



# HERITAGE HILLS

STAGE 2  
NEIGHBOURHOOD PLAN

---

MARCH 29, 2016



# HERITAGE HILL

**AMENDED**

DECEMBER 9, 2019 | SEPTEMBER 13, 2021 | JULY 11, 2022



# HERITAGE HILLS

PREPARED FOR:

**The Town of Cochrane  
Brookfield Residential Properties  
Harmony Park Developments  
MGM Developments  
The Lackey Family  
The Lee Family**

PREPARED BY:

**B&A Planning Group**

IN CONSULTATION WITH:

**BSEI Municipal Consulting Engineers  
Bunt and Associates  
L.A. West  
Levelton Consultants Ltd.  
LGN Consulting Engineering Ltd.**

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# HERITAGE HILLS

## GUIDING PRINCIPLES



### Create a Unique Community

Due to its significant topography, the Heritage Hills Stage 2 Neighbourhood Plan community contains a number of key design elements that enable the area to function as an **integrated community**. Heritage Hills will include a range of housing options that will meet the needs of its residents, create a distinct sense of place, and provide for recreational areas that combine active living with the natural beauty and social benefits of having a vast open space system.



### Promote Healthy Living

Heritage Hills Stage 2 will be an **active**, vibrant community, where residents are encouraged to engage in a **healthy lifestyle** and connect with their neighbours and the natural environment.



### Encourage Environmental Stewardship

Heritage Hills Stage 2 will define and promote the entire spectrum of **cultural and ecological values** associated with our mountain landscape, and will acknowledge and respect the needs of **both humans and wildlife** regarding the use of the natural landscape.

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## Preserve and Maintain the Viewshed

**Important and significant views** within the Heritage Hills community will be **preserved and maintained** by allowing public access to formalized viewing stations throughout the neighbourhood. The location of Heritage Hills allows for scenic views of the Rocky Mountains, the River Valley, and downtown Cochrane. Development will work with the landscape to emulate the natural character of the region.



## Provide Housing Options

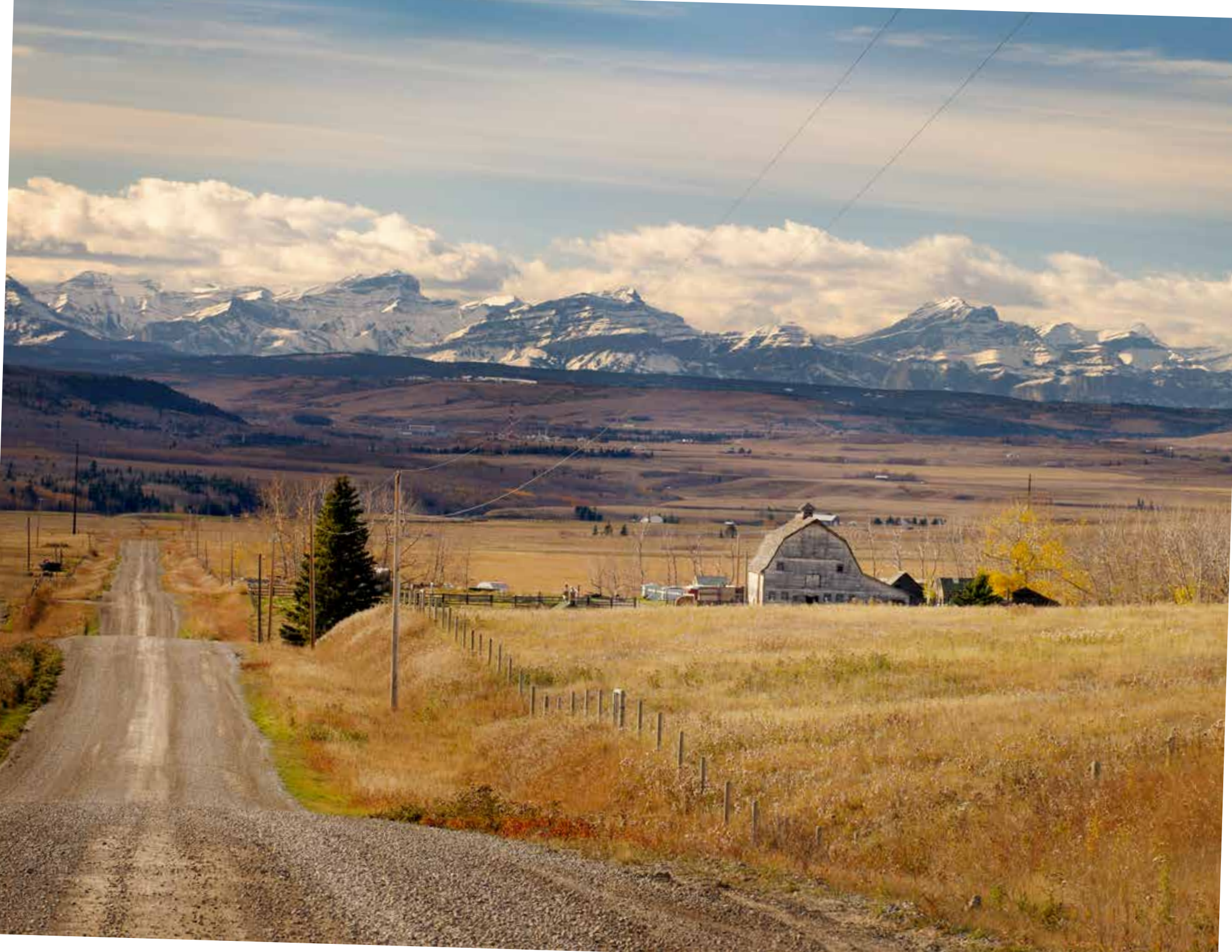
Heritage Hills Stage 2 envisions a wide variety of **housing options** in a **range of affordability** to be developed in the neighbourhood. Housing options could include a mix of single-family, semi-detached, street-oriented townhouses, group townhouses, and multi-family dwellings.



## Moving Around

Heritage Hills Stage 2 will incorporate a transportation network that will include **efficient travel** for all modes. The community will accommodate an efficient transit system that is supported by well-planned nodes and corridors. Heritage Hills Stage 2 will incorporate a mix of land uses, comprehensive **pedestrian facilities**, and **street networks** that move vehicular traffic quickly and mitigate congestion.

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# 1.0 INTRODUCTION

## 1.1 OVERVIEW & VISION

Heritage Hills Stage 2 is situated on 8 titled parcels, and two existing municipal roads, consisting of approximately 79.27 hectares (195.88 acres) of land within the Heritage Hills Area Structure Plan (HH ASP). The HH ASP has identified the subject property as future residential development.

The pedestrian environment and connectivity are a forefront design consideration. Housing options, streetscapes, viewsheds, environmental areas, open spaces, and pathway linkages are purposefully thought out and placed to create a community that encourages residents to take advantage of local amenities, to socialize with neighbours, and to directly contribute to a well-balanced community.

Site design considers a future bus transit service, which will circulate users between the more densely populated corridors, the interior of the neighbourhood, and the adjacent commercial districts. The community embraces the City of Calgary complete streets concept where possible, which serves to bring communities together by providing a safe pedestrian and vehicular environment throughout the neighbourhood.

## 1.2 PURPOSE OF THE PLAN

Heritage Hills Stage 1 makes up the west portion of the land contained within the HH ASP. The Heritage Hills Stage 2 Neighbourhood Plan (HHS2NP) will provide direction for the planning and development of the remainder of lands within the east portion of the HH ASP area. The HHS2NP will build on and compliment the existing residential uses already developed in Heritage Hills Stage 1 to form an integrated community enriched with numerous local amenities.



### 1.3 HISTORY OF THE PLAN AREA

Cochrane's natural beauty, small town charm, and proximity to Calgary makes it a desirable location that has experienced rapid residential growth in recent years. In response to this demand, the Town annexed lands to the north and south of the Town boundary from Rocky View County (RVC) through an Annexation Agreement that became effective on January 1, 2004.

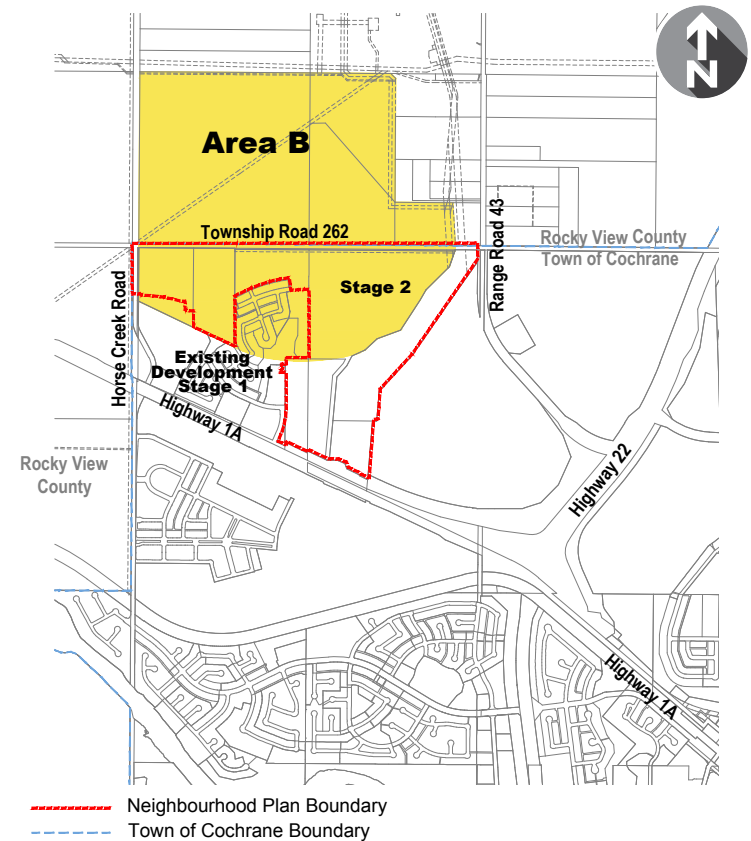
Subsequent to the annexation, a Concept Plan was prepared in 2005 for the westerly portion of the Heritage Hills area to guide that development. Approximately one-third of the Heritage Hills community was developed under the 2005 Concept Plan (Stage 1). This Concept Plan did not include the lands along the northern or eastern portions of Heritage Hills. These lands, in combination with some of the land on the north side of Township Road 262 (located within the boundaries of RVC), formed part of the Annexation Agreement. It was agreed that these lands would form a jointly planned non-residential, light industrial area known as Area B (see Figure 1).

In 2012, both RVC and the Town agreed that a light industrial area located in the northern portion of Heritage Hills no longer fit within the long term goals of the region. Both Councils agreed to withdraw from the industrial goals and joint planning process of Area B.

In 2013, the process to develop an ASP for the entire Heritage Hills community was prepared through a collaborative process with the Town, landowners, planning consultants, engineering consultants, and other external stakeholders.

In May 2014, the HH ASP was approved by Council. The HHS2NP will build upon the policies and principles found in the HH ASP to aid in the development of an integrated community in northwest Cochrane. Additionally, the HHS2NP adheres to the Town of Cochrane Municipal Development Plan (October 2008) and the Cochrane Sustainability Plan (May 2009).

**Figure 1: Area B Location in Cochrane**



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## 1.4 MUNICIPAL DEVELOPMENT PLAN (MDP)

Section 14.3.2(b) of the Town of Cochrane Municipal Development Plan outlines the requirements for an Area/Neighbourhood Structure Plan to be adopted in Cochrane. Each plan shall address those matters identified in the Municipal Government Act, as well as, but not limited to, the following points:

- (i) parks and open space;
- (ii) utilities;
- (iii) conflicts between incompatible uses;
- (iv) interface with highway and railway rights-of-way;
- (v) urban design;
- (vi) ecologically significant areas;
- (vii) sustainability standards.

With respect to specific provisions of the Town of Cochrane Municipal Development Plan, the HHS2NP provides guidance for development in the following areas:

- Pipeline setbacks (see **Section 2.4**);
- Park, open space, and walkway connectivity concepts (see **Section 3.4 and 4.5**);
- Preservation of the environmentally sensitive lands within the plan area (see **Sections 3.7 and 9.5**);
- Providing complete communities through a variety of land uses including public facilities, a variety of housing forms, and support services (see **Section 3.7**);
- Connectivity to the broader Cochrane area (see **Section 4**);
- An effective transportation plan, employing the most current road standards and designs (see **Section 4**);
- Appropriately designated land uses (see **Section 5**), and;
- Slope lands and associated development setbacks (see **Section 6 and 9.5**).

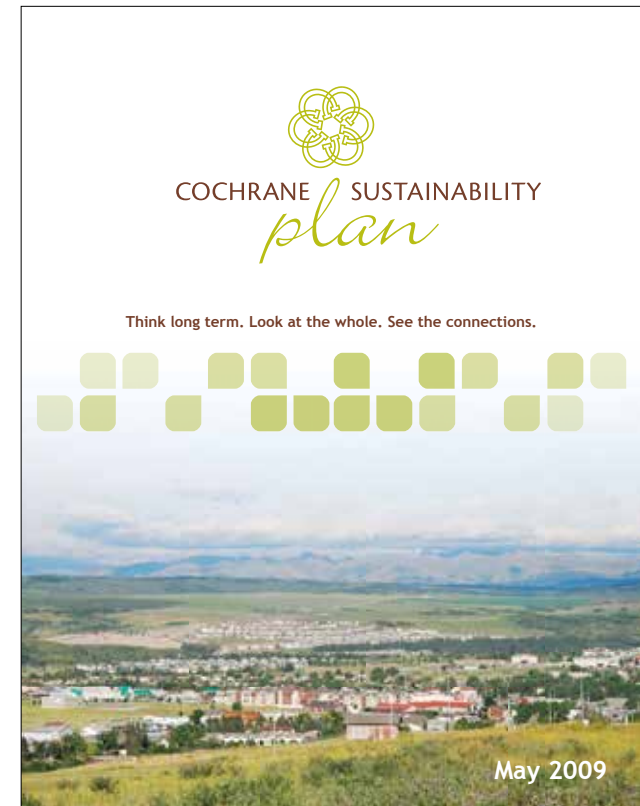
As such, the HHS2NP adheres to the guiding policies found within the Town of Cochrane MDP.

## 1.5 COCHRANE SUSTAINABILITY PLAN (CSP)

Adopted in 2009, the Cochrane Sustainability Plan (CSP) details six interconnected categories of sustainability that act as the guideposts for development in the Town of Cochrane:

- culture
- social
- natural environment
- economic
- built environment
- governance

Thirteen pathways toward sustainability were developed to help implement each category. The policies of the HH ASP were based off of the 13 pathways set forth by the CSP, and the HHS2NP builds upon these policies to create the parameters for development that will help Cochrane work towards achieving its sustainability targets.



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## COCHRANE SUSTAINABILITY PLAN (CSP) - 13 PATHWAYS TO THE FUTURE

The CSP thirteen pathways to a sustainable future outlines targeted goals that Cochrane is working towards in order to achieve its vision of sustainability. It is incumbent on development in new planning areas to identify how it is meeting the goals to the various pathways and thereby achieving a more sustainable future. Below, each CSP goal is outlined alongside the respective pathways that will help achieve that goal, and how the HHS2NP addresses them.

### 1. We build a culture of responsibility.

- *Pathway 1: We are a socially responsible and empowered community.*

The HHS2NP exhibits social responsibility in the plan area through the design of an integrated community with higher density located adjacent to the school site, and a future commercial development. Natural design elements and amenities such as green space, the escarpment area, and the school site will help to create a sense of place and ownership within the community. Public gathering places within the community, such as the off-leash dog park and viewing areas of the mountains, will offer the opportunity for residents to get acquainted with each other and become involved in their community.

Residents of Heritage Hills will feel connected to Cochrane through their enjoyment of their surroundings and natural amenities, and therefore empowered to become a voice in Cochrane's future.

### 2. We are Responsible Citizens of the Planet

- *Pathway 2: We treat water as a precious resource.*
- *Pathway 3: We use energy responsibly and innovatively.*
- *Pathway 4: We contribute to the solution on climate change.*

The HHS2NP will provide a density of approximately 19.0 units per hectare (7.7 units per acre). Higher density communities are more environmentally responsible than lower density communities as there is less land form disturbance for servicing, less vehicular impact (shorter drive times and reduced road construction), and greater opportunity for residents to use alternate forms of transportation. The walkability and pathway connectivity within the HHS2NP area will further encourage pedestrian and bicycle mobility.

The protection of the escarpment and encouragement of low impact development techniques will help foster an environmentally responsible community. In the interest of an environmentally sensitive development, the HHS2NP will implement the following Best Management Practices:

- A minimum of 300 mm of topsoil shall be provided for all landscape areas (including the lots);
- Stormwater conveyance through the natural drainage feature that runs north-south in the eastern portion of the plan area.



### 3. We Live Locally

- *Pathway 5: We consume the bounty of our local economy.*
- *Pathway 6: Our local economy is healthy and diverse.*
- *Pathway 7: Everyone has an opportunity to pursue their potential in Cochrane..*
- *Pathway 8: We are a caring community that lives and celebrates together.*

The HHS2NP will provide approximately 1088 homes for new residents coming to live in Cochrane. These residents will utilize the nearby local convenience commercial centres, as well as the downtown core for their shopping, entertainment, and service needs. Development of the community will help provide jobs to the local citizens of Cochrane.

The HHS2NP will include local opportunities for socializing, working, and education. The local school site will provide educational needs, jobs, and volunteering opportunities for Heritage Hills residents. Active play areas will provide families with the opportunity to meet together, and the off-leash dog park and viewshed gathering sites will provide additional places for community socialization and recreation.

### 4. Cochrane is a Complete Community

- *Pathway 9: Everyone has a roof over their head.*
- *Pathway 10: There's enough room for everything a community should have.*
- *Pathway 11: Wherever you are in Cochrane, you're close and connected.*
- *Pathway 12: There are diverse options for getting around.*
- *Pathway 13: We build Cochrane on the strengths of our natural and cultural heritage.*

HHS2NP will provide the 'age in place' opportunity for residents through a range of housing options integrated throughout the community. A resident who chooses to live in Heritage Hills could live their entire life within a community that offers housing appropriate for all stages of life and affordability levels.

Additionally, the regional and local pathway system will provide residents with convenient, safe access to the amenities within their community, as well as services and jobs outside of their community.

## 1.6 TOWN OF COCHRANE INTEGRATED NEIGHBOURHOOD DESIGN GUIDELINES

Approved on May 13, 2013, the Town of Cochrane Integrated Neighbourhood Design Guidelines (INDG) were developed to provide design direction to the development community and act as an evaluation tool for Town staff, Cochrane Planning Commission, and Cochrane Council. They have been developed in collaboration with Town Administration and the development community to represent and maintain Cochrane's unique cultural, historical, and physical context.

The INDG compliment existing Town policy documents and regulations. These documents include, but are not limited to:

- The Town of Cochrane's Land Use Bylaw and Engineering Standards
- The Municipal Development Plan (MDP)
- The Cochrane Sustainability Plan (CSP)
- The Heritage Hills Area Structure Plan (HH ASP)
- The Western Heritage Design Guidelines

The HHS2NP will utilize the following INDG Design Principles to foster the development of a neighbourhood that will compliment the Town's existing character and heritage. Indicated by the symbols to the right, the INDG Design Principles will be found throughout this report to indicate when the HHS2NP has utilized these principles in its design.

### Town of Cochrane INDG Design Principles



#### Open Space Design

- Retain natural features and landscapes to benefit the larger community.
- Encourage retention of views and visually sensitive areas such as views to and from the mountains, the valley, and ridge lines.
- Develop a variety of safe and social spaces, parks and amenities that provide areas for gathering and interacting between various users and uses.



#### Connectivity Design

- Deliver a network of pathways throughout new communities and provide connection points for the existing network of pathways at the periphery of the site.
- Encourage healthy neighbourhoods that foster increased physical activity and social interaction.



#### Housing Design

- Develop and integrate various forms of residential development that complement existing neighbourhoods and provide architectural integrity and variety.



#### Commercial Design

- Create local commercial services to meet the daily needs of the neighbourhood while being careful not to compete with the destination retail in downtown Cochrane for weekly and special needs.

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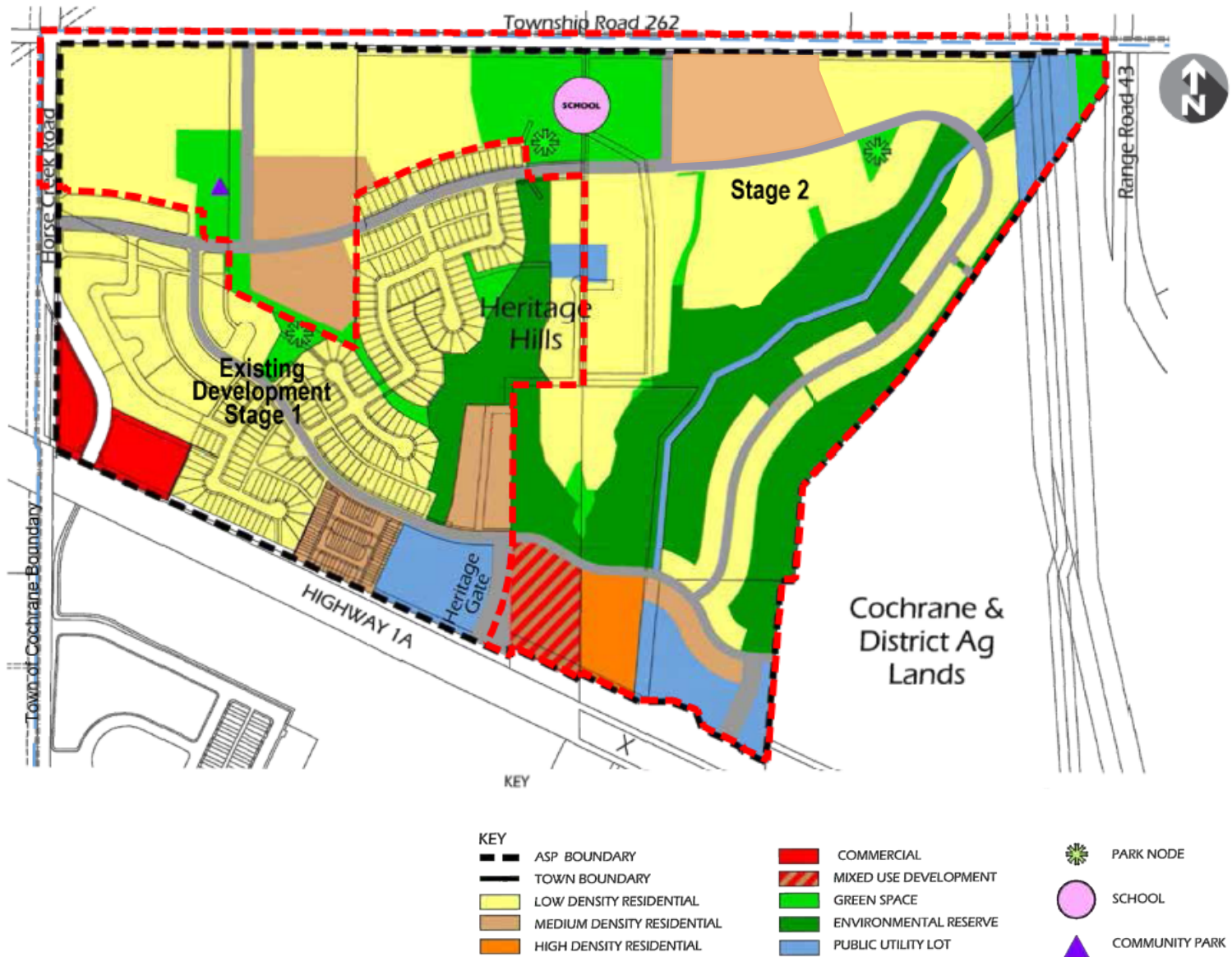
## 1.7 HERITAGE HILLS AREA STRUCTURE PLAN

Approved on May 26, 2014, the Heritage Hills Area Structure Plan (HH ASP) is a long-range planning document that contains the guiding policy for the Heritage Hills community. The HH ASP establishes policies for the preparation of a more detailed Neighbourhood Plan to ensure that growth proceeds in a balanced, compact, and contiguous manner. The HH ASP requires key land uses, sustainability, transportation, slope stability, pedestrian circulation, a specific development approach, and servicing components to be addressed in detail during the Neighbourhood Plan process.

