# WESTRIDGE
## OF COCHRANE

# AREA STRUCTURE PLAN

**Bylaw No. 13/2008**
**Adopted April 14, 2009**

# TOWN OF COCHRANE

## BYLAW NUMBER 13/2008

Being a Bylaw to adopt the West Ridge Area Structure Plan
for the Town of Cochrane, in the Province of Alberta

WHEREAS pursuant to Section 633 of the *Municipal Government Act* (hereinafter called the "*Act*"), RSA 2000, Chapter M-26, and amendments thereto, the Council of the Town of Cochrane in the Province of Alberta (hereinafter called the "Council") may provide a framework for subsequent subdivision and development of an area of land, by bylaw to adopt an area structure plan;

AND WHEREAS pursuant to Section 633 of the *Act*, an area structure plan shall describe the sequence of development proposed for the area, the land uses proposed for the area; the density of population proposed for the area, the general location of major transportation routes and public utilities, and any other matter deemed necessary;

AND WHEREAS Council in a duly assembled meeting did adopt Bylaw Number 07/2008, being the *Cochrane Municipal Development Plan*, which contains a requirement for a new area structure plan be adopted for the subject lands prior to subdivision and development;

AND WHEREAS an area structure plan has been prepared for Council approval;

NOW THEREFORE Council, duly assembled, hereby enacts, as follows:

1. This Bylaw may be cited as the "West Ridge Area Structure Plan";

2. The West Ridge Area Structure Plan, as attached to and forming a part of this Bylaw, is hereby formally adopted;

3. This Bylaw comes into full force and effect upon the date of third and final reading.

Read a first time May 12, 2008
Read a second time April 14, 2009
Read a third time April 14, 2009

Mayor

Municipal Clerk

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**FIGURES:**

# 1.0 INTRODUCTION

## 1.1 Purpose of the Plan

Community planning is the process of shaping the physical environment to achieve an orderly and compatible pattern of growth and to enhance the quality of life of a community's residents. The starting point for this process is an area structure plan.

The purpose of an area structure plan is twofold. Firstly, it refines and implements the Town's broader planning objectives as contained in its primary strategic planning document, the Municipal Development Plan, by promoting community development that is logical, compatible and sustainable. Secondly, an area structure plan guides and directs specific land use, subdivision, and development decisions that collectively determine the form a community will take.

To accomplish this purpose, an area structure plan must establish a broad framework for future development of a community. This framework consists of a land use concept and a series of policy statements and implementation actions that work together to ensure that the plan is achieved. The framework should be concise yet flexible. At the same time, the framework should promote creativity and innovation and be responsive to the ever-changing demands of the marketplace. In summary, a community plan must be formulated with the understanding that planning requires a visionary, balanced and dynamic approach if it is to be successful.

## 1.2 Authority of the Plan

The Westridge Area Structure Plan (the "Plan") is an area structure plan that has been adopted through a bylaw passed by Council in accordance with Section 633 of the *Municipal Government Act*.

## 1.3 Timeframe of the Plan

The Plan is future-oriented and depicts how Westridge is to be developed over an extended time period. No specific timeframe is applied to the Plan although most of the proposed development is expected to be completed within a 10 to 15 year horizon.

## 1.4 Interpretation of the Plan

### 1.4.1 Map Interpretation

Unless otherwise specified within the Plan, the boundaries or locations of any symbols or areas shown on a map are approximate only, not absolute, and shall be interpreted as such. They are not intended to define exact locations except where they coincide with clearly recognizable physical features or fixed boundaries such as property lines or roads and utility rights-of-way.

### 1.4.2 Policy Interpretation

Where a purpose section accompanies a policy, it is provided for information purposes only to enhance the understanding of the policy. Should an inconsistency arise between the purpose section and a policy, the policy will take precedence.

Where “shall” is used in a policy, the policy is considered mandatory. However, where actual quantities or numerical standards are contained within a mandatory policy, the quantities or standards may be deviated from provided that the deviation is necessary to address unique circumstances that will otherwise render compliance impractical or impossible, and the intent of the policy is still achieved.

Where “should” is used in a policy, the intent is that the policy is to be complied with. However, the policy may be deviated from in a specific situation where the deviation is necessary to address unique circumstances that will otherwise render compliance impractical or impossible or to allow an acceptable alternate means to achieve the general intent of the policy to be introduced instead.

Where a policy requires compliance at the Conceptual Plan/Land Use Amendment stage, that requirement may be deferred to the Subdivision Approval or Development Permit Approval stage without requiring an amendment to the Plan.

Where a policy requires submission of studies, analysis or information, the exact requirements and timing of the studies, analysis or information shall be determined at the Conceptual Plan/Land Use Amendment stage.

## 1.5 Amendment of the Plan

Where substantive changes are deemed necessary, they shall be referred to the appropriate authority for consideration and ultimate approval.

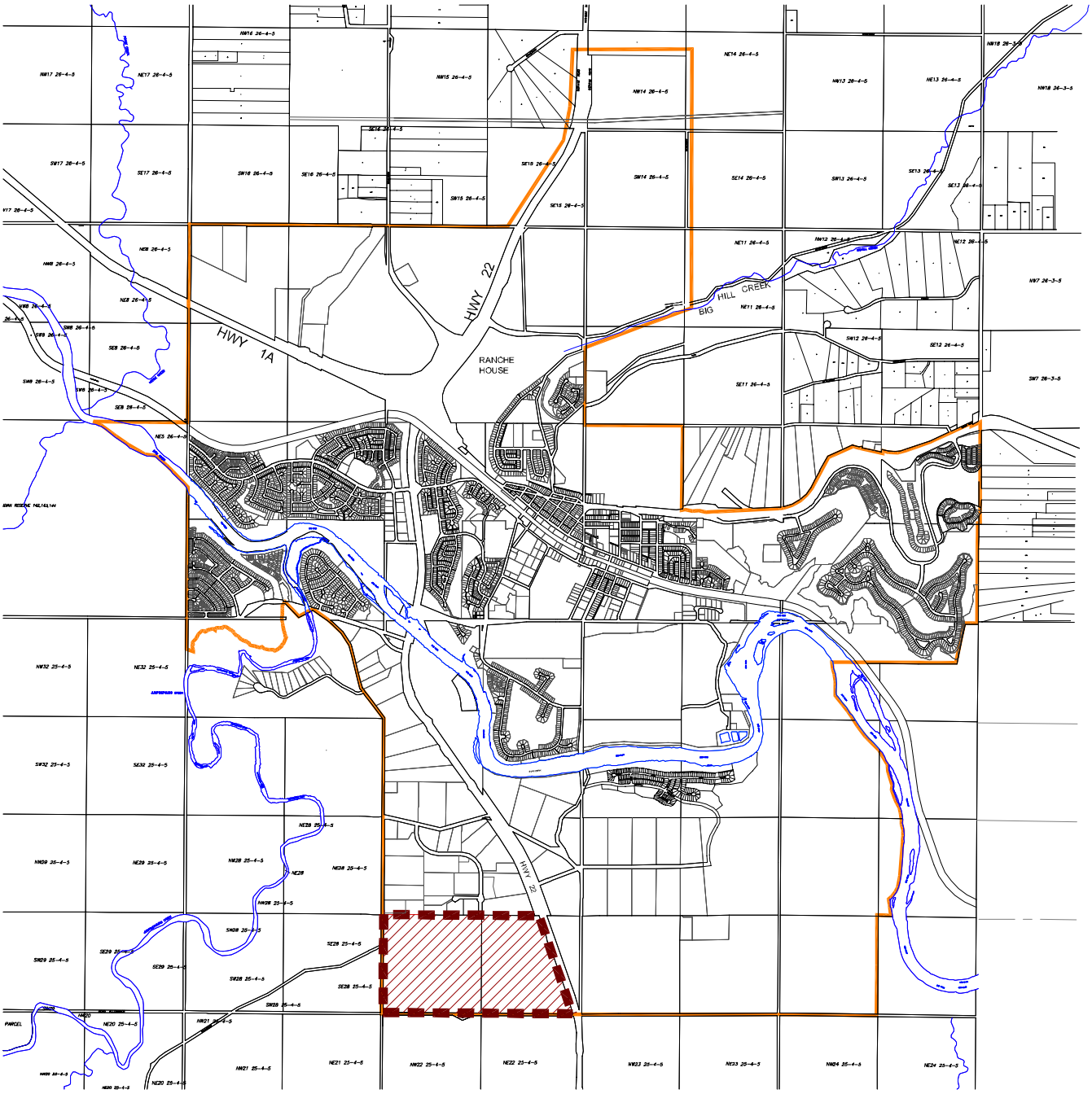
To make any change to the text or maps within this Plan, an amendment to the Plan shall proceed in accordance with the *Municipal Government Act*.

Where an amendment to the Plan is deemed necessary, the applicant shall submit supporting information necessary to evaluate and justify the amendment.

# 2.0 PLANNING AREA

## 2.1 Application of the Plan

The Area Structure Plan applies to those lands comprising Westridge as shown on the Location and Planning Area maps, Maps 1 and 2. Westridge is located within the south




ASP AREA

TOWN BOUNDARY

**WESTRIDGE ASP**

COCHRANE
DISCOVER THE NATURAL WEST

WESTRIDGE
OF COCHRANE

**MAP 1**

**LOCATION**


ASP BOUNDARY

TOWN BOUNDARY

**WESTRIDGE ASP**

COCHRANE
DISCOVER THE NATURAL WEST

WESTRIDGE
OF COCHRANE

**MAP 2**

# PLANNING AREA and OWNERSHIP

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sector of the Town and comprises approximately 114.04 hectares (281.8 acres) of land. The area is bounded by:

- The west boundary of Highway 22 (Cowboy Trail) to the east
- Rolling Range Estates to the north; and
- Agricultural lands to the south and west within the Municipal District of Rocky View.

## 2.2 Ownership within Plan Area

The ownership, with agreements to purchase, as of January 22, 2009, within the Plan area is tabulated in the table below and illustrated on Map 3.

| OWNER | HECTARES | ACRES |
|---|---|---|
| Board of Trustees of Rocky View School Division #41 (Tirion Properties Ltd. & La Vita Land Inc.) | 49.29 | 121.80 |
| Tirion Properties Ltd. (La Vita Land Inc.) | 64.75 | 160.00 |
| **TOTAL** | **114.04** | **281.80** |

