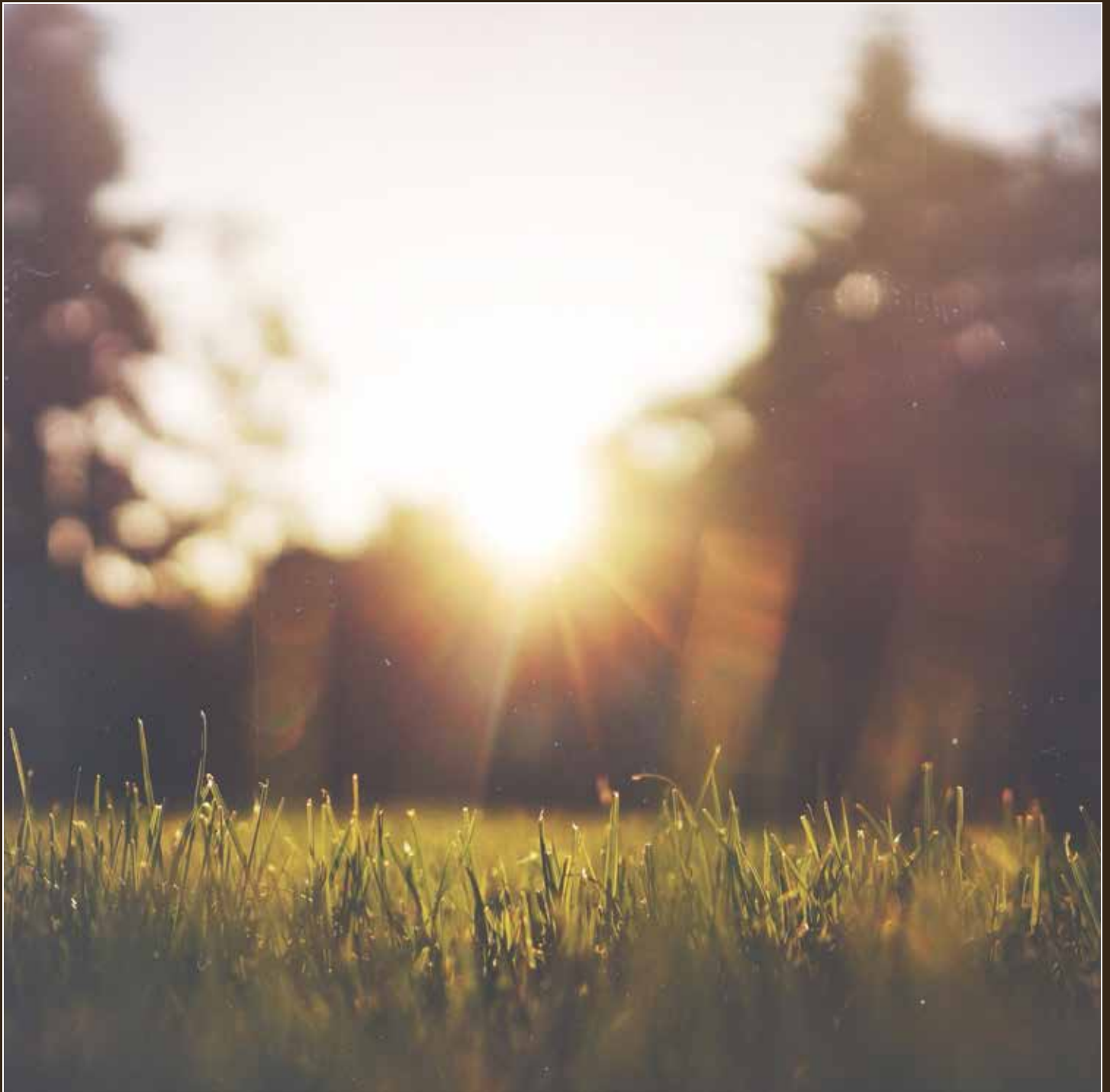


# HERITAGE CROSSING



Area Structure Plan



# Heritage Crossing Area Structure Plan

## Prepared By

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## Prepared For

2291463 AB Ltd.

August 2023

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## 1.0 Introduction



# Land Acknowledgment

We acknowledge all those who call this land home, past, present, and future. May we respect one another, find understanding together, and recognize the benefits that this land provides to all living things who share it.



