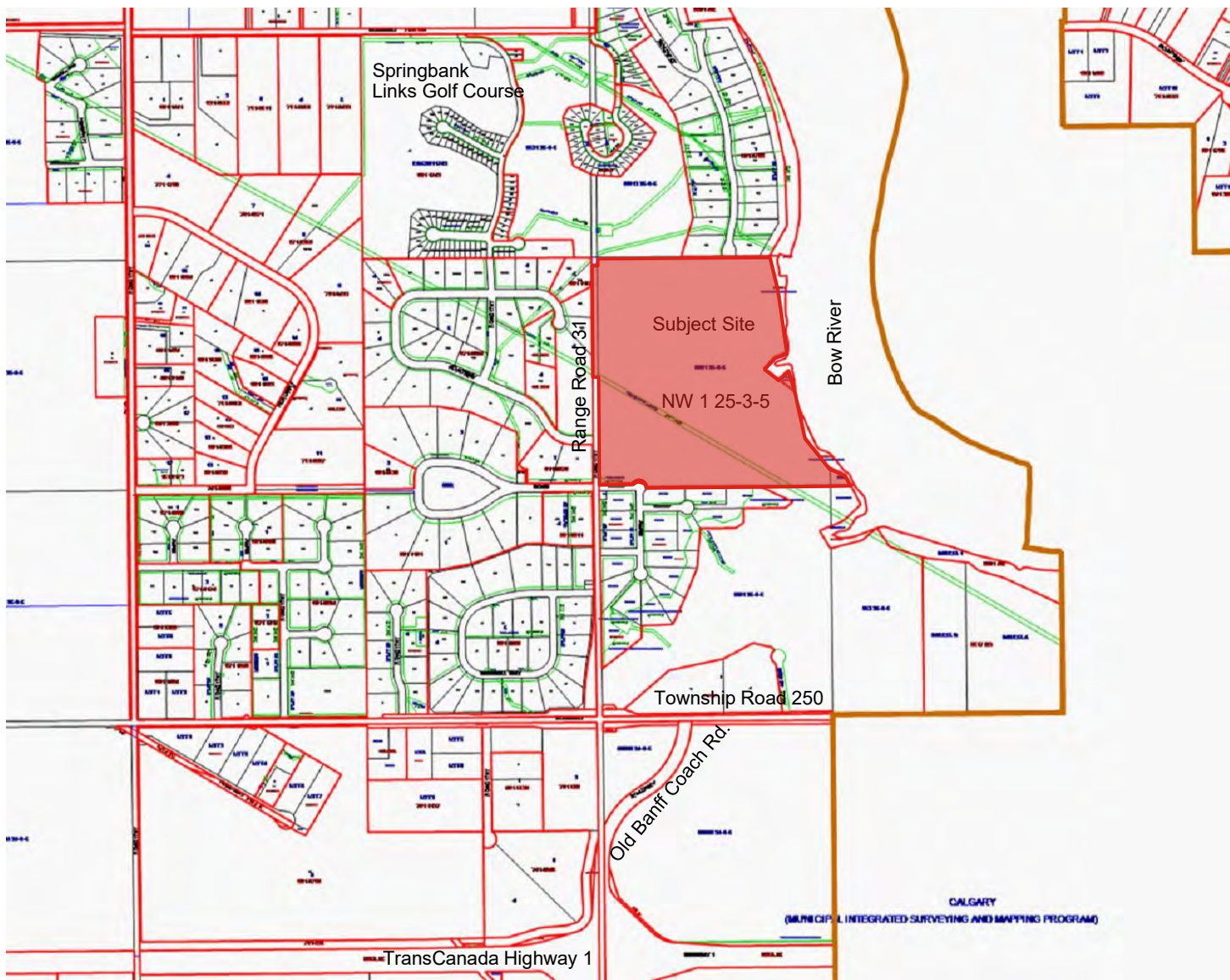
REGIONAL LOCATION PLAN



 Location of Subject Property



PLANNING AREA



2.3 Description of Adjacent Land Uses

~~The planning area is located within the Central Springbank Community in Rocky View County where the primary land use is a mix of Residential One (R-1) and Residential Two (R-2) districts, with the exception of the Springbank Links Golf Course development adjacent to the north.~~

~~The Central Springbank community is currently under development with the subject site remaining as one of the last undeveloped properties in the area. The adjacent quarter sections to the west, south and north of the subject site generally contain lands that have been developed or are currently under development with residential parcels of various sizes. The lands to the west of the property is the Calling Horse Estates community, which has Residential One (R-1) and Residential Two (R-2) land use designations.~~

~~The community of Emerald Bay Estates is adjacent to the north of the subject site, between the Springbank Links Golf Course and the Bow River. Emerald Bay Estates is zoned for Residential One (R-1) district, while the Springbank Links Golf Course community has a Direct Control land use designation (DC25 and DC26) which allow for residential and recreational development cells. Overall, residential development cells in Emerald Bay Estates allow for a total of 134 lots where single detached dwellings and accessory buildings are permitted.~~

~~The lands to the south are Residential One (R-1) and Ranch and Farm (R-F) districts. **Exhibit 3** illustrates the adjacent existing land uses.~~

~~The planning area is located within the Central Springbank Community in Rocky View County where the primary land use is a mix of Residential, Country Residential District (R-CRD) and Residential Rural District (R-RUR) districts, with the exception of the Springbank Links Golf Course development adjacent to the north. The Central Springbank community is currently under development with the subject site remaining as one of the last undeveloped properties in the area. The adjacent quarter sections to the west, south and north of the subject site generally contain lands that have been developed or are currently under development with residential parcels of various sizes. The lands to the west of the property is the Calling Horse Estates community, which has Residential, Country Residential District (R-CRD) and Residential Rural District (R-RUR) land use designations. The community of Emerald Bay Estates is adjacent to the north of the subject site, between the Springbank Links Golf Course and the Bow River. Emerald Bay Estates is zoned for Residential, Country Residential District (R-CRD), while the Springbank Links Golf Course community has a Direct Control land use designation (DC25 and DC26) which allow for residential and recreational development cells. Overall, residential development cells in Emerald Bay Estates allow for a total of 134 lots where single detached dwellings and accessory buildings are permitted.~~

~~The lands to the south are Residential, Country Residential District (R-CRD) and Residential, Rural District (R-RUR) districts. **Exhibit 3** illustrates the adjacent existing land uses.~~

2.4 Central Springbank Area Structure Plan

The Central Springbank Area Structure Plan (ASP), Bylaw C-5354-2001, adopted October 2, 2001, identifies the Riverside Estates site as being within the new residential areas for the community. Guiding policies for new residential areas include a minimum allowable parcel size of 0.8 ha (2 acres), which may be reduced to a minimum of 0.4 ha (1 acre) if justified on the 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 number of lots allowed is 64 units on a quarter section for new residential areas. Section 2.3.2.3 of the Central Springbank ASP identifies the subject site within the Elbow River/Bow River special planning area (Map 3), as well as within an environmental significant area with steep slopes (Map 6).

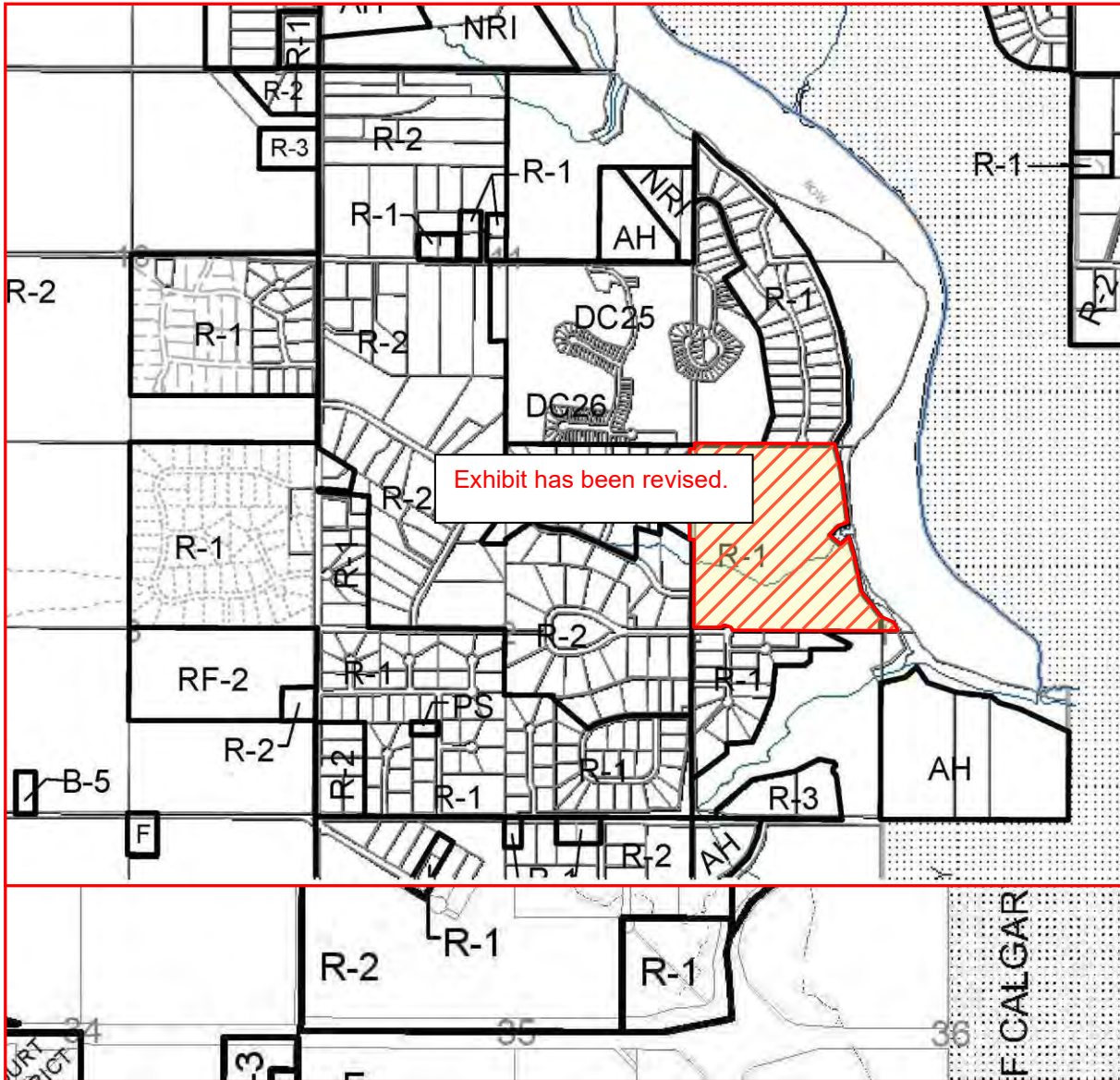
~~The Springbank Area Structure Plan (SASP) is under review at the time of preparation of this Conceptual Scheme, with a pre-release draft for review available in 2019. The forthcoming SASP identifies the subject property as suitable for Cluster Residential Development within its draft land use strategy. Draft policies for Cluster Residential Development are intended to sensitively integrate residential uses with the natural features and topography of a site by grouping homes on smaller lots, while permanently preserving a significant amount of open space for conservation, recreation, or small-scale agriculture uses. The proposed development~~

3 Physical Site Features

3.1 Topography

In general, the site slopes from the western boundary of the site down to the Bearspaw Reservoir to the east, with significant slopes and escarpments within the site and a total elevation change of approximately 80.0 metres. Erosion within the valleys exists predominantly in the southern third of the site. The site is heavily grassed with generally shallow slopes. Steeper slopes consist of a dense coverage of spruce and poplar trees, as well as shrubs and

EXISTING LAND USE



- Subject Site
- R-1 - RESIDENTIAL ONE DISTRICT.
- R-2 - RESIDENTIAL TWO DISTRICT.
- R-3 - RESIDENTIAL THREE DISTRICT.
- NRI - NATURAL RESOURCE INDUSTRIAL DISTRICT.
- AH - AGRICULTURAL HOLDING DISTRICT.
- F - FARMSTEAD DISTRICT.
- DC - DIRECT CONTROL DISTRICT.
- PS - PUBLIC SERVICES DISTRICT.

grasses. There is no indication of rock outcrops on the slope and there are also no indications of instability in the steep slopes, nor any seepage within the slope face. See **Exhibit 4** for aerial plan of the site and **Exhibit 5** contour plan. **Exhibit 6** shows various site photos of the natural features of the site.

3.2 Hydrogeological & Geotechnical Considerations

A geotechnical investigation for the subject lands was prepared to meet County standards, including fieldwork consisting of twenty-three (23) boreholes ranging in depths between 9.1 metres and 18.3 metres below grade, with one borehole advanced to a depth of 30.0 metres. The outcome of fieldwork indicates that the soil stratigraphy of the site predominantly consists of topsoil overlying alternating layers of silt, and silty clay overlying bedrock, with variable layering of sandy gravels throughout. Silt and sand soils dominates the soil profile across the site. Silty clay soils were encountered with variable thickness throughout the site. The silty clay was generally stiff to very stiff in consistency, and medium to low in plasticity. Silty and sandy gravel were also encountered on site, predominantly along the eastern edge of the Bears paw Reservoir. Bedrock consisting of siltstone was encountered at depths ranging between 5.8 and 9.5 metres below current site grades, and generally encountered in the northern half of the site.

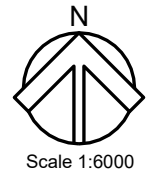
During the drilling process seven (7) of the twenty-three (23) boreholes advanced were noted to be wet upon completion due to seepage. Groundwater readings were recorded within the eighteen (18) standpipes installed across the site at depths ranging from 3.86 and 8.07 metres below current site grades, typically encountered in the northern half of the site. Groundwater in surficial aquifers will generally flow in the same direction as the surface contours. Based on groundwater levels in a series of monitoring wells installed in 2016 and the surface contours, it can be inferred that any groundwater flowing towards the reservoir from the proposed disposal site will likely flow northeast and southeast. However, it cannot be assumed that the aquifers on the site are all interconnected, since groundwater was not encountered in two boreholes drilled to depths of 25 meters and located between monitoring wells and the reservoir. In addition, water quality in the wells varies by location further indicating the presence of perched water tables on the site. Groundwater from four monitoring wells was sampled in June, August and October 2016 as well as March 2017 and analyzed by Exova. With the exception of phosphorus in some samples, this groundwater quality data is typical for most surficial aquifers.

Further lot specific studies will be required on some lots at the subdivision or building permit stage to determine exact setback requirements and suitability of walk-out basements. Potable water will be provided to the proposed development through either individual groundwater wells located on each lot or communal water system. Based on the data gathered during the aquifer testing, these wells will be installed at depths greater than what can be impacted by the surficial water table. The wells will be drilled into buried bedrock aquifers that are protected from surface waters by a number of shale confining layers, or aquitards. Therefore, the potable water supply on each lot will not be impacted by the proposed effluent discharge of the proposed on-site wastewater treatment facility.