**Table 1:** Ownership

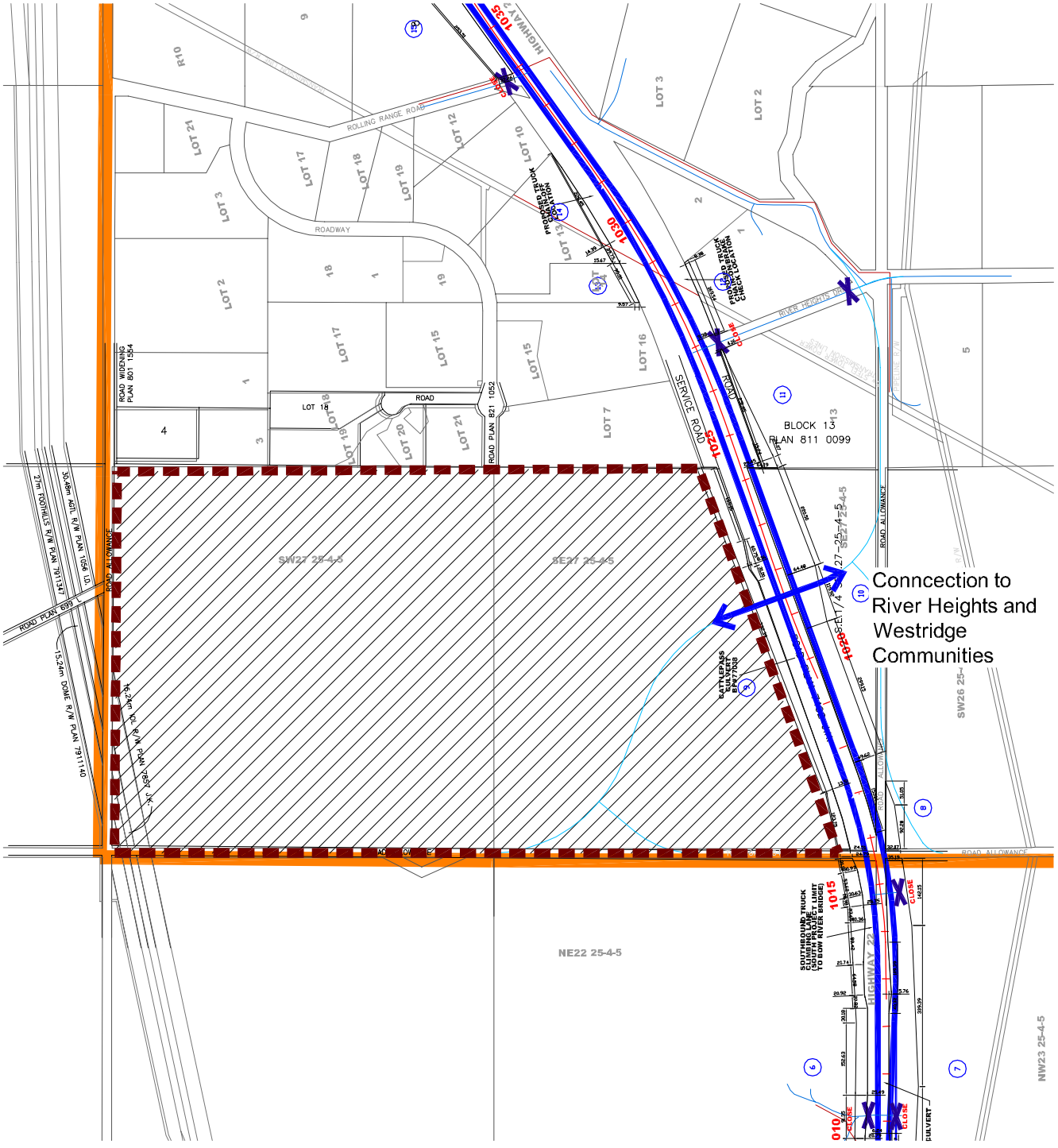
## 2.3 Context of the Plan

The Town of Cochrane experienced significant growth pressure throughout the 1990s and early 2000s. Between 1996 and 2006, the population of Cochrane grew from 7,424 to 13,760, which represents an approximate 85% increase over ten years.

## 2.4 Adjacent Land Uses

The west boundary of the right-of-way of Highway 22 (Cowboy Trail) forms the eastern boundary of the Plan area. As growth in Cochrane continues and regional traffic on Cowboy Trail increases, a number of improvements will be required along this highway. Alberta Transportation has indicated they would like to start construction of the intersection which will provide access to the Westridge ASP area, as well as the River Heights Area to the east, as early as possible in 2009. Ultimately, Highway 22 in the Cochrane area will be twinned.

The lands to the west and south of the Plan area lie within the Municipal District of Rocky View. The area to the north supports existing country residential land use, Rolling Range Estates, which may intensify over time. To the east of Highway 22 is a future development area which currently has The Bow Valley public high school, a major church facility and some existing country residential development.




ASP BOUNDARY

TOWN BOUNDARY

PROPOSED ROADWAY

PROPOSED CLOSURE TO EXISTING ROAD/DRIVEWAYS

**WESTRIDGE ASP**

COCHRANE
DISCOVER THE NATURAL WEST

WESTRIDGE
OF COCHRANE

**MAP 3**

# HIGHWAY 22 FUNCTIONAL PLAN

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# 3.0 SITE ANALYSIS AND DEVELOPMENT CONSIDERATIONS

## 3.1 Existing Land Use

The lands within the Plan area have been used for livestock grazing. A farmstead with a large, relatively new house is situated in the central portion of SW27-25-4-5. See Map 4.

## 3.2 Terrain and Views

The land within the Plan area consists of hummocky terrain. The land contains two permanently wet Class IV wetlands adjacent to Highway 22 in the eastern portion of the lands and a significant Class III wetland, which is generally wet but is subject to drying up, in the northern portion of the plan. There are also a number of smaller wetlands, dry for much of the time, scattered about the plan area. There are no slopes within the plan area which would prevent development.

Elevations vary in the Plan area from approximately 1197 meters (3927 feet) in the SW portion of the plan to 1215 meters (3986 feet) in the NE portion of the plan. The lands generally slope from SW to NE. See Map 4.

When the elevation drop from west to east is averaged across the entire ASP area, the crossfall is 1%. Different portions of the ASP area have views of the Rocky Mountains, the foothills and/or the Bow River valley.

## 3.3 Geotechnical and Soils

A Geotechnical Evaluation dated February 2008 was prepared by McIntosh Lalani Engineering Ltd.

The geotechnical evaluation included the drilling of 21 boreholes to a depth of 9.1m to assess general subsurface soil conditions and install standpipes to monitor groundwater. The general subsurface stratigraphy of the site consists of surficial organic topsoils overlying a veneer of silt and lacustrine clay deposits atop of glacial till soils. Groundwater seepage was not encountered in any of the boreholes during drilling, and all twenty one remained dry upon completion. Groundwater levels were measured two weeks after drilling, at which point the groundwater ranged from 2.16m below existing grade to dry to a depth of 9.1m below grade, with the majority of the boreholes being dry.

The Geotechnical evaluation references the intermittent encounter of high plastic clays. In a follow up letter to the original study, dated September 2, 2008, Sandy McIntosh, P.Eng. indicates that the high plastic clays encountered were intermittently encountered in the form of lenzes in certain areas of the site. These lenzes were encountered within the lacustrine clay layer in seven of the twenty one boreholes advanced.


**WESTRIDGE ASP**

- ASP BOUNDARY
- TOWN BOUNDARY
- EXISTING WETLANDS
- GENERAL DIRECTION OF OVERLAND FLOW
- ADJACENT HOUSES
- GAS LINE RIGHTS-OF-WAY
- **G** ABANDONED NATURAL GAS WELL
- **H** EXISTING HOUSE TO BE INTEGRATED
- **W** EXISTING WATER WELLS TO BE RECLAIMED
- **S** EXISTING SEPTIC SYSTEM TO BE RECLAIMED

COCHRANE
DISCOVER THE NATURAL WEST

WESTRIDGE
OF COCHRANE

**MAP 4**

# DEVELOPMENT CONSIDERATIONS

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The letter indicates developing residential subdivisions in areas of high plastic clays can be undertaken provided certain methods are employed during the grading operations and house footing construction. The McIntosh Lalani letter further indicates that these methods have been successfully employed on other developments in the Cochrane area which have high plastic clay (Lacustrine clay) provided there is comprehensive phased soil analysis, specific recommendations relative to the detailed design and construction of the development, and field supervision to implement the specific recommendations. This work will be undertaken by the developer and the geotechnical engineer retained by the developer. McIntosh Lalani indicated they do not see any potential liability for the Town,; any liability would lie with the developer and geotechnical engineer.

The geotechnical report is prepared to provide recommendations for the construction of the subdivision as it relates to the sub-surface soil and ground water conditions. Stand pipes are installed in all boreholes to monitor the impact of surface ground water on the future development. Methods of dealing with the ground water are developed during the detailed design stage of the project and during the construction phase. The September 2nd 2008 letter indicated that methods employed during the grading operation, underground utility installation and construction of the homes will not have an impact on shallow ground water if encountered.

In summary, the Geotechnical Evaluation presents design, construction and geotechnical inspection recommendations which will be followed by the developer at every phase. The geotechnical evaluation did not identify any slopes of concern or any soil conditions that would prevent development of the subject lands provided appropriate engineering practices were undertaken during construction.

## 3.4 Cultural and Archaeological Resources

An Historical Impact Assessment dated May 21, 2008 was completed for the lands by Historical Resource Management Limited. This assessment indicated that no new archaeological sites were recorded in the course of the assessment and there were no previously recorded sites on the property. On September 26, 2008 Historic Resource Management, Alberta Culture and Community Spirit, based on the information provided in the assessment, provided Historical Resources Act clearance for development of the lands. A copy of the “clearance to proceed letter” is provided as Appendix A.

## 3.5 Biophysical Resources

A Biophysical Overview dated February, 2008 was completed by Sweetgrass Consultants Ltd. This overview was based on field visits to the site in late summer 2007. A supplementary letter and detailed Wetland Assessment dated September 2, 2008 was submitted to the Town by Sweetgrass Consultants Ltd., to respond to questions relative to the Biophysical Overview. The Wetland Assessment provided a summary of all wetlands on the lands field surveyed in both August 2007 and June 2008. A further supplementary letter on the area of wetlands within the gross developable area, which excludes the Highway 22 road widening area, was completed by Sweetgrass Consultants on February 2, 2009.

A report dated December 4, 2008, entitled Westridge ASP Review of Wetland Components, was prepared by Fossil Water Corporation on behalf of the Town to comment on the wetlands, stormwater facilities proposal and appropriate policies relative to these.

The Sweetgrass Overview indicated that the ASP area is located at the northern end of the Foothills Parkland Subregion of Alberta, a biotic zone that occurs as a narrow band along the eastern edge of the foothills. Characteristic vegetation includes variable amounts of aspen and balsam poplar woodland and willow shrubbery, as well as grassland dominated by rough fescue and oat grasses. Localized wetlands in this sub-region include some productive habitats for a variety of breeding and transient birds.

As with other parts of the Foothills Parkland Subregion, the original native habitats in this area have been largely disturbed through cultivation and heavy grazing by domestic livestock. Linear disturbances, including road systems, have further fragmented native habitats into smaller, isolated units.

The Sweetgrass study indicates that two Class IV wetlands are situation along the eastern boundary. See Map 4, Development Considerations. In both cases, portions of the wetland occur outside of the property boundary within the highway right-of-way. Class IV wetlands have semi-permanent standing water. Relatively deep, open water occupies the majority of the basins of the two Class IV wetlands. Discontinuous deep marsh of common cattail and great bulrush, as well as a small area of shallow spike rush marsh, occurs along the edge of the south wetland, while the north wetland lacks any marsh development.

Both wetlands have restricted areas of wet meadow on their backshores. Both Class IV wetlands appear to have been substantially maintained through highway construction, which raised water levels. This has, in turn, resulted in the large areas of open water that dominate the wetland basins – habitat that is somewhat atypical of Class IV ponds. Prior to road construction, these wetlands may have been seasonal Class III types with shallower, more seasonal water.

The study indicates that a significant Class III wetland is situated along the northern boundary of the property, with a small portion of the wetland outside of the property. Class III wetlands have seasonal ponding of water in their basins and often become dry in late summer, especially in drought years. A shallow marsh of awned sedge and open water occupy the deeper parts of the wetland, while a ring of wet meadow with reed grass, woolly sedge and wire rush occurs along the outer margin.

As clarified in its February 2, 2009 letter, in total, Sweetgrass identified 43 wetlands on the property covering a cumulative area of 23.42 acres within the gross developable area of the ASP. The gross developable area excludes the 4.95 acre highway widening. The categories of wetlands are as follows:

| | |
|---|---|
| Class II | 1.75 acres |
| Class III | 17.59 acres |
| Class IV | 4.08 acres |

Waterline Resources Inc., in a letter dated September 3, 2008, assessed the contribution of wetland hydrology to regional groundwater supplies. Waterline indicated

that precipitation and snowmelt that collects within the wetland areas and infiltrates the soil within the Westridge ASP area does not likely contribute recharge to the deep aquifers utilized as water supplies by the local residents. Low permeable soil and bedrock overlying the aquifers limits vertical groundwater flow. Local surface water infiltration within the ASP area would typically migrate laterally through the shallow subsurface and re-emerge at surface along the valley slopes downgradient of the Development. As such, Waterline Resources indicate that development will have no impact on the wells in the Rolling Ridge Estates subdivision to the north of the ASP area.