## 1.1 Plan Purpose

The Heritage Crossing Area Structure Plan (the Plan) is a statutory document that establishes the vision for the Plan Area. The Plan guides development of ± 39.11 acres (15.83 ha) on two separate titles all contained within the northwest quarter section 32-21-29-W4M, located in Foothills County immediately east of Second Street East and south of Dunbow Road (**Figure 1: Site Location**).

An area structure plan must outline the goals, objectives, land use, density, phasing, infrastructure and servicing requirements, environmental considerations, and housing types proposed for the site. The Heritage Crossing ASP provides the policy and the implementation to realize the resulting community as a welcoming, sustainable neighbourhood that celebrates the character of Foothills County in this location.

## 1.2 Vision

Heritage Crossing is thoughtfully designed as a fully serviced residential neighbourhood with a variety of housing forms that integrate into the Hamlet of Heritage Pointe. The site design celebrates open space amenity and protects the environment, demonstrates efficiency in design and servicing, and provides a unique balance of rural and urban living for Foothills County residents to call home.

Offering single-family and multi-family forms of housing, Heritage Crossing provides a variety of options to suit different lifestyles from the typical single-family home to semi-attached villas. Heritage Crossing is situated within an extensive open space network that connects areas within the community and offers passive and active recreational opportunities. Strategic landscaping and a buffer area maintain the privacy of adjacent residences. Environmental Reserve preserves significant environmental features to both retain natural processes and protect the site in perpetuity for future generations.





## 1.3 Objectives

The Plan objectives reflect the aspirations of applicable Foothills County policies, the existing and future area residents, regional stakeholders, and the developer. These objectives provide the framework to guide development over time and achieve the vision for Heritage Crossing as an integrated and economically viable community. The overarching objectives of the Plan are:

- To establish a policy framework to guide development of Heritage Crossing in a manner that aligns with existing local and regional policy and benefits the Hamlet of Heritage Pointe and Foothills County residents;
- To define all lands within the Plan Area and how they integrate with and enhance existing uses in the community.
- To present a comprehensive review of the existing site conditions, constraints, and opportunities within the Plan Area;
- To develop sustainability principles to guide the community design to foster long term preservation of environmentally and historically sensitive areas.
- To outline a sustainable community servicing plan that properly sets the stage for connections to stormwater, wastewater, and potable water servicing opportunities;
- To provide a framework that outlines the configuration of land uses, transportation networks, open space, and utilities to guide the development of a vibrant, sustainable, welcoming community in Foothills County.

## 1.4 Background

The Heritage Crossing Area Structure Plan has evolved from ongoing planning efforts involving the developer, area residents, the Foothills County administration, and Foothills County Council. The result is a planning framework for the sensitive development of a unique parcel of land at the intersection of Dunbow Road and Second Street East, south of the Heritage Pointe hamlet boundary. **Figure 1:** Site Location identifies the plan area in relation to the surrounding rural/urban transition.

Heritage Crossing is a vibrant mix of integrated residential and open space land uses designed to thrive as a new neighbourhood immediately South of the existing Hamlet of Heritage Pointe. The “Hamlet” designation and boundary was established following a public hearing of Council on 4 May 2000. The Hamlet boundary is, as yet, only recognized at the municipal level. Over time the hamlet boundary has varied to include the Pinehurst community and additional publicly and privately owned lands.