3.3 Soils and Vegetation

The geotechnical studies completed in 2018 indicates loam topsoil was encountered in twenty-one (21) of the boreholes advanced on site, with two identifiable horizons found in most boreholes. Horizon A was found in all boreholes and consisted of black organics with a thickness ranging from 75 to 750 mm. The B horizon was found in one of the boreholes and consisted of silty organics browns, with a thickness of approximately 150 mm. Although organics soils deposits vary widely across the site it tends to be deepest in low-lying areas. Fill soils, consisting of silt and some amounts of clay, were encountered in two boreholes drilled within the access

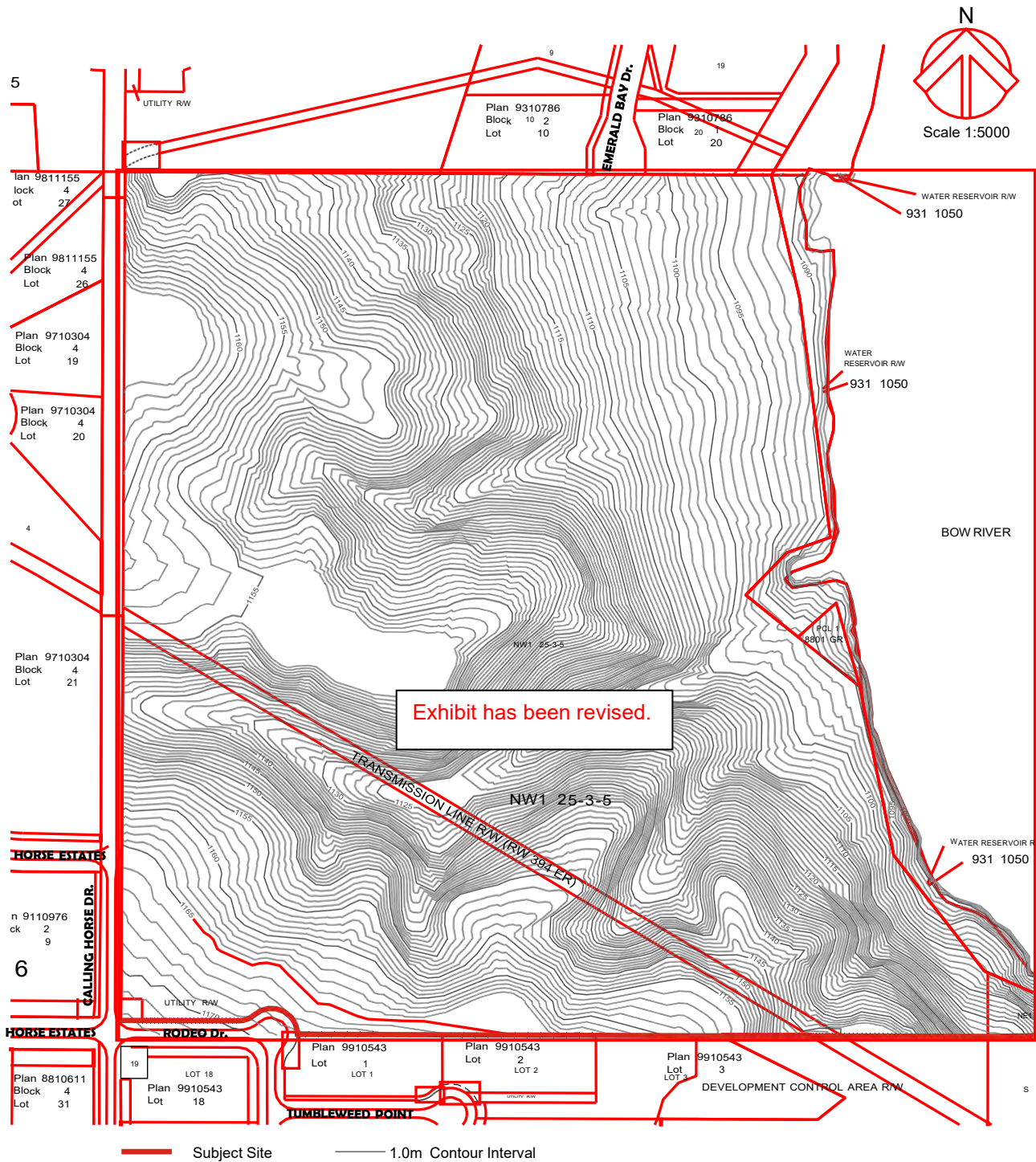
AERIAL PLAN



 Subject Site



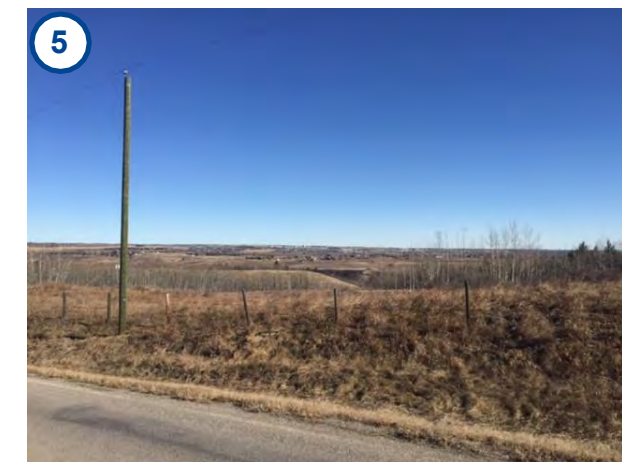
CONTOUR PLAN



SITE PHOTOS



— Subject Site ① Camera View



road through the site. The fill was loose to compact and contained variable amounts of organics, including roots and other wood debris.

An onsite soils investigation was completed on February 25, 2016, to determine the suitability of the site for soil disposal proposed as part of the on-site wastewater treatment system. Eight backhoe pits were excavated, and soil sidewalls were characterized based on their color, texture, structure, consistency and presence of redoximorphic features. Soil profiles on the site are relatively consistent and are typically characterized by silt loam topsoil over well-structured silt loam or fine sand subsoil. Evidence of seasonal groundwater, or redoximorphic features, was not observed to depth of greater than 7 meters in the backhoe pits.

The southern portion of the subject lands also contain several mature stands of trees and shrubs, with natural open areas.

3.4 Environmental Considerations

A Biophysical Impact Assessment (BIA) was prepared for the subject lands to meet County standards (2017) and completed in April 2018. A total of 13 habitat types were mapped and described in the report, noting that more than 18% of the site is either non-native or disturbed habitat.

A total of 146 vascular plant species were recorded in the field survey, including 26 non-natives, 3 of which are listed as regulated Noxious Weeds through the Alberta Weed Act. Wildlife species observed included 37 birds and 11 mammals. No federally or provincially rare plants or plant communities were found in the Subject Area and potential for these species is low. Two provincially Sensitive bird species, Pileated Woodpecker and Least Flycatcher, were recorded in field surveys.

Valued ecosystem components include key ungulate habitats and an extensive, diverse area of native habitat connected with significant native habitats outside of the site. While habitat loss will include native as well as non-native habitats, an extensive area of retained habitats is proposed to remain that encompasses all native habitat types and the majority of species in the subject area, including uncommon and sensitive species. The area of retained habitat will also conserve key ungulate habitats and maintain important connections with native habitats on adjacent lands.

Mitigation is proposed to avoid steep slopes, control noxious weeds, avoid impacts to breeding birds, and protect riparian habitat. The site is located within a key wildlife and biodiversity zone and provincial environmentally significant area. These rankings have been addressed through the field assessment, proposed habitat and biodiversity retention, and mitigation as mentioned previously. It is anticipated that the effects of the proposed project will be relatively low on regional habitat fragmentation, loss of regional wildlife biodiversity, and loss of regional wildlife corridor potential. Contribution to regional cumulative effects is, therefore, predicted to be low.

3.5 Historical Use of the Site

A Historic Resource Acts response was received from Alberta Culture, Multiculturalism and Status of Women in July 2019. The review of the site in light of the proposed development did not identify any Historical Resources Act requirements associated to Aboriginal Traditional Use Sites, Historic Structures or Provincially Designated Historic Resources.

However, pursuant to Section 37(2) of the *Historical Resources Act*, a Historic Resources Impact Assessment for palaeontological resources is to be conducted on behalf of the proponent by a palaeontologist qualified to hold a palaeontological research permit within the Province of Alberta. Similarly, a Historic Resources Impact Assessment for archaeological resources is to be conducted on behalf of the proponent by an archaeologist qualified to hold an archaeological research permit within the Province of Alberta. In particular for the latter, the proponent's

consulting archaeologist must confirm the relationship between the proposed development activities and archaeological sites EgPn-29 and EgPn-88. Results of the Historic Resources Impact Assessment for paleontological resources and archaeological resources must be reported to Alberta Culture, Multiculturalism and Status of Women and subsequent *Historical Resources Act* approval must be granted before development proceeds.

Policy 3.1 A Historic Resources Impact Assessment for palaeontological resources ~~is to be~~ shall conducted on behalf of the proponent by a palaeontologist qualified to hold a palaeontological research permit within the Province of Alberta. Results of the Historic Resources Impact Assessment for paleontological resources must be reported to Alberta Culture, Multiculturalism and Status of Women and subsequent Historical Resources Act approval must be granted before development proceeds.

Policy 3.2 A Historic Resources Impact Assessment for archaeological resources ~~is to be~~ shall conducted on behalf of the proponent by an archaeologist qualified to hold an archaeological research permit within the Province of Alberta. Results of the Historic Resources Impact Assessment for archaeological resources must be reported to Alberta Culture, Multiculturalism and Status of Women and subsequent Historical Resources Act approval must be granted before development proceeds.

3.6 Existing Structures

There are a couple of structures located on the western shore of the property, remnants of a former summer patio, but no functioning buildings located on site. There are no other structures on the subject site other than the supporting structures for the Altalink transmission line, which have been recently upgraded (2017).

3.7 Existing Transportation and Utilities Considerations

3.7.1 Transportation

A Transportation Impact Assessment for Riverside Estates was completed in 2019 in support of this conceptual scheme. The analysis indicates that all the study intersections, namely the intersections of Calling Horse Dr.-Township Road 250 and Old Banff Coach Rd.- Township Road 250, will continue to operate within acceptable capacity parameters at the opening day horizon.

While the Alberta Transportation's warrant for a west bound right turn lane at the intersection of TWP 250 and RR 32 is technically met by a small margin, no improvements are required. In the future, TWP 250 will be upgrade as a result of overall County growth and intersection design requirements can be reassessed at that time.

For the long-term horizon, this development is accounted for in the background growth of the Bingham Crossing TIA and as such the recommendations from this previously approved TIA still apply.

3.7.2 Utilities

Water servicing options explored for Riverside Estates included licensed withdrawal from the Bow River and the potential connection to existing water co-ops servicing the area, like Emerald Bay Water and Sewer Co-Op, Salt Box Coulee Water Supply Company and North Springbank Water Co-Op. While these remain as potential opportunities for the future, it was preferable to provide potable water for the proposed development through individual groundwater wells located on each lot.

Aquifer testing on site was completed in 2018 through a two-step process. The first consisted of a desktop review using local well logs and other available information. Once this "Phase One" review was completed and indicated the potential for groundwater development onsite, a "Phase Two" assessment was initiated. During this assessment, two test wells were installed on future lots in the development and 24-hour pump tests were completed on both wells. A groundwater quality sample was taken from both test wells at the end of the 24-hour pumping test and lab analyzed, finding that water quality in the two wells is consistent with bedrock aquifer water supplies and is considered potable. Point of use softening and/or reverse osmosis may be required due elevated hardness, TDS and sulphate levels.

The aquifer testing study concluded that based on the understanding of hydrogeological conditions onsite from many different site investigations there is sufficient water onsite to meet the water demands of the proposed development. The study found that the development of future groundwater wells will not have a significant impact on existing groundwater users in the area, and that the aquifers recommended as possible supply sources for the development are not under direct influence of the Bow River. The proposed individual wells will be installed at depths greater than what can be impacted by the surficial water table. The wells will be drilled into buried bedrock aquifers that are protected from surface waters by a number of shale confining layers, or aquitards.

Electricity and natural gas will be provided by utilities adjacent to the site. There are currently no piped services for sewage disposal or stormwater, which will be addressed through on-site treatment and management facilities.

As indicated previously, an Altalink transmission line right-of-way crosses the site with a southeast-northwest alignment, with three supporting structures located within the right-of-way.

4 Land Use Concept

4.1 Design Considerations

The design of Riverside Estates is based on a conservation design approach that integrates the proposed development within the natural setting of the site with the least amount of disruption to the natural context. The result is a concerted effort to meet the objectives outlined in section 1.3 with a land use plan that meets a balance of economic, environmental, technical and community performance aspirations. These factors require a development concept that blends with the traditional residential subdivision pattern predominant in a region experiencing continued growth.

There is an increased appreciation for a high quality built environment that integrates the natural setting into the overall community design, particularly for a site with the natural characteristics and locational features as the subject property. Adjacent to the Bow River, the site offers magnificent scenic views to the east, in addition to beautiful treed areas along the ravines that cross the site draining towards the river. Traditional multi-acre lots are being recognized as an unsustainable form of future growth due to issues such as land consumption, significant impacts

from private sewage systems and public infrastructure maintenance and replacement costs, while development with medium-sized lots embedded in a natural setting have growing market appeal.

As a result, conservation approaches for recent subdivisions that feature lots in more efficient clusters, allowing for both country residential housing options and the preservation of open space, are increasingly common in Rocky View County. The design of Riverside Estates is consistent with the cluster development format ~~advanced in the forthcoming Springbank Area Structure Plan~~, and offers a broader, more diverse residential product range to bolster existing land values instead of saturating the market with more of the same product.

4.1.1 Community Input

~~Within the framework of what is technically and economically viable, the most important consideration and influence on the design of Riverside Estates will be the input of local residents. Bearspaw Lakefront Estates LP has engaged the Springbank community and surrounding land owners through a variety of channels and will continue to do so as part of a consultation process that will go above and beyond what is required or accepted as standard practice. All aspects of the Riverside Estates Conceptual Scheme will represent an attempt to find balance and incorporate the significant amount of feedback to be received.~~ The most important consideration and influence on the design of Riverside Estates has been the input of local residents. Bearspaw Lakefront Estates LP has engaged the Springbank community, surrounding land owners and existing utility co-ops through a variety of channels and printed and digital media as part of a consultation process to go above and beyond what is required or accepted as standard practice. Community outreach was facilitated as follows: i) targeted mail out on Aug. 6, 2020 of an informative postcard to adjacent community areas, introducing information about the proposed development and how to access the developer-led project information website; ii) publication of an ad in the Rocky View Weekly the weeks of July 27 and Aug. 3, 2020 with same information as mail out postcard; iii) launching of a developer-led project information website www.ibipublicengagement.com/riverside/ on July 27, 2020 that included project description, online survey, frequently asked question, comment inbox, contact email address (riversideestates@ibipublicengagement.com) and the proposed Conceptual Scheme; iv) meeting with property owners of communities adjacent to the project site at RVC offices on July 29, 2020, facilitated by RVC Planning staff. Public engagement was conducted to inform revisions to the proposed Riverside Estates Conceptual Scheme and meet Rocky View County requirements. All aspects of the Riverside Estates Conceptual Scheme represent an attempt to find balance and incorporate the significant amount of feedback received, particularly relating to location and access to the open space network, ensuring integration with the natural setting and movement of wildlife, accessibility to the proposed pathway system and safe operation of the proposed servicing strategy.

4.1.2 Incorporate and Conserve Site Attributes

Riverside Estates has been planned to align with and take advantage of the natural topography and vegetation of the site. The proposed three development cells are the result of a concerted design effort to map roads strategically to best match the existing grades and minimize cut and fill requirements and maximize tree preservation. Home sites have been laid out to create the best opportunity to protect the existing tree stands and allow them to be natural buffers between lots and adjacent properties, to foster high amenity values and the rural, natural character desired in this development. Furthermore, consistent with the goals of cluster development approaches, a significant portion of the site has been identified to be preserved in natural state to continue to provide close interaction with nature to residents in the broader area.

4.1.3 Open Space, Trails, and Recreation

The design intent is to make open space, connected trails, and on-site recreational opportunities

signature features of Riverside Estates. Open space networks will be interlaced throughout the development and connect every part of the development to each other and to adjacent developments, as well as provide a link to a regional pathway system and significant natural areas within the development; all of which will be publicly dedicated. The open space network is designed to maintain access to the natural areas that the community has enjoyed for years.