The lands consisting of Heritage Hills Stage 2 within the HH ASP are identified as a primarily-residential use, along with a small-scale commercial component. Open space features include a school site, a large community park, several smaller park nodes, a significant amount of environmental reserve, and several public utility lots. Figure 2 illustrates the approved land use concept and key elements of the HH ASP. The HHS2NP of this application will adhere to all policies contained within the HH ASP.



**Figure 2:** Heritage Hills Area Structure Plan Land Uses



## 2.0 SITE CONTEXT

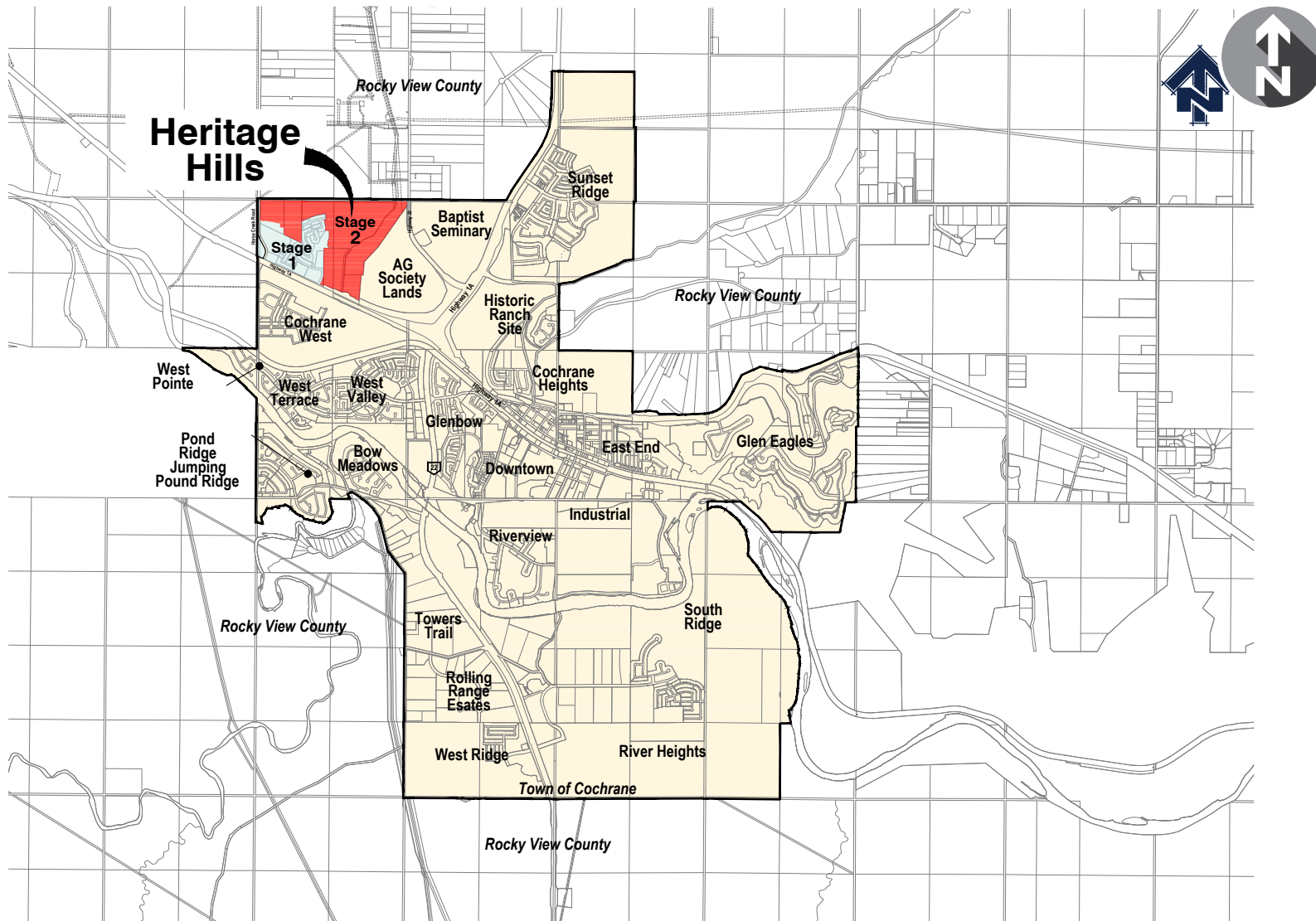


### 2.1 LOCATION

The HHS2NP lands are located in the northwest quadrant of the Town of Cochrane (see Figure 3). The subject lands are bound by Highway 1A to the south, Horse Creek Road to the west, the Cochrane and District Agricultural Society lands to the east, and Township Road 262 to the north. Horse Creek Road and Township Road 262 are respectively the westerly and the northerly limits of the Town.







**Figure 3:** HHS2NP Area Location

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## 2.2 TOPOGRAPHY

The subject lands rise in elevation approximately 70 metres from the lower lands located along Highway 1A to the uplands located to the north. Elevations vary from 1164 metres (3819 feet) along the south boundary to 1165 metres (3822 feet) in the northeast corner of the HHS2NP area. There are two north-south drainage courses within the Heritage Hills area. Slopes within the HHS2NP area range from gentle slopes and flat lands to slopes of 50% where the escarpment is at its steepest. The HHS2NP lands provide spectacular views of the Rocky Mountains, the foothills, and the Town of Cochrane to the west, south and southeast. The contours of the HHS2NP area, as well as the direction of slope, are illustrated in Figure 4.

Heritage Hills acknowledges the hilly topography of the area and introduces innovative design elements to maximize the development potential while respecting the unique natural features. These design elements align with the vision established during the collaborative ASP planning process (see Section 3.7).

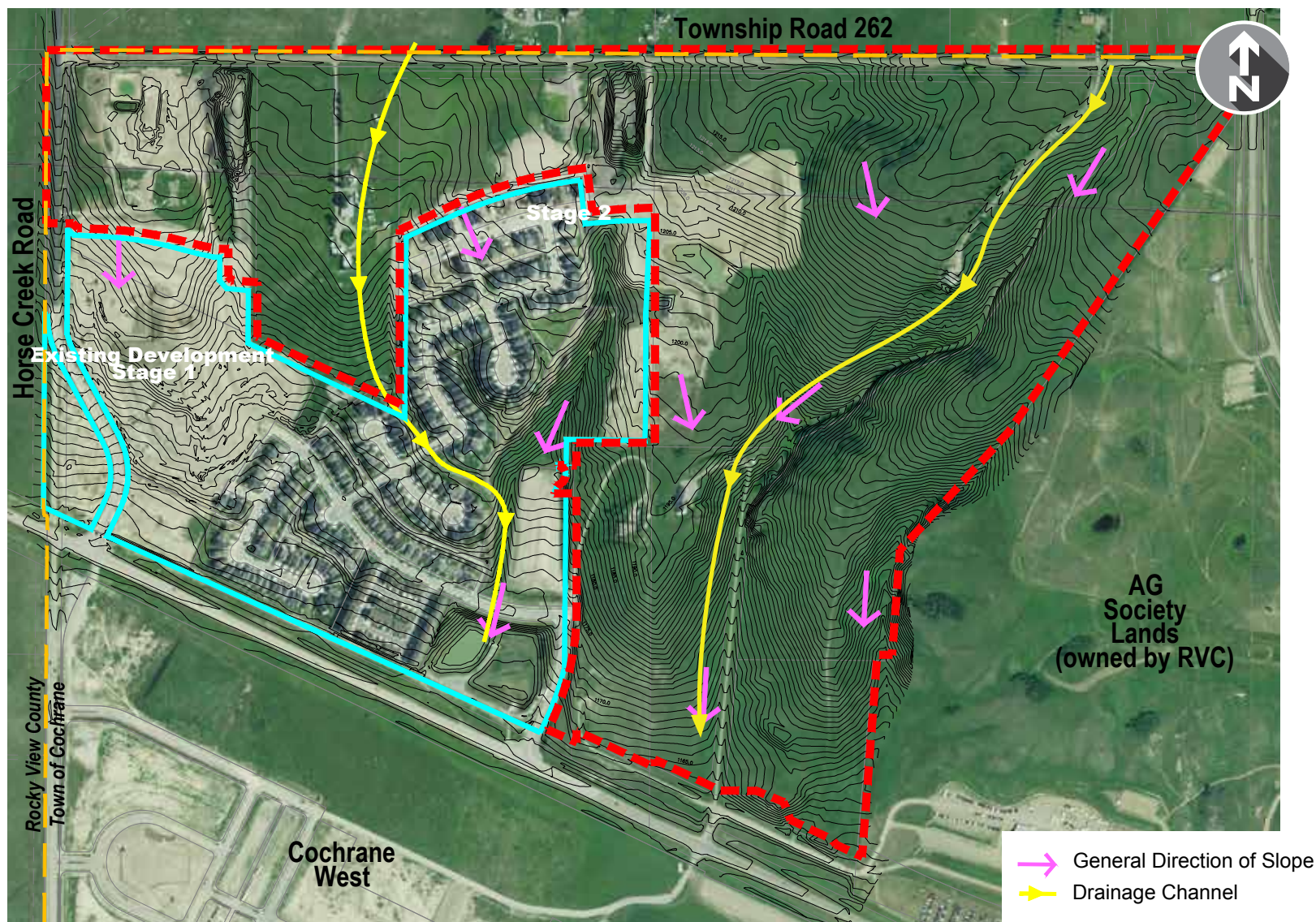
## 2.3 COCHRANE EXTRACTION PLANT (GAS PLANT)

The Cochrane Extraction Plant is located approximately 1 kilometer north of the community of Heritage Hills, and has a 1 kilometer emergency zone surrounding the plant. The HHS2NP area is located entirely outside of the emergency zone.

## 2.4 PIPELINE RIGHT-OF-WAY

Due diligence investigations with the Alberta Energy Regulator (AER) found that there are a series of gas pipelines that traverse the northeast corner of the HHS2NP area in NE 1/4 9-26-4-W5M. The HHS2NP area contains three sweet natural gas and two High Vapour Pressure pipelines. No additional setbacks are required in addition to the existing leased rights-of-way as per the Alberta Energy Regulator (AER) setback requirements. Development adjacent to the pipeline ROWs may be subject to notification processes as identified by the Town of Cochrane.

**Figure 4:** Topography in the HHS2NP Area





## 2.5 LEGAL DESCRIPTION & OWNERSHIP

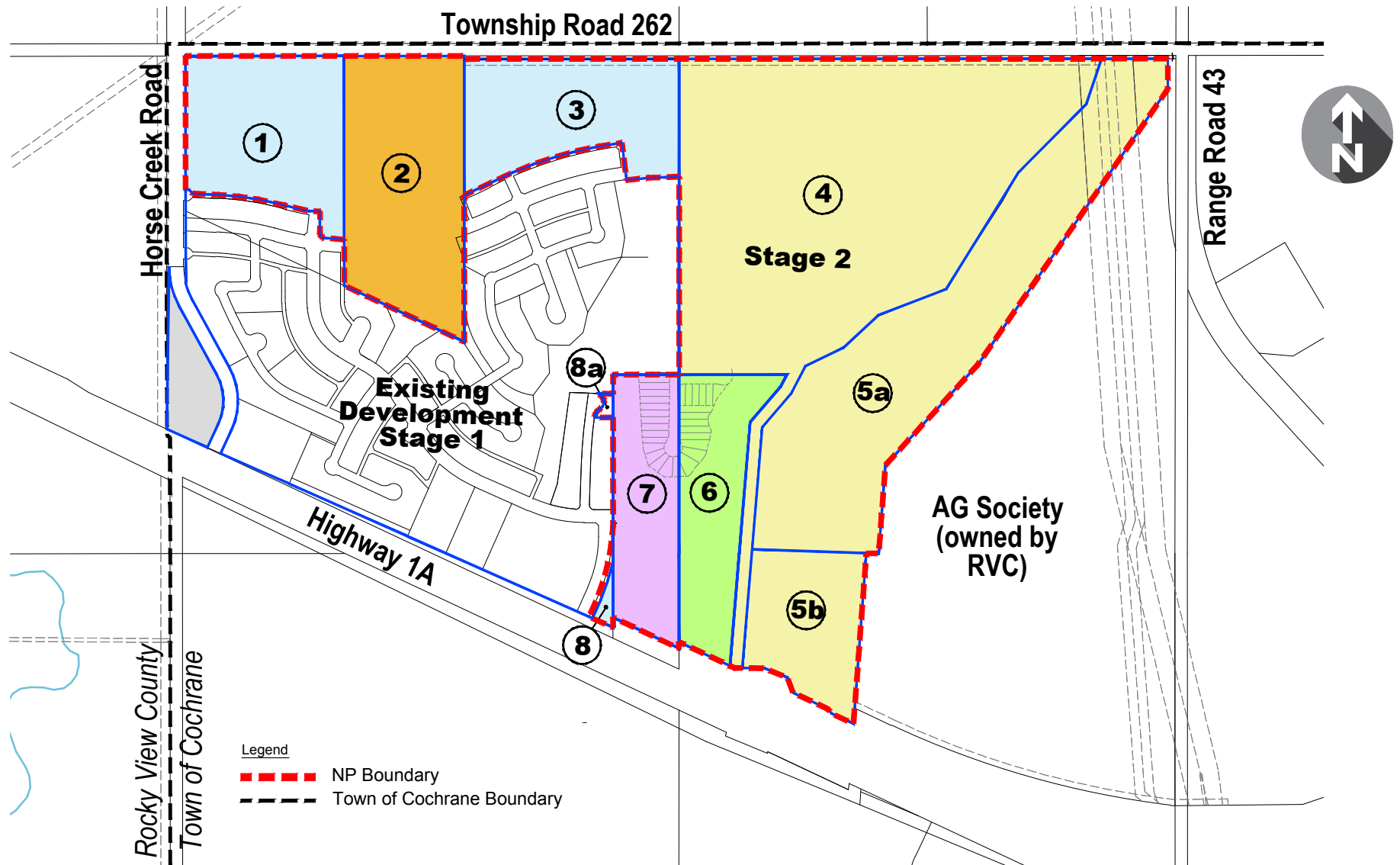
Ownership within the HHS2NP has 5 principal land owners, sitting over 8 titled parcels of land, with Carma LTD (Brookfield Residential Properties) holding the largest percentage of land. A portion of the Heritage Hills community (Stage 1) is currently under development, and is not included in this Neighbourhood Plan application (see Existing Development in Figure 5). The following table illustrates the legal description, land ownership, and parcel size within the HHS2NP boundary. The colours and numbers in the table align with the land parcels found in Figure 5.

**Table 1:** Land Ownership in Stage 2 Heritage Hills

| #     | Legal Description    | Title Number    | Ownership                                | Hectares (+/-) | Acres (+/-) |
|-------|----------------------|-----------------|--|----------------|-------------|
| 1     | Plan 2292JK; 1       | 141 085 221 +40 | Private Corporate (1073112 Alberta Ltd.) | 6.22           | 15.37       |
| 2     | Plan 2292JK; 2       | 071 100 156     | Private Corporate (743096 Alberta Ltd.)  | 8.09           | 19.99       |
| 3     | Plan 9010954; 3      | 141 085 221 +41 | Private Corporate (1073112 Alberta Ltd.) | 6.07           | 15.00       |
| 4     | Plan 9010954; 4      | 071 048 640     | Private Corporate (Brookfield)           | 26.00          | 64.24       |
| 5a    | NE ¼ 9-26-4 W5M      | 061 254 015     | Private Corporate (Brookfield)           | 14.54          | 35.93       |
| 5b    | SE ¼ 9-26-4 W5M      | 061 254 015     | Private Corporate (Brookfield)           | 4.25           | 10.53       |
| 6     | Plan 9010954; 6      | 901 131 762 +3  | Private (Lackey Family)                  | 4.86           | 12.01       |
| 7     | Plan 9010954; 5      | 051 331 732     | Úlár Á[ ] [æ] ÓT<br>DevelopmentsAD       | 4.45           | 11.00       |
| 8     | Plan 0710782; 5      | 071 079 236     | Private Corporate (1073112 Alberta Ltd)  | 0.16           | 0.40        |
| 8a    | Plan 0710782; 10; 17 | 071 079 236 +81 | Private Corporate (1073112 Alberta Ltd.) | 0.08           | 0.20        |
| 9     | Horse Creek Road     |                 |  | 0.64           | 1.58        |
| 10    | Township Road 262    |                 |  | 4.07           | 10.06       |
| Total |                      |                 |  | 79.44          | 196.30      |

\* Land ownership areas are in accordance with that listed on the applicable land title and are subject to verification at that the time of subdivision.

**Figure 5:** Land Ownership in the HHS2NP Area





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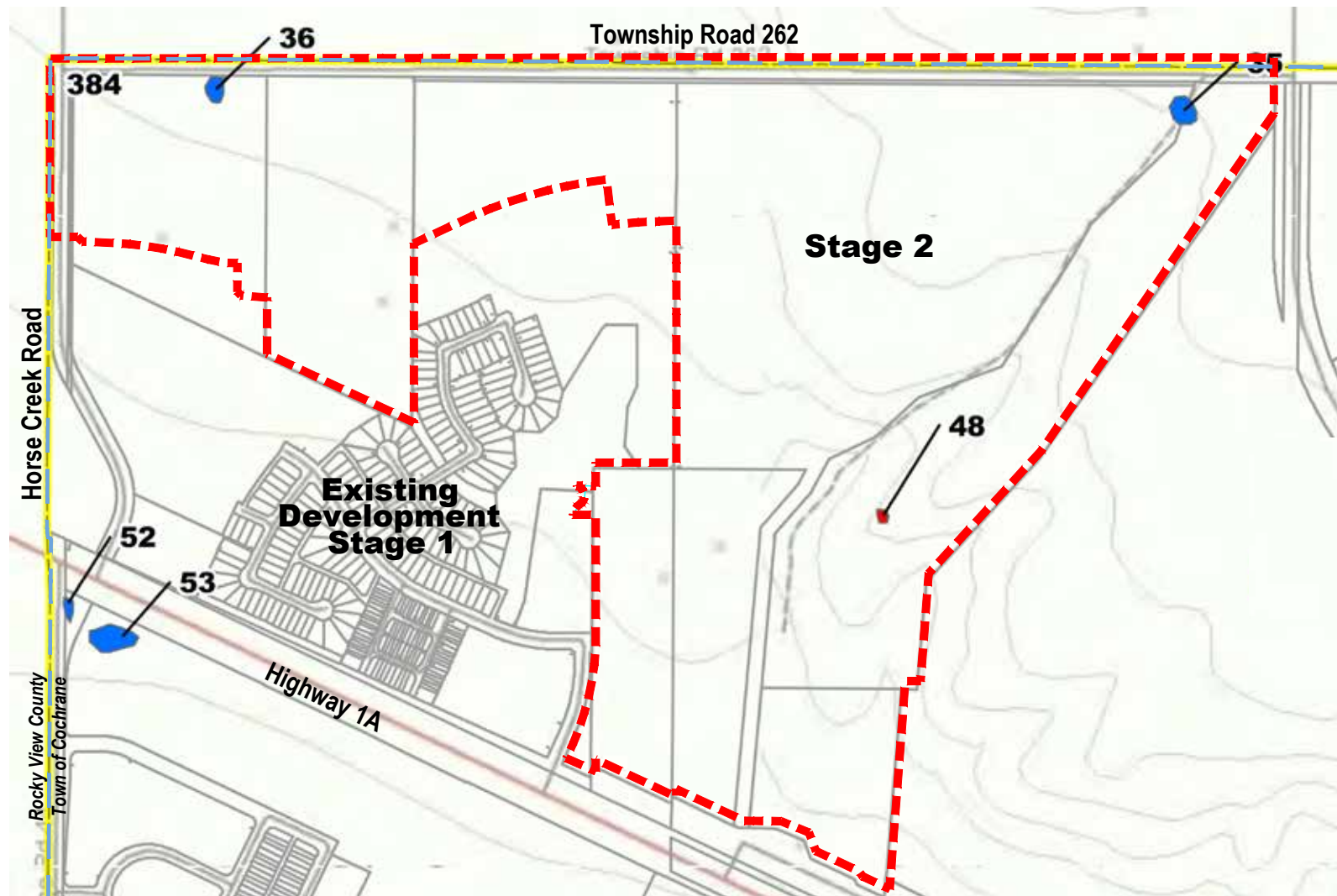
## 2.6 EXISTING & ADJACENT LAND USE

The HHS2NP lands are bound by Highway 1A to the south, Horse Creek Road to the west, the Cochrane and District Agricultural Society lands to the east, and Township Road 262 to the north. Lands beyond this boundary to the north, east, and west fall under the jurisdiction of Rocky View County. The majority of the adjacent Rocky View County lands are under agricultural use, but contain no intensive livestock operations. At the time of initial adoption, the land use designation for the HHS2NP lands was Residential - Urban Reserve District (UR-R).