Fossil Water's report indicated that Waterline's finding are consistent with published literature (US Army Corps of Engineers, 2006) regarding the performance of these wetland systems, namely that the dominant hydrologic inputs to temporary and seasonal prairie pothole wetlands are surface runoff of snowmelt and early spring rains that do not infiltrate into the frozen upland soils. The dominant hydrologic output is evapotranspiration.

## 3.6 Environmental Site Assessment

A Phase One Environmental Site Assessment (ESA) dated November 28, 2007 was completed by Base Property Consultants Ltd. A follow up letter dated September 2, 2008 expanded on the original report.

Base Property Consultants further indicates that a natural gas well was drilled and abandoned in 1974. This natural gas well has a certificate of abandonment. The Phase One ESA indicates that a review of records show no records of impairment or environmental violations within the ASP area. Further, the author of the ESA, Brian Chikmoroff, P. Eng., indicated that based on his experience, the soils around natural gas wells (which have the potential for drilling mud sumps or flare pits that could impact soil and groundwater conditions) are not difficult to remediate or address and will not result in any impediment to development. The Phase One ESA also indicated that the four water wells and the septic system will have to be reclaimed in an appropriate manner prior to development.

As indicated by Base Property Consultants, to ensure that no soil contamination exists, a Phase Two Environmental Site Assessment will have to be completed by the developer prior to grading of the site. It will be submitted for review to the Town of Cochrane, who may then distribute it for additional review to the Calgary Health Region and Alberta Environment. Following this more detailed Phase Two ESA, and if there is any contamination, a remediation action plan will be established as part of the Phase Two ESA report and will ensure there is no concern for future development or the physical or environmental well-being of future residents.

## 3.7 Oil and Gas Pipelines

Oil and Gas pipelines and easements exist in the S ¼ section 27-25-4W5. As identified in the Phase One Environmental Site Assessment by Base Property Consultants Ltd., no hydrogen sulphide or sour gas was identified by Alberta Energy Utility Board data for the pipelines on or near the ASP site. As such, development

setbacks to the pipelines will not result in any significant restriction to land use beyond the pipeline easements or to use of the surface area of the easements as public open space. The appropriate building setbacks will be verified at the Concept Plan/Neighbourhood Plan stage of the planning process.

# 4.0 VISION AND GOALS

## 4.1 Vision

The Town of Cochrane Municipal Development Plan (MDP) sets out the following vision for the Town:

> *The community of Cochrane is committed to enhancing social well-being, environmental stewardship, and economic vitality within a context of responsible growth and community engagement. Cochrane embraces sustainability and innovation while maintaining a strong link to its vibrant western heritage.*

The mission statement for the Town is:

> *We are building a community of choice for present and future generations.*

This plan seeks to achieve both the vision and mission of the Town of Cochrane.

## 4.2 Goals

Without repeating the goals of the Municipal Development Plan, the goals of the ASP are to:

- create the opportunity for a variety of affordable housing for individuals and families seeking homes in the Town of Cochrane. The opportunity for affordable housing may require new land use districts to be added to the current Land Use Bylaw.
- create a significant entranceway feature to the Town of Cochrane and to the new community which takes advantage of the visual amenity of the existing wetlands,
- create a safe, attractive, efficient, and environmentally sustainable community which may require that alternative development standards be considered by the Town,
- provide the opportunity for and access to educational and recreational facilities, parks, and natural amenities that will meet the needs of residents,
- develop a system of walkways and public open spaces that contribute to and connect with Cochrane's open space and trail system,
- ensure that transportation and utility infrastructure is designed to serve the area in an economical and efficient manner,
- provide for commercial uses and services that conveniently meet the needs of the residents of Westridge and are not in conflict with commercial development that should be in the commercial core,

- establish appropriate interfaces between the Plan area and the surrounding lands,
- conserve the two existing Class IV wetlands with permanent water adjacent to Highway 22, and the Class III wetland in the north-central portion of the ASP area, including consideration of integrating stormwater management facilities with the wetlands adjacent to the Highway and considering the north-central wetland as an example of a low impact development natural stormwater area to ensure long-term sustainability of these wetlands.

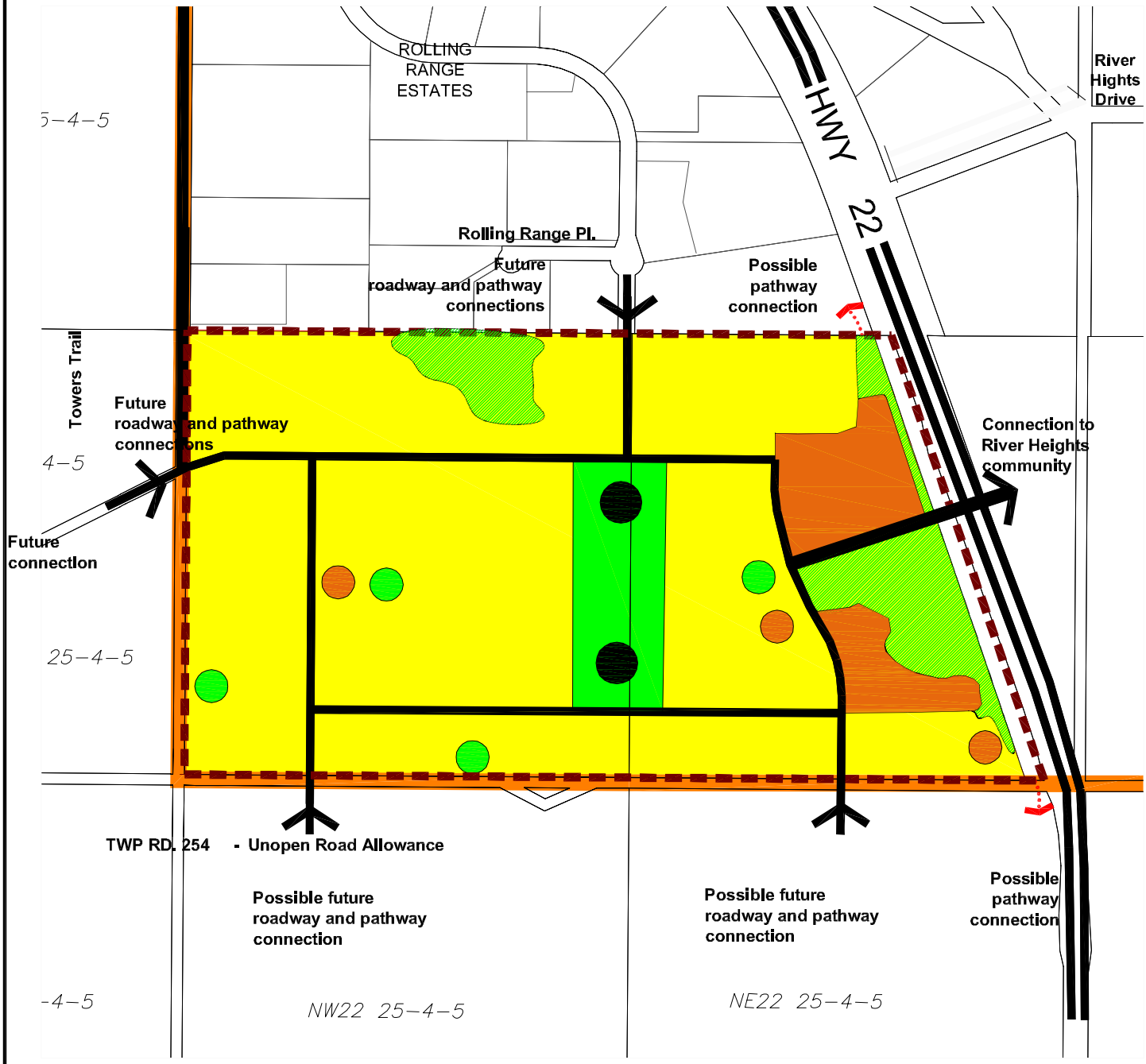
# 5.0 LAND USE CONCEPT

## 5.1 Land Use Concept

The land use concept for Westridge is shown on the Land Use Concept, Map 5. This concept consists of a series of areas and symbols that define a future land use pattern for the community. The approximate areas of the land areas and land uses are tabulated in the table below. The concept is described relative to the five planning principles of long term sustainability as set out in the Municipal Development Plan in Section 5.2.

| | **Hectares** (+/-) | **Acres** (+/-) | |
|---|---|---|---|
| **Total Land Area** | 114.04 | 281.80 | |
| Highway 22 Road Widening | 2.0 | 4.95 | |
| **General Land Uses (Areas are approximations based on Map 6: Conceptual Plan)** | | | **%** |
| Open Space, School, Recreation and Natural Stormwater Facilities | 19.7 | 48.7 | 17.6 |
| Mixed Use (includes Commercial area) | 4.0 | 9.9 | 3.6 |
| Residential | 60.34 | 149.15 | 53.8 |
| Roadways and Lanes | 28.0 | 69.1 | 25.0 |
| **Gross Developable Area** | **112.04** | **276.85** | **100** |

**Table 2:** General Land Use Table




ASP BOUNDARY

TOWN BOUNDARY

COLLECTOR ROAD

ARTERIAL ROAD

HIGHWAY 22

SCHOOL SITES AND ACTIVE PLAYFIELDS

NEIGHBOURHOOD PARKS

WETLANDS, UPLANDS HABITAT and STORMWATER MANAGEMENT FACILITIES

MIXED USE/ COMMUNITY NODE

RESIDENTIAL

**WESTRIDGE ASP**

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**MAP 5**

# LAND USE CONCEPT

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## 5.2 Long Term Sustainability

The Municipal Development Plan 2008 places specific emphasis on long-term sustainability based on the following five planning principles:

- Responsible Growth Management
- Social well-being
- Environmental Stewardship
- Economic Vitality
- Community engagement

The land use concept and development framework for this ASP area can best be described, relative to long term sustainability and these five planning principles, in the following sub-sections.

### 5.2.1 Responsible Growth Management

The land use concept provides for a minimum development density of 19.8 units per hectare (8 units per acre) thereby efficiently utilizing the land base and the existing infrastructure systems. This minimum density conforms to the minimum MDP density requirement of 19.8 units per gross developable hectare (8.0 units per gross developable acre). However, the development will be designed for a development opportunity of closer to 10 units per acre so as to enable more efficient use of the land if the market opportunity exists to accommodate the higher density.

The land use concept utilizes smart growth principles by including the opportunity for local convenience commercial, personal services and neighbourhood office uses in the mixed use area within the higher density community core at the entrance to the community. This community focal point will provide the primary meeting place for residents in a small town setting. Other meeting places will be the western neighbourhood node, the schools/playfields and more local open space areas along the sidewalk and pathway network.

This higher density community core, with a diversity of multi-family dwelling units is targeted to a broad range of households and will be integrated with the existing wetlands and the naturalized stormwater management facilities. The public open space will become an attractive feature for both waterfowl and residents of the community, while ensuring that stormwater is detained and cleansed to a standard that minimizes impact on the water quality in the Bow River. The naturalized stormwater management facilities are an example of green infrastructure. The increased emphasis on energy efficiency and the use of BuiltGreen™ practices by the residential homebuilders is another example of a more sustainable future. The provision of separated sidewalks and boulevard trees on the collector spine roads, along with the provision of strategically located walkways elsewhere, encourage walking to the main points of destination within the community. This should lead to a reduced usage of vehicles for local trips, and an increased level of personal fitness. This too is an example of a design feature that considers a more sustainable future. The opportunity for a broad

and diverse range of housing forms is another aspect of the community design which provides for a more inclusive community and provides the opportunity to accommodate the various housing needs of individuals and families throughout their complete lifecycle.