4.1.4 Transition and Compatibility with Surrounding Uses

One of the priorities guiding the design of the new development is to achieve a well transitioned and compatible community design that integrates with the context and character of the existing community. This is achieved in the Riverside Estates design through selective landscaping, strategic lot arrangement and the applicability of design standards that provide specific building envelopes for individual lots.

4.1.5 Innovatively Minimize Country Residential Development Footprint

A hallmark principle of the proposed development is to minimize the private country residential development footprint, while maximizing the open space area to preserve the natural rural aesthetic. Applying creative site design, more efficient lot yields are achieved and on a much smaller footprint than the conventional country residential development that has been built over the last few decades. Furthermore, the amount of publicly dedicated open space is also significantly enhanced.

4.1.6 Respect the Nature and Culture of Central Springbank

Riverside Estates was conceived as a development that would become an integral part of the Central Springbank community without detracting from the attributes that have made it such an attractive residential location. Riverside Estates is envisioned as a community where buildings are integrated to the traditional built context of the community, stepped with the natural grades, blending in with the character of the surrounding landscape and reflecting the architectural styles of the surrounding area. Respect for the rural character and ecological features of the site, such as surface and ground water quality, steep slopes and wildlife habitat, will be achieved through the protection of a portion of each parcel. Optimal lot sizes limit the need for alteration of the existing terrain and will facilitate the retention of diverse ecology, topography and vegetation throughout the site. The policies of this Conceptual Scheme provide an implementation framework to realize the community vision that preserves the existing vegetation and landscape.

4.2 Development Goals and Objectives

The goal of the Conceptual Scheme for Riverside Estates is to **preserve**, **protect** and **enhance** the natural environment of the subject site and to remain consistent with the policies outlined in the Central Springbank Area Structure Plan and the forthcoming Springbank Area Structure Plan (SASP).

The Riverside Estates Conceptual Scheme is guided by a set of goals and objectives that respects the natural setting on site and community context, to allow for a residential community that will:

- Create a unique residential community that respects the predominant country residential surrounding context and enhances the natural setting, features and topography of the site.
- Offer a high quality of life for all residents by providing a balance between the public and private realms within the community that facilitates a safe and open community for its residents.
- Ensure high quality and uncompromising development standards for a consistent, integral and healthy built environment.
- Integrate areas of environmental significance within the site into the development, ensuring that such areas are preserved.
- Integrate existing natural stormwater drainage patterns into the site design and ensure the implementation of comprehensive stormwater management plan.
- Incorporate innovative sustainable initiatives and standards to promote water conservation and energy efficiency.
- Create a pedestrian friendly community through the design of a local road system, pathway and open space network that incorporates multi-use regional pathways and rustic trails that allow for easy and convenient connection to adjacent sites.

- Value and respect local resident interests; and
- Pursue consistency with the provisions of the Central Springbank Area Structure Plan and the forthcoming Springbank Area Structure Plan to offer a livable and sustainable community design;

4.3 Concept Plan Design

Riverside Estates is proposed as an efficient and sustainable country residential development with a cluster approach that, while featuring homesite sizes consistent with surrounding areas, secures abundant open space supporting a residential lifestyle that is harmonious to the Central Springbank area. The proposed development achieves a substantial reduction in the residential development footprint compared to traditional residential development in the area while maintaining a residential character common to two-acre sites. The Concept Plan is illustrated on **Exhibit 7**. The Lot Layout and Concept Plan is shown as an overlay with the aerial photo of the site in **Exhibit 8**.

Riverside Estates is a 32-lot development structured in three development cells with existing road connections to neighboring communities. Development Cell A is located in the southwestern corner of the site and has a total of 8 residential lots that are accessible through north and east extensions of Calling Horse Drive (Range Road 31) and Rodeo Dr. respectively. The northern extension of Calling Horse Drive (Range Road 31) leads into Development Cell B, which is located on the northeastern corner of the site, with a couple of its 12 lots backing onto the Springbank Links Golf Course property. The third development cell, Cell C, is accessible through Emerald Bay Dr. from the north, extending into the northeast corner of the site to its 12 residential lots.

The proposed wastewater facility that will service the development is located south of development Cell B. Its location and anticipated environmental performance is respectful of the central ravine and key topographic features characteristic of the site that are preserved in the central portion of the site, thus ensuring the protection of the natural setting that extends towards Bears paw Reservoir and the southeastern corner of the site. Overall, the project is conceived for a total of 32 residential lots that will feature reduced building envelopes to foster a seamless blend with the natural setting.

Ranging from 2.0 to 2.68 acres, the 32 country estate homesites provide a practical balance of the space provided with a traditional country residential lot with greater manageability and attainability. Many of these homesites are located in prime locations backing onto open space and treed areas. Lot and building sites have been carefully designed to ensure residential integration to the natural character while providing privacy and tranquility for individual lots. Fencing shall not be allowed on individual lots to preserve the natural environment of the site perimeter. ~~Instead, the use of landscaping and vegetation as a natural boundary marker for homeowners will be encouraged to obtain privacy and consistency throughout the Riverside Estates community. Privacy fencing and dog runs within the building envelope areas will be permitted.~~ Instead, the use of landscaping and vegetation as a natural boundary marker, along with discrete property boundary markers, will be encouraged to obtain privacy and consistency throughout the Riverside Estates community. To allow sensitive wildlife presence in the plan area, privacy fencing and dog runs within the building envelope areas will be permitted.

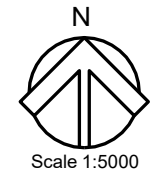
Image of example of proposed boundary marker included.

The proposed concept for Riverside Estates adheres to the applicability of the conservation country residential concept already applied to other developing areas with Rocky View County. The ~~Residential One (R-1)~~ The Residential, Country Residential District (R-CRD) land use designation existing on the subject site is appropriate for the intended development and aligns with the cluster residential concept ~~advanced in the forthcoming Springbank Area Structure Plan as proposed.~~

IBI GROUP REPORT
RIVERSIDE ESTATES
CONCEPTUAL SCHEME
Prepared for Bearspaw Lakefront Estates LP

Open space has been carefully intertwined to allow a relaxing pedestrian experience through the site's landscape and natural amenities. The greenway system generally corresponds to the grassland and treed areas naturally found in the planning area. Dedication of these green areas permits recreation while preserving the open vistas and views.

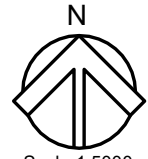
CONCEPT PLAN



LEGEND	
	Boundary Site
	Residential area
	Limit of Disturbance
	Building Envelope
	Lot Setback Line
	Wastewater Treatment Area
	Geo-Tech Setback Line
	Natural Low-lying Area
	Pathways
	1.00m Contours
12	Lot Number



LOT LAYOUT + CONCEPT PLAN



Scale 1:5000



 Subject Site



The stormwater management system has been integrated within the open space network following a Conservation plan approach, allowing the existing terrain and vegetation to naturally maintain sheet flows across lot property lines. Enhanced infiltration at the back of lots to reduce overland flows, as well as punctual grading to divert water away from buildings towards pervious areas and channels, will allow stormwater to be managed using appropriately sized low impact development practices and storm pond facilities to retain stormwater within the site.

The following table summarizes the subdivision and land use concept stats:

Table 1 – Subdivision and Concept Plan Stats

Gross Area:	±55.46 ha (±137.04 ac)		
<u>Residential (R-1)</u>			
Cell A (Lot 1-8)	±6.83 ha (±16.87 ac)		
Cell B (Lot 9-20)	±9.91 ha (±24.49 ac)		
Cell C (Lot 21-32)	±9.93 ha (±24.54 ac)		

TOTAL	±26.67 ha (±65.90 ac)		
<u>Services</u>			
S-SPR	±23.49 ha (±58.04 ac)		
PUL – Wastewater Treatm	Table has been revised.	ha (±4.87 ac)	
TOTAL	±25.46 ha (±62.91 ac)		
Roads	±3.33 ha (8.23 ac)		
TOTAL LAND	±55.46 ha (±137.04 ac)		
LOTS BY CELL:			
	Quantity	Lot Size Range	Ave. Lot Size
Cell A	8	2.00 ac – 2.68 ac	±2.11 ac (±0.85 ha)
Cell B	12	2.00 ac – 2.25 ac	±2.04 ac (±0.82 ha)
Cell C	12	2.00 ac – 2.14 ac	±2.05 ac (±0.83 ha)
TOTAL	32 LOTS		

- Policy 4.1* Subdivision of land within the Riverside Estates planning area shall be generally in accordance with Exhibits 7 and 8. The final size, configuration and design of individual parcels and road system proposed through subdivision shall be identified on the tentative plan for subdivision approval.
- Policy 4.2* ~~Residential lot sizes within Riverside Estates shall be a minimum of 0.8 hectares (2.0 acres) and a maximum of 1.08 hectares (2.68 acres). The form of residential development shall be single detached housing and residential lot sizes within Riverside Estates shall be a minimum of 0.8 hectares (2.0 acres) and a maximum of 1.08 hectares (2.68 acres).~~
- Policy 4.3* There shall be a maximum of 32 residential units within Riverside Estates.
- Policy 4.4* ~~To preserve the natural environment of the site and maintain sensitive presence of wildlife, fencing shall not be allowed on individual lots. Instead, the use of landscaping and vegetation as a natural boundary marker for homeowners will be encouraged to obtain privacy and consistency throughout the Riverside Estates community. Privacy fencing and dog runs within the building envelope areas will be permitted.~~
- Policy 4.5* ~~The location of community mailboxes will be defined at subdivision stage.~~
- Policy 4.6* ~~Prior to subdivision approval, the developer shall explore through geotechnical assessment and other information satisfactory to the County, the availability of one contiguous developable acre for each proposed residential unit.~~

4.4 Municipal Reserve, Open Space, and Pathways

4.4.1 Open Space

Riverside Estates features over ~~42.3% open space, (approximately 58 acres)~~ 44.8% open space, (approximately 61 acres) comprised of municipal reserve, environmental reserve and public utility lots. **Exhibit 9** illustrates the openspace and existing trees to be preserved, where possible, within the planning area.

The Riverside Estates parcel features a varied topography and natural vegetation. While the valley and central ravine through the parcel limit developable area, they provide an attractive and interesting feature for the adjacent homesites and for all residents to enjoy the natural open space and trails.

The continuity of the open space network within Riverside Estates allows for the maximization of the rural character of the development and the preservation of existing vegetation and natural areas to maintain corridors for wildlife movement. The conservation design approach used in Riverside Estates allows the pursuit of the goals for open space expressed in section 2.6 of the Central Springbank ASP.

- ~~*Policy 4.4* **Policy 4.7** An open space network within the planning area, including the delineation of public and private land, shall be constructed by the developer, as generally shown in Exhibit 9, to the satisfaction of the County.~~
- ~~*Policy 4.5* **The Developer shall dedicate Municipal Reserve in accordance with Exhibit 9 at the time of subdivision, subject to a review of Environmental Reserve/ Environmental Easement requirements. Municipal Reserve shall be developed in a form acceptable to the County at the time of dedication. Notwithstanding the provisions of the Municipal Government Act, the Developer is committed to the provision of Municipal Reserve in accordance with Exhibit 9 of this Conceptual Scheme.**~~
- Policy 4.8* ~~At the subdivision stage, the developer shall prepare a strategy for the open space identified on Exhibit 9. The strategy shall include proposals for dedication of~~

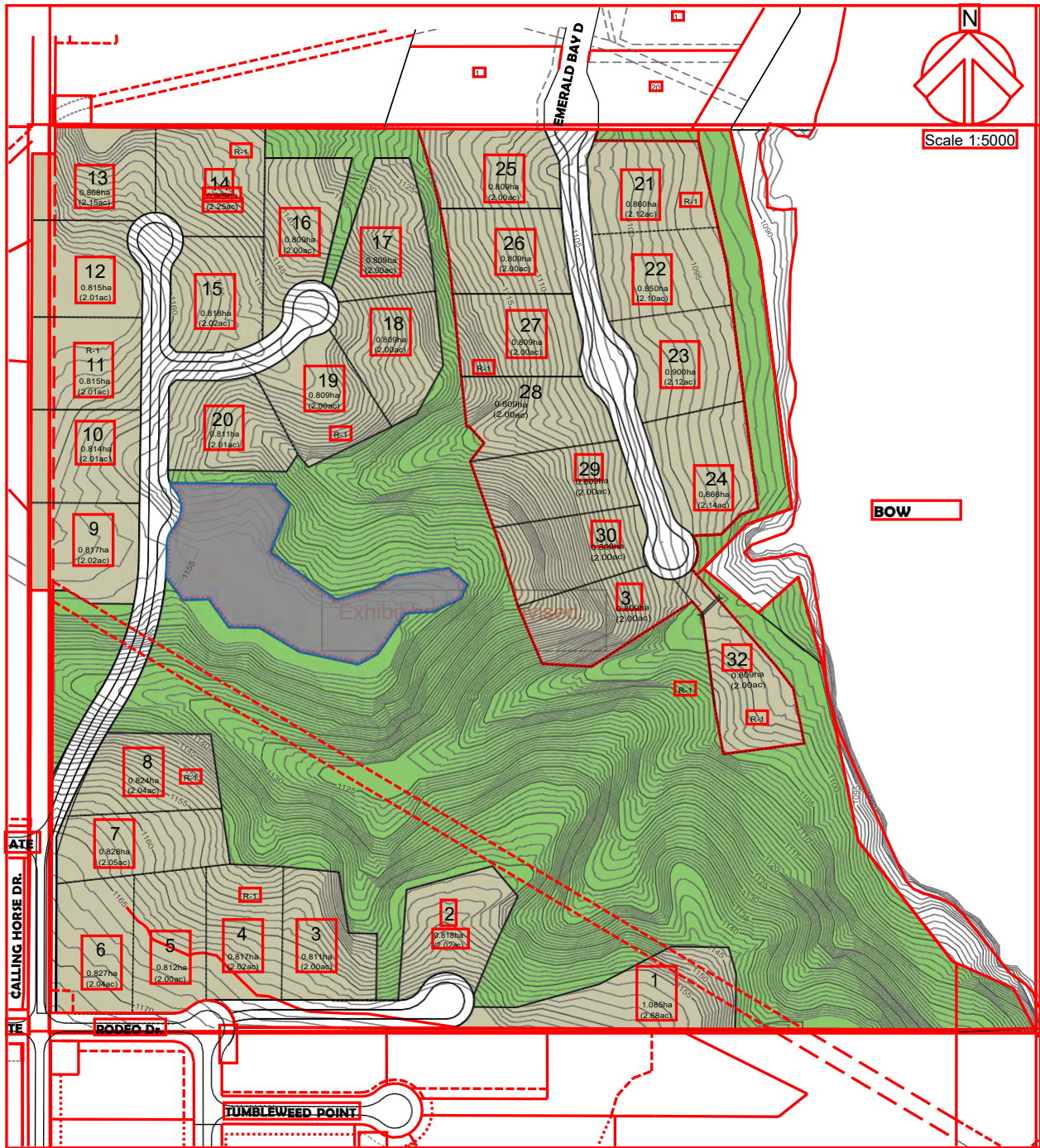
Municipal Reserve/ Environmental Reserve. For remaining lands, the strategy shall confirm to the satisfaction of the County, home owners' association ownership, operation, maintenance, public access easements, and future uses

4.4.2 Pathways and Trails

The pathways and trails network for Riverside Estates responds to the community's aspiration to achieve a connecting walkway system that offers a convenient, safe recreational pedestrian passage throughout the community, as expressed in the Rocky View West Recreation Board's Master Plan and Operating Guidelines. The development concept also aligns with the Active Transportation Plan (2018) recently adopted for the County. The proposed development will feature an estimated 3.4 kms of publicly accessible pathways and trails. The local pathway and rustic trails system provide a connected network of pedestrian routes and recreation opportunities that connect to the regional pathway system in the surrounding areas. **Exhibit 10** illustrates the connected pathways and trail network.