## 2.7 WETLANDS

Hab-Tech Environmental conducted a reconnaissance-level field visit of two wetlands mapped by AECOM (2011), for the Town of Cochrane Wetland Inventory, within the HHS2NP boundary. Wetlands #35 and #36 mapped by AECOM were visited on May 15, 2013, with the purpose of verifying their occurrence and wetland class (see Figure 6). No evidence of a wetland was found at the location of wetland #36, as no water or wetland characteristics were identified. Wetland #35 was identified as a Class I ephemeral wetland dominated by non-native plant species: smooth brome (*Bromus inermis*) and Canada thistle (*Cirsium arvense*). As this wetland lies within a utility right-of-way corridor, it will remain in its natural state, and is not proposed to be financially compensated to the Province of Alberta. Wetland #48 was examined and concluded that there was no wetland present.

**Figure 6:** AECOM Wetland Map of the Heritage Hills Community



- Neighbourhood Plan Boundary
- Town of Cochrane Boundary



## 3.0 NEIGHBOURHOOD PLAN

### 3.1 PLAN AREA KEY ELEMENTS

Key neighbourhood design elements are included throughout the HHS2NP to ensure a complete and balanced community. The Town's Integrated Neighbourhood Design Guidelines were referenced to create an attractive, walkable community with amenities, opportunity for transit, and recreational open space in close proximity to the neighbourhood residents.

Key neighbourhood design elements include a slope-sensitive design, retention of the natural character of the region, viewshed preservation, incorporation of stormwater design into the natural drainage of the topography, the building of a relationship between the street and built form, and mixed land uses within the same block. The HHS2NP concept is shown on Figure 8: HHS2NP Concept Plan.

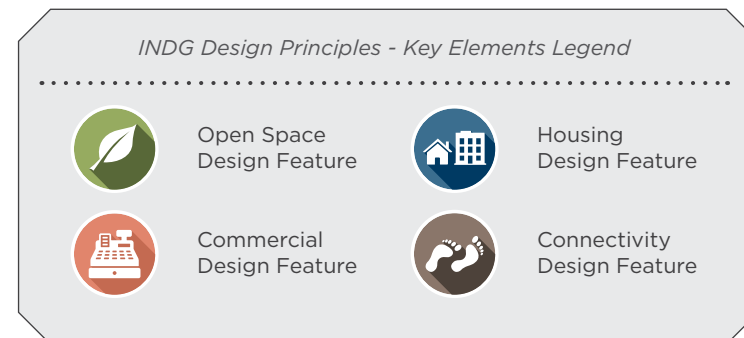
As per the goals of the Cochrane Municipal Development Plan, the overall layout of the neighbourhood is intended to promote pedestrian connectivity through a strong park system supported by sidewalks on both sides of local and collector streets, while limiting non-local vehicular traffic via a collection of residential cells with a modified or grid street pattern.

Further to objectives and policies in the Town of Cochrane/MD of Rocky View Intermunicipal Development Plan, there will be appropriate edge buffering between proposed residential development and non-residential land uses on the northern periphery of the HHS2NP. Buffering for the transition of densities includes the Township Road 262 corridor and may include edge treatments such as developer installed 6' high screen fencing adjacent to residential development, strategically placed landscaping and enhanced architectural details on upper storeys of medium density development.

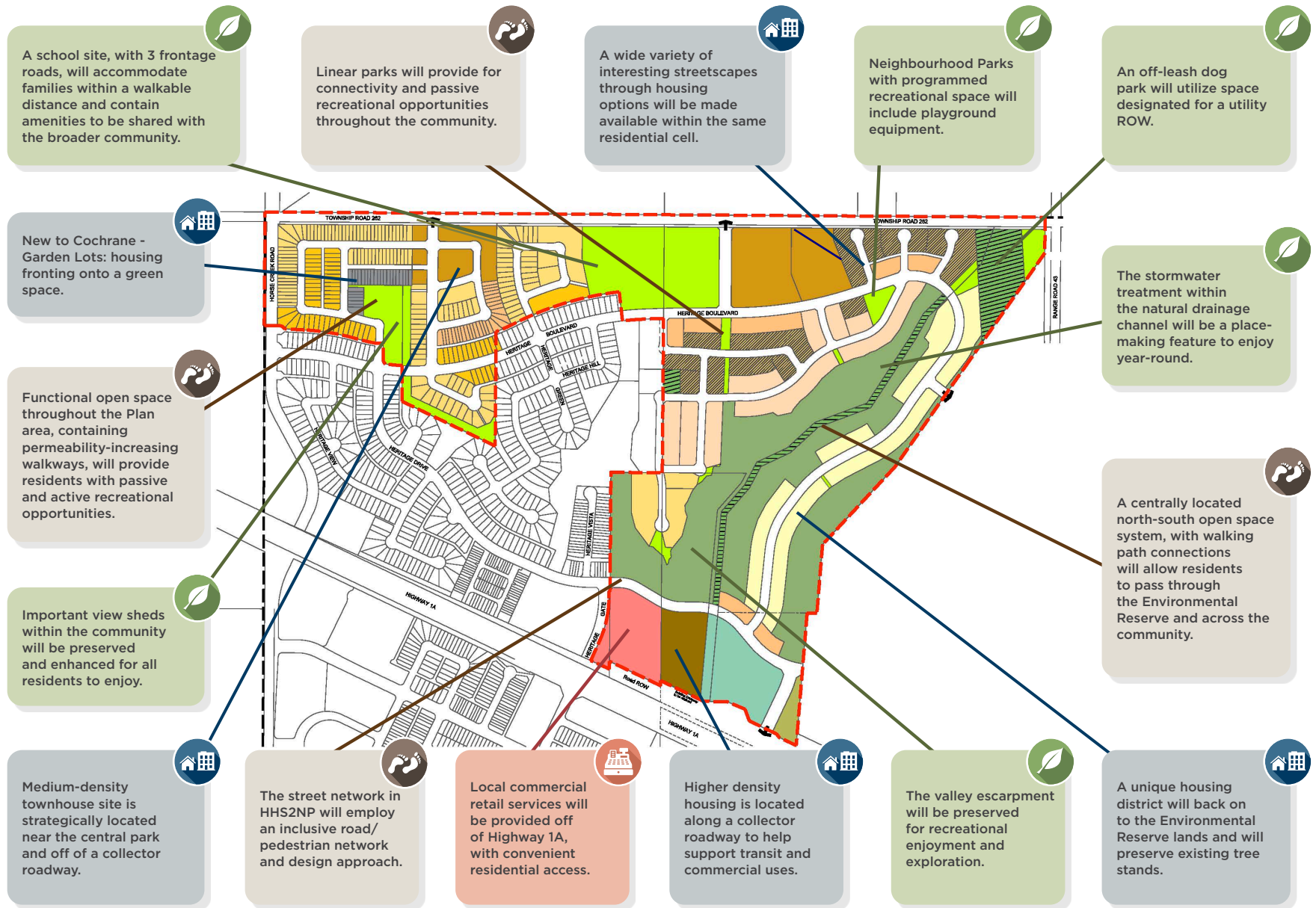
Multi-family housing is generally located along collector roads or at the entrance to the community, near retail areas **or the school site**. This will place more residents in close proximity to shopping, services, parks, and potential future transit. In addition, the majority of the traffic generated from the multi-family sites will be accommodated by the collector road network.

Each residential cell within the neighbourhood contains an open space area to serve as a localized focal point or gathering place. These features are physically linked to each other, in many instances, by pedestrian pathways within linear parks containing a number of openings to local streets or along sidewalks integrated with the collector roadway system.

The key design elements of the HHS2NP respect the Town of Cochrane Integrated Neighbourhood Design Guideline goals, as indicated by the icons below and in Section 1.6. Please see Figure 7: Key Elements of the HHS2NP Area for additional design features of the subject lands.



**Figure 7: Key Elements of the HHS2NP Area**





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## 3.2 INTEGRATED PLANNING PROCESS

The HH ASP planning process included thorough consultation between various stakeholder groups to develop the design of Heritage Hills. Stakeholder workshops, public open houses, and team meetings facilitated collaboration between the Town of Cochrane, the landowner group, the Province of Alberta, developers, urban planning consultants, engineering consultants, and Town of Cochrane residents.

The planning process for the HHS2NP was built upon the planning concepts developed during the collaborative HH ASP process. The HHS2NP takes them a step further to provide a framework for a development concept that rests on the common vision accepted and supported by all affected stakeholder groups.

Key elements of the HHS2NP area were determined through the collaborative efforts and opinions brought forward by the stakeholders invested in the creation of Heritage Hills as a complete community. They are as follows:

### *A COLLABORATIVE LANDOWNER GROUP*

The ownership of Heritage Hills consists of five landowners who were brought together collectively, with the assistance of a consultant team, to see the completion of the Heritage Hills community. Through strategic visioning sessions between the Town, developer team, and in response to Town policies, the group worked together to achieve a comprehensive vision for the HHS2NP area.

### *SLOPES/TOPOGRAPHY/AREAS OF CONSIDERATION*

The natural topography of Heritage Hills places limitations and challenges on the transportation network, connectivity, and lot placement within the community. The site contains slopes that are between 15% and 33%, and are considered stable. The Cochrane MDP and Cochrane Land Use Bylaw permit discretionary consideration for development on pockets of land that have geotechnically been proven to be stable. The developer team, Town Administration, and external engineering consultants spent a considerable amount of time reviewing the stable sloped land for consideration to allow for a better balance of amenities and connectivity to be achieved throughout the community. The result, as demonstrated in the HH ASP, is a well-connected road network, the ability to maintain significant tree stands within the Environmental Reserve, and improved densities.

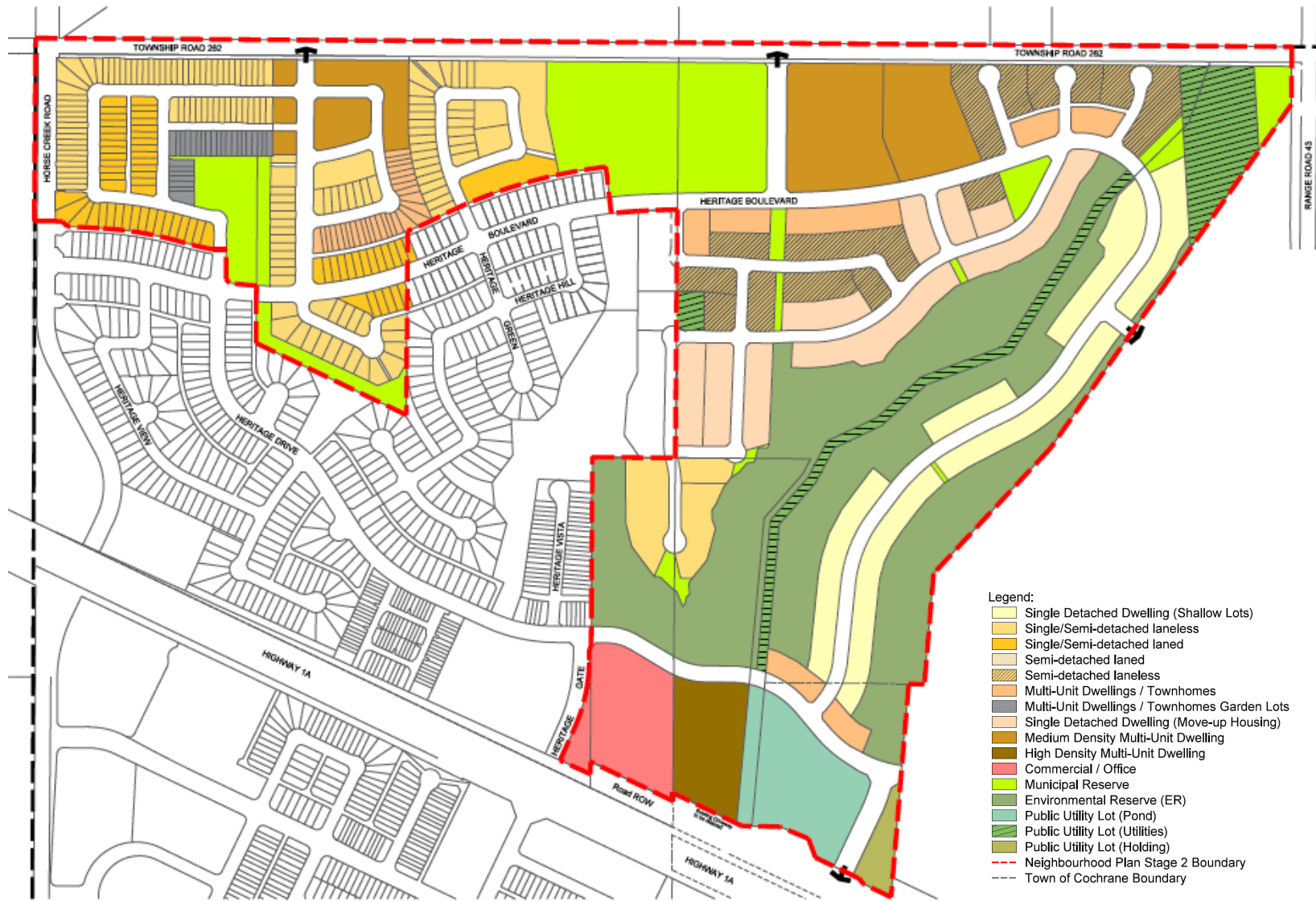
### *SCHOOL SITE LOCATION*

During the HH ASP process, the Town, developer team, and school boards sited one school within the Heritage Hills Community. A working session was held between Town Administration and the developer team which identified 5 possible locations for school placement within Heritage Hills. It was determined that the school should be placed between the two largest landowners, be contained on a flatter piece of the landscape, and be central to the community. Pathways have been strategically located to provide direct access to the school site, in addition to a well connected street pattern.

### *OPEN SPACE DISBURSEMENT*

Upon determination of the school site location, further refinements occurred between the working team to establish an even distribution of open space throughout the remainder of Heritage Hills. Open space in the HHS2NP includes linear pathways, the ravine system, neighbourhood parks, and a large central community park space. Additionally, there was opportunity to take advantage of significant utility infrastructure to design an off-leash dog park.

**Figure 8: HHS2NP Concept Plan**





### 3.3 ROAD NETWORK

The road network in the HHS2NP area has been planned and designed to enable safe, convenient, and comfortable travel and access for users of all ages. The road network will allow safe travel by those walking, bicycling, driving automobiles, riding public transit, or delivering goods.

The HHS2NP utilizes Cochrane's innovative 15.5m residential road standard where feasible. Portions of the community have already been developed, therefore some transition areas will need to continue using the 15.0m residential road standard to ensure logical implementation and transition into the new 15.5m residential road standard. Please see Figure 17 in Section 4 of this report.



### 3.4 OPEN SPACE CONCEPTS

The HHS2NP features a well-connected open space system as a main feature of the community. Adding to the green space already found in Stage 1, nine additional open space concepts are proposed, and will be connected through a series of pathways, trails, roadways, and sidewalks. Open space designs will adhere to the Recreation and Open Space Master Plan, and the 'Park Types and Proposed Guidelines for Development' section in the Town of Cochrane MDP. These open spaces will vary in size and function, and will permit a wide range of passive and active recreational opportunities.

As seen in Figure 9, the open space system is well balanced throughout the entire community of Heritage Hills. Key features of the open space system in the HHS2NP include the following:

- **Community Vista** park spaces have been incorporated into the HHS2NP lands to protect the significant views within the community (see locations A & G in Figure 9).
- Several **Community Linear Trails** have been planned for the HHS2NP lands. The intention of these trails is to link various community amenities via a pathway system for walking, jogging, and bicycle riding (see locations B & D in Figure 9).
- A **School Site** has been optimally located in the centre of the HHS2NP area (see location C in Figure 9).
- In addition to the existing **Local Tot Lot** in the western portion of the Heritage Hills development, an additional **Local Tot Lot** will be constructed in the eastern portion of the Stage 2 NP area, and is intended for local day use by adjacent residents (see location E in Figure 9).
- A **Neighbourhood Park** in the form of an off-leash dog park is a need identified in the Recreation and Open Space Master Plan and is proposed within the utility ROW (see location F in Figure 9).
- The HHS2NP area is largely enhanced by the **Natural Feature Community Park** ravine that runs north-south in the eastern portion of the community (see location H in Figure 9).
- A new stormpond/water amenity, that will act as an entrance feature into the community.

The major open spaces in the HHS2NP area are described further in the following pages of this report, and all of the open space concept plans can be found in the Appendix.

**Figure 9: Stage 2 Open Space Concepts Key Plan**



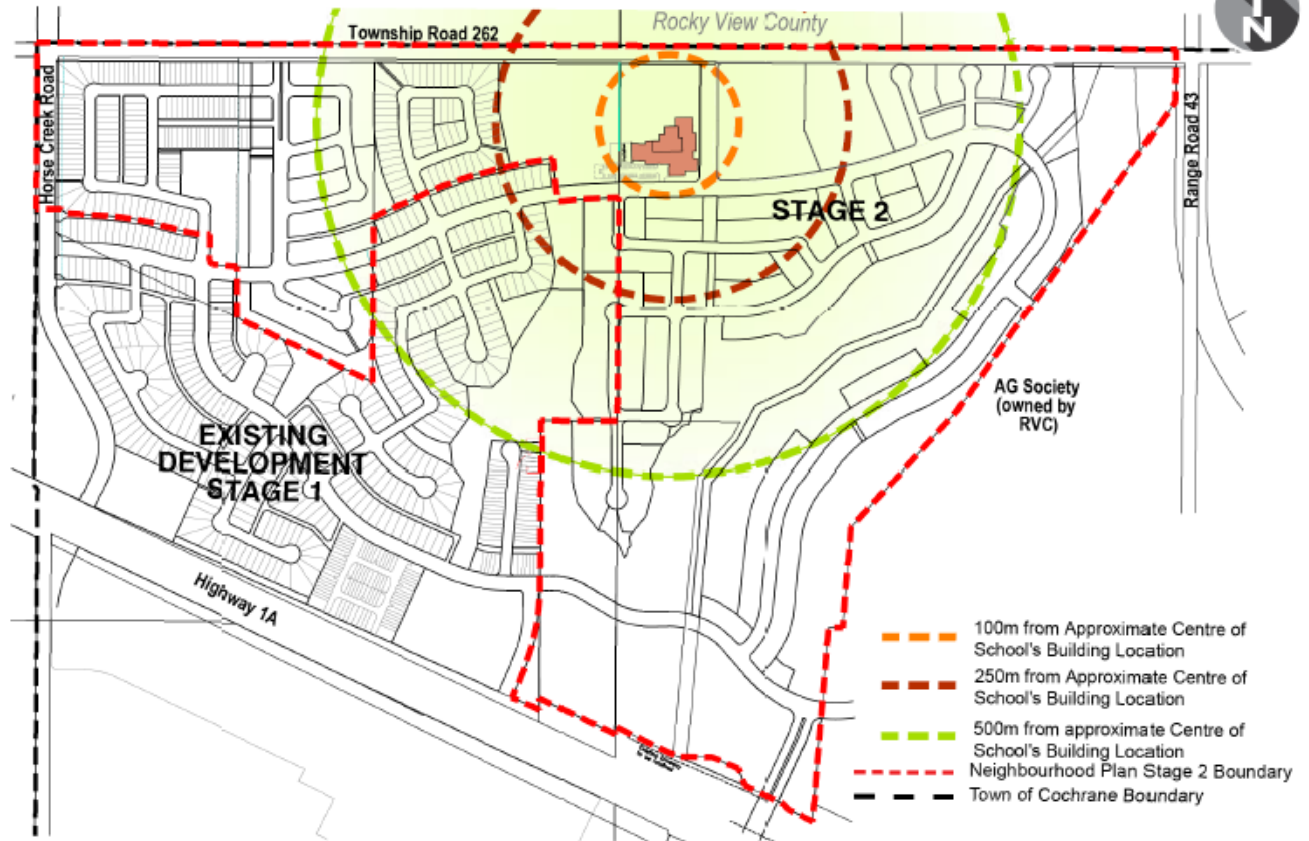




### 3.5 JOINT USE SCHOOL SITE

A K to 9 **Joint Use Site/School Site** is being proposed centrally within the HHS2NP lands. With consideration to the varying topography of the Heritage Hills community, the school site has been optimally located in an area that will provide no limitations to the school envelope nor the sports fields. This 4.53 hectare (11.19 acre) site will feature sports fields, opportunities for informal activity, and numerous spaces for youth gathering. Additionally, this site will be easily accessible for pedestrians, cars, and public transit from the three major roadways that abut the property. The K to 9 School Site will be located within 500 metres of walking distance from a large percentage of single-family dwellings and other forms of housing oriented towards households with children within the HHS2NP area (see Figure 10).

**Figure 10: School Site Distance Map**





**Figure 11:** HHS2NP Joint Use Site/School Site Concept Plan





### 3.6 NATURAL DRAINAGE FEATURE

The HHS2NP recognizes the unique topography of the area as a significant natural amenity that provides opportunities for residents to enjoy their outdoor environment. In the eastern portion of the plan area, a **Natural Feature Community Park** will utilize the natural overland drainage channel for the conveyance of stormwater, and will be designated as Environmental Reserve and Public Utility Lot. This Natural Feature Community Park will contain native habitat for wildlife, rest nodes, seating areas at important viewpoints, rocky outcroppings, a series of pathways, walking trails and ravine crossings to allow residents to travel through the Environmental Reserve land.

It is intended that the existing roadway will be enhanced/ restored into a natural element feature while providing a stormwater function. A pathway system will be constructed within the ER to enable connectivity and improve aesthetics.



*An example of a naturalized drainage channel drybed.*



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## 3.7 INNOVATION

In Heritage Hills, respecting the topography plays a significant role in the community design. While the natural drainage course will be protected as a significant community amenity, it presents challenges to developing a balanced community. To maximize the development potential of the land east of the escarpment, an innovative street cross-section and a wide-shallow housing product will be introduced to Heritage Hills. Other innovative design elements found within the plan design include the stormwater conveyance channel and the Heritage Hills garden lots, as described in the following section.



### *INNOVATIVE STREET DESIGN SENSITIVE TO TOPOGRAPHY*

The natural topography of Heritage Hills presents challenges to transportation, pedestrian connectivity, and lot placement within the community. To balance the desire to protect the community's unique natural features with the other neighbourhood goals outlined in the MDP and CSP, an innovative street cross section has been developed for Heritage Boulevard (please see Figure 17 for street names).