### 5.2.2 Social Well-being

This community will provide a safe, healthy and comfortable high quality of residential accommodation and social interaction, as well as convenient in-community opportunities for education and recreation. As part of the larger community of Cochrane, all higher level education and recreation will happen outside this community, along with the majority of jobs.

The opportunity for a wide diversity of housing forms will enable a broad range of individuals and families with various financial means to live and interact in the community.

The pedestrian orientation and "walkability" of the plan provides safe access within the community for pedestrians and cyclists. This access is focused towards the mixed use/neighbourhood commercial centre, natural open space area and the school sites.

### 5.2.3 Environmental Stewardship

The Westridge ASP protects the two permanent wetlands adjacent to Highway 22 and the vegetated upland slopes adjacent to these while providing naturalized stormwater facilities adjacent to the wetlands. The stormwater facilities will cleanse pollutants from the stormwater before it flows in pipes from the community to the Bow River. These naturalized stormwater facilities supplement the habitat productivity of the wetlands and uplands.

The plan will also protect the large wetland in the north-central portion of the plan. While water is not always apparent in the wetland, the wetland is considered to be significant and worthy of retention.

Retention of the three wetlands and the creation of naturalized stormwater facilities which will supplement and be integrated with the large wetland adjacent to Highway 22, is an example of a more sustainable future. Not only will the ultimate wetland complex result in a no-net loss of wetlands on the lands, but the stormwater from the development area will be naturally cleansed before entering the Bow River, will be utilized to ensure a healthy future for the existing permanent wetlands and will be designed to provide an educational and open space amenity for the community. Not only will the developer design and build the natural facilities but the developer will help educate future generations by describing the integration of the stormwater with the wetlands on pathway display boards.

The Plan is designed to encourage walking and cycling by ensuring direct access along sidewalks, on walkways and in open space from the residential cells to the schools, playfields and neighbourhood commercial area. By providing convenient and direct

pedestrian connections, and a mix of land uses, the need for motorized transport within the community is discouraged. Similarly, the opportunity for pedestrian linkages adjacent to and in the highway R-O-W will encourage walking and cycling to destinations outside the community.

To minimize air pollution, energy and water consumption, the Town supports efforts by the developer to encourage the homebuilders within Westridge to utilize energy efficient building products and construction methods as set out in the Alberta BuiltGreen™ program.

Other aspects of environmental stewardship are outlined in Section 5.2.1.

### 5.2.4 Economic Vitality

The primary role of the new ASP area within the context of the Town is to provide an attractive residential community which will support the existing business community and increase the local population base to help attract industries and more employers to the Town.

### 5.2.5.Community Engagement

During the ASP planning process, the developer held several meetings with adjacent landowners and the public to discuss the proposed ASP and concept plan, and listen to their concerns. The major concerns were (a) a wish to prevent trespass by people and animals and (b) to prevent premature connection of the new community roads to Rolling Ridge Drive and Towers Trail. Both have been addressed in the Plan. At the initial public hearing on June 24, 2008 concern was raised by the Cochrane Environmental Committee and other members of the general public. In response to these concerns, the developer had technical experts prepare letters and/or reports to address these concerns. These responses and supplementary technical information were presented to Council and the public on September 8, 2008 at the second portion of the public hearing into the ASP.

## 5.3 Policy Direction

Section 6.0 of the ASP, as follows, contains policies that apply to the land use areas illustrated on the Land Use Concept, Map 5. The remaining sections 7 to 10 of the ASP provide for transportation, servicing, phasing, and implementation policies that will be applied to the ASP Plan area.

# 6.0 LAND USE POLICY AREAS

## 6.1 Residential Area

### 6.1.1 Purpose

The purpose of the Residential Area is to provide for a range of housing options, from single detached to apartment styles, in a comprehensively designed residential neighbourhood.

Policies of the ASP and the future Land Use Bylaw designations should allow flexibility in order to accommodate a range of residential unit types. This will facilitate innovation and affordability as well as the ability to respond to changing market conditions.

In addition, compatible and complementary institutional, recreational, and neighbourhood commercial uses will be allowed within this ASP. Public parks will be interspersed throughout the residential area to serve the recreational needs of residents. The Residential Area comprises the majority of lands within the community. The design of the Residential Area should present opportunities for all residents the choice of movement via multi-access roadways, sidewalks and walkways. The residential design will be determined through the Conceptual Plan/Land Use Amendment process.

### 6.1.2 Policies

#### (1) Composition of Residential Area

(a) Subject to the policies of this Plan,

(i) traditional and narrow lot single-detached, two-unit residential uses (duplexes, semi-detached and single-detached with an accessory suite) and street-oriented townhousing, shall be the predominant use of land within the residential area, with an emphasis on affordability of the housing;

(ii) affordable multi-unit housing forms, special needs housing, institutional uses, recreational uses, public uses and other similar and accessory uses to the above will be allowed within the residential area where determined to be compatible and appropriate, to ensure a comprehensively planned community; and

(iii) open space shall be provided throughout the residential area to meet the active and passive recreational needs of residents;

(iv) the potential exists to create a major neighbourhood node or focal point at the gateway to the community and a second more minor node in the west portion of the Plan which can create a social focus for the residents containing higher density housing, complementary local commercial and local open space. These are indicated on Map 5.

(b) The general categories of uses identified under Section 6.1.2(1)(a) shall be refined through the Land Use Districts applied within the residential area. New districts or amendments to existing districts within the Town's Land Use Bylaw will be required to accommodate a broad range of affordable housing types.

#### (2) Design of Residential Area

(a) The design for the residential area shall:

(i) generally be consistent with the Conceptual Subdivision Plan, Map 6, recognizing that this plan is intended to show the general nature of subdivision and is subject to change at the Tentative Plan/Conceptual

Plan/Land Use Bylaw amendment stage without the need for Council to amend Map 6 to accommodate refinements of this Conceptual Subdivision Plan;

(ii) be determined through the Tentative Subdivision Plan or Conceptual Plan/Land Use Bylaw amendment process; and

(iii) emphasize opportunities for distinct enclaves that contain unifying elements to help create a cohesive community.

(b) Elements of the Western Heritage Design Guidelines including but not limited to architectural detailing, street signs and landmarks, shall be applied.

(c) Design Guidelines and Architectural Controls should be implemented by the developer on all residential and commercial development in order to ensure an aesthetically coordinated streetscape appearance as well as an attractive appearance from all publicly accessible areas;

(d) Consideration shall be given to sustainability and environmental stewardship principles through the design of the Plan Area by:

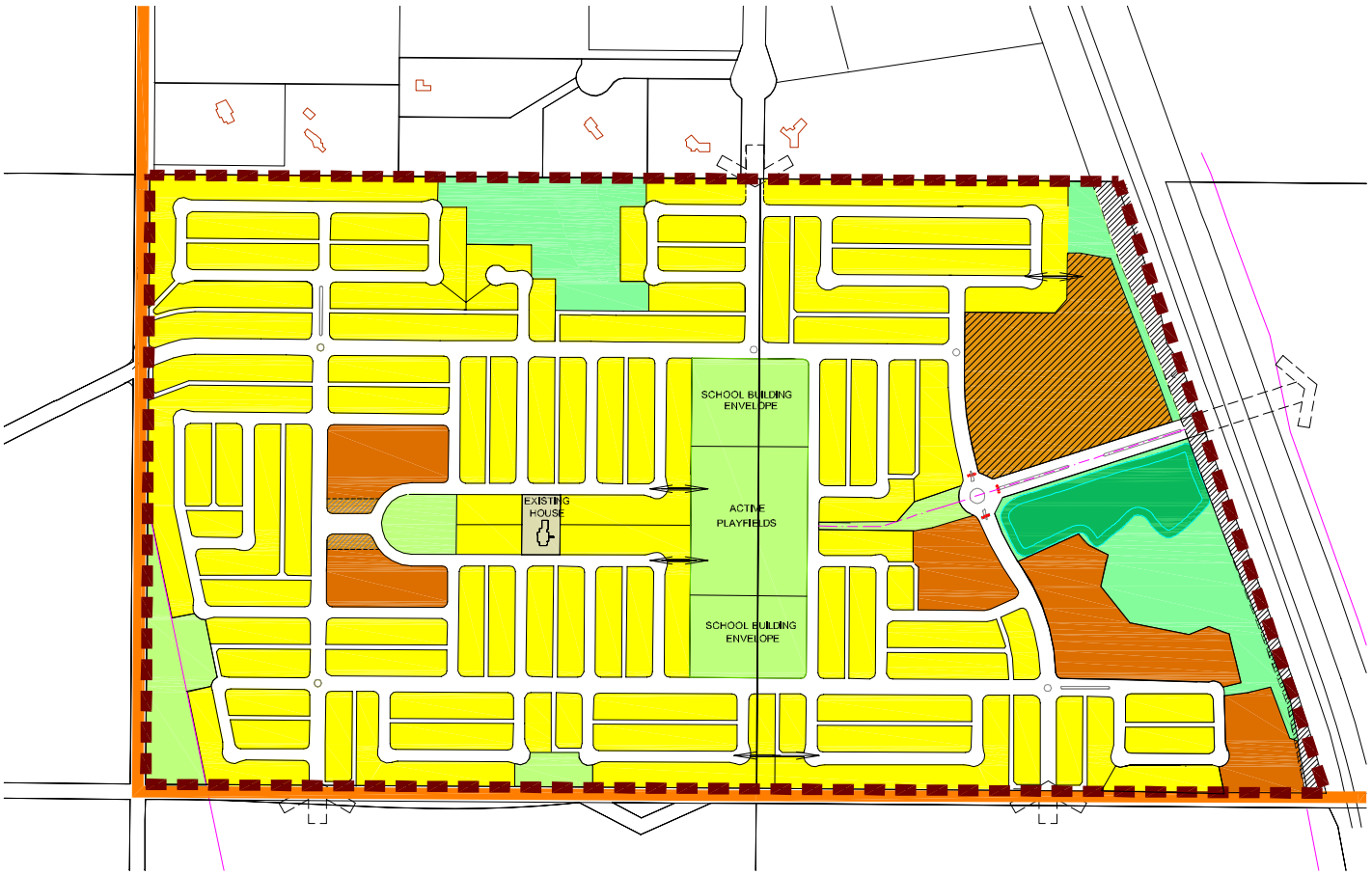
(i) encouraging walkability by centrally locating school sites and concentrating multi-family units near the commercial area and entranceway features.

(ii) providing a range of residential unit types to meet the accommodation needs of all ages;

(iii) providing a sidewalk and open space system that encourages walkability within the development.

**(3) Density and Population of Residential Area**

In order to support the efficient provision of infrastructure, amenities and services, a residential density of at least 19.8 units per gross developable hectare (8.0 units per gross developable acre) shall be achieved in Westridge corresponding to at least 2100 units. It is anticipated that the density could be as high as 10 units per gross developable acre. Development of individual parcels and cells can occur at higher and lower density levels. The population of the area should peak within 5 to 10 years of the completion of development and will be roughly 6000 people, assuming 8 units per acre, and up to 7100 people if a density of 10 units per acre is achieved.