A 1.5m wide natural local pathway will provide connectivity to adjacent lands and pathways.

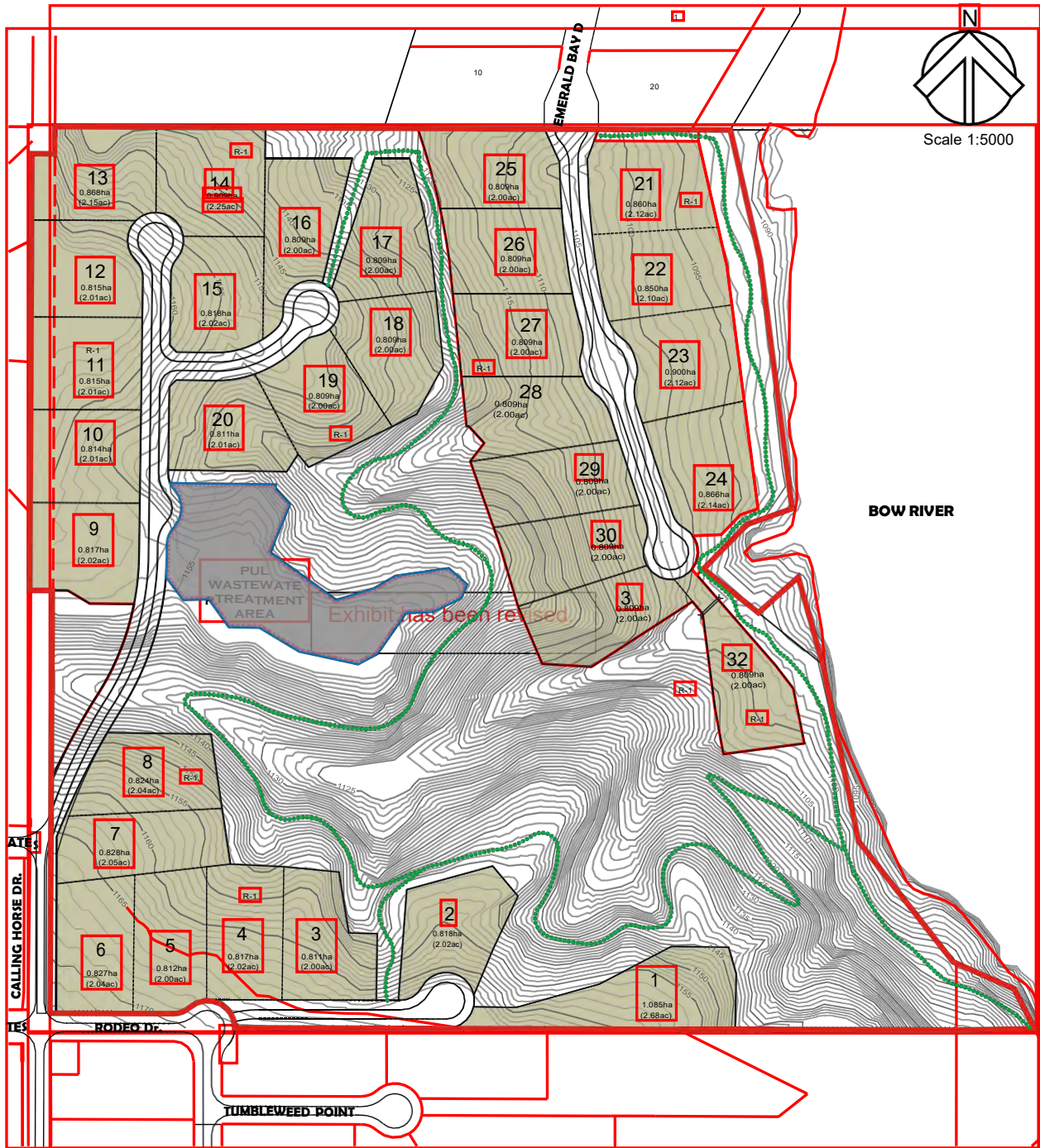
OPEN SPACE



- Subject Site
- Residential Area ±26.67 ha (±65.90 ac)
- Open Space ±23.09ha (±57.06ac)
- Wastewater Treatment Area ±1.97ha (±4.87ac)
- 12** Lot Number



PATHWAYS AND TRAILS



- Subject Site
- Residential Area ±26.67 ha (±65.90 ac)
- Local Pathways ±3381.30m
- Wastewater Treatment Area ±1.97ha (±4.87ac)
- 12** Lot Number



Approximately 3.3 kms of rustic trails will run internal to the large open area located within the development site, maintaining public access to the trails and ravines the community has come to appreciate.

~~Policy 4.6~~ *Policy 4.9 The pathway and trail system (Local, Rustic) within the planning area, as generally shown in Exhibit 10, shall be constructed by the Developer, to the satisfaction of the County.*

~~Policy 4.7~~ *Policy 4.10 The pathway and trail system (Local, Rustic) within the Planning area, as generally shown in Exhibit 10, shall be publicly accessible with appropriate signage.*

~~Policy 4.8~~ *Policy 4.11 Pathways and trails including road crossings (crossing requirements and locations to be determined at the time of subdivision) shall be constructed in accordance with the descriptions in the County's Pathways and Trail Classification and the requirements of the County's Servicing Standards and shall be situated outside any proposed road widening.*

~~Policy 4.9~~ *Policy 4.12 The pathway and trail system (Local, Rustic) within the planning area, as generally shown in Exhibit 10, shall be maintained by the Riverside Estates Homeowners Association through an agreement to be determined with the County at the subdivision stage.*

4.4.3 Recreation

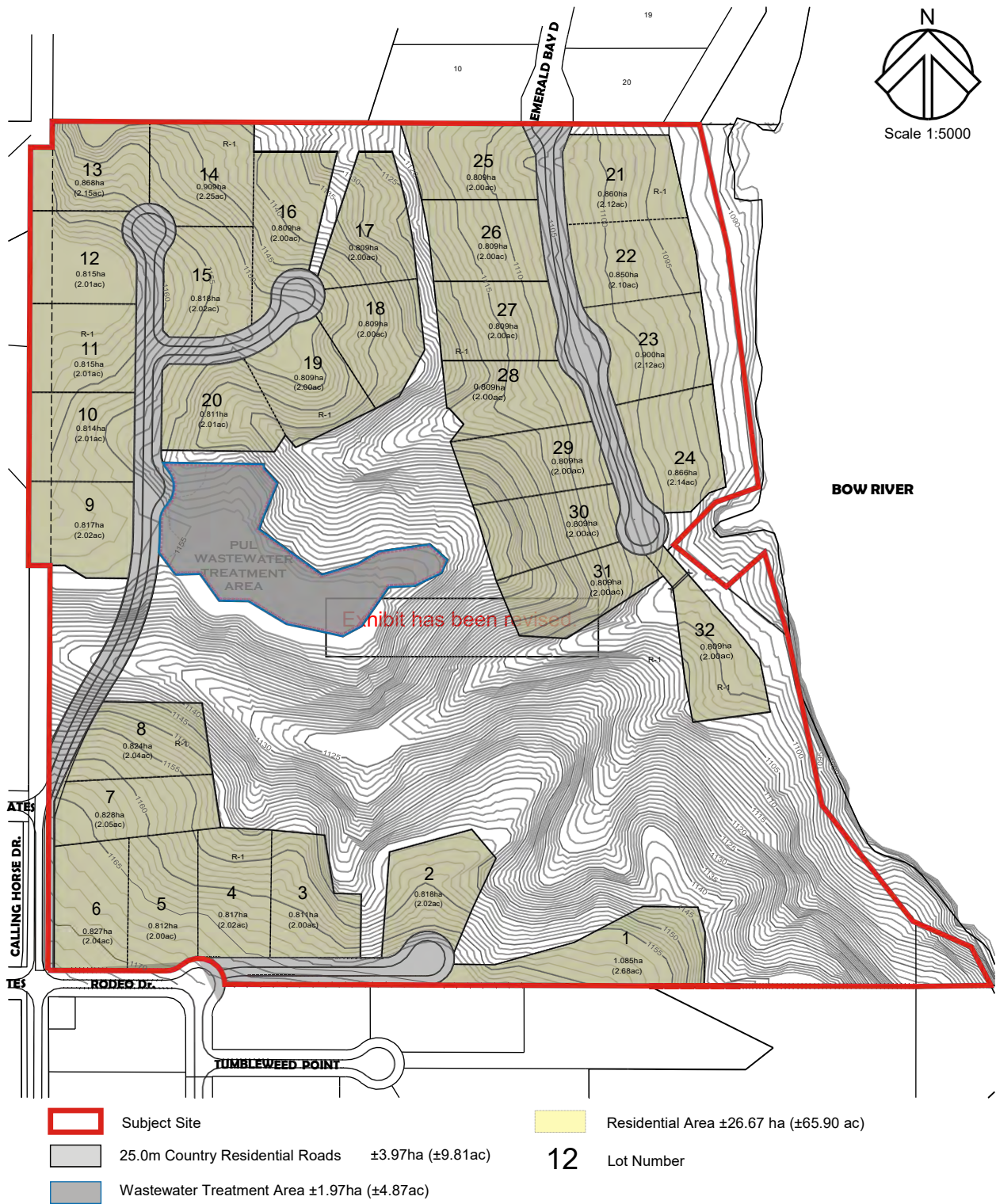
In addition to the passive recreational opportunities provided by the extensive trail system, the developer of Riverside Estates will discuss the community's recreational needs with the ~~Rocky View West Recreation District Board Recreation Governance Committee~~.

Public access to the site will be possible along the local pathway and trail system or via the Rustic Pathway.

4.5 Transportation Overview

The proposed transportation network is designed to provide safe and efficient access to the development and includes a discrete hierarchy of road typologies to best account for safety, accessibility and country residential design character. Wherever possible, the road alignments follow the natural topography of the land to minimize cut and fill areas while still being able to achieve maximum road grade performance criteria. The road network along with carriageway widths were minimized wherever possible to reduce the amount of impervious surfaces, while meeting the network capacity requirements. In addition, although it is proposed that road right of ways (ROW) be minimized and encourage the location of deep services within the road ROW to reduce disruption to existing tree stands from being cleared in key zones on the property, the development concept for Riverside Estates allows for the integration of a shared use pathway to ease connectivity for active transportation modes to other developments in the area, thus responding to the County's Active Transportation Plan (2018). **Exhibit 11** illustrates the proposed road network hierarchy and proposed right of ways. The proposed right of ways are to be finalized at the appropriate subdivision stage for each given phase, at which time, detailed cross sections will be required. The proposed ROW for each road may be subject to change at the subdivision stage.

INTERNAL ROAD NETWORK



4.5.1 Riverside Estates Site Access and Public Roads

It is proposed that each of three residential cells that comprise the Riverside Estates community will have separate accesses that will connect them to surrounding neighborhoods. Located in the southwestern corner of the site, Development Cell A is accessible through north and east extensions of Calling Horse Drive (Range Road 31) and Rodeo Dr. Development Cell B, located on the ~~northeastern~~ northwestern corner of the site, is accessible through the northern extension of Calling Horse Drive (Range Road 31). The third development cell, Cell C, is accessible through Emerald Bay Dr. from the north. Calling Horse Drive (Range Road 31) to the south serves as the main connector of the site to the regional road network, as it intersects with Township Road 250, which in turn leads to Old Banff Coach Road and TransCanada Highway 1.

Each of the access roads to the development cells is proposed to reside within a 25m ROW, serving as the transportation links to the surrounding neighbourhoods. ~~For enhanced safety, three-way stop signs and similar traffic control measures should be put in place at the intersection of Villosa Ridge Drive and the extension of Calling Horse Drive into Cell B (Road B) of Riverside Estates.~~

4.5.2 Internal Road Hierarchy

The internal roads of Riverside Estates will be designed using the County's road standards as updated, and will meet the County's performance requirements. To further help create a rural feel and assist in the preservation of natural vegetation and trees, the shallow utility easement will be in a separate right of way (ROW) on one side of the road as necessary, while the sanitary and water lines may be located within the road ROW (includes a ditch, where applicable).

~~Policy 4.10 A complete road system, including pathway crossings, within the planning area~~

~~shall be constructed by the Developer as generally shown in Exhibit 11, to the satisfaction of the County.~~

~~Policy 4.13 A complete road system, including appropriate measures such as signage, sightlines, speed limits, pathway crossings and other improvements within the planning area shall be constructed by the Developer as generally shown in Exhibit 11, to the satisfaction of the County.~~

~~Policy 4.11 Primary access to Riverside Estates shall be from Calling Horse Drive (Range Road 31) and Emerald Bay Drive as shown in Exhibit 11, to the satisfaction of the County.~~

~~Policy 4.14 At the subdivision stage, the developer shall incorporate designs for secondary access/emergency access in alignment with municipal standards. Revisions to the conceptual road layout shown in Exhibit 11 to accommodate secondary access shall not require an amendment to this conceptual scheme.~~

~~Policy 4.15 Primary access to Riverside Estates shall be from Calling Horse Drive (Range Road 31), Rodeo Dr. and Emerald Bay Drive as shown in Exhibit 11, to the satisfaction of the County.~~

~~Policy 4.16 The ownership and maintenance of the internal road system shall be the initial responsibility of the Developer and then transferred to the County at no cost on a deficiency free basis in accordance with the terms set out in a Development Agreement, which shall be entered into between the Developer and the County prior to subdivision approval.~~

4.6 Traffic Impact Assessment Recommendations

A Transportation Impact Assessment for Riverside Estates was completed in 2019 in support of this conceptual scheme. The analysis indicates that all the study intersections, namely the intersections of Colling Horse Dr.-Township Road 250 and Old Banff Coach Rd.- Township Road 250, will continue to operate within acceptable capacity parameters at the opening day horizon.

IBI GROUP REPORT
RIVERSIDE ESTATES
CONCEPTUAL SCHEME
Prepared for Bears paw Lakefront Estates LP

While the Alberta Transportation's warrant for a west bound right turn lane at the intersection of TWP 250 and RR 32 is technically met by a small margin, no improvements are required. In the future, TWP 250 will be upgraded as a result of overall County growth and intersection design requirements can be reassessed at that time.

For the long-term horizon, this development is accounted for in the background growth of the Bingham Crossing TIA and as such the recommendations from this previously approved TIA still apply. Off-site intersection and roadway improvements will be detailed at the subdivision stage in coordination with Rocky View County and Alberta Transportation.

~~Policy 4.12 Policy 4.17 An updated Traffic Impact Assessment will be required prior to subdivision approval.~~

~~Policy 4.13 Each phase of development will require updates to the Traffic Impact Assessment.~~

~~Policy 4.14 Policy 4.18 All upgrades required by the Traffic Impact Assessment and not completed by Alberta Transportation shall be provided by the Developer to the satisfaction of Rocky View County and Alberta Transportation. Upgrade costs may be proportionally distributed among developers in the area.~~

4.7 Population and Density Projections

4.7.1 Population

Based on the intended housing typology proposed, it is anticipated that there will be an average of 2.5 people per unit within the planning area, the national average number of persons per private household as per the 2016 Statistics Canada Census. A full development of 32 units equates to a total population of approximately 80 residents.

4.7.2 Density

With an anticipated total of 32 units over the Conceptual Scheme plan area of 55.46 ha (137.04 acres), the density of Riverside Estates will be approximately 1.73 units per hectare, or 4.28 units per acre.