A grid street design is generally desired to provide greater pedestrian connectivity, less vehicular conflict, and multiple routing options. With respect to the community topography, a modified version of this type of road network is provided where feasible, with a very limited number of proposed cul-de-sacs. In accordance with Section 4.1 of the Town's Integrated Design Guidelines, the mobility network considers all modes of transportation with sidewalks on both sides of the public streets and pathways for both pedestrians and cyclists.



### *SHALLOW WIDE HOUSING*

Backing on to both sides of the Environmental Reserve natural drainage channel, the eastern portion of the HHS2NP area will feature a unique housing product. This housing form is respecting the slopes by offering lots that are slightly wider and shallower than traditional lots, to make the best use of the narrow development site. The housing product has a wider appearance than traditional single family units, bringing a unique housing choice to Heritage Hills that will respect the topography of the plan area.

The unique housing product area will contain protected tree stands and pathways connecting residents to the Environmental Reserve open space area.





## STORMWATER CONVEYANCE

The natural drainage channel encompasses a significant portion of the plan area and serves as a Low Impact Development (LID) opportunity for stormwater filtration while providing recreational and wildlife enhancement to the drainage channel (see location H in Figure 9).

This naturalized engineering technique will help sustain the Environmental Reserve by providing a continued water source to the existing drainage channel and supporting existing habitat. Additionally, the naturalized stormwater conveyance will ultimately reduce unnecessary long-term maintenance costs for the Town of Cochrane.



## HOUSING DIVERSITY

The HHS2NP will continue the diverse housing opportunities and streetscapes provided in Stage 1 of the development. Multiple housing options will be made available in a range of affordability for residents to choose from. The housing mix within the HHS2NP may include estate-style single-family homes with attached garages, unique home product, garden-lot homes, move-up laned single family homes with detached garages, semi-detached homes, townhouses, villas, stacked multi-family condominiums and multi-unit dwellings as apartments.

Heritage Hills utilizes the Town of Cochrane Land Use Bylaw designations as an important tool to help build diversity into its streetscapes. The land use designation that provides the greatest flexibility in the existing Town of Cochrane Land Use Bylaw is the R-MX, Residential Mix District (Bylaw 01/2022). This land use allows single detached houses, semi-detached houses and street-oriented townhouses to coexist within the same development cell and under the same land use. This allows the opportunity for developers and builders to provide the type of housing that residents want, and to place it where it is desired. The R-MX land use district integrates diverse housing options resulting in interesting and unique streetscapes. The district allows for the possibility of secondary suites to be developed either within the dwelling or in the backyard. The R-MD and R-HD districts are also utilized to allow for higher density residential developments in a multi-unit building form.





## GARDEN LOTS/TOWNHOMES FRONTING ONTO PARK

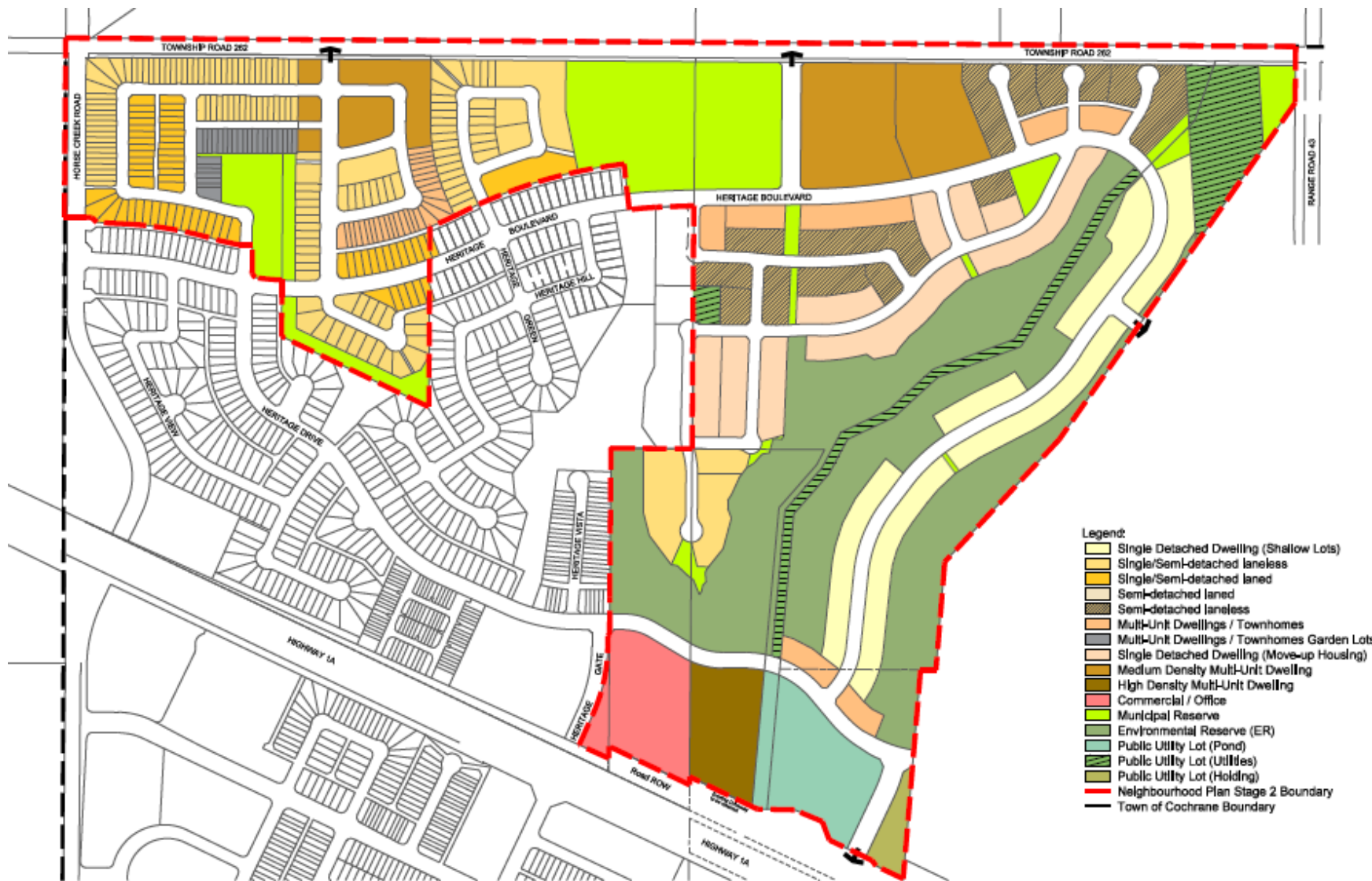
Garden Lots, which offer houses that front directly onto open spaces, are included in the northwestern portion of the HHS2NP area. Garden Lots offer a unique relationship between houses and open space, creating safe public realm with multiple eyes on the parks, and an enhanced sense of ownership from adjacent residents. Pedestrian access is provided through a sidewalk between the open space and the townhouse. The facades that face the park will include similar architectural treatment and design as found on the front facades of units facing a street.

The townhomes are accessed by vehicles through a 10m wide rear lane. The extra wide lane will permit garbage trucks, emergency services access and utility servicing. Two parking spaces will be provided at the rear of each townhouse unit through the provision of a single-car garage and a 6 m deep driveway. Visitor parking will be accommodated along the side street and within the 10m public lane. Visitors will be able to access each unit through a backdoor adjacent to the garage. An example of this exists in the Calgary, Alberta, community of Garrison Woods, and other examples can be found in Denver, Colorado, USA (as seen in the photo beside).





**Figure 13:** Proposed Housing Mix in Stage 2 of Heritage Hills





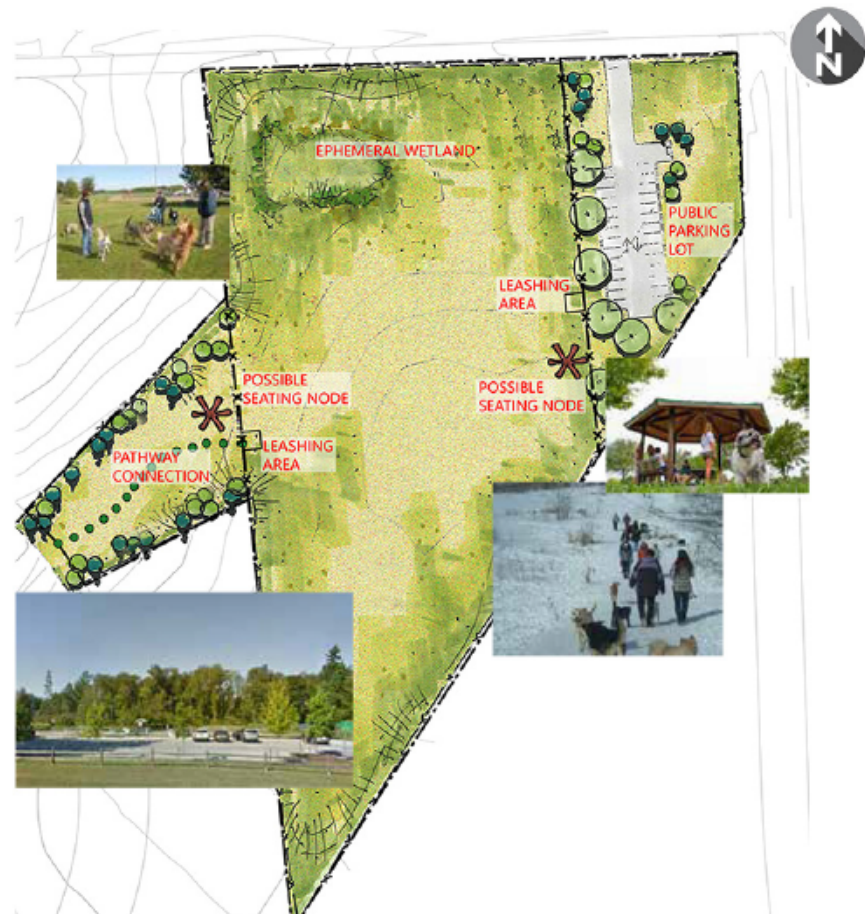
## OFF-LEASH DOG PARK

To meet a desired open space need as identified by Town of Cochrane residents and the Recreation & Open Space Master Plan, the 2.25 hectare (5.56 acre) Public Utility Lot ROW located in the northwest portion of the HHS2NP area is proposed to be used as an off-leash dog park (see area F on Figure 9). The site is well-connected to the community, allowing for residents to use the pathway or sidewalk system to walk their dogs to the park, or to drive to the parking lot provided on the eastern entrance to the dog park off of Township Road 262.

The off-leash dog park will also feature the HHS2NP area's only ephemeral wetland, which will remain on site in its natural state.



**Figure 14:** HHS2NP Utility ROW/Dog Park Concept Plan





### 3.8 DENSITY AND STATISTICS

The HHS2NP statistics provide the parcel area and projected number of units for each general land use category. It is important to note that not all Municipal Reserve was provided in Stage 1 by the Private Corporation, with a balance of 2.27 ha/5.61 ac to be accommodated within Stage 2. The Developer acknowledged the lack of open space within the Stage 1 community and is pleased to provide the owed Municipal Reserve dedication in their portion of the HHS2NP lands. To accommodate the under-dedication of Municipal Reserve in Stage 1, 13.8% of the Gross Developable Area will be provided as Municipal Reserve in Stage 2. See Appendix E for Municipal Reserve summary by stage of development.

The Stage 2 Neighbourhood Plan will provide an anticipated 1247 residential units in a combination of single, semi-detached, townhomes and innovative multi-family style housing forms including apartment building form. The density of the HHS2NP area is approximately 21.8 **units per hectare (8.8 units per acre)**, which exceeds the MDP target density of 19.8 units per hectare (8.0 units per acre).

The development statistics for the HHS2NP area can be found in Table 2.

Table 2: Proposed Stage 2 Neighbourhood Plan  
Development Statistics

|   | Frontage (m) | Lot width/units<br>(m)/(upa) | Hectares (+/-) | Acres (+/-)   | Number of<br>units |  | % of GDA      |
|---|--------------|------------------------------|----------------|---------------|--------------------|--|---------------|
| <b>TOTAL LAND AREA</b>  |              |                              | <b>79.27</b>   | <b>195.88</b> |                    |  |               |
| <b>ENVIRONMENTAL RESERVE</b>  |              |                              | <b>14.61</b>   | <b>36.10</b>  |                    |  |               |
| Less existing Boundary Roads  |              |                              | <b>4.71</b>    | <b>11.64</b>  |                    |  |               |
| <b>LESS PUL (UTILITIES)*</b>  |              |                              | <b>2.69</b>    | <b>6.65</b>   |                    |  |               |
| <b>GROSS DEVELOPABLE AREA (GDA)</b>                                   |              |                              | <b>57.26</b>   | <b>141.49</b> |                    |  | <b>100.0%</b> |
| <b>GENERAL LAND USES</b>  |              |                              |                |               |                    |  |               |
| <b>Residential</b>  |              |                              | <b>32.65</b>   | <b>80.68</b>  |                    |  | <b>57.0%</b>  |
| <b>Residential and Two Dwelling District</b>                          |              |                              | <b>26.13</b>   | <b>64.57</b>  |                    |  |               |
| Single-Family (13.45 m lot width)                                     | 1433.5       | 13.45                        | 5.1            | 12.60         | 106.58             |  |               |
| Single-Family and Semi-Detached (10.4m lot width)                     | 4618         | 10.4                         | 17.89          | 44.21         | 444.04             |  |               |
| Townhomes (5.7m lot width)  | 1036.5       | 5.7                          | 3.14           | 7.76          | 181.84             |  |               |
| <b>Medium Density Multi Unit Dwelling</b>                             |              |                              |                |               |                    |  |               |
| Anticipated / Maximum number of lots based on 20upa (50uph) density   |              | 20                           | 4.98           | 12.31         | 246.12             |  |               |
| <b>High Density Multi-Unit Dwellings</b>                              |              |                              |                |               |                    |  |               |
| Anticipated / Maximum number of units based on 60upa (150uph) density |              | 60                           | 1.54           | 3.81          | 228.33             |  |               |
| <b>Total frontage</b>   | <b>7769</b>  |                              |                |               |                    |  |               |
| <b>Total number of units (including Commercial/Residential site)</b>  |              |                              |                |               | <b>1247</b>        |  |               |
| Anticipated /Maximum  |              |                              |                |               | 1247               |  |               |
| <b>Density</b>  |              |                              |                |               |                    |  |               |
| Anticipated/Maximum   |              |                              |                |               | 21.8 uph           |  | 8.8 upa       |
| <b>Commercial/Office/Residential</b>                                  |              |                              | <b>1.98</b>    | <b>4.89</b>   | <b>40.00</b>       |  | <b>3.46%</b>  |
| <b>Municipal Reserve (Credit)**</b>                                   |              |                              | <b>8.74</b>    | <b>21.60</b>  |                    |  | <b>15.26%</b> |
| Municipal Reserve (School)  |              |                              | 4.53           | 11.19         |                    |  |               |
| Parks and Linear Pathways   |              |                              | 4.21           | 10.40         |                    |  |               |
| <b>Public Utility Lot</b>   |              |                              | <b>2.88</b>    | <b>6.70</b>   |                    |  | <b>5.03%</b>  |
| Existing Water Reservoir  |              |                              | 0.17           | 0.42          |                    |  |               |
| Stormpond   |              |                              | 2.29           | 5.66          |                    |  |               |
| PUL (holding)   |              |                              | 0.42           | 1.04          |                    |  |               |
| <b>Roadways and Lanes</b>   |              |                              | <b>11.02</b>   | <b>27.23</b>  |                    |  | <b>19.24%</b> |
|   |              |                              |                |               |                    |  | <b>100.0%</b> |

Notes:

\*An agreement with Town of Cochrane Administration has determined that the natural drainage channel and eastern pipeline ROW should not be included in the GDA.

\*\* See Municipal Reserve breakdown by stage of development in the Appendices.



## 4.0 TRANSPORTATION & ACCESS



### 4.1 BOUNDARY ROADS & REGIONAL ROAD LAYOUT

The HHS2NP area is surrounded by a strong regional road network, which will provide a direct commute to and from downtown Cochrane, as well as in all directions outside of the Town.

Access into the community will be achieved via several access points from the south along Highway 1A, from the west along Horse Creek Road, and from the north along Township Road 262.

The HHS2NP area is bound by:

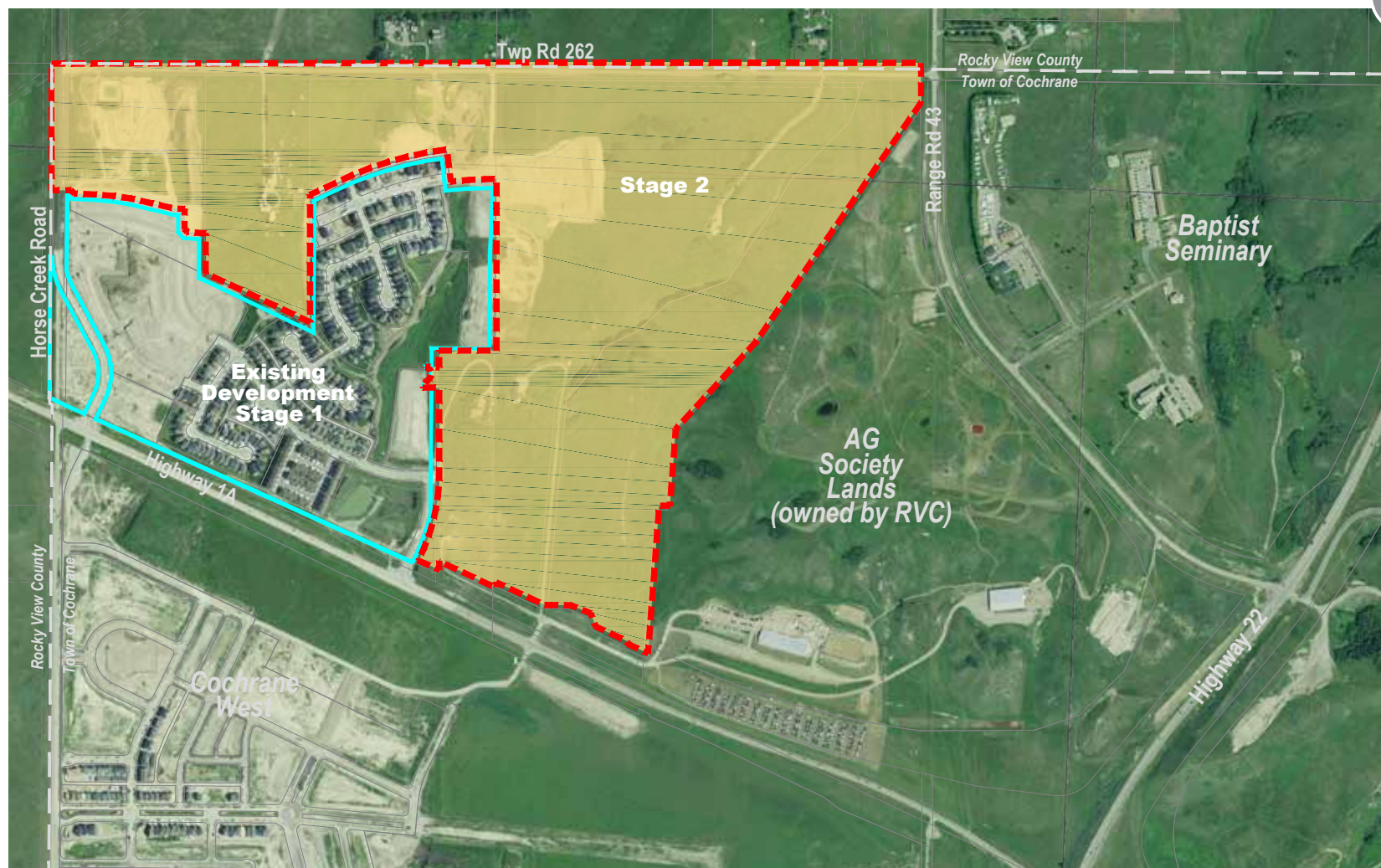
- Township Range Road 262 to the north;
- The Cochrane & District Agricultural Society lands to the east;
- Horse Creek Road to the west, and;
- Highway 1A, and the existing Heritage Hills residential development, to the south.

A Transportation Impact Assessment was submitted and approved during the Heritage Hills Area Structure Plan process. An updated Traffic Impact Assessment dated 2023 will be submitted to support this NP amendment.

Twp Rd 262 is currently an unpaved roadway carrying approximately 200 vehicles per day (vpd) with ultimate development resulting up to 2000 vpd. Town guidelines suggest that Twp Rd 262 will ultimately be developed as a four lane undivided minor arterial with an environmental threshold of 15,000 vehicles per day with the ultimate development of Heritage Hills resulting in the need for the south two lanes be constructed and paved when the adjacent phase is developed as per the MGA. It is expected that Development of Rockyview County lands (including the proposed school site) to the north of Twp Rd 262 will increase the traffic volumes beyond the levels noted above and will trigger the need to construct the remaining two northern lanes to complete the four lane cross section at the north adjacent landowners cost. Additional road right of way required for upgrading of Twp Rd 262 is to be shared between the lands to the north and the south of Twp Rd 262.



**Figure 15:** Boundary Roads & Regional Road Connectivity



- Existing Development
- Neighbourhood Plan Boundary Stage 2
- Town of Cochrane Boundary



## 4.2 INTERNAL ROAD LAYOUT

The internal modified grid road layout in the HHS2NP area is designed to achieve:

- convenient access to and from the HHS2NP area, with direct connection to the regional transportation network around the Heritage Hills community.
- a wide range of options available for pedestrian mobility regardless of age, means, or ability. Options include walking, cycling, public transit and automobiles.
- a design to optimize the use of available resources and provide better value to businesses and nearby residents.
- a balance between connectivity and sensitivity to the natural environmental features of the area.