ASP BOUNDARY

TOWN BOUNDARY

LOWER DENSITY RESIDENTIAL

HIGHER DENSITY RESIDENTIAL

MIXED USE

OPEN SPACE/ SCHOOLS/ PARKS

NEW NATURALIZED STORMWATER MANAGEMENT FACILITIES

EXISTING WETLAND AND UPLAND AREAS TO BE RETAINED

HIGHWAY WIDENING

WALKWAYS - supplements sidewalks and pathways in open spaces

**WESTRIDGE ASP**

**MAP 6**

# CONCEPTUAL NEIGHBOUROOD PLAN

COCHRANE
DISCOVER THE NATURAL WEST

WESTRIDGE
OF COCHRANE

**(4) Residential Area Adjacent to Highway 22**

Residential development adjacent to Highway 22 (Cowboy Trail) shall provide adequate separation and/or screening for noise impact mitigation in order to satisfy the noise attenuation standards of the Town. Noise attenuation analyses shall accompany the tentative subdivision plans and engineering plans based on the proposed grading plan for the development.

**(5) Residential Area Adjacent to Rolling Range Estates**

Only single family residential dwellings and open space shall be permitted adjacent to the north property line and the country residential lots in Rolling Range Estates. A fence shall be constructed by the developer along the property boundary to prevent trespass, dogs and blowing debris from the residential development and to protect the rural/urban interface.

**(6) Residential Areas Adjacent to M.D. of Rocky View**

To address Section 2.13 of the *Intermunicipal Development Plan,* which deals with compatibility of residential development with adjacent uses across municipal boundaries, the following policies shall apply:

(i) Conceptual Plans adjacent to the municipal boundary shall address compatibility and minimize interface conflicts with existing and future surrounding land uses;

(ii) A fence shall be constructed by the developer along the property boundary to prevent trespass, dogs and blowing debris from the residential development and to protect the rural/urban interface.

(iii) As part of the physical development, the possible future roadways shown to connect to lands adjacent to the ASP area shall be treated in such a way as to discourage trespass and access to the adjacent lands.

**(7) Residential Area Adjacent to Wetlands**

Conceptual plans for sites adjacent to the three wetlands to be retained shall be submitted to the Subdivision Authority with sufficient detail (property lines, building setbacks, contour lines etc.) in conjunction with tentative plans to demonstrate the developer's intended treatment of the interface and ensure that the environmental integrity of the wetlands will be maintained.

**(8) Affordable Housing**

The developer proposes to deliver affordable housing in the first stage of the development of the community. The form and management of the affordable housing will be coordinated between the developer and the Town.

The developer is working with the Cochrane Society for Housing Options (CSHO) and the Town to create a unique concept for the delivery of affordable housing to those in need. This could be in the form of rental, owned, leased or purchased units or other ways and means.

## 6.2 Mixed-Use Area

### 6.2.1 Purpose

The purpose of this area is to create a commercial and higher density residential development node, strategically located at the entrance to the community, to enable the opportunity for a cohesive grouping of commercial and residential uses. The area will provide retail, business and personal services in the community without jeopardizing the integrity of the downtown commercial area. In addition, the opportunity for a minor mixed use node with the opportunity for limited local oriented commercial uses may be provided in the western portion of the plan to offer local convenience goods and services.

The policies of the Town of Cochrane Municipal Development Plan speak to the desirability of mixed uses and for neighbourhood commercial uses, in both general and specific terms, in order to encourage sustainable and innovative design and development.

The placement of a mixed use area at the entrance to a community provides a central, accessible and recognizable community or neighbourhood node which promotes a sense of place and identity within the community. By enabling a mix of uses there will be more flexibility and opportunity for the community as it matures.

There is support in the MDP policy for flexibility and innovation in land use districts to not restrict design innovation. The creation of a mixed use area rather than a separate neighbourhood commercial and higher density residential area provides the opportunity for integration but does not preclude a comprehensive plan comprised of single use elements.

### 6.2.2 Policies

**(1) Design of Mixed Use Area**

a) Commercial development shall be physically compatible with planned adjacent residential areas;

(b) Commercial building facades, setbacks and landscaping shall be sensitively treated on all sides, including the Highway 22 side;

(c) Commercial loading and servicing areas should be screened from adjacent development and roads through the use of landscaping, fencing, or building partitions;

(d) A mix of deciduous and evergreen trees, in clusters with shrubs, shall be used within and around commercial parking lots in order to provide some all-season visual relief from paved areas;

(e) All buildings within the commercial site shall have a coordinated architectural style. Long continuous building walls or façades shall generally be broken up by architectural detailing such as windows and/or roofline articulation. Rooftop mechanical devices shall be screened; and

(f) Elements of the *Western Heritage Design Guidelines*, including but not limited to architectural detailing, lighting and signage, shall be applied.

(g) Opportunities to provide recycling facilities (bin depot) is encouraged within the Commercial Area.

## 6.3 Public Open Space and Pathways

### 6.3.1 Purpose

The purpose of these policies is to provide for the dedication of municipal and environmental reserve lands. The creditable municipal reserve land is to be provided to meet the educational and recreational needs of the community. Reserve will be used to create school sites, active recreation playfields, a variety of parks such as neighborhood parks, sub-neighborhood parks and linear parks and to accommodate community and recreational facilities. Decisions on creditable reserve dedication will be made at the Conceptual Plan/Tentative Plan/Land Use Amendment stage.

The most significant open space/environmental features on the land are the permanent wetlands adjacent to Highway 22, and the wetland in the north central portion of the plan. These will be retained and appropriately integrated with the stormwater management facilities for the development.

The wetland and stormwater management plan for the ASP area is the result of the wetland inventory of the lands by Sweetgrass Consulting, the fact that the land area has numerous small and isolated Class II, III and IV wetlands as illustrated on Map 4, and careful consideration of the logical balance between wetland conservation, stormwater management and urban development.

Riparia Ltd., Bernard Amell, prepared a stormwater management/wetland conservation plan for the ASP area and submitted it to the Town in a letter dated September 2, 2008.

The biophysical and wetland inventory work of Sweetgrass Consulting and the integrated stormwater management/wetland conservation plan and concepts of Riparia were reviewed on behalf of the Town by Bill Berzins, M.A.Sc., P. Eng. of Fossil Water Corporation.

The Riparia concept proposes to provide naturalized stormwater management features adjacent to Highway 22 that supplement wetland and upland habitat productivity. The Fossil Water review confirms conceptual design principles proposed have been demonstrated within urban wetland environments including the Elbow Valley

Constructed Wetland and Fish Creek Provincial Park wetland. A description of the conceptual stormwater/wetland conservation plan and a copy of the conceptual plan, as amended to reflect the retention of the north-central Level III wetland is provided in Appendix B. The north central wetland is proposed as a low impact sustainable urban drainage area or wetland that accepts localized stormwater from non-street sources rather than the more "engineered" stormwater facility adjacent to Highway 22 which will accept and "cleanse" all roadway and non-roadway stormwater runoff from the community.

### 6.3.2 Policies

#### (1) Municipal and School Reserve Dedication

(a) Municipal reserve shall be dedicated through the subdivision process as reserve land in the full amount owing as opposed to the payment of cash-in-lieu of reserve land.

(b) Two school sites shall be dedicated as creditable reserve land and shall include active playfields for use by both the school and the community.

(c) The Town encourages school sites to be shared by both school authorities.

(d) The Subdivision Authority may register a deferral of municipal reserve in accordance with the Municipal Government Act.

#### (2) Public Parks and Pathways

(a) Local neighborhood parks of sufficient size shall be established throughout the ASP area. These parks will be located so as to provide convenient access for all residents, as well as to ensure a safe play environment for younger children. Specific park locations will be determined as part of the Conceptual Plan and finalized in the detailed subdivision plans.

(b) Sidewalks, walkways and trails will link parks, schools, public facilities, and commercial areas to create an appropriate pedestrian/ cyclist system in the community.

(c) The future and possible future collector roadway connections to lands outside the ASP area provide the future opportunity for vehicular as well as pedestrian and cyclist's connections outside the community. Prior to that time, the future and possible future roadway connections shall be fenced along the ASP boundary.

(d) Possible pathway connections to the north and south of the community in the Highway 22 R-O-W will be explored with Alberta Transportation and the Town to encourage walking and cycling to locations outside the community.

(e) Public parks adjacent to the ASP boundary also provide the future opportunity for pedestrian and cyclist connections outside the community at a time when such connections are appropriate. Prior to that time, the public parks shall be fenced along the ASP boundary.

**(3) Wetlands and Naturalized Stormwater Management Facilities**

(a) The development plan for the ASP area shall retain the three most significant wetlands and appropriate adjacent upland habitat areas and design and construct new wetlands so as to compensate on a 1:1 area basis for wetlands that will not be retained, in order to achieve the no-net-loss provisions within the Town's Land Use By-Law and the Town's Wetland Policy 1502.01.

(b) The total of the existing wetland area within the gross developable area of the ASP shall be based on the Sweetgrass Consultants inventory set out in the Sweetgrass Consultants letter dated September 2, 2008 and clarified in a letter dated February 2, 2009.

(c) The design of the stormwater facilities and wetland areas shall be consistent with the Water Act and subject to AEPEA approvals.

(d) In the event that 1:1 area compensation is considered by the Town to be uneconomical from a capital and/or operating cost perspective, the developer shall prepare a functional-based assessment at the Concept Plan/Neighbourhood Plan approval stage to demonstrate that the no-net-loss objectives can be achieved.

(e) The stormwater management and wetland conservation plan adjacent to Highway 22 shall consider a design layout that supports the development of a mitigation and/or compensation scheme for the Highway 22 widening and right-of-way lands, in conjunction with Alberta Transportation, in order to provide the opportunity for the Town's no-net-loss objective to be met by Alberta Transportation on its existing road righ-of-way and the additional road widening lands.

(f) Once the Town assumes control of the wetland and stormwater areas, after they have been constructed by the developer, the Town commits to the long-term measurement, maintenance and operation of wetland and stormwater features to retain wetland functionality.

## 6.4 Other Land Uses

### 6.4.1 Policies

**(1)** Public or quasi-public uses, religious institutions, day care facilities, and other service type uses which predominantly serve the community may be located on major or collector roads within the community. These uses would be particularly appropriate in the vicinity of the neighbourhood commercial site at the main entrance to the community, or in the vicinity of the local commercial node in the west portion of the plan.

# 7.0 TRANSPORTATION POLICIES

## 7.1 Highway 22

### 7.1.1 Purpose

The purpose of these policies is to support Highway 22 (Cowboy Trail) remaining a functional, safe and efficient provincial highway which is now within the boundary of the Town of Cochrane. A Functional Plan for Highway 22, recently completed by the Province of Alberta, defines the potential access to the Plan area from Highway 22. The recommendations of this Plan are illustrated on Map 7. Highway 22 will carry the majority of the traffic from the Plan area to the rest of the Town and the region beyond. The potential exists to design the Highway 22 access to the community in conjunction with the existing wetlands to establish a unique entrance that will contribute to the character of the Westridge community. The location of the entrance will mirror the entrance to the River Heights ASP area to the east and will provide direct access between the future communities.