Policy 4.15 Policy 4.19 Overall density of residential development within the planning area shall not exceed 1.73 units per gross hectare (4.28 units per gross acre).

5 Servicing Strategy

5.1 Water Supply

Water servicing will be provided through individual groundwater wells located on each lot. Potential water servicing options for the future include licensed withdrawal from the Bow River and/or potential connection to existing water co-ops servicing the area, like Emerald Bay Water and Sewer Co-Op, Salt Box Coulee Water Supply Company and North Springbank Water Co-Op.

The aquifer testing study conducted in 2018 concluded that based on the understanding of hydrogeological conditions onsite from many different site investigations there is sufficient water onsite to meet the water demands of the proposed development. The study found that the development of future groundwater wells will not have a significant impact on existing groundwater users in the area, and that the aquifers recommended as possible supply sources for the development are not under direct influence of the Bow River. The proposed individual wells will be installed at depths greater than what can be impacted by the surficial water table.

To meet sustainability objectives and reduce development impact, Riverside Estates will implement water demand reduction practices. Such practices will include installation of low-flow fixtures and low impact landscaping with rainwater collection barrels and cisterns.

~~*Policy 5.1 — The planning area shall be serviced through individual groundwater wells located on each lot. If deemed necessary, water servicing options for the future include licensed withdrawal from the Bow River and/or potential connection to existing water co-ops servicing the area. Supplementary water reservoirs shall be considered to the satisfaction of Rocky View County.*~~

~~*Policy 5.2 — Riverside Estates shall implement water conservation practices that reduce the amount of potable water consumed. Such conservation measures may include:*~~

- ~~*a) — A requirement for all buildings to install low-flow water fixtures;*~~
- ~~*b) — A requirement for all development to utilize drought resistant landscaping and rainwater collection systems.*~~

Policy 5.1 Prior to subdivision approval, the developer shall, to the satisfaction of the County, provide a feasibility assessment on water servicing options for potential connection to a

*pip*ed water system, including possible connections to existing water co-ops servicing the area.

- Policy 5.2* Where connection to piped potable water services is not deemed feasible by the County following review of the feasibility assessment required under Policy 5.1, the development should be serviced through individual groundwater wells to the satisfaction of the County.
- Policy 5.3* Riverside Estates shall implement water conservation practices that reduce the amount of potable water consumed. Such conservation measures may include:
- a) A requirement for all buildings to install low-flow water fixtures;*
 - b) A requirement for all development to utilize drought resistant landscaping and rainwater collection systems.*

5.2 Wastewater

Given that currently there is no economically feasible potential connection to piped services for sewage disposal for the subject site, wastewater will be managed on site using a communal system licensed by the Province of Alberta and constructed in accordance with all Provincial and Municipal requirement and standards. The proposed system is the ORENCO AdvanTex Decentralized Wastewater Treatment System and will be managed by a licensed operator.

The ORENCO system generally consists of a tank with solid separation for each lot which pumps liquid to a pressurized line leading to the central processing facility, where it incorporates additional filtration and treatment for the effluent within filter pods, prior to drainfield release. The processing facility can be constructed in phases as the project is built out, with each modular, in-ground filter pod capable of servicing approximately 30 residential units. With the addition of filtration/treatment, the effluent quality is substantially increased and the size of the dispersal field is correspondingly reduced. The treatment facility and dispersal fields are to be located in Public Utility Lots, illustrated in **Exhibit 12**.

The proposed location of the Riverside Estates wastewater treatment facility is in the central area of the site, just south of Development Cell B and north of the central ravine that crosses the site. The dispersal fields for the Riverside Estates wastewater system will be sensitively located to meet Alberta Environment standards to protect the natural drainages and minimize the possibility of treated effluent reaching the Bow River and Bearspaw Reservoir.

A Preliminary Wastewater Feasibility Report (PWFR) was prepared by SD Consulting in support of the Riverside Estates Conceptual Scheme in 2018. The report found that the soils are suitable for providing the development with the necessary sanitary servicing using the proposed system. The proposed dispersal field is of adequate size and location for the development of Riverside Estates. Details of the wastewater flow estimates and dispersal field requirements have been provided within an updated wastewater report from SD Consulting under a separate cover.

5.2.1 Rocky View County Policy #449 on Decentralized Wastewater Treatment Systems

Policy #449 Rocky View County Policy defines a Decentralized Wastewater Treatment System as consisting “of a communal system that collects typical wastewater strength effluent from multiple lots, conveyseffluent to a wastewater treatment plant for treatment and discharge to an approved discharge location.”

#449 Policy Statements:

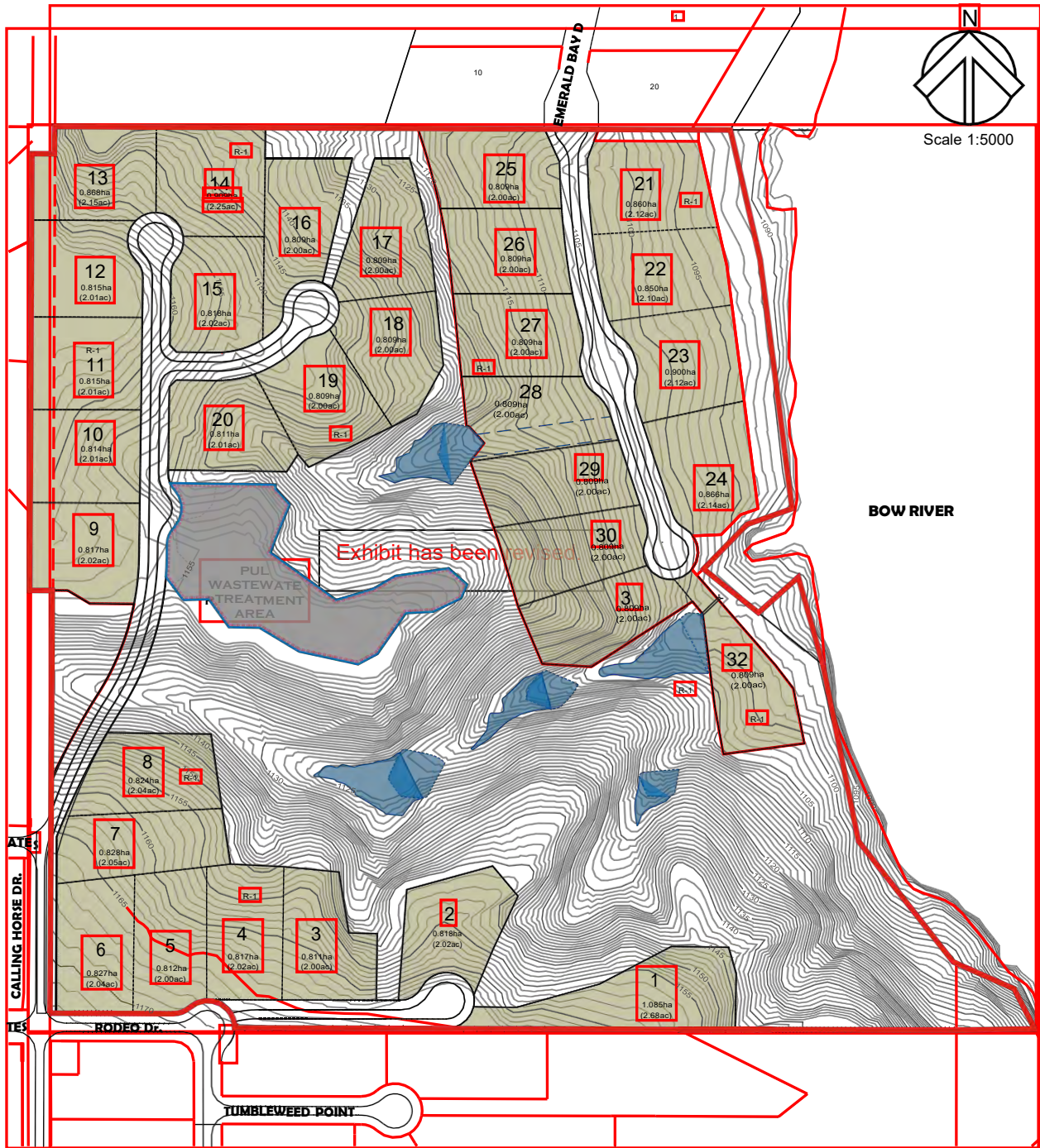
10. *When a proposed subdivision will result in the creation of any lot(s) less than 4 acres and where development density exceeds 60 proposed, conditionally approved or existing lots within a 600m radius of the centre of the proposed development, the County will not permit the use of PSTS to support the development, but will require a Decentralized or Regional Wastewater Treatment System.*

Utilizing a proven Decentralized Wastewater Treatment System, Riverside Estates satisfies this policy statement.

11. *Where connection to a Regional Wastewater Treatment System is not feasible, the feasibility of proposed development hooking up to an existing Decentralized Wastewater Treatment System shall be investigated.*

The decentralized wastewater treatment system proposed is the same type approved for use in the Silverhorn and Indigo Hills developments, in the Bearspaw area. It is a modular and scalable solution.

PROPOSED UTILITY LOT



- Subject Site
- Wastewater Treatment Area ±1.97ha (±4.87ac)
- Natural Low-lying Area
- Residential Area ±26.67 ha (±65.90 ac)
- 12** Lot Number



The development will have collection, treatment, and disposal infrastructure on its lands, with a control panel for monitoring. When the County assumes ownership of the land and systems, the monitoring system can be linked to the County's control panel.

~~Policy 5.3 — Sanitary sewage service shall be provided by a communal wastewater system, as per County Policy #449, Performance Requirements for Wastewater Treatment Systems, that provides secondary wastewater treatment to the satisfaction of the County.~~

~~Policy 5.4 — The communal wastewater system proposed for installation within the planning area shall meet or exceed engineering standards and specifications established by the County and the Province.~~

~~Policy 5.5 — The ownership, operation and maintenance of the communal system shall be the initial responsibility of the Developer and then transferred to the County at no cost on a deficiency free basis in accordance with the terms set out in a Transfer Agreement, which shall be entered into between the Developer and the County prior to subdivision approval, as per County Policy #430, Communal Wastewater System Management.~~

~~Policy 5.6 — The location and type of the communal wastewater system, and final size of dispersal field shall be determined prior to subdivision approval.~~

~~Policy 5.7 — The components of the communal wastewater system shall be located within individual residential lots, road Right-of-Ways and/or Public Utility Lots.~~

~~Policy 5.8 — Consent to waive setback distance for the Riverside Estates Wastewater Treatment Facility and Dispersal Field shall be received from Alberta Environment and Alberta Health Services prior to subdivision approval.~~

~~Policy 5.4 — As a condition of subdivision approval, Deferred Services Agreements shall be registered against each new certificate of title (lot) requiring the owner to tie into municipal services when they become available.~~

~~Policy 5.5 — Sanitary sewage service shall be provided by a communal wastewater system, as per County Policy, Performance Requirements for Wastewater Treatment Systems, that provides secondary wastewater treatment to the satisfaction of the County.~~

~~Policy 5.6 — The communal wastewater system proposed for installation within the planning area shall meet or exceed engineering and monitoring standards and specifications established by the County and the Province. Under no circumstances will septic pump-out systems, dispersal fields or open discharge from septic tanks be permitted.~~

- Policy 5.7 The ownership, operation and maintenance of the communal system shall be the initial responsibility of the Developer and then transferred to the County at no cost on a deficiency free basis in accordance with the terms set out in a Development Agreement, which shall be entered into between the Developer and the County prior to subdivision approval, as per County Policy, Communal Wastewater System Management.”*
- Policy 5.8 The location and type of the communal wastewater system, and final size of dispersal field shall be determined prior to subdivision approval.*
- Policy 5.9 The components of the communal wastewater system shall be located within individual residential lots, road Right-of-Ways and/or Public Utility Lots.*
- Policy 5.10 At time of future subdivision, a long term monitoring program will be developed and implemented that monitors baseline and post-development water quality conditions of the drainage and subsurface flows from the wastewater facility discharging into the Bow River and the natural drainage course on the subject land. The program will also include a remediation strategy that will be deployed in the event the monitoring results show signs of degrading water quality as a result of the development.*
- Policy 5.11 At the subdivision stage, the developer shall in line with relevant provincial and municipal regulations, specify and justify the extent of provincial relaxation required to setbacks identified for affected residences from the proposed wastewater treatment plant. As a condition of subdivision approval, the County shall submit a request to the relevant provincial department for consent to vary any applicable setback.*
- Policy 5.12 At the subdivision stage, the developer shall submit a detailed design of the wastewater services system, including the plan of sludge disposal, operation, contingency measures and other details as deemed necessary by the County and to the satisfaction of the County.*
- Policy 5.13 Consent to waive setback distance for the Riverside Estates Wastewater Treatment Facility and Dispersal Field shall be received from Alberta Environment and Alberta Health Services prior to subdivision approval.*
- Policy 5.14 The design of the communal wastewater system shall be such that the proposed wastewater system shall be connected to regional piped services as and when they become available in the future.*
- Policy 5.15 As a condition of subdivision approval, Deferred Services Agreements shall be registered against each new certificate of title (lot) created as a condition of approval, requiring the owner to tie into municipal services when they become available.*

5.3 Stormwater Management

5.3.1 Stormwater Management Approach

The Central Springbank Area Structure Plan (2001) defined the goals for sub-basin management in the Springbank area; these goals include, among other, to implement effective Best Management Practices at a site-specific level, as guided in a Master Drainage Plan and/or a Site Implementation Plan; the establishment of water quantity and quality monitoring programs for each sub-basin endeavoring to retain the same levels recorded January 2000; as well as maintaining post-development rates of stormwater runoff that equal predevelopment rates on both a regional and site specific basis. These recommendations are supported by the Springbank Context Study (2013), which recognized the importance of updating the Master Drainage Plan for the area. A new Springbank Master Drainage Plan was prepared by MPE Engineering and was adopted by Rocky View County in 2016. The new Master Drainage Plan (MDP) provides policy and implementation strategies to ensure sustainable and orderly development of future growth in Springbank from a stormwater management point of view. The 2013 Context Study documents that the central ravine crossing the site as a major drainage route in the area.

The stormwater management system is governed by the Springbank Master Drainage Plan

IBI GROUP REPORT
RIVERSIDE ESTATES
CONCEPTUAL SCHEME

Prepared for Bearspaw Lakefront Estates LP

(MPE, April 2016). The Springbank Master Drainage Plan requires unit area peak release rate of 1.71 L/s/ha for 1-in-100 year events where downstream constraints exist. The MDP also requires a volume control target of 45 mm or lower to meet the Stream Erosion Index less than 2. The drainage system design should also demonstrate that the Stream Erosion Index is 2 or lower, where the development releases into or passes through a natural stream. Riverside Estates is proposed to discharge into the central ravine. However, we note that the immediate downstream water body is the Bow River Reservoir (Bearspaw Dam) and not an erodible

channel. To construct the roadway over the existing central ravine, appropriately sized box culverts will be installed to maintain flows in the ravine.

Riverside Estates will be developed using a Conservation plan, which includes allowing the existing terrain and vegetation to naturally maintain sheet flows across lot property lines. To enhance infiltration at the back of lots, amended soils will be considered to reduce overland flows. Lot grading is part of this conservation plan which will divert water away from buildings towards pervious areas and channels.

In this context, stormwater will be managed using appropriately sized low impact development practices and storm pond facilities to retain stormwater within the site. These facilities will meet the stormwater quantity and quality control requirements currently set out by Alberta Environment and Rocky View County.

Appropriate levels and locations of off-site discharge, controlled to pre-development flows and over 1:100 year storm events will be identified with a stormwater management plan prior to subdivision endorsement.