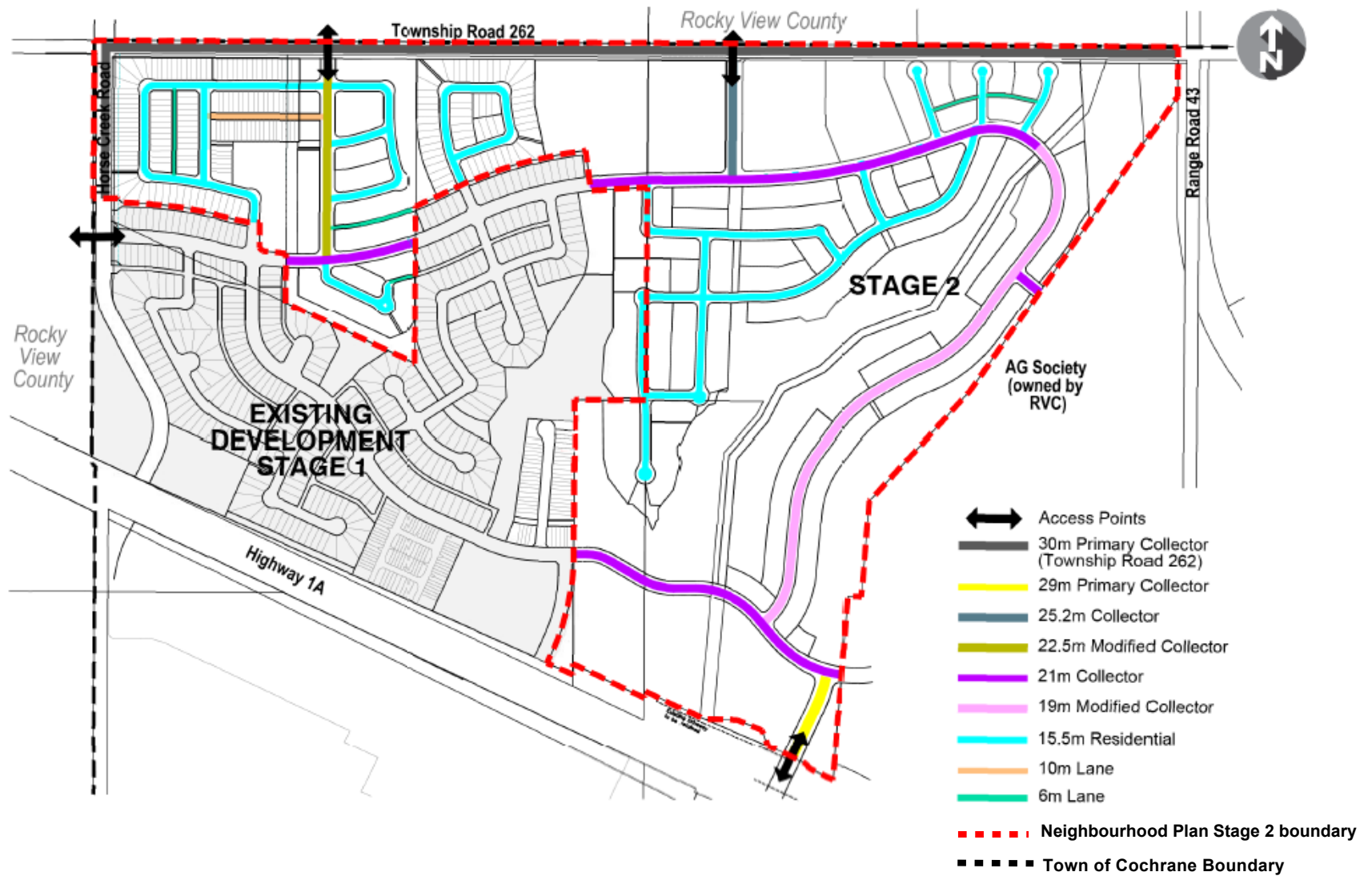
Primary access to the Heritage Hills community shall be provided via five (5) access locations. Direct access to the subject property will be off of Highway 1A, Horse Creek Road, and Township Road 262. The HHS2NP area has identified a primary east-west collector road that will loop throughout the community, and this road will also act as the feeder route for transit service. The number of access points into the community ensure conformance with the National Fire Protection Agency (NFPA) standards.

The balance of the local road network will support development within the subject property by providing internal access to the various segments of the community. Based on the preliminary results of the Traffic Impact Assessment (TIA), the following road ROW requirements have been identified to accommodate the anticipated transportation needs:

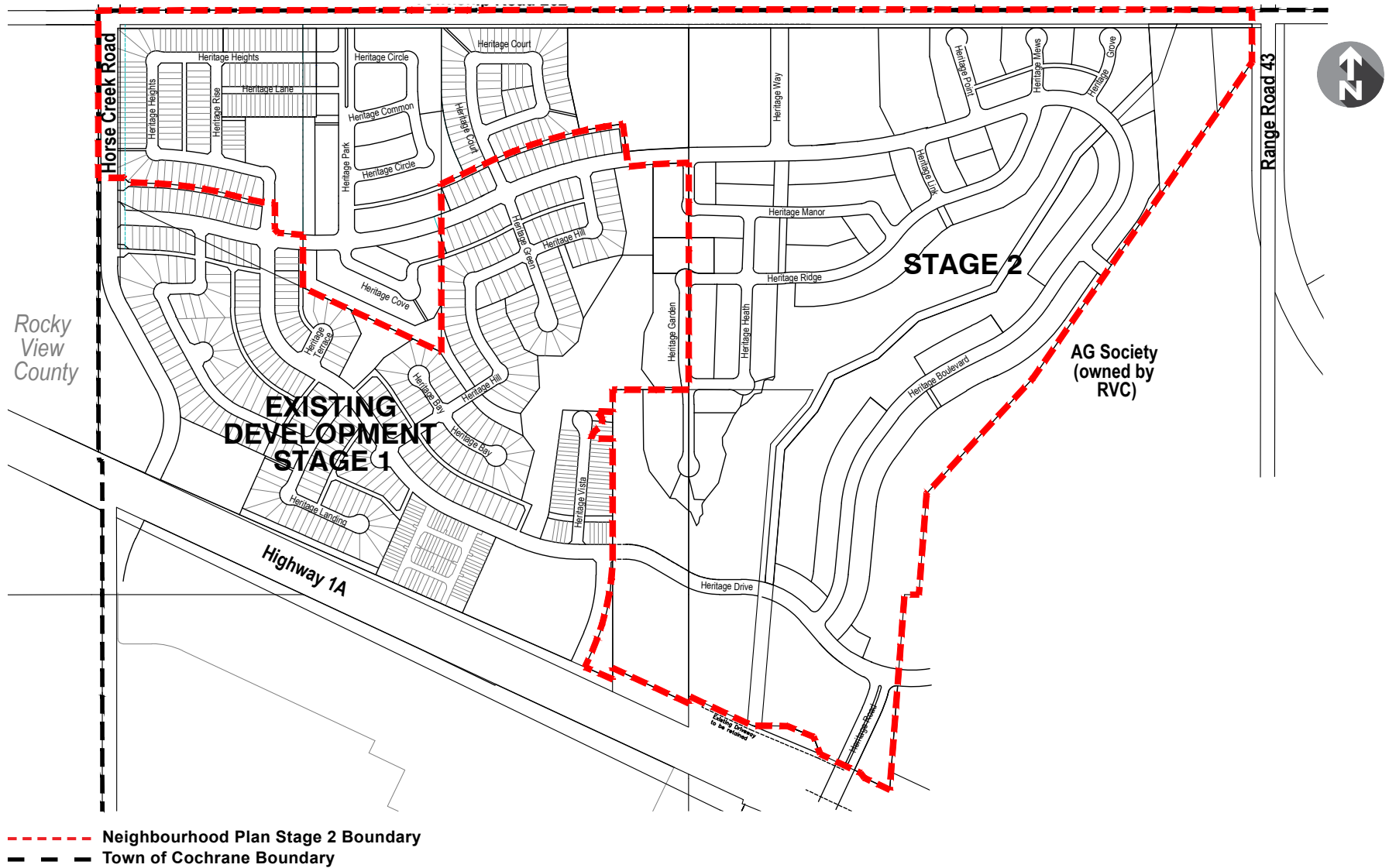
|                                  |                                      |
|----------------------------------|--------------------------------------|
| • Collector Road                 | +/- 21.0m - 23.5m meter right-of-way |
| • Modified Collector             | +/- 19.0m meter right-of-way         |
| • Modified Collector with Median | +/- 21.0 meter right-of-way          |
| • Residential Local Road         | +/- 15.0 - 15.5 metre right-of-way   |
| • Laneways                       | +/- 6.0m - 10.0m meter right-of-way  |

All road standards will seek to employ the City of Calgary Complete Streets policies where possible. These policies aim to increase the attractiveness, convenience, and safety of all modes of transportation, as well as incorporate elements of green infrastructure and function. A summary of the proposed road hierarchy is shown on Figure 16: Internal Road Layout.

**Figure 16: Internal Road Layout**



**Figure 17: Proposed Street Names**



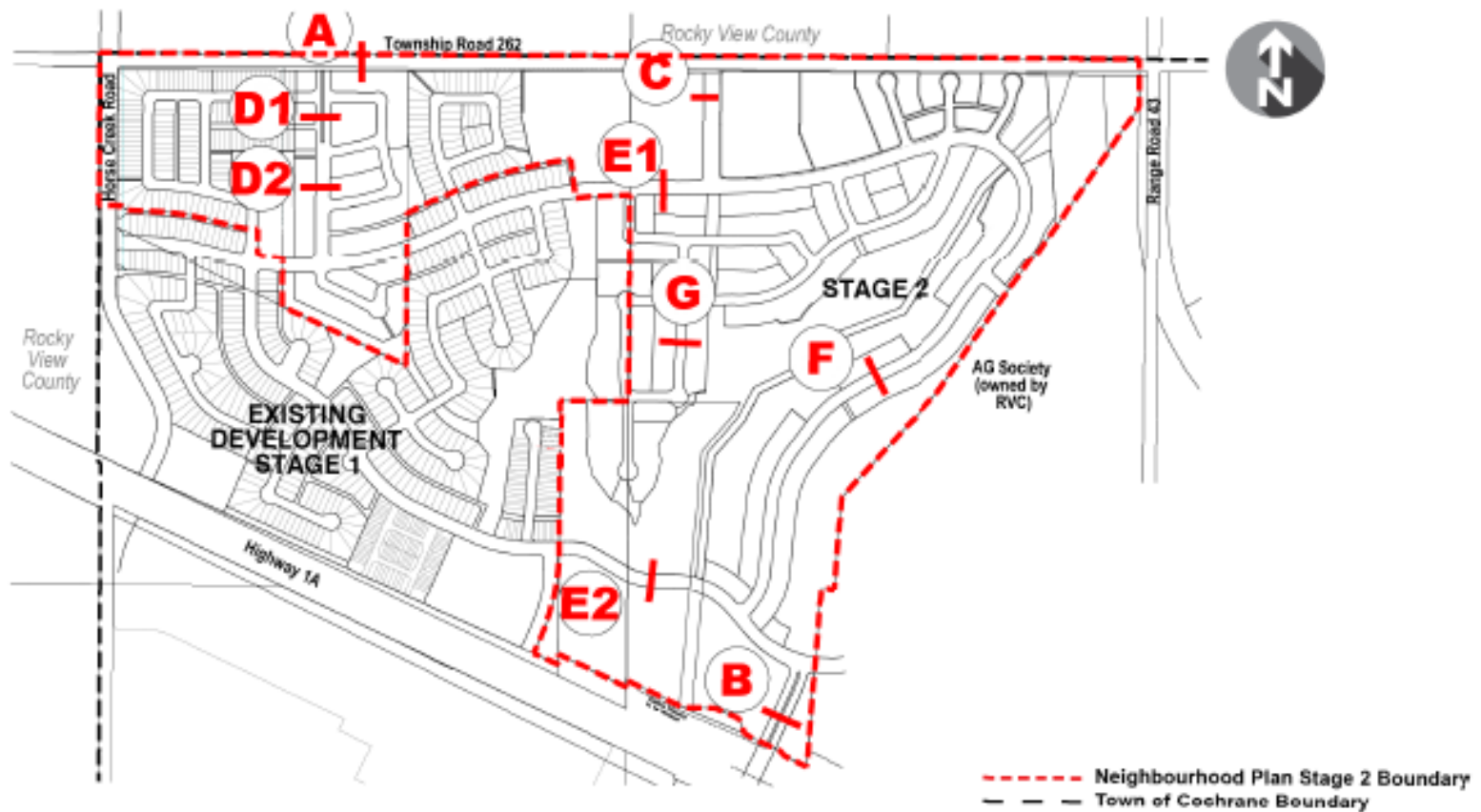




## ROAD CLASSIFICATIONS

The Town of Cochrane has identified the desire to implement some of the design elements of the City of Calgary Complete Streets road cross-sections for residential streets within Cochrane. These design elements include sidewalks on both sides of the street and public trees. A majority of the roads in the HHS2NP area have been designed to embrace the Complete Street concept and to foster a sense of inclusion between adjacent neighbourhoods. The following cross-sections illustrate this concept:

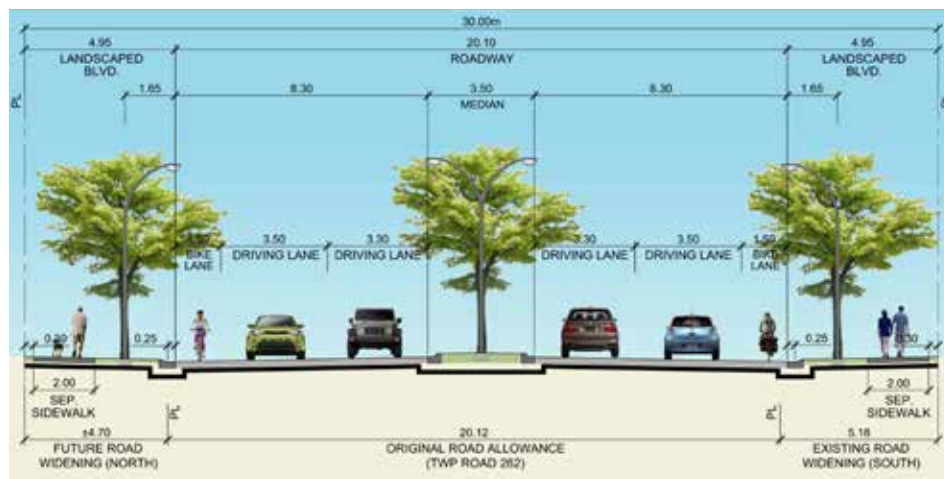
**Figure 18: Street Cross Sections Key Map**





A1  
A2

**Figure 19: Cross Section A1 + A2 - 30.0m Primary Collector - Interim/Ultimate**



**A1 - Interim**

**A2 - Ultimate**

**Section A1 - 30.0m Primary Collector - Interim**

Cross Section A1 is the interim roadway for Twp Rd 262 for the Heritage Hills Stage 2 Development. When lands to the north are developed Section A1 will be achieved.

**Section A2 - 30.0m Primary Collector - Ultimate**

Cross Section A2 is the ultimate roadway for Twp Rd 262 along the northern boundary of the plan area. This road will contain four travel lanes, bike lane accommodations and separate sidewalks.

B1  
B2

**Figure 20: Cross Section B1 + B2 - 29.0m Primary Collector (2 options)**



**Section B1 - 29.0m Primary Collector - Option 1**

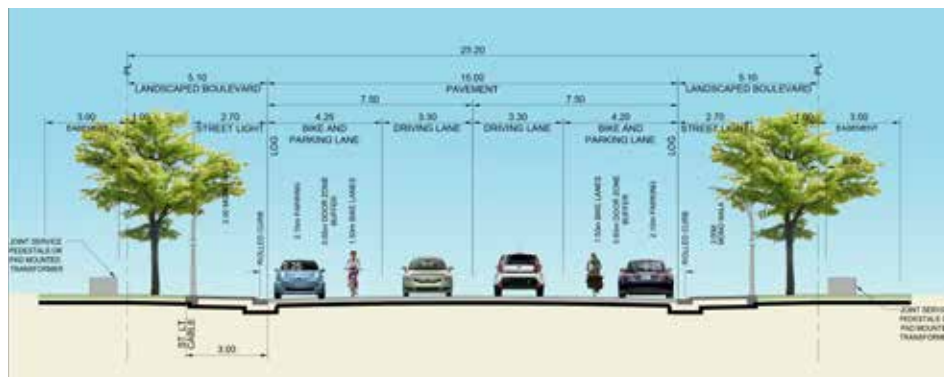


**Section B2 - 29.0m Primary Collector - Option 2**

Each cross section is designed to contain four travel lanes, bike lane (with an optional parking lane) accommodations and separate sidewalks.

C

**Figure 21: Cross Section C - 25.2m Collector Entrance**



### **Section C - 25.2m Collector Entrance**

Cross Section C is a Complete Streets collector roadway that contains parking on two sides, sidewalks and bike lanes.

D1

**Figure 22: Cross Section D1 - 22.5m Street with Median**

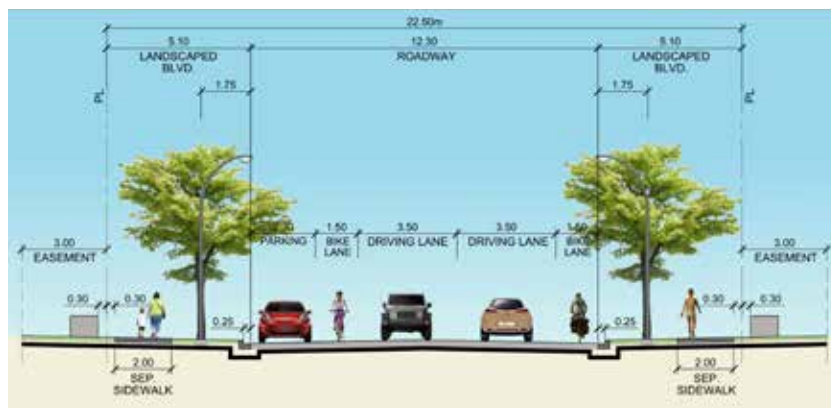


### **Section D1 - 22.5m Residential Entrance Street w/ Median**

Cross Section D1 is a modification of a collector standard road. This roadway will feature a portion that contains a median directly south of 262. Its intention is to maintain movements for traffic accessing 262 and limit movements into the internal roads due to block spacing requirements.

D2

**Figure 23:** Cross Section D - 22.5m Street without Median

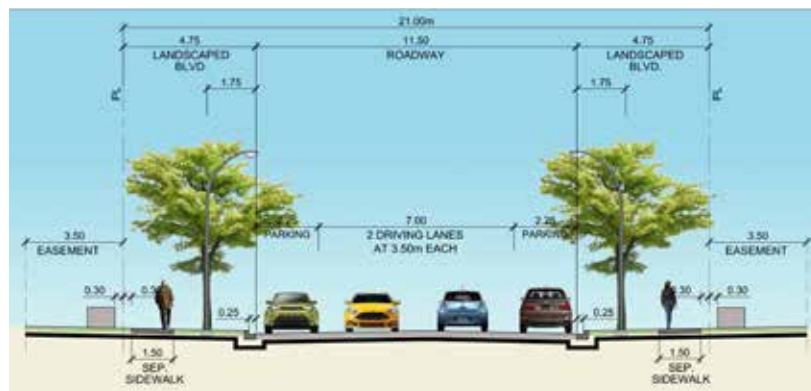


**Section D2 - 22.5m Street without Median**

Cross Section D2 is a modification of a collector standard road. It is intended to contain bike lanes, parking on one side of the street and dual sidewalks.

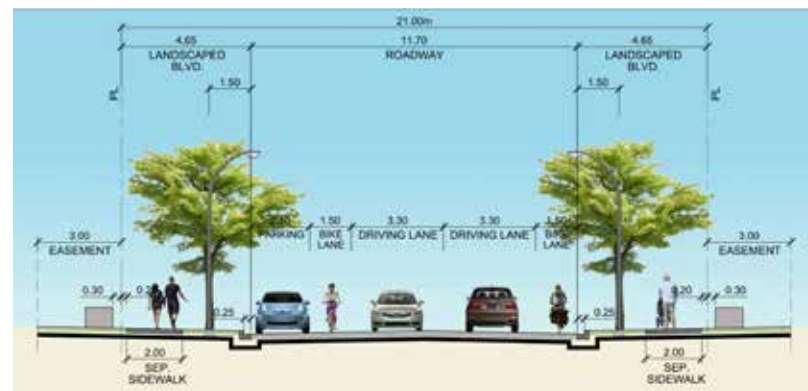
E1  
E2

**Figure 24:** Cross Section E1 + E2 - 21.0m with 1.5m Sidewalk & 21.0m with 2.0m Sidewalk



**Section E1 - 21.0m Collector with 1.5m Sidewalk**

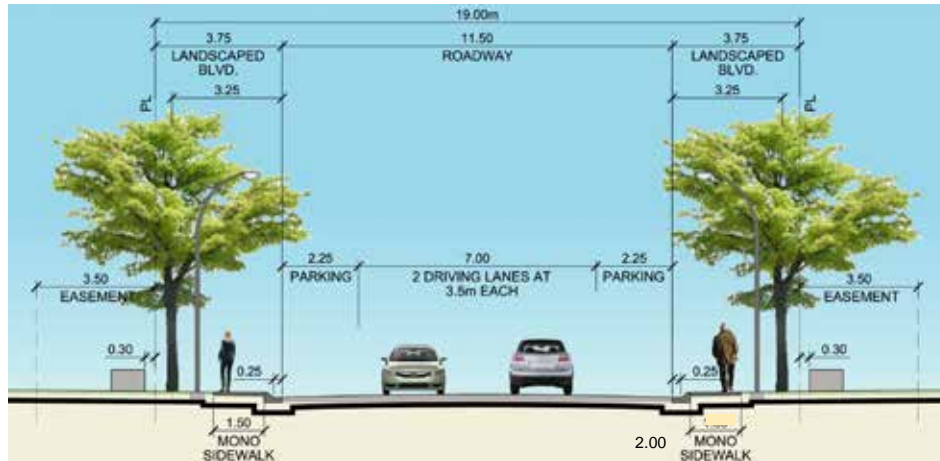
Cross Section E1 is a collector roadway that currently exists within the Heritage Hills Stage 1 community. In order to maintain consistency for residents it is carried through Stage 2 on the collector loop road.



**Section E2 - 21.0m Modified Collector w/ 2.0m Sidewalk & Bike Lane**

Cross Section E2 is a roadway containing a 2.0m separate sidewalk, bike lane and parking lanes, offering a variety of modes as you enter the community and are nestled along the embankment.