### 7.1.2 Policies

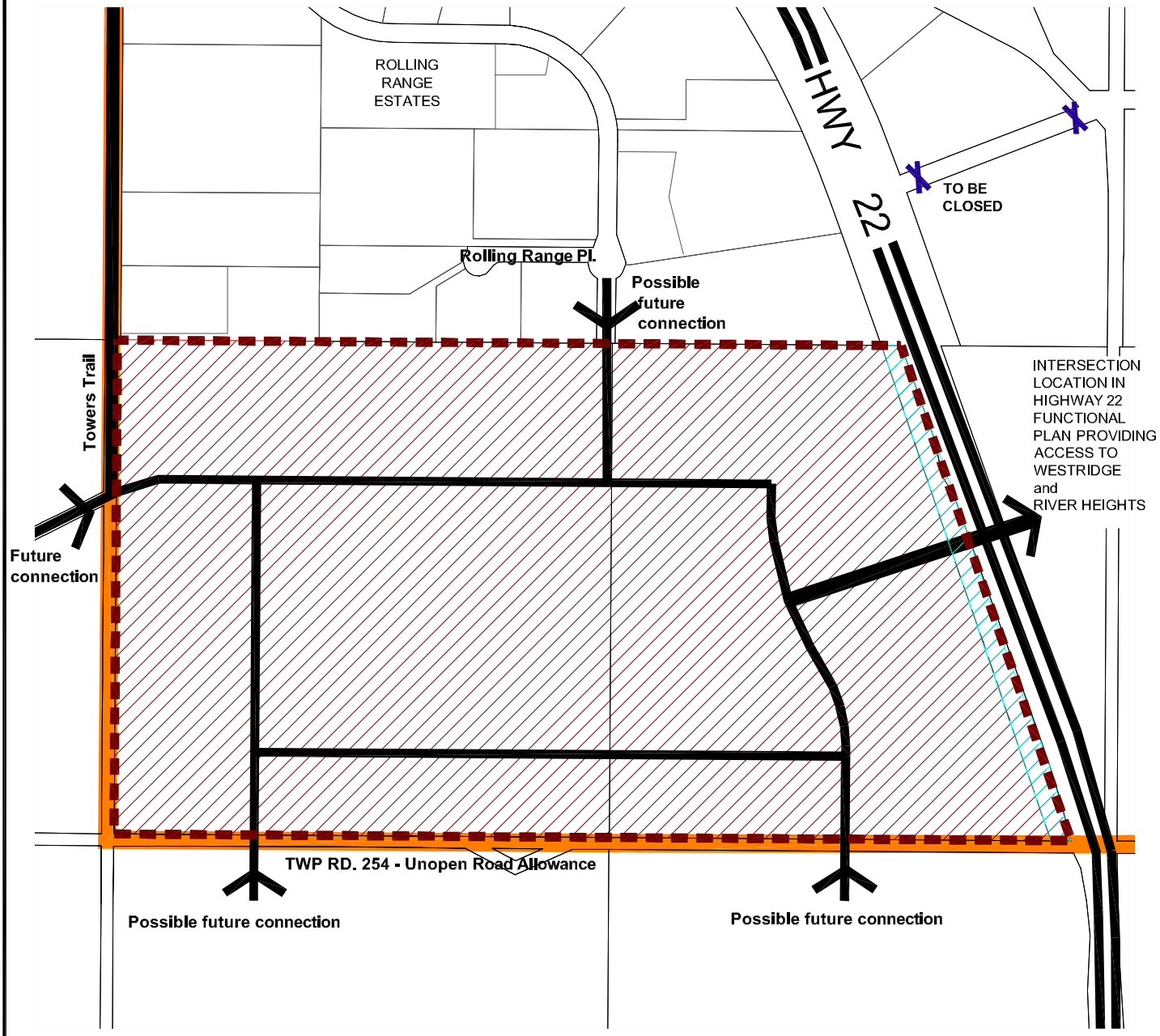
**(1) Design**

(a) Access to the Plan area shall be provided in accordance with the approved Highway 22 Functional Planning Study completed by Alberta Transportation;

(b) The design of the Highway 22 intersection providing access to the Plan area shall be approved by both the Province of Alberta and the Town of Cochrane. Arrangements have already been completed between the developer and Alberta Transportation to provide the necessary road widening and allow the intersection construction as soon as the ASP is approved.

(c) Transportation Impact Statements to ensure that the internal roadways are appropriately designed to accommodate the projected traffic volumes and movements associated with the development will be required in conjunction with Conceptual Plans/Neighbourhood Plans/Land Use Amendments;

(d) Highway 22 widening is to be provided as part of Subdivision Plans adjacent to Highway 22. A caveat was placed on the title for the portion of the S.E. quarter of Section 27 on June 24, 2008, which ensures that this land will be transferred to Alberta Transportation and integrated with Highway 22.




**WESTRIDGE ASP**

- ASP BOUNDARY
- TOWN BOUNDARY
- COLLECTOR ROAD
- MAJOR ROAD
- HIGHWAY 22

HIGHWAY 22 ROADWAY WIDENING AQUIRED BY ALBERTA INFRASTRUCTURE

COCHRANE
DISCOVER THE NATURAL WEST

WESTRIDGE
OF COCHRANE

**MAP 7**

# TRANSPORTATION PLAN

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**(2) Right-of-Way and Road Widening**

(a) The Highway 22 road widening shown on the various maps has been defined by the developer to the satisfaction of Alberta Transportation on a proposed road plan. Legal transfer of the land will occur before or concurrent with registration of the subdivision plan(s) adjacent to Highway 22.

(b) No development, including berming, grading or servicing, shall be allowed within the Highway 22 right-of-way without permission being granted from the Province of Alberta.

**3) Adjacent Residential Development**

Prior to Tentative Plan approval and in consultation with the Town of Cochrane and the Province of Alberta, visual screening and sound attenuation for residential development adjacent to Highway 22 shall be resolved.

**(4) Phasing of Development**

The occupancy of the first residential dwellings in Westridge shall require the completion and operation of the new permanent intersection with Highway 22.

## 7.2 Internal Road Network

### 7.2.1 Purpose

The purpose of these policies is to provide for an internal road network within the community that accommodates vehicular and pedestrian traffic in a safe, efficient and balanced manner. In this regard, the internal road network will need to meet design criteria which address vehicular, transit and pedestrian circulation within the community. The detailed alignment of the road network within the community will be determined through the Conceptual Plan/Neighbourhood Plan/Land Use Amendment process.

### 7.2.2 Policies

**(1) Preliminary Road Network**

(a) The internal road network shown on the Land Use Concept map is preliminary only and shall be refined at the Conceptual Plan/Neighbourhood Plan/Land Use Amendment stage.

**(2) Road Network Design**

(a) The design of the internal road network shall provide the following:

(i) convenient access to the two school sites from the new intersection with Highway 22;

(ii) sensitivity to existing grades;

(iii) opportunity for a future public transit route that is efficient;

(iv) interconnected pedestrian systems within the residential neighbourhood;

(b) Collector roadways may need to be upgraded to higher standards in the vicinity of the main entrance to the community from Highway 22;

(c) Direct driveway access from individual dwellings to collector roads will be assessed based on the projected traffic volumes on these roads;

(d) A traffic assessment on the road design and traffic volumes shall be submitted by the developer with each conceptual plan/neighbourhood plan/land use bylaw amendment which shall include consideration of the appropriateness of driveway accesses on the collector roadway network. This traffic assessment will supplement the Traffic Impact Assessment (Bunt & Associates) prepared in conjunction with the ASP. The traffic assessment must be to the satisfaction of the Town's Subdivision and Development Engineer;

(e) The opportunity for a collector road connecting to the north boundary of the Westridge ASP plan will provide a possible future linkage from Rolling Range Estates into the ASP area when deemed appropriate by the Municipality. Such a connection may be as a result of any changes to the existing Rolling Range Drive intersection with Highway 22 as required by Alberta Transportation.

(f) Collector roads within the Westridge ASP plan will enable possible access from the Municipal District of Rocky View into the Westridge ASP area.

## 7.3 External Roads

### 7.3.1 Purpose

The purpose of these policies is to ensure the appropriate timing and connection between roads within the plan area and Rolling Ridge Drive within the Town and Towers Trail within the M.D. of Rocky View to safeguard existing users of the external roads from undue interference by the new residents. As indicated in Section 7.1 above, development within the ASP area is to be designed so that all necessary access is satisfied by the proposed major road connection to Highway 22. Connections to Towers Road and Rolling Range Drive are not required to satisfy access for future residents within the ASP area. The developer of the ASP area has no need for and shall bear no responsibility for the upgrading of the roadways behind the boundary of the ASP area.

### 7.3.2 Policies

**(1) Rolling Ridge Drive**

a) A roadway connection from the ASP area to Rolling Range Drive shall only be made when the Town determines that it is desirable for use by the residents of Rolling Range Estate.

b) A condition of the subdivision (which includes the future collector road connection to the ASP boundary) shall establish the developer's responsibility to construct a roadway to the ASP boundary as and when directed by the Town.

**(2) Towers Trail**

a) A roadway connection from the ASP area to Towers Trail shall only be made when the Town, as guided by the recommendations of the M.D. of Rocky View, determines that it is desirable for use by the rural users west of the ASP area.

b) A condition of the subdivision which includes the future collector road connection to the ASP boundary, shall establish the developer's responsibility to construct the roadway to the ASP boundary as and when directed by the Town, as a result of consultation on the recommendations of the M.D. of Rocky View.

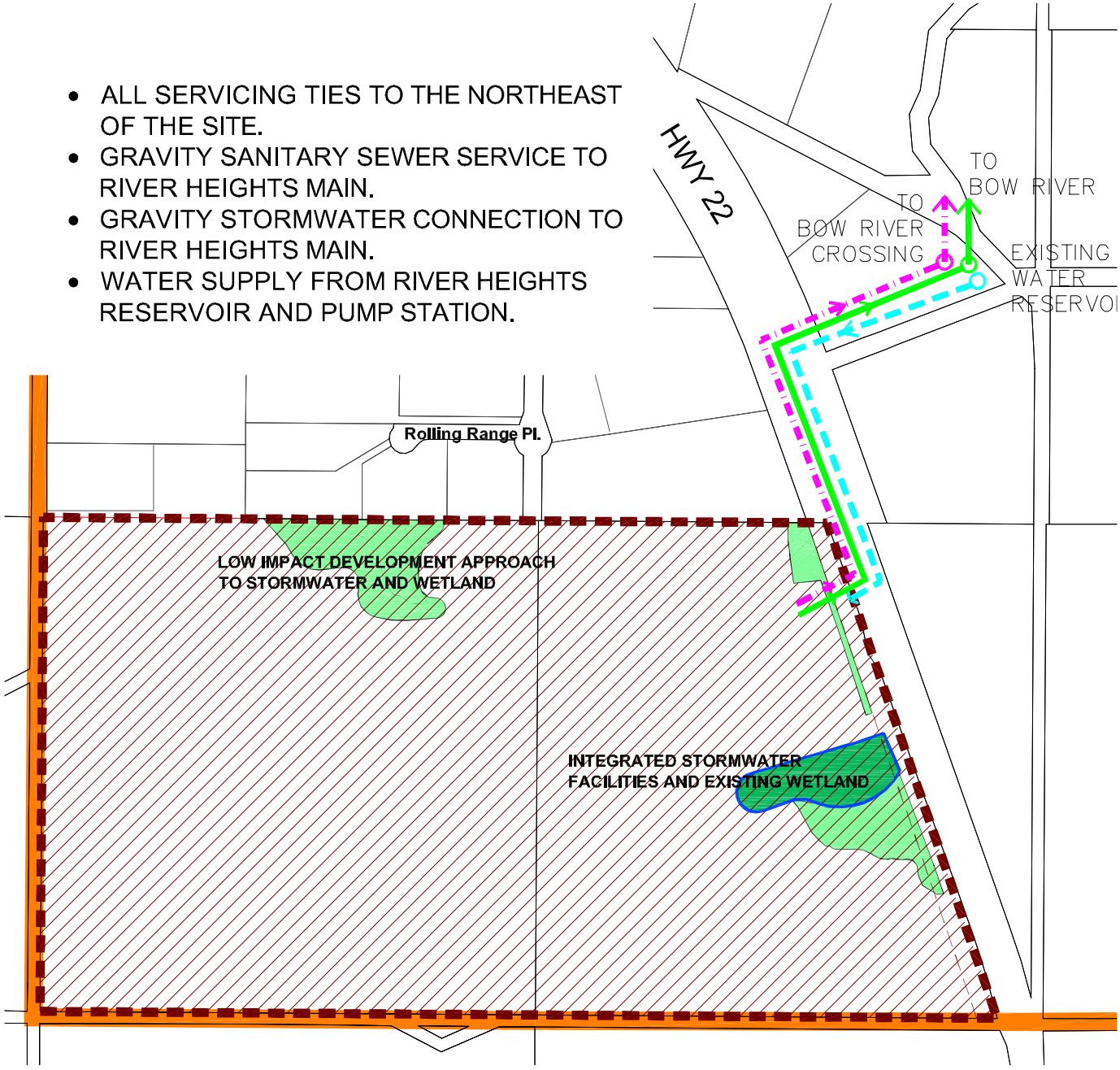
# 8.0 SERVICING POLICIES

## 8.1 Utility Infrastructure

### 8.1.1 Purpose

The purpose of these policies is to ensure that adequate utility infrastructure is provided to serve urban development throughout the community. Any development within the area will need to be fully serviced with piped municipal utilities (water, sanitary sewer, and stormwater) as well as shallow utilities (gas, electrical, telecommunications). Utilities will need to be constructed prior to or in conjunction with the first phase of development, and rights-of-way and easements will need to be provided to accommodate the extension of utility services through the development. Utility alignments will be identified at the Conceptual Plan stage and confirmed prior to or during the Tentative Plan/Construction Drawing Approval stage. The anticipated servicing infrastructure is illustrated on Map 8.