In order to maximize the beneficial use of stormwater, it is proposed to incorporate a number of features to contain, manage and utilize stormwater within the development. Development Guidelines will require LID practices for each residence. LID practices and end-of-pipe facilities implemented in Riverside Estates may include, but not be limited to:

- directing paved areas to absorbent landscaping and natural areas within each private lot
- taking roof areas to rain-barrels, allowing for water reuse during dry periods
- minimizing the extent of land disturbance, which will increase infiltration and reduce runoff.
- managing runoff from roads and hard surfaces using swales and bioswales
- using constructed trap low and detention areas to treat stormwater before directing overland flows to the natural ravine and coulees within the site.
- maintaining existing natural topography to provide natural infiltration zones

The contributing area to the management facilities includes the lands within the Riverside Estates community (55.46 ha, 137.04 acres) as well as some surrounding developed residential lands. The analysis will include the information for the required by-pass flows from adjacent communities. The on-site attenuation facilities will be sized to service the site area only and meet restrictions on release rate and volume. A stormwater management plan will be prepared according to County standards and will inform the development's policy framework.

~~*Policy 5.9—A stormwater management system designed for the Riverside Estates Planning Area shall be prepared prior to subdivision approval. This plan shall:*~~

- ~~*a) Adhere to the stormwater management principles of this Conceptual Scheme, the Springbank Context Study, and the Central Springbank Area Structure Plan to the satisfaction of the County.*~~
- ~~*b) Undertake an assessment of drainage patterns and provide appropriate mitigation measures to resolve any drainage issues within and adjacent to the site.*~~
- ~~*c) Meet or exceed Springbank Master Drainage Plan (MPE Engineering, 2016) guidelines for peak annual rates and volume of discharge of post-development stormwater.*~~

~~Policy 5.10 Alterations to the existing pre-development stormwater drainage pattern within the Planning Area shall proceed in accordance with an approved Stormwater Management Plan and require all appropriate Provincial approvals regarding alterations to existing drainage courses within the proposed development site.~~

~~Policy 5.11 The stormwater management system should incorporate Low Impact Development (LID) strategies and technologies in its design that will consider ways to implement the following:~~

- ~~a) Preserve, where possible the existing landform in the subdivision and development concept and minimize extensive stripping and grading during the development of Riverside Estates;~~
- ~~b) Preserve, protect and enhance, where possible, existing natural spaces in the landscape that promote riparian habitat and natural vegetation to attract wildlife and enhance recreational opportunities, and utilize these spaces in the overall design of the stormwater management system;~~
- ~~c) Adopt a development strategy focused upon the reduction of impermeable areas throughout Riverside Estates; and~~
- ~~d) Promote the use of rain barrels and cisterns to retain and reuse stormwater.~~

- Policy 5.16 A stormwater management system designed for the Riverside Estates Planning Area shall be prepared prior to subdivision approval. This plan shall:*
- a) Adhere to the stormwater management principles of this Conceptual Scheme, the Springbank Context Study, and the Central Springbank Area Structure Plan to the satisfaction of the County.*
 - b) Undertake an assessment of drainage patterns and provide appropriate mitigation measures to resolve any drainage issues within and adjacent to the site.*
 - c) Meet or exceed Springbank Master Drainage Plan (MPE Engineering 2016) guidelines for peak annual rates, volume of discharge, and water quality parameters of post-development stormwater.*
- Policy 5.17 Alterations to the existing pre-development stormwater drainage pattern within the Planning Area shall proceed in accordance with an approved Stormwater Management Plan and require all appropriate Provincial approvals regarding alterations to existing drainage courses within the proposed development site.*
- Policy 5.18 The stormwater management system should incorporate Low Impact Development (LID) strategies and technologies in its design that will consider ways to implement the following:*
- a) Preserve, where possible the existing landform in the subdivision and development concept and minimize extensive stripping and grading during the development of Riverside Estates;*
 - b) Preserve, protect and enhance, where possible, existing natural spaces in the landscape that promote riparian habitat and natural vegetation to attract wildlife and enhance recreational opportunities, and utilize these spaces in the overall design of the stormwater management system;*
 - c) Adopt a development strategy focused upon the reduction of impermeable areas throughout Riverside Estates; and*
 - d) Promote the use of rain barrels and cisterns to retain and reuse stormwater.*
- Policy 5.19 Prior to subdivision approval, the developer shall to the satisfaction of the County, confirm easement requirements and mechanisms for the maintenance of the stormwater management infrastructure.*
- Policy 5.20 The Riverside Estates Home Owners Association will be responsible for the maintenance of stormwater management infrastructure.*

5.4 Solid Waste Management

The Riverside Estates Homeowners Association, through a contract with a solid waste contractor, shall provide solid waste management within the development. The creation of an onsite recycling program to divert materials such as paper, plastics, glass, and organic compost away from the landfill should be investigated by the corporation and an appropriate site should be selected within the development site.

~~*Policy 5.12*~~ *Policy 5.21 A solid waste and recycling management plan shall be prepared for Riverside Estates prior to endorsement of subdivision. Implementation of a solid waste and recycling management plan shall be the responsibility of the Developer and/or the Riverside Estates Homeowners Association.*

5.5 Shallow Utilities

The utility services required for the proposed development, including electrical power, telephone and natural gas, are all available in the immediate area with sufficient capacities to service the site. All utilities will be underground and on one side of the road right-of-way (ROW) in a joint-use trench where possible to reduce the clearing of natural vegetation and trees.

~~*Policy 5.13*~~ *Policy 5.22 Shallow utilities shall be provided by the appropriate utility company providing service to Riverside Estates at the sole expense of the Developer. The Developer shall provide easements to any utility company requiring them to provide*

services to Riverside Estates.

5.6 Protective Services

Fire protection is a priority concern for local residents. The Springbank Fire Station 102, located at 128 McLaurin Dr., is within 5.3 km (3.3 mi) of Riverside Estates with direct access to Township Road 250. Riverside Estates will also conform to Fire Smart principles in an effort to prevent the spread of wild fires. Main building structures in Riverside Estates will be equipped with dry fire suppression systems to ensure code-compliant fire protection while limiting potential water damage to valuables.

~~Policy 5.14 The Site Development Guidelines shall include Fire Smart principles, to the satisfaction of the Municipality.~~

~~Policy 5.15 Dry fire suppression infrastructure shall be provided in main building structures through dry fire suppression systems that are consistent with Rocky View County policy (C-7259-2013, as amended) and standards.~~

Policy 5.23 At the subdivision stage, the developer shall submit a Fire protection management plan in accordance with municipal standards.

Policy 5.24 The Site Development Guidelines shall include Fire Smart principles, to the satisfaction of Rocky View County.

Policy 5.25 Dry fire suppression infrastructure shall be provided in main building structures through dry fire suppression systems that are consistent with Rocky View County policy (C-7259-2013, as amended) and standards.

Policy 5.26 Connection to regional piped services will be pursued should a regional piped solution become available.

6 Statutory Plan Compliance

6.1 County Plan – Rocky View County

The Rocky View County Plan (Bylaw C-7280-2013) was approved on October 1, 2013, in accordance with Section 632 of the Municipal Government Act.

The County Plan defines the Vision for the County as follows:

Rocky View is an inviting, thriving, and sustainable county that balances agriculture with diverse residential, recreational, and business opportunities.

The Principles that guide County decisions regarding the implementation of goals, policies and actions include:

1. **Growth and Fiscal Sustainability** – *direct new growth to designated development areas, and in doing so it will remain fiscally responsible.*
2. **The Environment** – *develop and operate in a manner that maintains or improves the quality of the environment.*
3. **Agriculture** – *respects, supports, and values agriculture as an important aspect of the County's culture and economy.*
4. **Rural Communities** – *support the development and retention of well-designed rural communities.*
5. **Rural Service** – *strive to provide an equitable level of rural service to its residents.*
6. **Partnerships** – *maintain a strong web of partnerships to help extend the range of services it provides to its residents.*

The County Plan identifies the Central Springbank Area Structure Plan within the group of hamlets and country residential communities where residential growth for the next decade is a primary focus. Section 10 of the County Plan provides preferred direction on Country Residential Development, in pursuit of the following goals:

- Manage the planning and development of country residential communities so that they provide residents with a safe, healthy, and attractive community.
- Support country residential communities in maintaining a strong sense of community.
- Encourage alternative residential development forms that retain rural character and

IBI GROUP REPORT
RIVERSIDE ESTATES
CONCEPTUAL SCHEME
Prepared for Bearspaw Lakefront Estates LP

reduce the overall development footprint on the landscape.

- Provide an effective process to support the orderly, efficient, and cost effective development of fragmented quarter sections in agricultural areas.

The County Plan provides useful guidance for the design of country residential communities that pursue a compact development form with significant conservation goals, as is the case for Riverside Estates. Although the Riverside Estates development proposed in this Conceptual Scheme follows the design principles for compact conservation communities,

the site does not meet the policy requirements stated in Section 10.10 a., which states that Conservation Communities “shall comprise multiple quarter sections of land that are comprehensively planned and developed.”

However, Sections 10.1 and 10.5 of the County Plan provide a wider policy framework to be relied upon for proposed developments that aspire to adhere to conservation principles and compact development forms, as follows:

- 10.1 *Development within Greater Bragg Creek, Bearspaw, North and Central Springbank, Elbow Valley, Balzac East (Sharp Hills/Butte Hills), Cochrane North, and Glenbow Ranch shall conform to their relevant area structure plan.*
- 10.5 *When an existing country residential area structure plan is undergoing a comprehensive review, the following policy areas shall be addressed:*
- a) *Update all policies in accordance with this Plan, County Policies, and other relevant County planning documents.*

6.2 Central Springbank Area Structure Plan

Riverside Estates is located within the boundaries of the Central Springbank Area Structure Plan (CSASP), Bylaw C-5354-2001, adopted on October 2, 2001. The CSASP “defines a planning and development framework to guide future growth and development within the area, and provide some certainty for landowners and land uses in the years to come.” The CSASP identifies the Riverside Estates land as requiring a concept plan and as being within an area designated for new residential use. The CSASP defines New Residential Land Use as lands that “consist primarily of large blocks of unsubdivided agricultural lands.”

Policy 2.4.4 e) of the CSASP states that the minimum allowable parcel size is 0.8 ha (2 acres). However, Policy 2.4.4 g) states that notwithstanding Sections 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 the 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.

~~6.3 Springbank Area Structure Plan~~

~~At the time of preparation of the Riverside Estates Conceptual Scheme, the Springbank Area Structure Plan (SASP) was being prepared by Rocky View County. The SASP includes the lands of the Central Springbank Area Structure Plan within its approximately 9,548.56 ha (23,595.00 ac) plan area. As explained in the pre-release draft of the SASP, the development of Springbank has previously been guided by the following Area Structure Plans:~~

- ~~—— Central Springbank ASP (Bylaw C-5354-2001, adopted October 2, 2001);~~
- ~~—— North Springbank ASP (Bylaw C-5035-1999, adopted May 4, 1999);~~
- ~~—— Middle Springbank ASP (Bylaw C-1725-84, adopted March, 1998).~~

~~The Springbank ASP combines and updates these ASPs, taking into account the new developments and policy documents and that have occurred since their adoption.~~

~~The pre-release draft of the SASP identifies the subject site for Riverside Estates as suitable for Cluster Residential Development in its Land Use Strategy. According to the draft SASP, Cluster Residential areas are mainly un-fragmented quarter sections with potential for connectivity and different forms of development. These areas are generally cultivated with some pasturelands. The site for Riverside Estates matches this general site description.~~

The proposed design for Riverside Estates aligns with the design intent defined for Cluster Residential areas in the SASP, described to sensitively integrate housing with the natural features and topography of the site by grouping homes on smaller lots, while permanently preserving a significant amount of open space for conservation, recreation, or small-scale agriculture uses. The draft SASP anticipates that half or more of the buildable land area is designated as undivided, permanent open space, as part of the principles of cluster development. The development concept for Riverside Estates anticipates retaining approximately 42.3% of the gross site area as open space, significantly more than the minimum required of 30% stated in policy 8.19 of the draft SASP. Similarly, the design for Riverside Estates aligns with the following policies in the draft SASP:

- ~~8.20 Areas of environmental significance, as shown on Map 8: Environmental Areas, shall be protected within cluster residential development.~~
- ~~8.21 Open space systems within the cluster residential development shall incorporate linked linear systems of trails and pathways, which shall connect to existing or proposed active transportation networks.~~
- ~~8.22 Municipal Reserve should be provided through dedication of land; cash-in-lieu of reserve should only be taken in the cluster residential area where necessary to contribute to the improvement of public open space systems or recreation facilities.~~
- ~~8.23 In developments where Municipal Reserve may be dedicated, Municipal Reserve lands should be used to ensure connectivity within the development and with adjacent lands.~~
- ~~8.24 Where new landscaping is contemplated, proponents are encouraged to use climate/geographically appropriate natural vegetation materials.~~
- ~~8.27 Cluster residential development shall provide:

 - ~~a) reduction in the overall development footprint through a permanent retention of a portion of developable land as open land;~~
 - ~~b) a significant portion of open land that is publicly accessible and used for greenways, regional pathways, and/or trails;~~
 - ~~c) an efficient, compact, walkable development area;~~
 - ~~d) servicing and transportation efficiencies, minimizing operational costs, and retention of viewscales;~~
 - ~~e) minimal impacts on adjacent agricultural operations; and~~
 - ~~f) environmental best practices, interconnected open land, efficient development, and retention of rural character.~~~~
- 8.28 *Cluster residential development shall ensure that development supports rural character, is well designed, and conforms to current technical servicing requirements and master servicing plans and policies.*

The servicing approach for Riverside Estates seeks efficiencies through reduced footprints and reduced infrastructure runs, which is also consistent with the draft SASP, in addition to exploring opportunities for on-site storage and treatment of storm water and waste water treatment systems.

7 Implementation

7.1 Proposed Land Use Designations

The site for Riverside Estates has a ~~Residential One (R-1)~~ Residential, Country Residential District (R-CRD) land use designation, which is inappropriate for the intended development described in this Conceptual Scheme.

7.2 Proposed Architectural and Landscape Design Controls

To achieve the objective of creating a high quality community that is harmonious with the nature of the community and site, Riverside Estates will implement comprehensive architectural and landscaping guidelines. At the development phases, all builders will be required to conform to these guidelines prior to receiving a building permit. After the Homeowners Association is formed, the guidelines will be incorporated into the Bylaws of the Association, ensuring continued compliance.

The guidelines will incorporate principles including, but not limited to:

- **Dark Sky** – A valued benefit of country residential living is the enjoyment of a dark sky, free from the amount of light pollution found in more urban environments. The residents of Riverside Estates and surrounding communities should be able to continue clearly seeing the stars at night with the inclusion of Dark Sky Principles in the development guidelines.
- **Community Character** – Architectural controls will guide development of all buildings within Riverside Estates to create a neighbourhood that not only has its own strong identity, but also enhances the existing character of the Central Springbank Community.
- **Low Impact Landscaping** – The local topography, vegetation, and climate will guide landscaping throughout Riverside Estates with the goal of maintaining the aesthetic of the natural native landscape as well as reducing impact on the environment.
- **Conservation and Site Development Guidelines** – Riverside Estates contains various natural amenities including slopes, ravines and stands of native aspen trees. While the public open space has been designed to include much of these features, it is important that they are also incorporated into the homesites wherever possible. Site development guidelines will identify a suitable building and construction envelope as well as conservation areas on the homesite, where appropriate.