**Figure 25: Cross Section F - 19.0m Modified Collector**

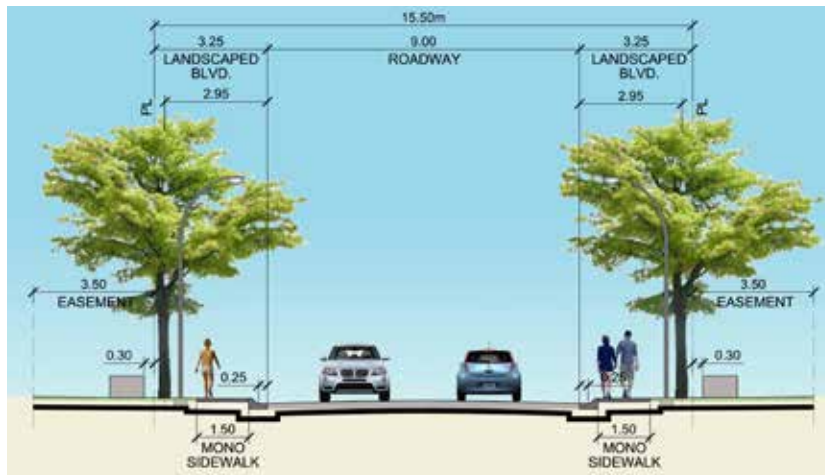


*Section F - 19.0m Modified Collector*

In order to accommodate the topographical challenges alongside the natural drainage channel, cross section F will introduce a 19.0m modified collector road standard that will compliment and work with the area's hilly terrain. This collector roadway will feature and preserve existing tree stands alongside the Environmental Reserve ravine, will feature a 1.5m monowalk on one side of the street and a 2.0m monowalk on the other side of the street, and will allow for parking along both sides of the roadway. Transit and private vehicles will be accommodated by two lanes of traffic.

This modified collector road will be located adjacent to the wide shallow lots along the eastern portion of the community, creating an attractive and unique development area in Heritage Hills.

**Figure 26: Cross Section G - 15.5m Residential Road**



*Section G - 15.5m Residential Road*

Cross Section G is a typical local residential roadway within the neighbourhood. This road standard will include public trees, and a 1.5m monowalk on both sides of the road to accommodate safe pedestrian circulation throughout the community.





### 4.3 TRANSIT

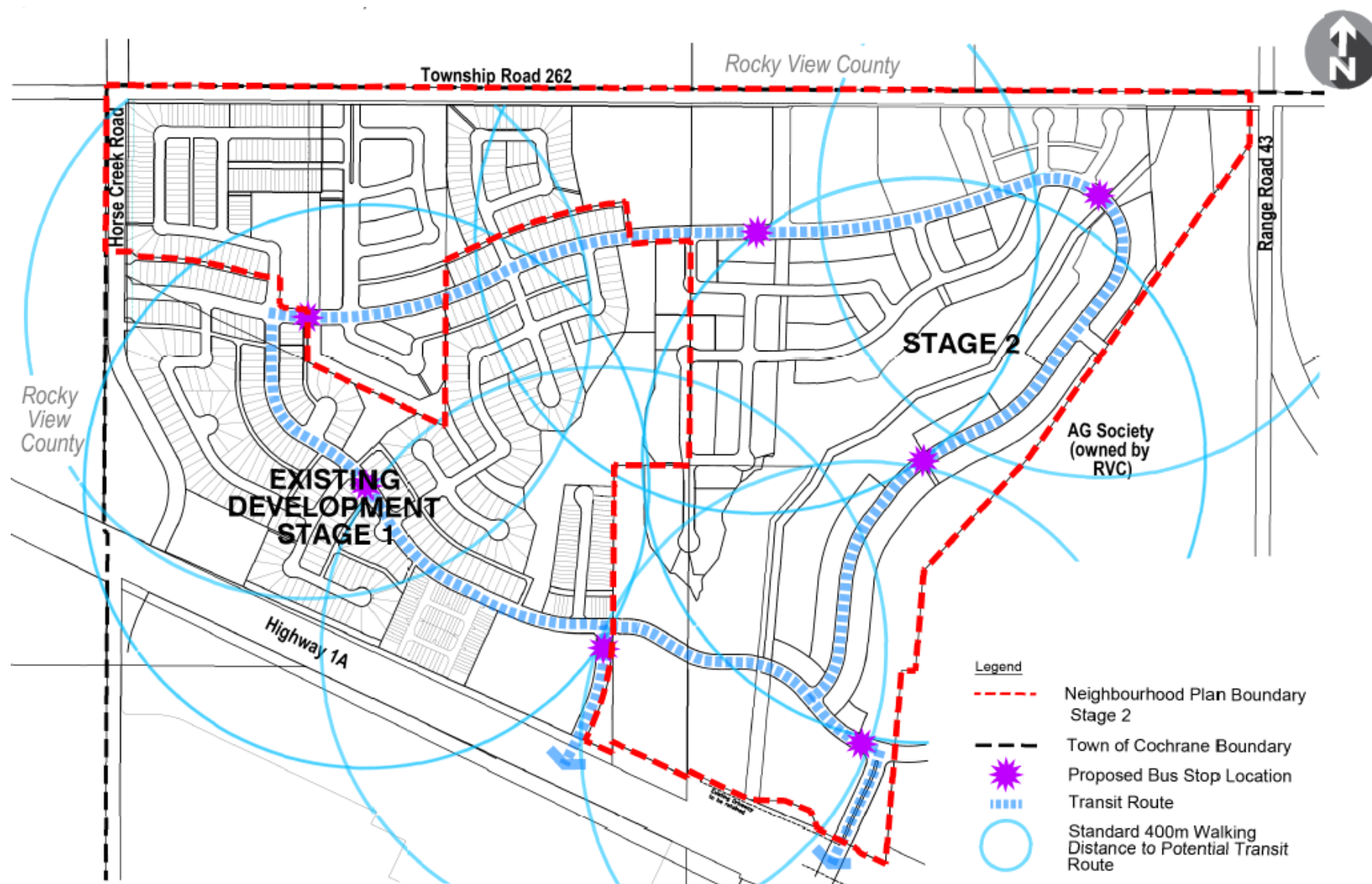
The implementation of transit service is an ongoing area of study for the Town of Cochrane. The HHS2NP anticipates a potential public transportation route to accommodate transit should it be implemented in the future. The logical transit route would take the form of a loop around Heritage Drive via Highway 22 or 1A, where all road standards are collector roads or greater. This route will provide the entire Heritage Hills development with access to public transportation.

All of the lots in HHS2NP area within a 400m walking distance of Heritage Drive - the maximum walking distance typically accepted for effective transit service (see Figure 27). This provides a good level of connectivity to transit routes around the community. All proposed schools and multi-family sites are also located directly adjacent to Heritage Drive or Heritage Boulevard, and will be directly serviced by transit stops.





**Figure 27: Transit Service Concept**



## 4.4 TRANSPORTATION IMPACT ASSESSMENT

A comprehensive TIA for the entire HH ASP area was completed by Bunt & Associates in December, 2013. A total of up to 1,913 residential units (1,044 single family and 869 multifamily), approximately 83,000 square feet of primarily neighbourhood commercial space (split between the east and west sides of the site) and a 900-student K to 9 school was proposed to be included within both Stages 1 and 2 of the Heritage Hills community.

The traffic generated by approved developments in the vicinity of the site was also added to the respective background traffic volumes in three horizons. These three horizons included a projected Opening Day (2015), Interim (2020), and Long Term (2035). The development was assumed to be fully built by the Interim horizon. In the existing condition, traffic signalization at Horse Creek Road/Highway 1A, Centre Avenue/Highway 1A and 5 Avenue/Highway 1A intersections were warranted. In the Opening Day horizon, signalization is required at all of the intersections onto Highway 1A west of Highway 22.

Highway 1A also needs to be widened to four lanes between Highway 22 and Centre Avenue. By the interim horizon, Highway 1A requires to be widened to four lanes between Heritage Gate and Centre Avenue. Most of the intersections at this horizon will require upgrades to accommodate the forecast traffic volumes. Additionally, the intersection design for Highway 22/Highway 1A planned by Alberta Transportation (AT) also needs to be implemented in this horizon.

## 4.5 SUBDIVISION TIA UPDATES

At each phase of subdivision or development permit stage the applicant will be required to provide an updated transportation impact assessment (TIA) to:

- Reflect any changes in the background traffic and road network assumptions;
- Reflect any changes or updates to land use types and sizes;
- Reflect interim road network operations and any changes or updates to the road network;
- Reflect required timing for removal of existing driveway access onto Highway 1A

- Analyze internal intersections to confirm intersection control and lane configuration; and
- Confirmation of internal road sizing and external intersection capacity.

The terms of reference for the TIA will need to be scoped and confirmed with the Town and Town's representative prior to proceeding.

## 4.6 PEDESTRIAN CIRCULATION & ACTIVE TRANSPORTATION

A key feature of the pedestrian circulation network within the HHS2NP area is the north/south central linear open space through the natural drainage channel (see Figure 28). This open space, which includes a combination of Municipal and Environmental Reserve, will allow pedestrians, cyclists, and joggers to utilize the multi-purpose pathway system for local exercise and enjoyment. Commuting to the Town-wide regional pathway and open space system, and access to the local commercial services and retail in the community, will be readily accessible.

The modified grid road network within the HHS2NP, along with the well-connected pathways, walkways, and sidewalks, will provide the pedestrian easy access to open spaces, schools and the community centre for recreation and gathering. The location of the pedestrian connection to the east AG lands will be determined once further planning has been completed on that site.

As a standard design guideline in Cochrane, monolithic sidewalks are required on both sides of collector roads. The Heritage Hills community will take this safety element a step further to ensure that separate sidewalks are provided on both sides of the main collector road loop. Separate sidewalks along the primary collector system will purposefully maintain a more comfortable distance between the pedestrian and the motor vehicle. A separate sidewalk places the pedestrian several metres from the curb whereas a monolithic sidewalk is built directly adjacent to the curb. This separation results in greater pedestrian protection and allowing for a more relaxing walking experience. The exception to the separate walk will be on the east side of the school where the drop off zone will require monolithic walk.

**Figure 28: Pedestrian Circulation & Access Map**



## 5.0 LAND USE REDESIGNATION



### 5.1 LAND USE STATISTICS

Based on consideration of site opportunities and constraints, as well as the technical evaluations completed to date, the following table presents a summary of the land use configuration for the proposed HHS2NP lands. See Figure 29: Proposed HHS2NP Land Use Redesignation.

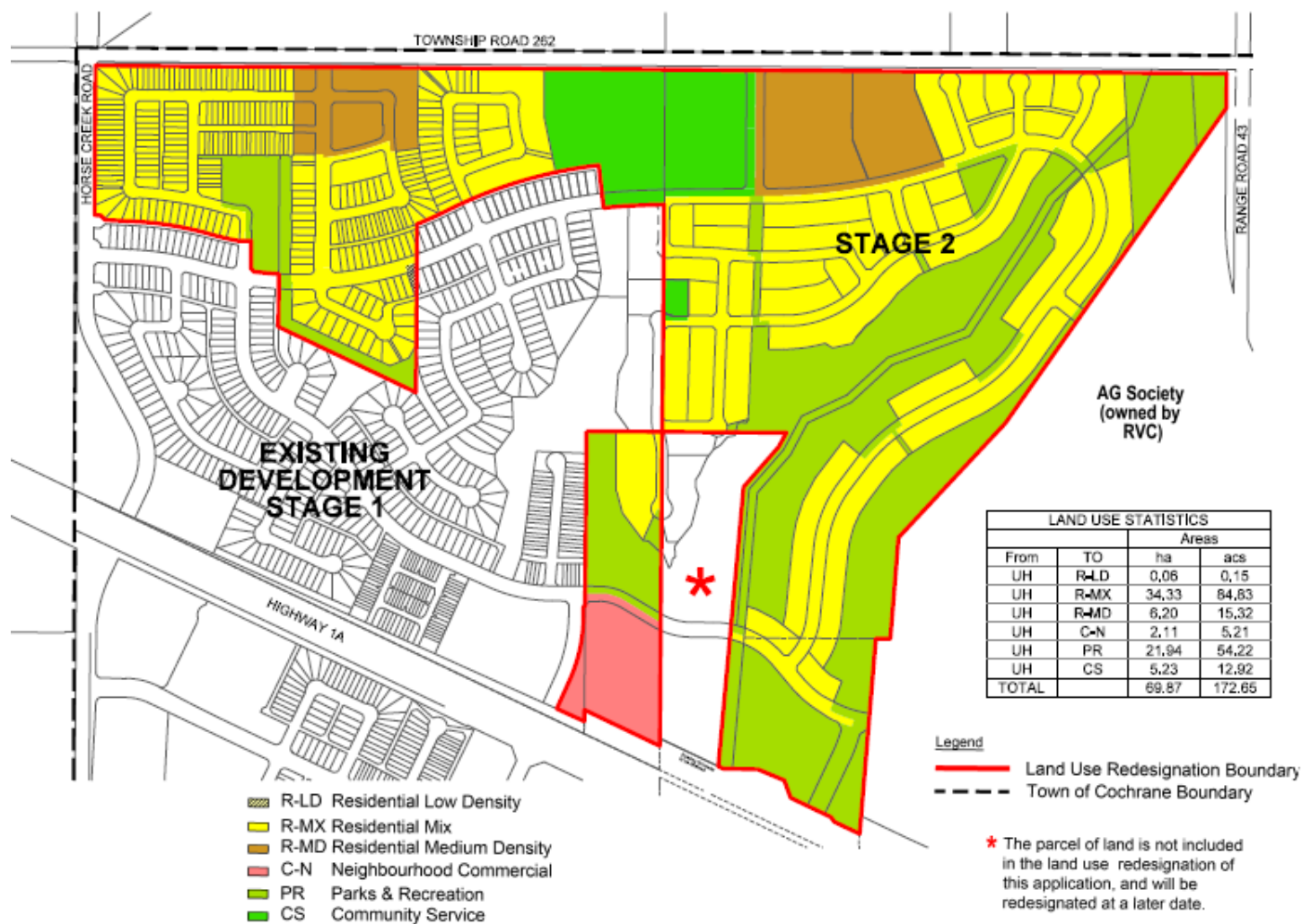
**Table 3:** Land Use Redesignation Statistics for the HHS2NP Lands

| From                         | To   | Hectares     | Acres         |
|------------------------------|--|--------------|---------------|
| Urban Holdings District (UH) | Residential Low Density District (R-LD)    | 0.06         | 0.15          |
| Urban Holdings District (UH) | Residential Mix District (R-MX)            | 34.33        | 84.83         |
| Urban Holdings District (UH) | Residential Medium Density District (R-MD) | 6.20         | 15.32         |
| Urban Holdings District (UH) | Neighbourhood Commercial District (C-N)    | 2.11         | 5.21          |
| Urban Holdings District (UH) | Parks & Recreation District (PR)           | 21.94        | 54.22         |
| Urban Holdings District (UH) | Community Service (CS)                     | 5.23         | 12.92         |
| <b>Total</b>                 |  | <b>69.87</b> | <b>172.65</b> |

\* Boundary Roads not included in Land Use Areas



**Figure 29: Proposed HHS2NP Land Use Redesignation**





## 5.2 RESIDENTIAL LAND USE OVERVIEW

The HHS2NP lands will provide an integrated mix of residential housing forms throughout the community. Residential land use will comprise the majority of the redesignation, with **40.59 hectares (100.3 acres)** of land been redesignated as residential.

The residential land use districts that will be included in the HHS2NP lands are:

- **Residential Low Density District (R-LD)**
- **Residential Mix (R-MX)**
- **Residential Medium Density District (R-MD)**
- **Residential High Density District (R-HD)**

The residential areas within the HHS2NP area predominantly make use of the Town's R-MX District, as it provides flexibility in housing form along with the option of having 'hidden density' via secondary suites. The addition of R-MD provides other alternative housing options. A future resident will be able to find the housing form, size, and affordability in all sectors of the community - close to the school site, open spaces, and pathway systems. The range of housing forms within the HHS2NP area provides the opportunity for residents to age in place, have rental income or multigenerational living on one parcel with secondary suites or change from rental to ownership, if desired.

A small portion of R-LD Residential Single Dwelling District (0.06 ha/0.15 ac) was redesignated to remain consistent with the land use found within the existing Stage 1 development.

The developers will engage the Cochrane Society for Housing Options to determine whether an affordable housing need can be met within the HHS2NP area.



## 5.3 COMMERCIAL-RESIDENTIAL MIXED USE DISTRICT LAND USE OVERVIEW

Local commercial uses are located within the existing Stage 1 Heritage Hills development, and an additional **2.11 hectare (5.21 acre)** mixed-use commercial/office/residential site is proposed in the HHS2NP lands. This mixed-use site will provide Heritage Hills, and surrounding communities, convenient access to goods and services, as well as opportunities for local employment.

The commercial/office/residential site has been strategically located near one of the main entrances into the community. Pedestrian access will be conveniently provided from the community's expansive sidewalk and pathway system, which runs along both sides of the main collector roadway.

With the addition of the Residential Medium Density District sites adjacent to the collector access to the primary east west collector on the northeast portion of the plan area, limited commercial uses could also be developed.



## 5.4 PUBLIC SERVICE LAND USE OVERVIEW

The Parks & Recreation and Community Service components of the HHS2NP lands accounts for 27.17 **hectares (67.14 acres)**, and includes Municipal Reserve, Environmental Reserve, and Public Utility Lots. The open space network in the HHS2NP will play a significant role in developing the community's identity. The social development of the community will be enhanced by the connected open space system. The different types of Public Service uses within the HHS2NP lands are:

### **Parks & Recreation/Community Service – Municipal Reserve (MR)**

The Parks & Recreation/Community Service – Municipal Reserve areas will include one community park, a series of linear pathway connections, community vista parks, and smaller parks for tot lots and playgrounds.

The Stage 2 lands also provide for a future K to 9 school site, as identified in the HH ASP. This future school site location and size meet the objective of the HH ASP by locating it where it can accommodate usable playfields and structures.

### **Parks & Recreation – Environmental Reserve (ER)**

The Parks & Recreation – Environmental Reserve dedication contains a large, central, linear Environmental Reserve open space, and will connect the northern portion to the southern portion of the HHS2NP area. This Environmental Reserve will preserve a significant natural drainage channel and contain an extensive pathway system.

### **Parks & Recreation – Public Utility Lot (PUL)**

The Public Service – Public Utility Lots in the subject lands will provide for stormwater collection, a water reservoir, and utility Rights of Way.

## 6.0 SERVICING



### 6.1 WATER

An existing potable water supply line is located along the north boundary of Highway 1A which feeds an existing water reservoir and pump house that was constructed with the initial development to service existing Stage 1 and the future Heritage Hills community. The water reservoir and pumps are sized to accommodate full build-out of the Heritage Hills community. Another connection will be made at the Heritage Gate intersection into the existing dedicated supply main. This connection would be an additional connection where if the original supply main had to be shut down, for any reason, the reservoir could be filled through the Heartland network, if required. Heritage Hills is comprised of three potable water pressure zones.

The existing reservoir is located in the middle pressure zone. Water distribution lines will be extended with road infrastructure. In order to adequately service all three pressure zones, a combination of looped water lines, dual feed lines and pressure reducing valves will be required. In order to provide required water system looping, water mains may need to be extended across natural drainage courses. Through the development of the Heritage Hills community, water mains will be stubbed at the Cochrane & District Agricultural lands to the east.





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## 6.2 WASTEWATER

The Heritage Hills community is serviced through an existing gravity wastewater sewer trunk constructed along the north side of Highway 1A which flows eastward to the Town's central wastewater collection point. This infrastructure is sized to handle full build-out of the community. Within the HHS2NP area, the westerly two-thirds of the community will be serviced by wastewater trunklines in the existing built areas of the community. The easterly third of the community will be serviced by new wastewater trunks in the collector road. In addition, a local network of lateral wastewater sewer infrastructure will be connected to provide service to the development (see Figure 30).



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## 6.3 STORMWATER

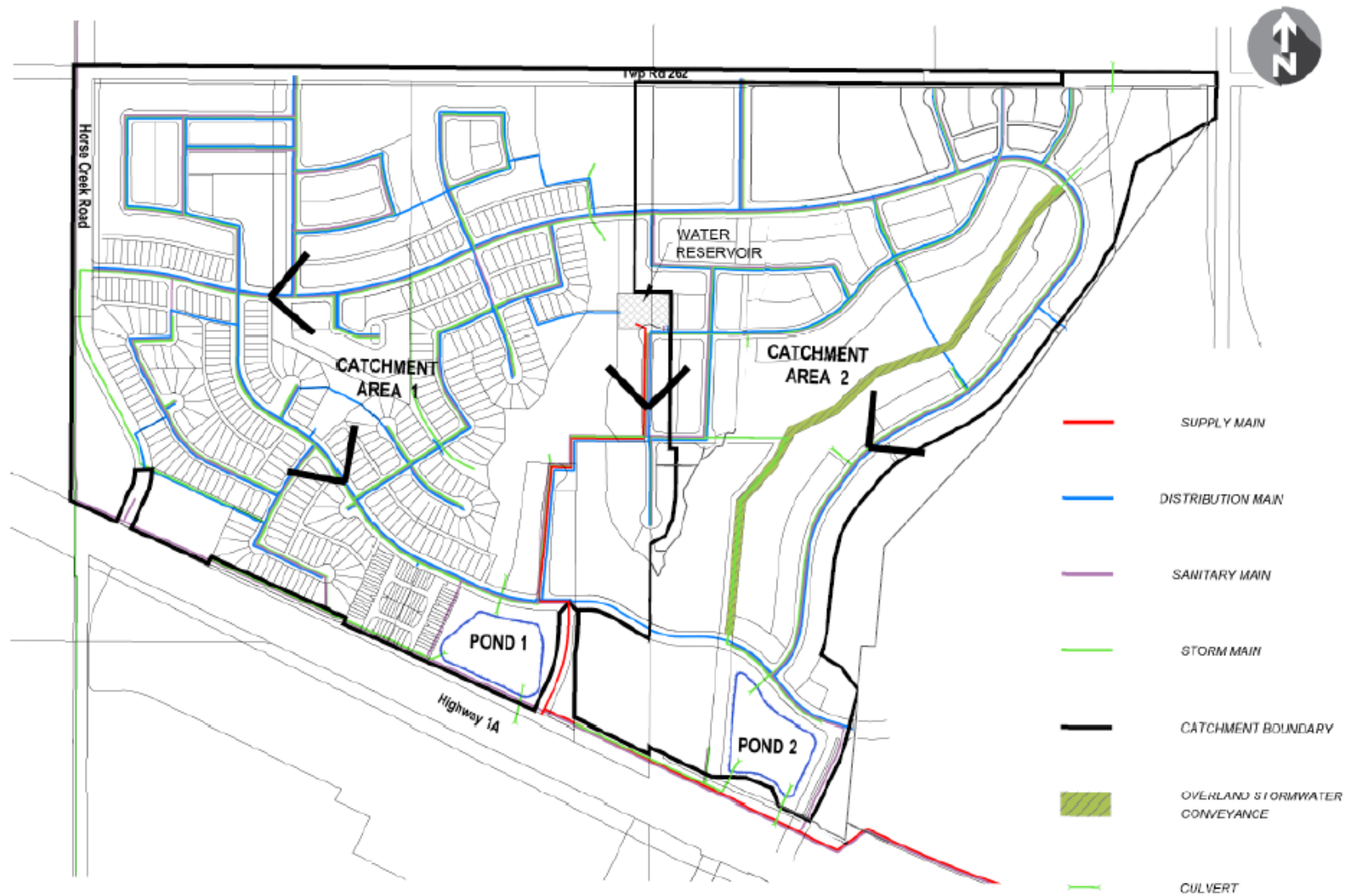
Stormwater management for the Heritage Hills community will follow the Heritage Hills Staged Master Drainage Plan prepared by LGN Consulting Engineering Ltd. (December 2013) and the Scheffer Andrew Ltd. update to the Master Drainage Plan prepared to support the amendment. These reports provides the design basis for the overall drainage concept for the remainder of the Heritage Hills development. Heritage Hills will be serviced for storm drainage with stormwater management facilities, as shown on Figure 30. The updated report revises the stormwater catchment boundary. Runoff release from the Heritage Hills development will be controlled by two stormwater management facilities. Stage 1 of Heritage Hills is controlled by an existing stormwater management facility located in the south-east corner of their development. Runoff from HHS2NP will be controlled by a new proposed stormwater facility at the south end of the development. Runoff from the developments will be conveyed to the stormwater facilities by the storm sewer (minor) and overland drainage (major) systems.