- ALL SERVICING TIES TO THE NORTHEAST OF THE SITE.
- GRAVITY SANITARY SEWER SERVICE TO RIVER HEIGHTS MAIN.
- GRAVITY STORMWATER CONNECTION TO RIVER HEIGHTS MAIN.
- WATER SUPPLY FROM RIVER HEIGHTS RESERVOIR AND PUMP STATION.




ASP BOUNDARY

TOWN BOUNDARY

STORM MAIN (Stormwater connection to River Heights main)

SEWER MAIN (Gravity Sanitary Service connection to River Heights main)

WATER MAIN (Water Supply from River Heights Drive reservoir and pump station)

NATURALIZED STORMWATER MANAGEMENT FACILITIES

EXISTING WETLANDS AND UPLAND HABITAT AREA TO BE RETAINED

**WESTRIDGE ASP**

COCHRANE
DISCOVER THE NATURAL WEST

WESTRIDGE
OF COCHRANE

**MAP 8**

# SERVICING PLAN

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### 8.1.2 Policies

**(1) Municipal Utilities**

(a) Urban development within the Plan area shall be serviced with piped municipal water, sanitary sewer, and stormwater utilities.

(b) The alignment and capacity of water distribution and feeder mains, sanitary sewer feeder mains and trunks, and stormwater feeder mains and trunks shall be to the satisfaction of the Town, based upon utility servicing studies and analysis.

(c) Utility rights-of-way and easements shall be provided to accommodate municipal utilities as determined necessary.

(d) Provincial consent shall be required to accommodate utilities in or across Highway 22.

**(2) Shallow Utilities**

(a) Urban development within the Plan area shall be serviced with shallow utilities (e.g., gas, electricity, and telecommunications).

(b) The location of shallow utilities and the provision of rights-of-way and easements and related line assignments should be addressed to the mutual satisfaction of the Town, the landowner, and the utility companies.

(c) Utility rights-of way and easements shall be provided to accommodate shallow utilities as determined necessary.

## 8.2 Water Distribution

### 8.2.1 Purpose

The purpose of these policies is to provide for a suitable water distribution system designed to serve the urban development needs throughout Westridge. Water will be supplied by the reservoir and pump station to the east of the development across Highway 22 adjacent to the Church site on River Heights Drive.

### 8.2.2 Policies

The water distribution system for Westridge shall be designed to adequately and efficiently serve the ultimate development of the area. The current infrastructure will be upgraded to accommodate the development. Details of the water supply infrastructure shall be determined in conjunction with the engineering plans and the tentative plans of subdivision.

## 8.3 Sanitary Sewer

### 8.3.1 Purpose

The purpose of these policies is to provide for a suitably designed sanitary sewer trunk system to service Westridge. This area will ultimately be gravity serviced through the Southridge plan area along River Heights Drive.

### 8.3.2 Policies

The sanitary sewage system for the Plan area shall be designed to adequately and efficiently serve the ultimate development of the area. The current infrastructure will be upgraded to accommodate the development. Details of the sanitary servicing system shall be determined in conjunction with the engineering plans and the tentative plans of subdivision.

## 8.4 Stormwater Management

### 8.4.1 Purpose

The purpose of these policies is to provide for the design and development of a suitable and efficient stormwater management system to serve urban development within Westridge. A Master Drainage Plan that provides for a network of stormwater facilities to manage storm drainage and direct it into the Bow River is in the process of being prepared by the Town. The location, size and configuration of the facilities will be determined at the Conceptual Plan/Land Use Amendment stage in conformity with the recommendations of the Master Drainage Plan.

Stormwater management will play a role in sustaining the permanent wetlands adjacent to Highway 22. A system of permanently wet stormwater retention ponds will accommodate runoff from major flood events. These ponds, which will allow reductions in the size and cost of off-site storm sewer pipes, will also reduce the rate of off-site runoff during major storms. Maintaining water levels in the existing permanent wetlands/ponds will be assessed as part of the Master Drainage Plan and detailed stormwater management plan to ensure that water quality remains high.

### 8.4.2 Policies

**(1)** The stormwater management system for Westridge shall be designed to adequately and efficiently serve the ultimate development of the area.

**(2)** As part of a Conceptual Plan/Land Use Amendment application, the developer shall submit a Stormwater Management Plan, consistent with the Town's Master Drainage Plan, to demonstrate that the site can be serviced in accordance with the overall design of the stormwater management system for the area. Both the Town's Master Drainage Plan and the developer's Stormwater Management Plan shall consider the utilization of best management

practices to minimize the negative impacts of stormwater on the Bow River and permanent wetlands to be retained.

**(3)** Stormwater from the Plan area will be treated in comprehensively designed, naturalized stormwater facilities adjacent to Highway 22 which integrates with and sustains the existing Class IV wetlands. The comprehensive and integrated natural system will include appropriate stormwater ponds, drainage systems, and trunks prior to being directed to the Bow River. The wetland area to be conserved in the north-central portion of the plan will be retained as an example of a low impact development approach to stormwater detention and wetland conservation since it is impractical from an operational perspective to have this wetland area be part of the stormwater system which will cleanse all forms of stormwater.

**(4)** A conceptual plan for the wetlands, stormwater management facilities and public open space shall be submitted as part of the Concept Plan/ Neighbourhood Plan/Land Use Amendment process to demonstrate the retention of the wetlands and adjacent upland habitat, the integration of the stormwater facilities into a natural open space system and the provision of pathways that will encourage pedestrian and cyclist movements within the open space system.

# 9.0 PHASING POLICIES

## 9.1 Approval Process

### 9.1.1 Purpose

The purpose of these policies is to provide for the phasing of development.

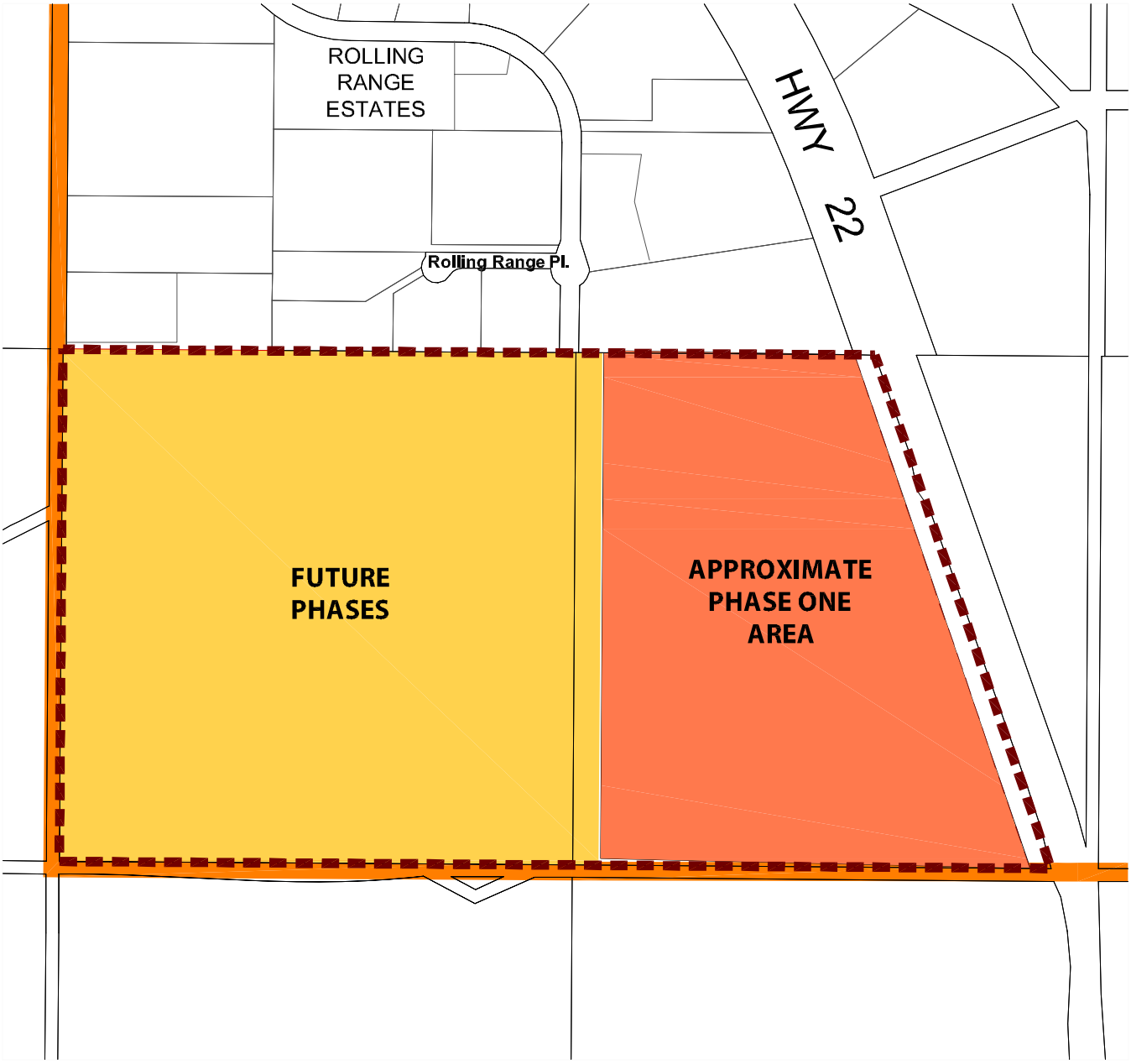
### 9.1.2 Policies

**(1) First Phase**

The first phase of development will focus on development of the entranceway features for the Westridge Community and reinforce the community's affordability. See Map 9. Included will be the entrance road to Highway 22, the wetlands/stormwater features, the local commercial site, adjacent multifamily sites and the eastern portion of the lands surrounding the entranceway.

**(2) Remaining Phases**

Remaining phases will commence in a westerly direction from the first phase of development.




ASP BOUNDARY

TOWN BOUNDARY

APROXIMATE PHASE ONE

FUTURE PHASES

**WESTRIDGE ASP**

COCHRANE
DISCOVER THE NATURAL WEST

WESTRIDGE
OF COCHRANE

**MAP 9**

# PHASING PLAN

# 10.0 IMPLEMENTATION POLICIES

## 10.1 Approval Process

### 10.1.1 Purpose

The purpose of this section is to provide for the implementation of the policies within the Plan. While the implementation of the Plan will be achieved through many different planning initiatives, the principal means of implementation will occur through the Land Use Bylaw Amendment process. Under this process, lands are retained within a holding district that will allow only existing low intensity agricultural uses. Council will redesignate lands to the applicable residential, commercial, recreational or other land use districts. Concurrent with a land use Redesignation application, a Conceptual Plan or Neighbourhood Plan will be required in order to resolve any design, transportation, and servicing matters that vary significantly from the conceptual subdivision plan in this ASP.