Policy 7.1 Architectural, Landscape, and Site development guidelines shall be registered against title of all properties and/or the Homeowners Association Bylaws prior to or concurrent with the final Plan of Survey. These guidelines shall, to the satisfaction of the County:

~~a) ensure a consistent standard of design;~~

a) ensure a consistent standard of design following architectural styles similar to modern farm house and other appropriate to the Springbank setting;

b) establish certain use restrictions [i.e. dog kennels];

c) encourage the preservation of existing trees on residential lots outside of the building envelope, where appropriate;

d) ensure the use of environmental technologies to promote energy efficiency and low impact construction practices;

- e) *require the incorporation of reduced water usage technologies in all buildings;*
- f) *promote Fire Smart principles; and*
- g) *establish Dark Sky principles.*

Following the conservation design approach guiding the development for Riverside Estates, rolling landscaped areas shall be provided along key sections of the boundaries of the proposed project to reduce the visual impact of new development on the neighbouring lands. The meandering terrain will also help to provide sound attenuation from surrounding roadways. The landscaping will blend with the natural topography of the land so as not to look “engineered”. The planting of local tree and grass species, to add to the visual screening of the site, may be located along and/or on top of the landscaped area.

The extensive open space, trails, amenities and landscaping can have a very positive effect on residential lot values, even at longer distances from the amenity and on adjacent residential parcels. To further protect and enhance the value of properties in and adjacent to Riverside Estates, the sites natural drainages are being preserved and storm ponds are being planned. A landscape plan will enhance and rehabilitate areas of Riverside Estates and around the perimeter of the Planning area that have been previously disturbed.

Policy 7.2 A Landscape Plan for Riverside Estates shall be submitted by the Developer prior to subdivision approval of each Phase, prepared by a qualified Landscape Architect, to the satisfaction of the Municipality, and shall include:

- a) *the alignment and classification of the trail network through Riverside Estates;*
- b) *naturalized plantings in Riverside Estates;*
- c) *LID principles;*
- d) *landscaping on the perimeter boundaries of Riverside Estates to help provide additional screening for adjacent residents;*
- e) *the preservation where possible of natural vegetation, existing topography and wetlands;*
- f) *the use of native plantings that provide protection of riparian habitats;*
- g) *the re-introduction of native or naturalized parkland landscape, where appropriate;*
- h) *landscaping within the proposed road network.*

Policy 7.3 Implementation of the Landscape Plan shall be through the Development Agreement at the time of subdivision endorsement.

7.3 Subdivision Transitioning and Edge Treatments

To maintain the rural character along the adjacent Calling Horse Road (Range Road 31) and Rodeo Drive, as well as enhance privacy and quiet for residents, Riverside Estates will feature a landscaped berm along portions of the perimeter of the development cells. This berm will be planted with native trees and grasses and provide a screen between Calling Horse Drive (Range Road 31), Rodeo Drive and existing residences. The view of the valley on the subject parcel from the roadway will remain and contribute to the rural, open feel.

Lot locations have been reconfigured to better transition with adjacent lands. The homesites around the outside of the plan area have been made as large as feasible, with the smallest homesites contained within the interior. The Homeowners Association will ensure that landscaping, maintenance, and architectural design quality is upheld to a standard expected in Central Springbank.

The significant amount of land proposed as public gives greater assurance that open space and conserved natural areas remain consistent features of the area. Riverside Estates will also implement Dark Sky Guidelines to maintain the dark sky and visibility of the stars that adjacent Central Springbank residents' value.

7.4 Subdivision Phasing Strategy

Exhibit 13 illustrates the proposed phasing plan of Riverside Estates.

Phase 1 will ensure that the appropriate services and infrastructure are efficiently put in place, including the wastewater management system, and comprise a balance of all land uses proposed within this Conceptual Scheme. This assists in creating the core character of the Riverside Estates neighbourhood in the initial phases of development.

Policy 7.4 To accommodate market conditions, the order of actual development may vary from the proposed phasing plan without requiring amendment to this Conceptual Scheme while ensuring the creation of appropriate services and infrastructure, including the wastewater management system.

7.5 Subdivision Naming

The name of the overall subdivision will be determined after Conceptual Scheme approval. The name selected will be a reflection of community and professional input to reflect the significant historical, geographical, and branding components that will most benefit the site and community. For example, a potential name for the subject lands may be "The Forest at..."

Policy 7.5 The final naming of the subdivision and internal roads will be determined at the appropriate time. The naming process will involve public and professional input with the objective of reflecting historical, geographic, and other positive traits to benefit the site and community.

The final naming of the subdivision and internal roads will be determined at subdivision stage. As per policy 2.1.3.h of the Central Springbank Area Structure Plan, the naming process will consider the names of settlement families, historical events or locations and will involve public and professional input with the objective of reflecting historical, geographic, and other positive traits to benefit the site and community.

8 Policy Summary – Full section has been revised.

~~*Policy 2.1 Policies contained in this Conceptual Scheme shall apply to lands identified in Exhibit 2 – Planning Area.*~~

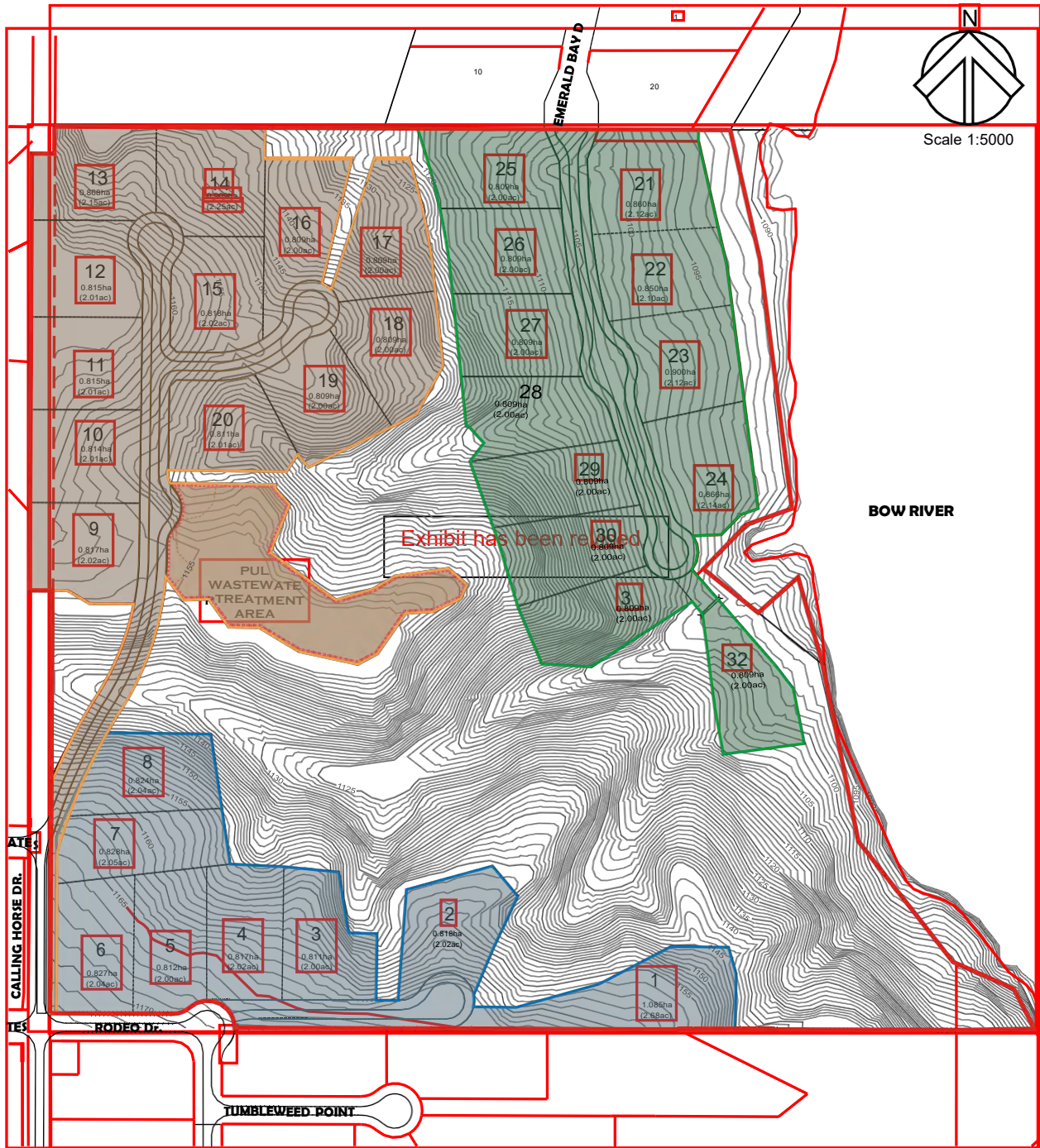
~~*Policy 3.1 A Historic Resources Impact Assessment for palaeontological resources is to be conducted on behalf of the proponent by a palaeontologist qualified to hold a palaeontological research permit within the Province of Alberta. Results of the Historic Resources Impact Assessment for paleontological resources must be reported to Alberta Culture, Multiculturalism and Status of Women and subsequent Historical Resources Act approval must be granted before development proceeds.*~~

~~*Policy 3.2 A Historic Resources Impact Assessment for archaeological resources is to be conducted on behalf of the proponent by an archaeologist qualified to hold an*~~

IBI GROUP REPORT
RIVERSIDE ESTATES
CONCEPTUAL SCHEME
Prepared for Bearspaw Lakefront Estates LP

~~archaeological research permit within the Province of Alberta. Results of the
Historic Resources Impact Assessment for archaeological resources must be
reported to Alberta Culture, Multiculturalism and Status of Women and subsequent
Historical Resources Act approval must be granted before development proceeds.~~

SUBDIVISION PHASING PLAN



- Subject Site
- Phase 1 (LOTS 9 - 20) ±13.99ha (±34.59 ac)
- Phase 2 (LOTS 1 - 8) ±7.46ha (±18.43ac)
- Phase 3 (LOTS 21 - 32) ±11.26ha (±27.82 ac)



- ~~Policy 4.1 Subdivision of land within the Riverside Estates planning area shall be generally in accordance with Exhibit 5. The final size, configuration and design of individual parcels and road system proposed through subdivision shall be identified on the tentative plan for subdivision approval.~~
- ~~Policy 4.2 Residential lot sizes within Riverside Estates shall be a minimum of 0.8 hectares (2.0 acres) and a maximum of 1.08 hectares (2.68 acres).~~
- ~~Policy 4.3 There shall be a maximum of 32 residential units within Riverside Estates.~~
- ~~Policy 4.4 An open space network within the planning area, including the delineation of public and private land, shall be constructed by the developer, as generally shown in Exhibit 9, to the satisfaction of the County.~~
- ~~Policy 4.5 The Developer shall dedicate Municipal Reserve in accordance with Exhibit 9 at the time of subdivision, subject to a review of Environmental Reserve/ Environmental Easement requirements. Municipal Reserve shall be developed in a form acceptable to the County at the time of dedication. Notwithstanding the provisions of the Municipal Government Act, the Developer is committed to the provision of Municipal Reserve in accordance with Exhibit 9 of this Conceptual Scheme.~~
- ~~Policy 4.6 The pathway and trail system (Local, Rustic) within the planning area, as generally shown in Exhibit 10, shall be constructed by the Developer, to the satisfaction of the County.~~
- ~~Policy 4.7 The pathway and trail system (Local, Rustic) within the Planning area, as generally shown in Exhibit 10, shall be publicly accessible.~~
- ~~Policy 4.8 Pathways and trails including road crossings (crossing requirements and locations to be determined at the time of subdivision) shall be constructed in accordance with the descriptions in the County's Pathways and Trail Classification and the requirements of the County's Servicing Standards and shall be situated outside any proposed road widening.~~
- ~~Policy 4.9 The pathway and trail system (Local, Rustic) within the planning area, as generally shown in Exhibit 10, shall be maintained by the Riverside Estates Homeowners Association through an agreement to be determined with the County at the subdivision stage.~~
- ~~Policy 4.10 A complete road system, including pathway crossings, within the planning area shall be constructed by the Developer as generally shown in Exhibit 11, to the satisfaction of the County.~~
- ~~Policy 4.11 Primary access to Riverside Estates shall be from Calling Horse Drive (Range Road 31) and Emerald Bay Drive as shown in Exhibit 11, to the satisfaction of the County.~~
- ~~Policy 4.12 An updated Traffic Impact Assessment will be required prior to subdivision approval.~~
- ~~Policy 4.13 Each phase of development will require updates to the Traffic Impact Assessment.~~
- ~~Policy 4.14 All upgrades required by the Traffic Impact Assessment and not completed by Alberta Transportation shall be provided by the Developer to the satisfaction of Rocky View County and Alberta Transportation. Upgrade costs may be proportionally distributed among developers in the area.~~
- ~~Policy 4.15 Overall density of residential development within the planning area shall not exceed 1.73 units per gross hectare (4.28 units per gross acre).~~

- ~~Policy 5.1 The planning area shall be serviced through individual groundwater wells located on each lot. If deemed necessary, water servicing options for the future include licensed withdrawal from the Bow River and/or potential connection to existing water co-ops servicing the area. Supplementary water reservoirs shall be considered to the satisfaction of Rocky View County.~~
- ~~Policy 5.2 Riverside Estates shall implement water conservation practices that reduce the amount of potable water consumed. Such conservation measures may include:~~
- ~~a) A requirement for all buildings to install low-flow water fixtures;~~
 - ~~b) A requirement for all development to utilize drought resistant landscaping and rainwater collection systems.~~
- ~~Policy 5.3 Sanitary sewage service shall be provided by a communal wastewater system, as per County Policy #449, Performance Requirements for Wastewater Treatment Systems, that provides secondary wastewater treatment to the satisfaction of the County.~~
- ~~Policy 5.4 The communal wastewater system proposed for installation within the planning area shall meet or exceed engineering standards and specifications established by the County and the Province.~~
- ~~Policy 5.5 The ownership, operation and maintenance of the communal system shall be the initial responsibility of the Developer and then transferred to the County at no cost on a deficiency free basis in accordance with the terms set out in a Transfer Agreement, which shall be entered into between the Developer and the County prior to subdivision approval, as per County Policy #430, Communal Wastewater System Management.~~
- ~~Policy 5.6 The location and type of the communal wastewater system, and final size of dispersal field shall be determined prior to subdivision approval.~~
- ~~Policy 5.7 The components of the communal wastewater system shall be located within individual residential lots, road Right-of-Ways and/or Public Utility Lots.~~
- ~~Policy 5.8 Consent to waive setback distance for the Riverside Estates Wastewater Treatment Facility and Dispersal Field shall be received from Alberta Environment and Alberta Health Services prior to subdivision approval.~~
- ~~Policy 5.9 A stormwater management system designed for the Riverside Estates Planning Area shall be prepared prior to subdivision approval. This plan shall:~~
- ~~a) Adhere to the stormwater management principles of this Conceptual Scheme, the Springbank Context Study, and the Central Springbank Area Structure Plan to the satisfaction of the County.~~
 - ~~b) Undertake an assessment of drainage patterns and provide appropriate mitigation measures to resolve any drainage issues within and adjacent to the site.~~
 - ~~c) Meet or exceed Springbank Master Drainage Plan (MPE Engineering, 2016) guidelines for peak annual rates and volume of discharge of post-development stormwater.~~
- ~~Policy 5.10 Alterations to the existing pre-development stormwater drainage pattern within the Planning Area shall proceed in accordance with an approved Stormwater Management Plan and require all appropriate Provincial approvals regarding alterations to existing drainage courses within the proposed development site.~~

~~Policy 5.11 The stormwater management system should incorporate Low Impact Development (LID) strategies and technologies in its design that will consider ways to implement the following:~~