The HHS2NP pond will treat the storm water to Alberta Environment water quality standards, and will discharge the water at the approved release rates into the existing road ditch on the north side of Bow Valley Trail (Hwy 1A), which will convey to the Big Hill Creek prior to discharging to the Bow River. The pond will be designed to accommodate up to the 1:100 year storm event at a minimum.

For the development backing on to the natural drainage courses, drainage should be handled to minimize the potential for damage to the slopes while balancing the need to retain water flows to the area. Within the easterly drainage course, the potential exists to incorporate a stepped storm water management system into the natural features of these lands and be contained within a linear Public Utility Lot.

As the Town of Cochrane abides by the City of Calgary standards, the stormwater system for Heritage Hills will be designed in accordance to the City of Calgary Stormwater and Design Manual, and will follow the recommendations in the Heritage Hills Staged Master Drainage Plan prepared by LGN Consulting Engineering Ltd. (December 2013).

**Figure 30:** HHS2NP Stormwater Catchment Areas and Servicing



# 7.0 PHASING



## 7.1 PHASING OVERVIEW

Phasing of development can occur in a number of ways within the HHS2NP lands (see Figure 31 for Directional Phasing Plan). Due to multiple landownership within Heritage Hills, it is difficult to anticipate the exact phasing direction that will occur. Capacity exists within existing Heritage Hills Stage 1 infrastructure to accommodate an extension of services into areas owned by 1073112 Alberta Ltd., 743096 Alberta Ltd., and a portion of the Brookfield Residential Properties land. A detailed phasing plan will be further refined as options are explored.

It is important to note that offsite development may occur within a particular phase. This means that engineering phase boundaries may not coincide exactly with the planning phase boundaries.





## 8.0 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN



Crime Prevention Through Environmental Design (CPTED) occurs where the built environment is designed to reduce the predication of criminal activities and reduce the fear of crime occurring. The community of Heritage Hills is conscious of safety through design and this is incorporated throughout the community. Neighbourhood safety and the principles of CPTED have been a major consideration throughout the evolution of the neighbourhood design, and a summary of some of the safety considerations incorporated into the neighbourhood layout are as follows:

### VISIBILITY BY OTHERS

- Street frontage adjacent to all components of the open space system.
- Higher density residential housing along major roadways will ensure a larger population to provide “eyes on the street”.
- The HHS2NP Community Park has single loaded roads fronting onto three sides of the site. This openness allows for constant visibility into the site by residents from either adjacent sidewalks and/or homes from vehicles passing by.
- The School Site will include recreation facilities that will be used by students of the proposed adjacent K to 9 school during the day and by organized sports programs in the evening.

### SIGHTLINES

- Corner cuts at the back of lots at park entry points could be provided to enhance visibility.
- A fence will be constructed in all rear or side yards that back onto any parks or drainage areas to encourage use of the space by local residents. Fences will be permeable so as to allow visibility from rear yards into open space areas. This will permit visibility and access into this linear open space to avoid feelings of entrapment or isolation.

## LIGHTING

- Attention will be made to provide street lighting at key locations and near walkways to allow continued visibility at night.
- To increase safety in some walkway locations, lighting options will be investigated at the time of subdivision.
- Pedestrian crossings of the Highway 1A right-of-way will implement safety in lighting and pavement markings. Proper construction design and specific safety measures will be required and addressed at the detailed design stage.



## ISOLATION

- Feelings of isolation will largely be avoided through maintenance of well-lit sidewalks and walkways, and highly visible pathways.
- All street corners with sidewalks will have wheelchair accessible ramps, and all multi-use trails will be graded to ensure accessibility.

## ENTRAPMENT SPOTS

- Park spaces offer multiple entry/exit points and provide significant sight lines to enhance visibility and natural surveillance, as well as decrease the presence of movement predictors.
- Vegetation within all parks will be designed to avoid areas of entrapment. The modified-grid design of roads and integrated open space encourage the use by local residents and strengthen neighbourhood cohesion.



## 9.0 ENVIRONMENTAL BACKGROUND STUDIES



Background studies were completed for the entire Heritage Hills community, which includes the lands found within both Stage 1 and Stage 2. These studies provide the physical evaluation of the lands so that future development plans ensure the noted constraints and natural feature opportunities are incorporated into the overall community design.

The following is a summary of the findings within each of the reports:

### 9.1 ENVIRONMENTAL SITE ASSESSMENT

Phase I Environmental Site Assessments, and their respective updates, have been completed for the lands within the plan area by Stantec in 2005, 2006 and 2013, and by Biophilia Inc. in 2012.

One potential environmental concern was identified on the 743096 Alberta Ltd. ownership lands as a result of current and/or historical onsite land uses. The ESA that noted this potential environmental concern recommended that a Phase II ESA be undertaken and:

1. all debris and waste material found onsite (used tires, wood debris, scrap metal, empty drums, and household appliances) should be removed and disposed appropriately offsite.
2. monitoring and sampling of the existing groundwater monitoring wells is recommended on this site during the Phase II ESA to verify the presence or absence of hydrocarbon impacts associated with the oil and gas activities on adjacent properties prior to stripping and grading.
3. Stantec recommends that all water wells in the HHS2NP area be located and decommissioned properly as a part of stripping and grading.

**Based on the results of the studies, a majority of the Phase I ESA reports concluded that no major known environmental concerns related to the subject sites were identified in the record reviews or the site reconnaissance visits.**



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## 9.2 BIOPHYSICAL INVENTORY

A Biophysical Inventory and Ecological Assessment have been completed for the HHS2NP lands by Stantec (2005) and URSUS Ecosystem Management Ltd. (2005). **These assessments conclude that no database of any rare plants exists in the subject area, and no rare plants or restricted weeds were observed on site. Additionally, no records of wildlife species-at-risk can be found in the HHS2NP lands and no Alberta Sustainable Resource Development concerns have been reported.**

The Migratory Birds Convention Act has implications for the timing of construction. Ground clearing in areas where migratory birds nest must be done before April or after August.

**The subject area does not lie within any environmentally significant areas as defined by Alberta Community Development.**

## 9.3 GEOTECHNICAL ASSESSMENT

A Geotechnical Assessment was conducted for the HHS2NP lands by Sabatini Earth Technologies in 2005 and 2006. The soil profile consists generally of a layer of clay overlying sand. No groundwater was encountered within the upper 7.6 metres in the six test holes drilled. The clay ranges in plasticity from low to high, with the highly plastic clay presenting challenges with respect to development. While soil conditions will not present any significant constraints for development, particular attention must be paid to the presence of highly plastic clay. Additional geotechnical work will be completed for portion of Harmony Park, and Lee at the time of subdivision.

**Overall, the assessments indicate that there are no geotechnical issues which are considered significant constraints for the proposed development.**

## 9.4 HISTORICAL RESOURCES IMPACT ASSESSMENT

A Historical Resources Overview (2006) was conducted for the HHS2NP area, followed by a Historical Resources Impact Assessment (HRIA) (2006 and 2013) by Stantec. The HRIA resulted in the discovery of four subsurface historical resource sites, all located within the ephemeral drainage course. No features such as tipi rings or rock cairns were found on remaining portions of the subject land. Each of the sites examined in full detail were of low cultural and historical significance. Based on the results of the HRIA, Stantec recommends Historical Resources Act (HRA) conditional clearance for the proposed development in Heritage Hills - however, it is required that a construction monitoring program for paleontological resources be undertaken. This should be provided prior to stripping and grading.

**No further study of these sites was recommended.**

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## 9.5 SLOPE STABILITY ASSESSMENT

In 2013 and 2014, a Slope Stability Assessment was completed by Levelton Consultants Ltd. Levelton was retained to review the available geotechnical and slope stability information for the Heritage Hills site, perform a slope stability analysis, determine the top of slope, Factor of Safety, 15% or greater slope stability line, and pre/post-grade development setback line as per the Town of Cochrane Municipal Development Plan and Land Use Bylaw.

The report found that the HHS2NP lands generally slope from north to south and includes two distinguished ravines. The majority of the HHS2NP lands have slopes of less than 15%. Within the ravine's side slopes, there are very small pockets of undevelopable unstable lands with a factor of safety greater than 1.5.

The lack of defined escarpments in the plan area is due to the undulating topography, which was formed by stormwater runoff channels, originating from the upper terrain to the north, and subsequent wind erosion. This origin resulted in relatively rounded ground surfaces with gradual slope steepening. Defining the top of slope lines for areas within the project site where the ground surface exhibits relatively rounded ground surface was not considered feasible.

The assessment established that the slopes within Stage 2 are safe with no signs of instability for a large portion of the subject lands. Levelton recommends:

- that no steepening of the overall slope or significant changes to the site grading within the HHS2NP area should be made without review by a qualified geotechnical engineer;

- site grading and cut/fill operations for development purposes should be designed and planned in collaboration with a qualified geotechnical engineer - final gradients of areas subject to site grading or cut/fill operations shall not exceed 25% (4H:1V); and
- to maintain stable conditions, management of surface water is imperative.

The onsite material is susceptible to erosion by running water and thus caution must be exercised during and after construction. An Erosion and Sediment Control Plan will need to be prepared and followed to ensure that excessive erosion does not occur, as this may lead to progressive instability of the entire slope.

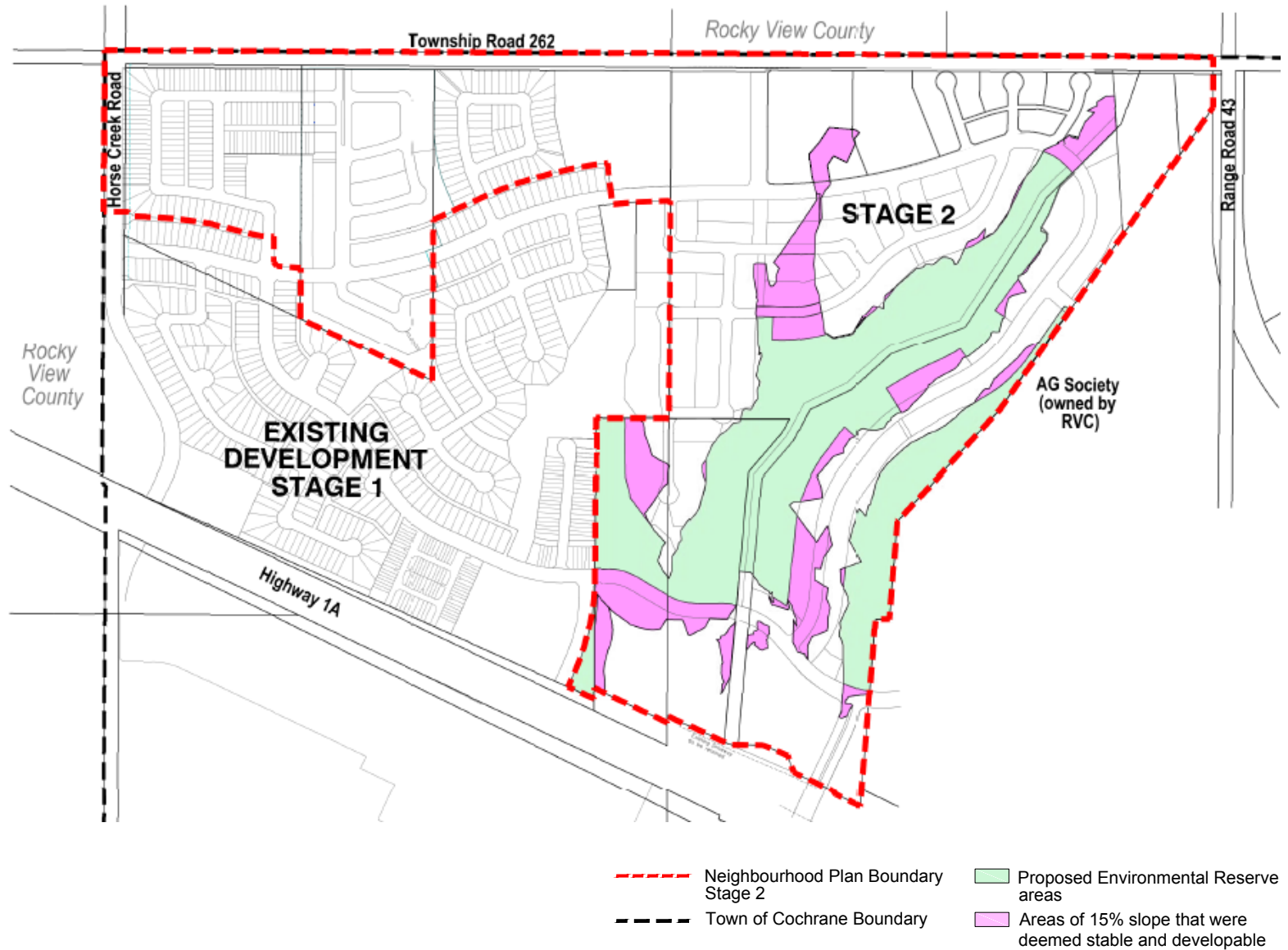
Small pockets of development were assessed and determined positive to the community as part of the Area Structure Plan process. These areas are identified in Pink on Figure 26, as they contribute to the principles established for the Heritage Hills Community. The proposal requires Council approval for the small pockets of development, in addition to, a relaxation of the 15m property line setback.

**Based on this information, the development will not negatively affect the slope, provided that the above recommendations are followed.**

**In 2015, at the request of the Town, additional drilling was completed to confirm test holes characteristics adjacent to old holes where clay was observed. The objective was confirm that soil characteristics and stability were assumed correctly. This work was completed and provided to the Town.**

To support the plan amendment, Geo-Slope Stability Services, have confirmed that the proposed areas of 15% slope that were previously deemed stable and developable as depicted in Figure 32 is still a valid conclusion with a 1.8 Factor of Safety.

**Figure 32:** Slope Stability in the HHS2NP Lands



# 10.0 MUNICIPAL ENVIRONMENTAL IMPACT STATEMENT (MEIS)



## VEGETATION

A Biophysical Inventory and Ecological Assessment have been completed for the HHS2NP lands by Stantec (2005) and URSUS Ecosystem Management Ltd. (2005). These assessments conclude that no database exists of any rare plants in the subject area, and no rare plants or restricted weeds were observed on site. The most significant habitat, within the natural drainage channel, will be protected through the designation of these lands as Environmental Reserve.

## WILDLIFE

Additionally, no records of wildlife species-at-risk can be found in the subject area and no Alberta Sustainable Resource Development concerns have been reported.

## ECOLOGICALLY SENSITIVE LANDS

The subject area does not lie within any environmentally significant areas, as defined by Alberta Community Development.

## SURFACE AND BEDROCK GEOLOGY

A Geotechnical Assessment has been conducted for the lands in the HHS2NP by Sabatini Earth Technologies in 2005 and 2006. There are no geotechnical issues which are considered significant constraints for the proposed developments. The soil profile consists generally of a layer of clay overlying sand.

No groundwater was encountered within the upper 7.6 metres in the six test holes drilled. The clay ranges in plasticity from low to high, with the highly plastic clay presenting challenges with respect to development.

While soil conditions will not present any significant constraints for development, particular attention must be paid to the presence of highly plastic clay, which will need to be addressed at the detailed design stage.

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## **TOPOGRAPHY & SLOPES**

A Slope Stability Assessment was completed by Levelton Consultants Ltd. in 2013 and 2014. Levelton was retained to review the available geotechnical and slope stability information for the Heritage Hills site and perform a slope stability analysis.

The report found that the HHS2NP area generally slopes from north to south and has two distinguished ravines. These ravines exist within the eastern portion of the Plan area. The majority of the site has slopes of less than 15%, and slope angles can be more than 33% within ravine side slopes. The assessment established that the slopes of the subject site appear safe with no signs of overall instability, with a factor-of-safety exceeding 1.5 in most cases.

## **WATER QUALITY AND QUANTITY**

The stormwater management facilities proposed for the development of HHS2NP have been designed to provincial standards to ensure that release rates and water quality are met or exceeded. Further information on the water quality and quantity for the subject lands area can be found in the Heritage Hills Staged Master Drainage Plan report, which has been submitted under separate cover. This report was prepared by LGN Consulting Engineering Ltd in December, 2013.

## **STORMWATER STUDY**

LGN Consulting Engineering Ltd prepared a Staged Master Drainage Plan for the entire Heritage Hills community in December, 2013. This report has been submitted under separate cover.



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## **GEOTECHNICAL INVESTIGATION**

A Geotechnical Investigations were prepared by Sabatini Earth Technologies in 2005 and 2006, and was submitted to the Town of Cochrane under separate cover during the Heritage Hills ASP application process. Additional geotechnical assessments will be provided at subdivision stage for portions of Harmony Park and Lee.

## **FLOOD POTENTIAL AND PROPOSALS FOR MITIGATION**

There are no floodway or flood fringe lands within the HHS2NP lands.

## **AIR QUALITY**

The HHS2NP area is predominantly a residential neighbourhood with an abundance of open space. The design of the community is such that pedestrian and bicycle transportation are encouraged as an alternative to internal use of motor vehicles. Although any development that results in the removal of existing vegetation will have some impact on existing air quality, the developer groups intends to incorporate public landscaped areas and private landowner plantings to replace any natural vegetation lost during construction.

## **VISUAL RESOURCES**

The rolling terrain of the HHS2NP neighbourhood is visually significant in the Town of Cochrane. The proposed development of the HHS2NP lands has paid close attention to the viewsheds within the plan area, and has designed the community to preserve these views and make them available to all residents within the neighbourhood and surrounding areas.

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## **LAND AND RESOURCE USE**

Urban development, by nature, is an intensive form of development and will disturb most of the lands on which it is placed. The land development concept of the HHS2NP proposes a high-density urban development that will provide residential accommodation to a large amount of residents while utilizing less land. Through these means, the concept plan for the HHS2NP is an environmentally responsible design that aims to achieve highest and best use of the developable land. Further details on the density provided in the plan area can be found in this report under Section 3.8.

## **CULTURAL AND HERITAGE RESOURCES**

A Historical Resources Overview (2006) was conducted for the entire HH ASP area, followed by a Historical Resources Impact Assessment (HRIA) (2006 and 2013) by Stantec. The HRIA resulted in the discovery of four subsurface historical resource sites, all located within the ephemeral drainage. No features such as tipi rings or rock cairns were found on remaining portions of the subject land. Each of the sites examined in full detail were of low cultural and historical significance and no further study of these sites was recommended.

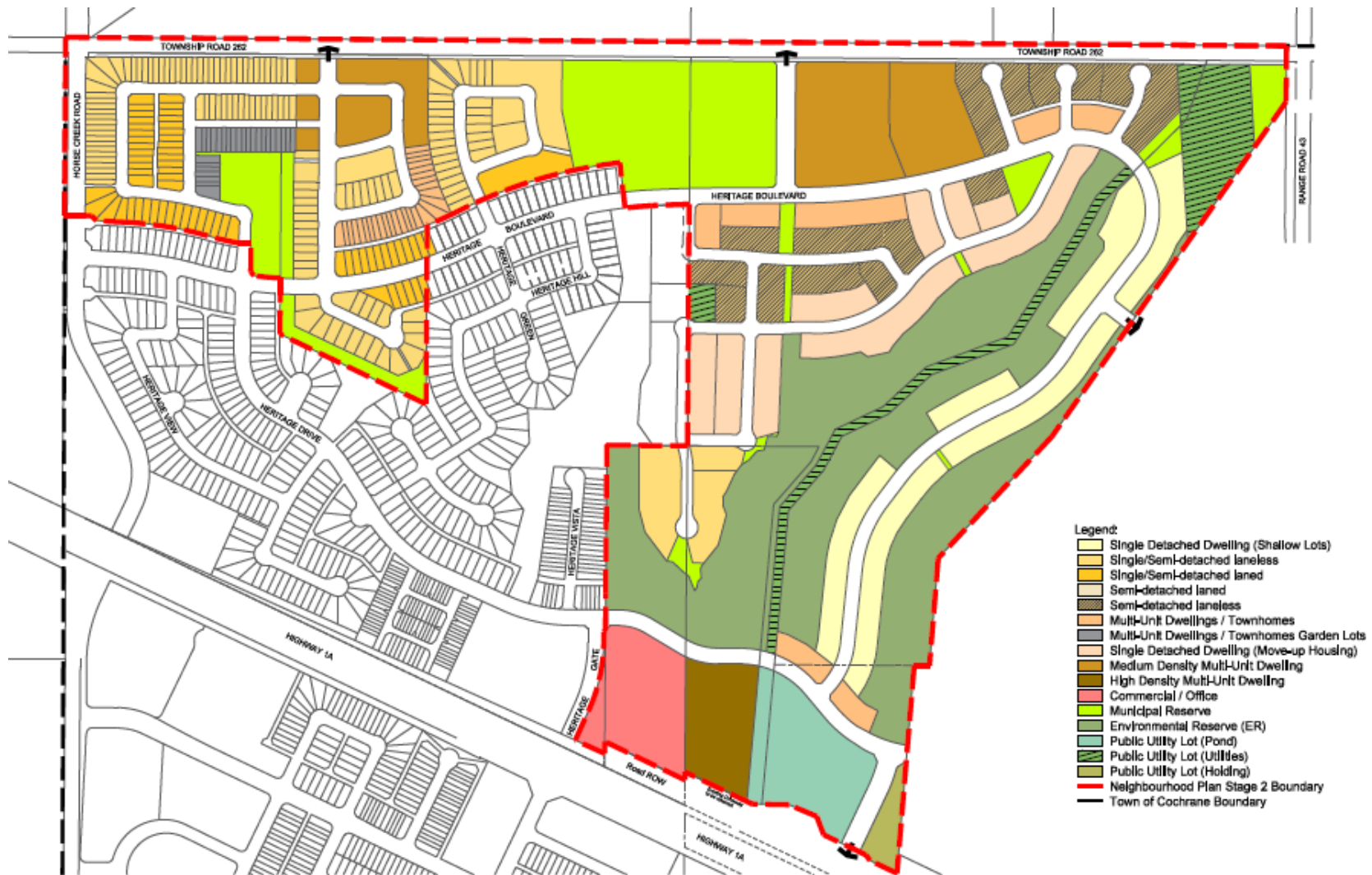
## **CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT**

A construction and demolition waste management plan will be provided with each subdivision application and Development Permit application to ensure proper procedures are followed at the time of construction.