### 10.1.2 Roles and Responsibilities

(a) Town Council will:

(i) Consider the objectives and policies of the plan prior to making decisions on Land Use Bylaw amendments within the Plan Area; and

(ii) Consider possible amendments to this plan from time to time to respond appropriately to changing or unforeseen circumstances.

(iii) Consider new land use districts, to be added to the current Land Use Bylaw, and alternative development standards in order to increase the diversity and affordability of housing and development.

(b) Town administrative staff will be responsible for implementing appropriate planning and policy statements contained within this Plan.

(c) The Planning Department will take the primary responsibility for the review of all land use, subdivision, and development proposals and ensure the participation of relevant government agencies, private groups, businesses, and municipal departments during the review process.

### 10.1.3 Policies

#### (1) Land Use Approval

(a) The Land Use Concept, Map 5, illustrates the general land uses that will be developed. The Conceptual Neighbourhood Plan, Map 6, illustrates the anticipated general nature of subdivision. These plans are conceptual only.

The timing and direction of development within Westridge shall be determined primarily through the Conceptual Plan/Land Use Bylaw Amendment process, which establishes the design and land use pattern for the subject site and enables subdivision and development to proceed.

(b) The land use designations in effect at the time of approval of this Plan shall:

(i) continue to apply in accordance with the provisions of the *Municipal Government Act*, and

(ii) remain in effect until it is determined appropriate to redesignate the lands to appropriate districts in accordance with the policies of this Plan.

**(2) Conceptual Plans/Neighbourhood Plans**

(a) The Conceptual Neighbourhood Plan, Map 6, illustrates the anticipated general nature of subdivision. This plan is conceptual only and subject to refinement at the Conceptual Plan/Neighbourhood Plan stage with a more detailed Conceptual Plan/Neighbourhood Plan to show:

- Sidewalks
- Servicing
- Road widths
- Pathways and connections

(b) Either a Tentative plan or a Neighbourhood Plan may be used to accompany a land use amendment when the subdivision plan is generally consistent with the Conceptual Neighbourhood Plan, Map 6, as amended from time to time.

(c) A Neighbourhood Plan may be used to accompany a land use amendment where the developer wants to proceed with approvals on a larger area than the next tentative subdivision plan, or where the proposed subdivision results in a refinement of the Conceptual Subdivision Plan, Map 6, which is deemed significant by the Town of Cochrane. When this occurs, an amendment to Map 6, Conceptual Neighbourhood Plan, in this Plan should occur concurrently with the Land Use Bylaw amendment.

(d) A Conceptual Plan/Neighbourhood Plan or Tentative Subdivision Plan, in order to confirm conformity to this Area Structure Area Structure Plan, shall be accompanied by the following studies, all of which shall be to the satisfaction of the Town of Cochrane:

(i) A transportation assessment, by a professional transportation engineer, on the size and classification of the roadways;

(ii) A geotechnical assessment on soil qualities and slope stability; and

(iii) A stormwater assessment on the management of stormwater by a professional stormwater engineer to clarify the stormwater management for the latest stage of development with reference to the Master Drainage Plan.

(iv) Other assessments or technical information as deemed necessary to evaluate the plan.

**(3) Transitional Development**

(a) Transitional and temporary uses allowed under the land use district in effect which do not comprise the ultimate urban development of the site, such as extensive agriculture, temporary storage or resource extraction, may be allowed if determined to be compatible and appropriate.

# 11.0 INTERPRETATION

The following general definitions shall apply:

**(1)** **Approving Authority** means the Subdivision Authority, Development Authority, or Subdivision and Development Appeal Board of the Town of Cochrane, as the case may be.

**(2)** **Community** means a comprehensively designed physical and social planning area which is predominantly residential in character defined by significant natural or man-made features and containing an adequate population base to support schools, parks, and community facilities necessary to serve the residents.

**(3)** **Council** means the Council of the Town of Cochrane.

**(4)** **Creditable Reserve Land** means the reserve owing on a parcel of land that is to be dedicated as municipal reserve (MR), school reserve (SR) or municipal and school reserve (MSR) through the Subdivision Approval process in accordance with the *Municipal Government Act*.

**(5)** **Gross Area** means the total area of land contained within the property lines of a site.

**(6)** **Gross Developable Area** for the purpose of calculating density means the gross area of the Plan Area, excluding environmental reserve and Highway 22 right-of-way.

# 12.0 BACKGROUND REPORTS

The following reports have been prepared specifically to address issues pertinent to the Westridge Area Structure Plan.

**Archeological**

- Historical Impact Assessment, May 21, 2008, Historical Resource Management Ltd.

**Biophysical**

- Biophysical Overview, Sweetgrass Consultants Ltd., February 2008
- Biophysical Update letter, Sweetgrass Consultants Ltd., September 2, 2008
- Biophysical Update on Wetland areas, Sweetgrass Consultants Ltd., February 2, 2009.

**Environmental**

- Phase One Environmental Site Assessment, Base Property Consultants Ltd., November 2007
- Phase One ESA Update letter, Base Property Consultants Ltd., September 2, 2008.

**Geotechnical**

- Geotechnical Evaluation, McIntosh Lalani Engineering Ltd., February2008
- Geotechnical Update letter, McIntosh Lalani Engineering Ltd., September 2, 2008

**Groundwater**

- Groundwater Supply Impact Evaluation letter, Waterline Resources Inc., September 3, 2008

**Stormwater**

- Stormwater Master Drainage Plan letter, LGN Consulting Engineering Ltd., September 2, 2008

**Transportation**

- Transportation Impact Assessment, Bunt and Associates Engineering, February 2008

**Wetlands and Stormwater**

- Westridge ASP, Review of Wetland Components, Fossil Water Corporation, December 4, 2008
- Stormwater Management/Wetland Conservation Plan letter, Riparia Ltd., September 2, 2008

# APPENDICES

**Appendix A:**

Clearance for development, a letter from Alberta Culture & Community Spirit, Historical Management Branch, in accordance with the Historical Resources Act, September 26, 2008.

**Appendix B:**

Stormwater Facilities and Wetland Conservation Plan, Riparia Inc., February 2009.

**Appendix A:**

Alberta Culture and Community Spirit
Historic Resources Management

Old St. Stephen's College
8820 – 112 Street
Edmonton, Alberta, Canada T6G 2P8
Telephone (780) 431-2300 Fax (780) 422-3106
www.tprc.alberta.ca/hrm

September 26, 2008

Project File: 4835-08-115; 2008-236

Mr. Greg Brown
Brown and Associates Planning Group
Suite 600, 222 – 58th Avenue SW
Calgary, Alberta
T2H 2S3

Dear Mr. Brown:

**SUBJECT:** TIRION PROPERTIES
PROPOSED SUBDIVISON - NW 26-25-4-W5M
HISTORIC RESOURCES IMPACT ASSESSMENT
FINAL REPORT, ARCHAEOLOGICAL RESEARCH PERMIT 2008-236

Ministry staff have received a final report from Historical Resource Management Ltd. discussing the results of the archaeological Historic Resources Impact Assessment that they conducted for the captioned project. No new archaeological sites were recorded in the course of this assessment and no previously recorded sites were revisited. Based on the information provided in this report staff of the Historic Resources Management Branch have recommended *Historical Resources Act* clearance for this project.

***HISTORICAL RESOURCES ACT* REQUIREMENTS/CLEARANCE**

Tirion Properties is granted *Historical Resources Act* clearance to proceed with this project as described in the consultant's report. However, pursuant to Section 31 of the *Historical Resources Act,* should any historic resources be encountered during construction activities staff of the Historic Resources Management Branch are to be contacted immediately. It may then be necessary to issue further instructions regarding the documentation of these resources.

Should you have any questions regarding the above, please contact Barry Newton at (780) 431-2330, (Historic Resources Management Branch, 8820 - 112 Street, Edmonton, Alberta, T6G 2P8), fax (780) 422-3106 or by e-mail at barry.newton@gov.ab.ca.

On behalf of Alberta Culture and Community Spirit, I would like to thank officials of Tirion Properties for their continued co-operation in our endeavour to conserve Alberta's past.

Sincerely,

David Link, PhD
Executive Director



cc: Andrea Richardson, Historical Resource Management Ltd.

# Appendix B

**Stormwater Facilities & Wetland Conservation Plan, Riparia Inc. February 2009**

Riparia (2008) has proposed a conceptual design that is illustrated in Appendix B. The key features of the concept are as follows:

*The existing wetland and nearby natural habitats near the entrance to the development will be retained and additional wetlands and contributing habitats will be created. The net result will be an increase in permanent Class III or IV wetlands, with a substantial fringe of riparian and upland natural habitats.*

*A sediment control forebay will be located near the entry road intersection/roundabout. All piped stormwater from the development will be routed to the forebay. The forebay is shaped to retain significant existing tree and shrub stands to the east and south of the forebay. The forebay will be truck accessible to facilitate sediment removal activities. The fringe of the forebay will be well vegetated with willows to obscure the view of murky water. Water will flow from the forebay to a treatment wetland, which is generously sized to provide higher than Alberta standards of water quality treatment before release.*

*The treatment wetland is separated from the existing wetland (to the south) by a low peninsula berm. Normal (base) flows will discharge from the treatment wetland to the existing wetland via pipe through the peninsula berm. This will maintain the current normal water level of the existing wetland and will provide some base flows to minimize stagnation. Without this provision, the existing wetland could either stagnate or dry up, since the development area is currently the main source of water for the existing wetland.*

*Higher flows will pass through a flow dispersion wetland zone east of the treatment wetland – avoiding direct high velocity or high volume flows to the existing wetland.*

*The general pattern of the native vegetation of the existing natural area will be preserved, plus additional native plantings will be used to fill visual gaps, to improve shoreline stability and to improve biodiversity.*

*The stormwater control structure north of the pond will maintain the water levels of both stormwater ponds (north and south of the entry road). An active storage depth of approximately 1.25m is anticipated – to be refined during the design stage.*

*During minor events the water in the created ponds and wetlands will fluctuate more than in the natural wetlands. During major storm events, the natural wetland will be flooded to become part of the overall stormwater management system. The duration and depth of flooding will be designed to minimize impact on the existing wetlands.*

*It is anticipated that the wetland and pond system will become a landmark feature in the local and regional open space network. A regional path connection to the central entry intersection is proposed, as well as connections to an anticipated municipal regional pathway to the north and south of this development. Bridge and boardwalk features along the pathway are proposed as particularly important opportunities to experience the wetland environment. Another proposed feature is a slight rise in the central peninsula berm – providing a wetland habitat overview opportunity.*

*Some edges of the wetland are deliberately not provided with a pathway, in order to favour wildlife nesting and refuge in these areas.*

*It is anticipated that the forebay and constructed wetlands will be installed in the first phase of development and that they will be fully vegetated within 2 to 3 years. Numerous similar systems have been created in the Calgary region in the past 15 years. The design model being advocated on the project (integrating forebay, treatment wetland and natural wetlands) has been successfully implemented, for example in Fish Creek Park.*

The conceptual design will be designed in detail as part of the engineering plans.


# WESTRIDGE STORMWATER MANAGEMENT FACILITIES AND WETLAND CONCEPT PLAN

FEBRUARY 3, 2009


Total area of naturalized stormwater management facilities and wetland and upland habitat conservation: 9.48ha/23.42ac

# WESTRIDGE ASP

## AREA OF MANAGEMENT FACILITIES AND WETLAND CONSERVATION

FEBRUARY 3, 2009