- ~~a) Preserve, where possible the existing landform in the subdivision and development concept and minimize extensive stripping and grading during the development of Riverside Estates;~~
- ~~b) Preserve, protect and enhance, where possible, existing natural spaces in the landscape that promote riparian habitat and natural vegetation to attract wildlife and enhance recreational opportunities, and utilize these spaces in the overall design of the stormwater management system;~~
- ~~c) Adopt a development strategy focused upon the reduction of impermeable areas throughout Riverside Estates; and~~
- ~~d) Promote the use of rain barrels and cisterns to retain and reuse stormwater.~~

~~Policy 5.12 A solid waste and recycling management plan shall be prepared for Riverside Estates prior to endorsement of subdivision. Implementation of a solid waste and recycling management plan shall be the responsibility of the Developer and/or the Riverside Estates Homeowners Association.~~

~~Policy 5.13 Shallow utilities shall be provided by the appropriate utility company providing service to Riverside Estates at the sole expense of the Developer. The Developer shall provide easements to any utility company requiring them to provide services to Riverside Estates.~~

~~Policy 5.14 The Site Development Guidelines shall include Fire Smart principles, to the satisfaction of the Municipality.~~

~~Policy 5.15 Dry fire suppression infrastructure shall be provided in main building structures through dry fire suppression systems that are consistent with Rocky View County policy (C-7259-2013, as amended) and standards.~~

~~Policy 7.1 Architectural, Landscape, and Development guidelines shall be registered against title of all properties and/or the Homeowners Association Bylaws prior to or concurrent with the final Plan of Survey. These guidelines shall, to the satisfaction of the County:~~

- ~~a) the alignment and classification of the trail network through Riverside Estates;~~
- ~~b) naturalized plantings in Riverside Estates;~~
- ~~c) LID principles;~~
- ~~d) landscaping on the perimeter boundaries of Riverside Estates to help provide additional screening for adjacent residents;~~
- ~~e) the preservation where possible of natural vegetation, existing topography and wetlands;~~
- ~~f) the use of native plantings that provide protection of riparian habitats;~~
- ~~g) the re-introduction of native or naturalized parkland landscape, where appropriate;~~
- ~~h) landscaping within the proposed road network.~~

- ~~Policy 7.2 A Landscape Plan for Riverside Estates shall be submitted by the Developer prior to subdivision approval of each Phase, prepared by a qualified Landscape Architect, to the satisfaction of the Municipality, and shall include:~~
- ~~a) the alignment and classification of the trail network through Riverside Estates;~~
 - ~~b) naturalized plantings in Riverside Estates;~~
 - ~~c) LID principles;~~
 - ~~d) landscaping on much of the perimeter boundaries of Riverside Estates to help provide additional screening for adjacent residents;~~
 - ~~e) the preservation where possible of natural vegetation, existing topography and wetlands;~~
 - ~~f) the use of native plantings that provide protection of riparian habitats; and~~
 - ~~g) the re-introduction of native or naturalized parkland landscape, where appropriate.~~
- ~~Policy 7.3 Implementation of the Landscape Plan shall be through the Development Agreement at the time of subdivision endorsement.~~
- ~~Policy 7.4 To accommodate market conditions, the order of actual development may vary from the proposed phasing plan without requiring amendment to this Conceptual Scheme.~~
- ~~Policy 7.5 The final naming of the subdivision and internal roads will be determined at the appropriate time. The naming process will involve public and professional input with the objective of reflecting historical, geographic, and other positive traits to benefit the site and community.~~
- Policy 2.1 Policies contained in this Conceptual Scheme shall apply to lands identified in Exhibit 2 –Planning Area.
- Policy 3.1 A Historic Resources Impact Assessment for palaeontological resources shall be conducted on behalf of the proponent by a palaeontologist qualified to hold a palaeontological research permit within the Province of Alberta. Results of the Historic Resources Impact Assessment for paleontological resources must be reported to Alberta Culture, Multiculturalism and Status of Women and subsequent Historical Resources Act approval must be granted before development proceeds.
- Policy 3.2 A Historic Resources Impact Assessment for archaeological resources shall be conducted on behalf of the proponent by an archaeologist qualified to hold an archaeological research permit within the Province of Alberta. Results of the Historic Resources Impact Assessment for archaeological resources must be reported to Alberta Culture, Multiculturalism and Status of Women and subsequent Historical Resources Act approval must be granted before development proceeds.
- Policy 4.1 Subdivision of land within the Riverside Estates planning area shall be generally in accordance with Exhibits 7 and 8. The final size, configuration and design of individual parcels and road system proposed through subdivision shall be identified on the tentative plan for subdivision approval.
- Policy 4.2 The form of residential development shall be single detached housing and residential lot sizes within Riverside Estates shall be a minimum of 0.8 hectares (2.0 acres) and a maximum of 1.08 hectares (2.68 acres).

Policy 4.3 There shall be a maximum of 32 residential units within Riverside Estates.

Policy 4.4 To preserve the natural environment of the site and maintain sensitive presence of wildlife, fencing shall not be allowed on individual lots. Instead, the use of landscaping and vegetation as a natural boundary marker for homeowners will be encouraged to obtain privacy and consistency throughout the Riverside Estates community. Privacy fencing and dog runs within the building envelope areas will be permitted.

Policy 4.5 The location of community mailboxes will be defined at subdivision stage.

Policy 4.6 Prior to subdivision approval, the developer shall explore through geotechnical assessment and other information satisfactory to the County, the availability of one contiguous developable acre for each proposed residential unit.

Policy 4.7 An open space network within the planning area, including the delineation of public and private land, shall be constructed by the developer, as generally shown in Exhibit 9, to the satisfaction of the County.

- Policy 4.8 At the subdivision stage, the developer shall prepare a strategy for the open space identified on Exhibit 9. The strategy shall include proposals for dedication of Municipal Reserve/ Environmental Reserve. For remaining lands, the strategy shall confirm to the satisfaction of the County, home owners' association ownership, operation, maintenance, public access easements, and future uses.*
- Policy 4.9 The pathway and trail system (Local, Rustic) within the planning area, as generally shown in Exhibit 10, shall be constructed by the Developer, to the satisfaction of the County.*
- Policy 4.10 The pathway and trail system (Local, Rustic) within the Planning area, as generally shown in Exhibit 10, shall be publicly accessible with appropriate signage.*
- Policy 4.11 Pathways and trails including road crossings (crossing requirements, easements and locations to be determined at the time of subdivision) shall be constructed in accordance with the descriptions in the County's Pathways and Trail Classification and the requirements of the County's Servicing Standards and shall be situated outside any proposed road widening.*
- Policy 4.12 The pathway and trail system (Local, Rustic) within the planning area, as generally shown in Exhibit 10, shall be maintained by the Riverside Estates Homeowners Association through an agreement to be determined with the County at the subdivision stage.*
- Policy 4.13 A complete road system, including appropriate measures such as signage, sightlines, speed limits, pathway crossings and other improvements within the planning area shall be constructed by the Developer as generally shown in Exhibit 11, to the satisfaction of the County.*
- Policy 4.14 At the subdivision stage, the developer shall incorporate designs for secondary access/emergency access in alignment with municipal standards. Revisions to the conceptual road layout shown in Exhibit 11 to accommodate secondary access shall not require an amendment to this conceptual scheme.*
- Policy 4.15 Primary access to Riverside Estates shall be from Calling Horse Drive (Range Road 31), Rodeo Dr. and Emerald Bay Drive as shown in Exhibit 11, to the satisfaction of the County.*
- Policy 4.16 The ownership and maintenance of the internal road system shall be the initial responsibility of the Developer and then transferred to the County at no cost on a deficiency free basis in accordance with the terms set out in a Development Agreement, which shall be entered into between the Developer and the County prior to subdivision approval.*
- Policy 4.17 An updated Traffic Impact Assessment will be required prior to subdivision approval.*

- Policy 4.18 All upgrades required by the Traffic Impact Assessment shall be provided by the Developer to the satisfaction of Rocky View County and Alberta Transportation.*
- Policy 4.19 Overall density of residential development within the planning area shall not exceed 1.73 units per gross hectare (4.28 units per gross acre).*
- Policy 5.1 Prior to subdivision approval, the developer shall, to the satisfaction of the County, provide a feasibility assessment on water servicing options for potential connection to a piped water system, including possible connections to existing water co-ops servicing the area.*
- Policy 5.2 Where connection to piped potable water services is not deemed feasible by the County following review of the feasibility assessment required under Policy 5.1, the development should be serviced through individual groundwater wells to the satisfaction of the County*
- Policy 5.3 Riverside Estates shall implement water conservation practices that reduce the amount of potable water consumed. Such conservation measures may include:*
- a) A requirement for all buildings to install low-flow water fixtures;*
 - b) A requirement for all development to utilize drought resistant landscaping and rainwater collection systems.*
- Policy 5.4 As a condition of subdivision approval, Deferred Services Agreements shall be registered against each new certificate of title (lot) requiring the owner to tie into municipal services when they become available.*
- Policy 5.5 Sanitary sewage service shall be provided by a communal wastewater system, as per County Policy, Performance Requirements for Wastewater Treatment Systems, that provides secondary wastewater treatment to the satisfaction of the County.*
- Policy 5.6 The communal wastewater system proposed for installation within the planning area shall meet or exceed engineering and monitoring standards and specifications established by the County and the Province. Under no circumstances will septic pump-out systems, dispersal fields or open discharge from septic tanks be permitted.*
- Policy 5.7 The ownership, operation and maintenance of the communal system shall be the initial responsibility of the Developer and then transferred to the County at no cost on a deficiency free basis in accordance with the terms set out in a Development Agreement, which shall be entered into between the Developer and the County prior to subdivision approval, as per County Policy, Communal Wastewater System Management.*
- Policy 5.8 The location and type of the communal wastewater system, and final size of dispersal field shall be determined prior to subdivision approval.*

Policy 5.9 The components of the communal wastewater system shall be located within individual residential lots, road Right-of-Ways and/or Public Utility Lots.

Policy 5.10 At time of future subdivision, a long term monitoring program will be developed and implemented that monitors baseline and post-development water quality conditions of the drainage and subsurface flows from the wastewater facility discharging into the Bow River and the natural drainage course on the subject land. The program will also include a remediation strategy that will be deployed in the event the monitoring results show signs of degrading water quality as a result of the development.

Policy 5.11 At the subdivision stage, the developer shall in line with relevant provincial and municipal regulations, specify and justify the extent of provincial relaxation required to setbacks identified for affected residences from the proposed wastewater treatment plant. As a condition of subdivision approval, the County shall submit a request to the relevant provincial department for consent to vary any applicable setback.

Policy 5.12 At the subdivision stage, the developer shall submit a detailed design of the wastewater services system, including the plan of sludge disposal, operation, contingency measures and other details as deemed necessary by the County and to the satisfaction of the County.

Policy 5.13 Consent to waive setback distance for the Riverside Estates Wastewater Treatment Facility and Dispersal Field shall be received from Alberta Environment and Alberta Health Services prior to subdivision approval.

Policy 5.14 The design of the communal wastewater system shall be such that the proposed wastewater system shall be connected to regional piped services as and when they become available in the future.

Policy 5.15 As a condition of subdivision approval, Deferred Services Agreements shall be registered against each new certificate of title (lot) created as a condition of approval, requiring the owner to tie into municipal services when they become available.

Policy 5.16 A stormwater management system designed for the Riverside Estates Planning Area shall be prepared prior to subdivision approval. This plan shall:

- a) Adhere to the stormwater management principles of this Conceptual Scheme, the Springbank Context Study, and the Central Springbank Area Structure Plan to the satisfaction of the County.*
- b) Undertake an assessment of drainage patterns and provide appropriate mitigation measures to resolve any drainage issues within and adjacent to the site.*
- c) Meet or exceed Springbank Master Drainage Plan (MPE Engineering 2016) guidelines for peak annual rates, volume of discharge, and water quality parameters of post-development stormwater.*

Policy 5.17 Alterations to the existing pre-development stormwater drainage pattern within the Planning Area shall proceed in accordance with an approved Stormwater Management Plan and require all appropriate Provincial approvals regarding alterations to existing drainage courses within the proposed development site.

Policy 5.18 The stormwater management system should incorporate Low Impact Development (LID) strategies and technologies in its design that will consider ways to implement the following:

- a) Preserve, where possible the existing landform in the subdivision and development concept and minimize extensive stripping and grading during the development of Riverside Estates;*
- b) Preserve, protect and enhance, where possible, existing natural spaces in the landscape that promote riparian habitat and natural vegetation to attract wildlife and enhance recreational opportunities, and utilize these spaces in the overall design of the stormwater management system;*
- c) Adopt a development strategy focused upon the reduction of impermeable area throughout Riverside Estates; and*
- d) Promote the use of rain barrels and cisterns to retain and reuse stormwater.*

Policy 5.19 Prior to subdivision approval, the developer shall to the satisfaction of the County, confirm easement requirements and mechanisms for the maintenance of the stormwater management infrastructure.

Policy 5.20 The Riverside Estates Home Owners Association will be responsible for the maintenance of stormwater management infrastructure.

Policy 5.21 A solid waste and recycling management plan shall be prepared for Riverside Estates prior to endorsement of subdivision. Implementation of a solid waste and recycling management plan shall be the responsibility of the Developer and/or the Riverside Estates Homeowners Association.

Policy 5.22 Shallow utilities shall be provided by the appropriate utility company providing service to Riverside Estates at the sole expense of the Developer. The Developer shall provide easements to any utility company requiring them to provide services to Riverside Estates.

Policy 5.23 At the subdivision stage, the developer shall submit a Fire protection management plan in accordance with municipal standards.

Policy 5.24 The Site Development Guidelines shall include Fire Smart principles, to the satisfaction of Rocky View County.

Policy 5.25 Dry fire suppression infrastructure shall be provided in main building structures through dry fire suppression systems that are consistent with Rocky View County policy (C- 7259- 2013, as amended) and standards.

Policy 5.26 Connection to regional piped services will be pursued should a regional piped solution become available.

Policy 7.1 Architectural, Landscape, and Site Development guidelines shall be registered against title of all properties and/or the Homeowners Association Bylaws prior to or concurrent with the final Plan of Survey. These guidelines shall be, to the satisfaction of the County:

- a) ensure a consistent standard of design;*
- b) establish certain use restrictions [i.e. dog kennels];*
- c) encourage the preservation of existing trees on residential lots outside of the building envelope, where appropriate;*
- d) ensure the use of environmental technologies to promote energy efficiency and low impact construction practices;*
- e) require the incorporation of reduced water usage technologies in all buildings;*
- f) promote Fire Smart principles; and*
- g) establish Dark Sky principles.*

Policy 7.2 A Landscape Plan for Riverside Estates shall be submitted by the Developer prior to subdivision approval of each Phase, prepared by a qualified Landscape Architect, to the satisfaction of the Municipality, and shall include:

- a) the alignment and classification of the trail network through Riverside Estates;*
- b) naturalized plantings in Riverside Estates;*
- c) LID principles;*
- d) landscaping on much of the perimeter boundaries of Riverside Estates to help provide additional screening for adjacent residents;*
- e) the preservation where possible of natural vegetation, existing topography and wetlands;*
- f) the use of native plantings that provide protection of riparian habitats; and*
- g) the re-introduction of native or naturalized parkland landscape, where appropriate.*
- h) landscaping within the proposed road network.*

Policy 7.3 Implementation of the Landscape Plan shall be through the Development Agreement at the time of subdivision endorsement.

Policy 7.4 To accommodate market conditions, the order of actual development may vary from the proposed phasing plan without requiring amendment to this Conceptual Scheme while ensuring the creation of appropriate services and infrastructure, including the wastewater management system.

Policy 7.5 The final naming of the subdivision and internal roads will be determined at subdivisionstage. As per policy 2.1.3.h of the Central Springbank Area Structure Plan, the namingprocess will consider the names of settlement families, historical events or locations and will involve public and professional input with the objective of reflecting historical, geographic, and other positive traits to benefit the site and community.