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# THE APPENDIX

## APPENDIX A: NEIGHBOURHOOD CONCEPT PLAN







A

NEIGHBOURHOOD PARK



# B COMMUNITY LINEAR TRAIL 1



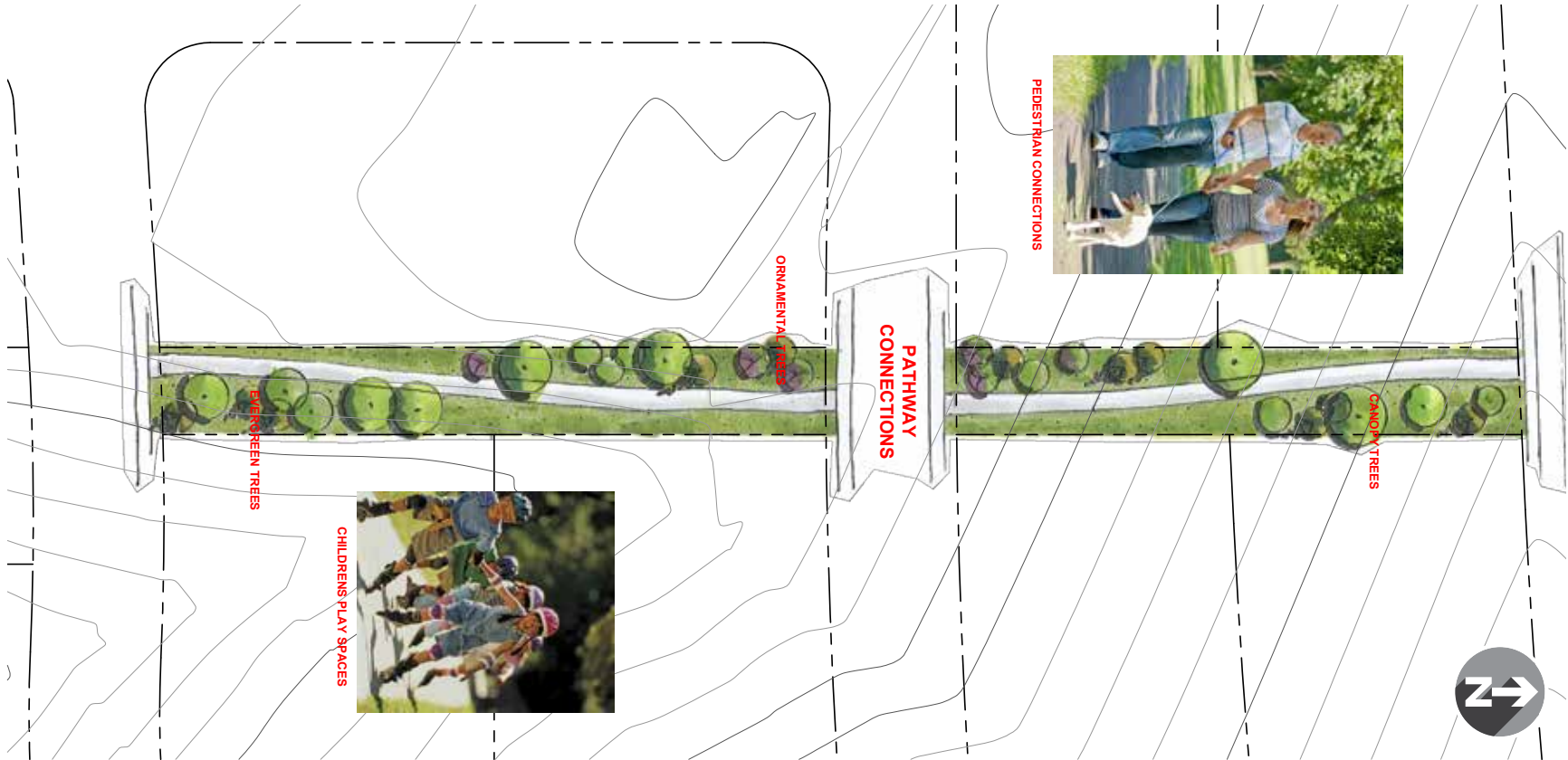
# C JOINT USE SCHOOL SITE





# D

## COMMUNITY LINEAR TRAIL 2



# E

## LOCAL TOT LOT



PASSIVE RECREATION



FORMAL SEATING PLAZA

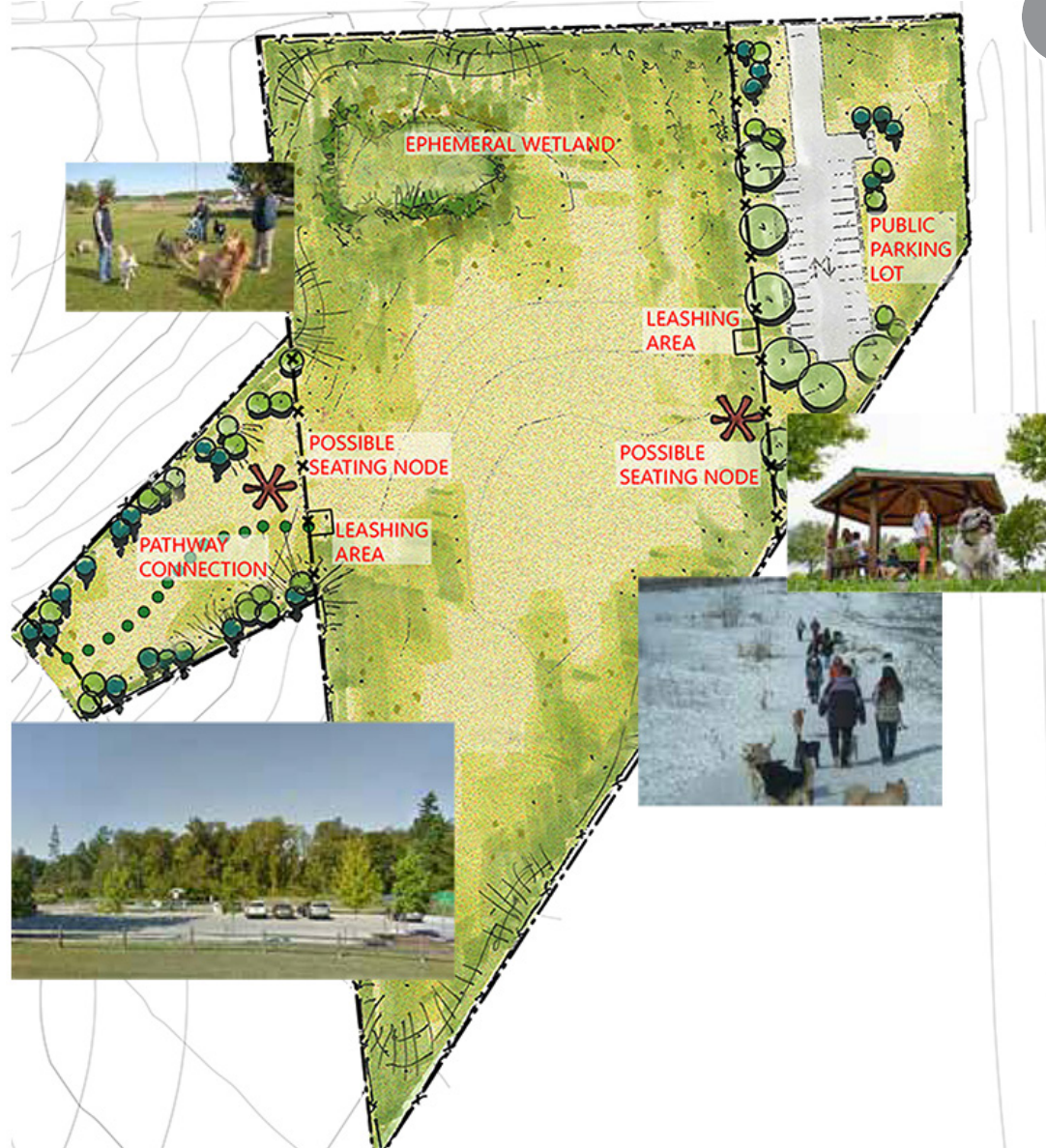


THEMED PLAY AREAS



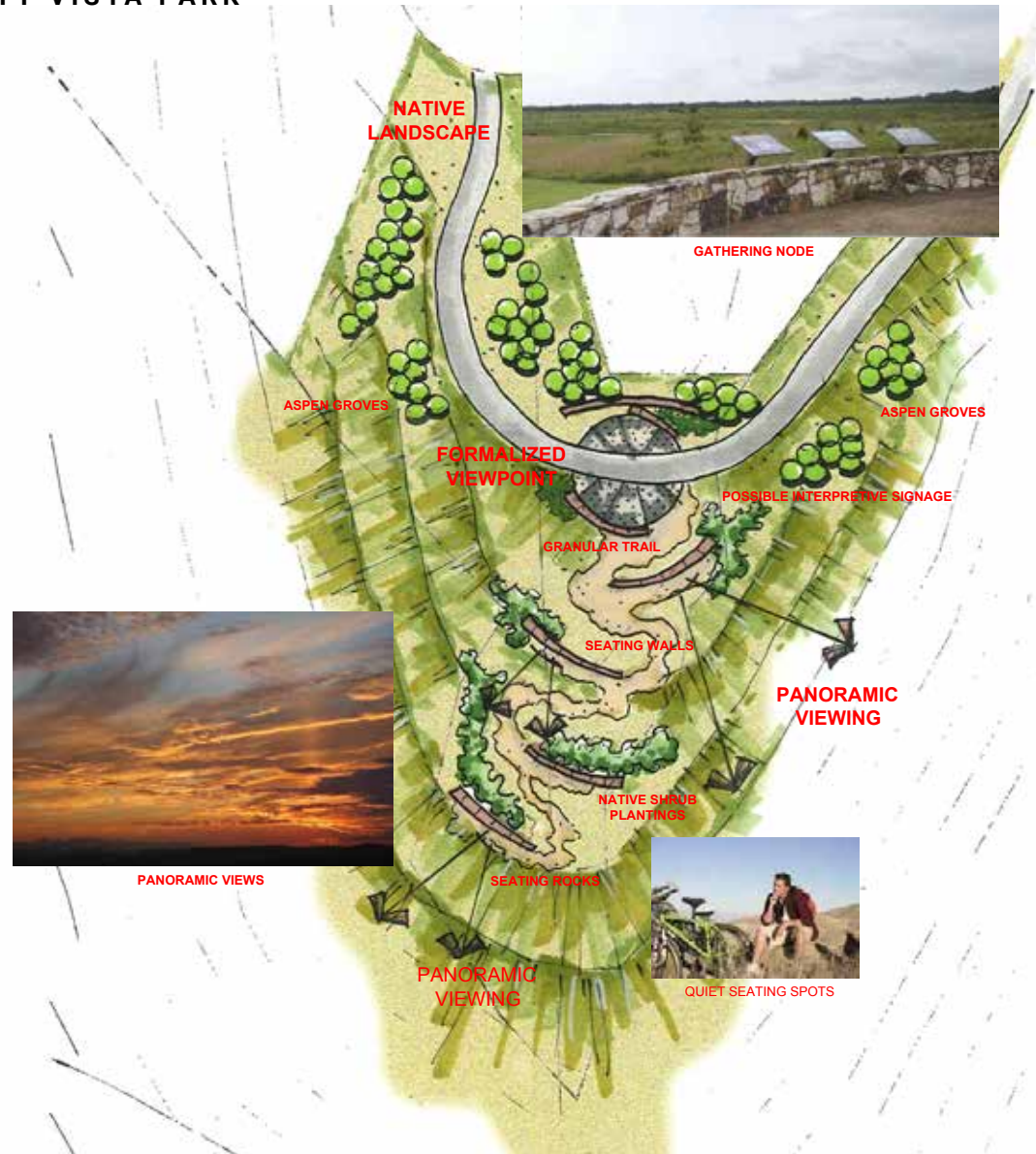
F

## OFF-LEASH DOG PARK



G

# COMMUNITY VISTA PARK







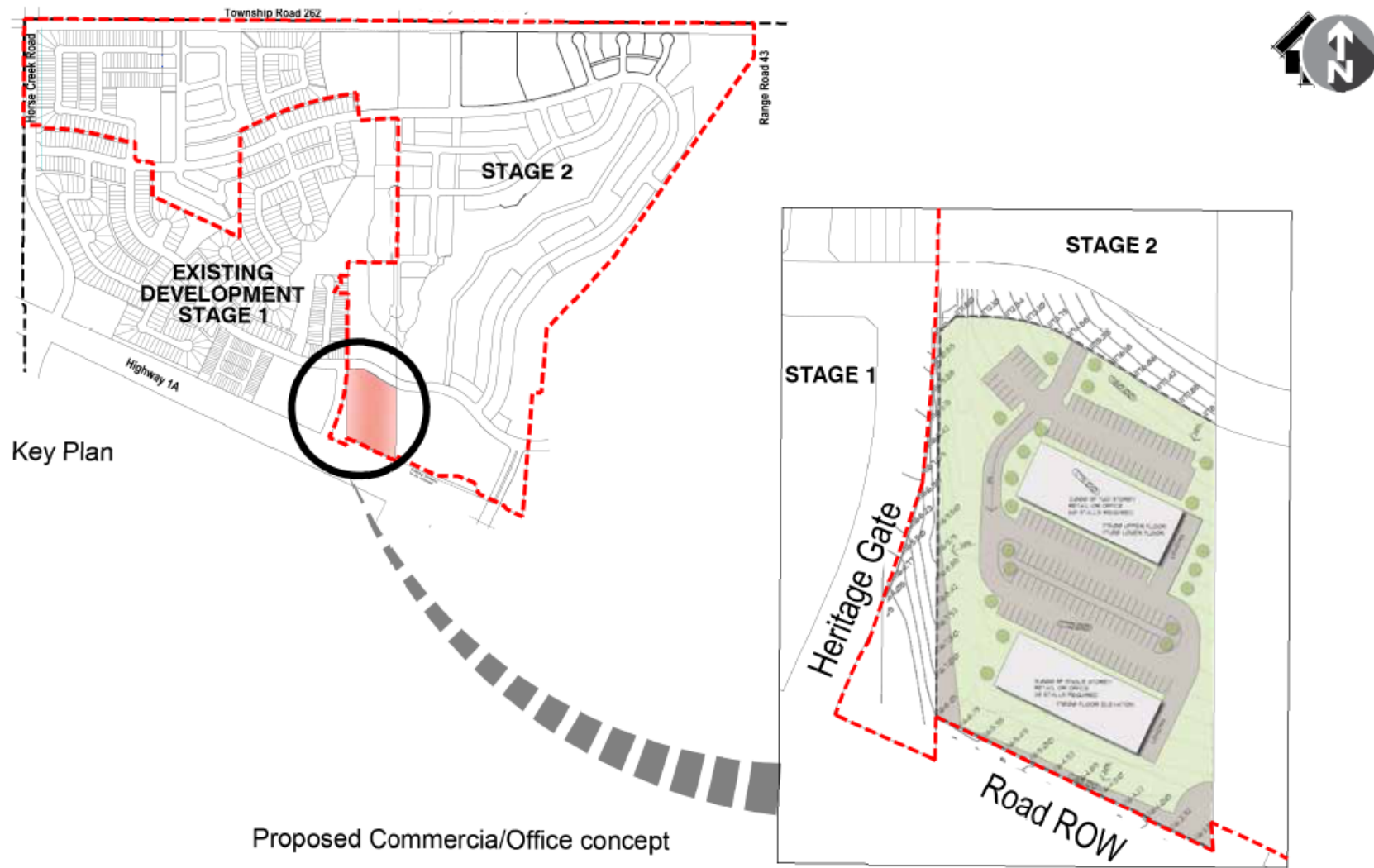
## NATURAL FEATURE COMMUNITY PARK



## STORM POND



## APPENDIX C: SAMPLE COMMERCIAL CONCEPT





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## APPENDIX D: SAMPLE HOUSING PRODUCT EXAMPLES



*Arts and Crafts Architectural Design*



*Bungalow Housing Product 1*



*Bungalow Housing Product 2*



*Timber-themed Architectural Design*



*Timber-themed Wide Shallow Housing Product*



*Timber-themed Semi-Detached Housing Product*



*Timber-themed Condominium Example*



*Garden Lot Townhome Example Rendering*

## APPENDIX E: MUNICIPAL RESERVE BY STAGE OF DEVELOPMENT

| STAGE 1 |                                | hectares    | acres  |
|---------|--------------------------------|-------------|--------|
| Stage 1 | Total Area                     | 37.93       | 93.73  |
|         | Less ER                        | <b>3.44</b> | 8.50   |
|         | Less ER Proposed               | 0.00        | 0.00   |
|         | Less PUL (utilities)*          | 0.00        | 0.00   |
|         |                                |             |        |
|         | Total GDA                      | 34.49       | 85.23  |
|         | 10% MR Required                | 3.45        | 8.52   |
|         | MR dedicated to date           | 1.18        | 2.92   |
|         | 10% MR Owing remaining         | 2.27        | 5.61   |
|         |                                |             |        |
|         | MR Proposed as per concept     | 1.18        | 2.92   |
|         | Balance (under dedicated)      | 2.27        | 5.61   |
|         |                                |             |        |
| STAGE 2 |                                | hectares    | acres  |
| Stage 2 | Total Area                     | 69.86       | 172.63 |
|         | Less ER                        | 0.00        | 0.00   |
|         | Less ER Proposed               | 12.35       | 30.52  |
|         | Less PUL (utilities)*          | 2.68        | 6.63   |
|         |                                |             |        |
|         | Total GDA                      | 54.83       | 135.49 |
|         | 10% MR Required                | 5.48        | 13.55  |
|         | MR dedicated to date           | 1.78        | 4.40   |
|         | 10% remaining MR Owing         | 3.70        | 9.15   |
|         |                                |             |        |
|         | MR proposed as per concept     | 7.48        | 18.48  |
|         | Cash-In-Lieu                   | 0.00        | 0.00   |
|         | Balance Owing (overdedication) | -2.00       | -4.94  |

\*An agreement with Town of Cochrane Administration has determined that the natural drainage channel and eastern pipeline ROW should not be included in the GDA.

| LACKEY LANDS**   |                                | hectares    | acres       |
|------------------|--------------------------------|-------------|-------------|
| Future Stage 3** | Total Area                     | 4.86        | 12.01       |
|                  | Less ER                        | 0.00        | 0.00        |
|                  | Less ER Proposed               | 2.26        | 5.58        |
|                  | Less PUL (utilities)*          | 0.00        | 0.00        |
|                  |                                |             |             |
|                  | Total GDA                      | 2.60        | 6.42        |
|                  | 10% MR Required                | 0.26        | 0.64        |
|                  | MR dedicated to date           | 0.00        | 0.00        |
|                  | 10% MR Owing                   | 0.26        | 0.64        |
|                  |                                |             |             |
|                  | MR Provided                    | <b>0.08</b> | <b>0.20</b> |
|                  | Cash-in-lieu (under dedicated) | <b>0.18</b> | <b>0.44</b> |
|                  | Balance Owing                  | <b>0.00</b> | <b>0.00</b> |

| SUMMARY                                    |  | hectares | acres  |
|--|--|----------|--------|
| Heritage Hills Community Area:             |  | 112.65   | 278.36 |
| Less Environmental Reserve:                |  | 18.05    | 44.60  |
| Less PUL (Utilities):                      |  | 2.68     | 6.63   |
| Heritage Hills GDA:                        |  | 91.92    | 227.14 |
| Total MR obligation                        |  | 9.19     | 22.71  |
| Total MR dedicated in Stage 1 and Stage 2: |  | 2.96     | 7.31   |
| Stage 1 MR future cash in lieu :           |  | 2.27     | 5.61   |
| Stage 2 MR future dedication:              |  | 5.70     | 14.04  |
| Stage 2 future Cash-in-lieu:               |  | -2.00    | -4.89  |
| Stage 3 future MR Dedication:              |  | 0.08     | 0.20   |
| Stage 3 future Cash-in-lieu:               |  | 0.18     | 0.44   |
| Total MR Dedication as Land:               |  | 8.74     | 21.60  |
| Total MR as cash in lieu :                 |  | 0.45     | 1.11   |

\*\*The Lackey Family will be submitting a land use at a later date

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## **APPENDIX F: March 29 Council Direction**

That the Heritage Hills Neighbourhood Plan be adopted and further that an appendix be added to the Neighbourhood Plan capturing the following requirements:

That restrictive covenants be developed and registered against the land prohibiting the construction of retaining walls of any size within the Neighbourhood Plan area;

That Third Party Geotechnical on site and reviewing next steps be required throughout development of the Neighbourhood Plan area;

That the area within the Neighbourhood Plan must meet a minimum Factor of Safety of 1.8 at the property line for all areas to be developed;

That appropriate wording be approved by Council for inclusion within any future Subdivision/Development Agreement applicable to any lands within the Neighbourhood Plan area to provide additional security and delay final transfer and responsibility of any ER areas until two years following the date at which the final home has been developed within the Neighbourhood plan area;

AND FURTHER, that no land use redesignation will be considered for the area within the Neighbourhood Plan until such time as traffic concerns in relation to the intersection at Highway 22 and Highway 1A have been adequately addressed.







# HERITAGE HILLS

STAGE 2  
NEIGHBOURHOOD PLAN

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MARCH 29, 2016