Heritage Crossing draws on the aesthetic character and architectural style of the Hamlet to provide Foothills County residents with a stunning residential neighbourhood. The Plan takes its cues from the adjacent residential developments and addresses the needs of new residents, while supporting existing commercial businesses, and offering an integrated and efficiently serviced community.

## 1.5 Interpretation & Definitions

The meaning of some of the key words used throughout the Plan are described below:

**Shall:** a directive term, indicating that the actions outlined are mandatory; therefore, Administration, the developer, the Development Authority, and Subdivision Authority must comply without discretion.

**Should:** a directive term, indicating a strongly preferred course of action, but one that is not mandatory.

**May:** a discretionary term, meaning the policy in question can be enforced by Foothills County if it chooses to do so, depending on the circumstances of the application.





## 2.0 Regulatory Framework





## 2.1 Authority of the Plan

The Plan was prepared in accordance with the provincial requirements outlined in section 633 of the Municipal Government Act (MGA) (Statutes of Alberta, RSA 2000 Chapter M-26.1), specifically:

*633(1) For the purpose of providing a framework for subsequent subdivision and development of an area of land, a council may by bylaw adopt an area structure plan.*

*(2) An area structure plan*

*(a) must describe*

*(i) the sequence of development proposed for the area,*

*(ii) the land uses proposed for the area, either generally or with respect to specific parts of the area,*

*(iii) the density of population proposed for the area either generally or with respect to specific parts of the area, and*

*(iv) the general location of major transportation routes and public utilities, and*

*(b) may contain any other matters, including matters relating to reserves, as the council considers necessary.*

The current MGA also states that an ASP must conform to the MGA, any existing Intermunicipal Development Plans (IDP), the Municipal Development Plan (MDP), and all other statutory plans.

## 2.2 Governing Policies

Due to its location within Foothills County and its proximity to the City of Calgary, Heritage Crossing is subject to several statutory plans which are summarized below. These plans include the South Saskatchewan Regional Plan (SSRP), the Calgary Metropolitan Region (CMR) Growth Plan (GP), the Foothills County/City of Calgary Intermunicipal Development Plan (IDP), the Foothills County Municipal Development Plan 2010, the Foothills County Growth Management Strategy, and the Foothills County Land Use Bylaw.

### 2.2.1 South Saskatchewan Regional Plan

The South Saskatchewan Regional Plan (SSRP) is the highest-level policy in the South Saskatchewan region; as such, all plans in the region must align with its directives. The SSRP provides the long term vision for the region, and guides all municipalities under its influence. The SSRP promotes efficient use of land and servicing; this encourages municipalities to infill and develop properties that can be serviced communally and do not prematurely fragment agricultural land.

### 2.2.2 Calgary Metropolitan Region Growth Plan

Adopted by the Minister of Municipal Affairs in August 2022, the Calgary Metropolitan Region Growth Plan establishes the vision and policy framework to guide sustainable, efficient development in the Calgary Metropolitan Region through a collaborative, intermunicipal process.

The Heritage Crossing ASP aligns with the Growth Plan's Regional Vision to create a thoughtfully designed, sustainable, fully-serviced, diverse community that serves the needs of the local residents with an eye for the needs of the future. The Heritage Crossing ASP aligns with the regional policies 3.1.1, particularly 3.1.1.3 related to identifying impacts of development on agricultural land and providing mitigation measures.

Heritage Crossing is designed to meet the Residential Community Placetype criteria in accordance with the policies of the Growth Management Plan 3.1.4.4. Heritage Crossing is intended to be an expansion of and included in the Hamlet of Heritage Pointe.

In accordance with the Regional Evaluation Framework (REF) policy 4.1 c), the Plan was submitted to the Calgary Metropolitan Region Board (CMRB) for evaluation as it is a new Area Structure Plan proposing more than 80 units outside a Preferred Growth Area.

## 2.0 Regulatory Framework



### 2.2.3 City of Calgary, Foothills County Intermunicipal Development Plan

The Heritage Crossing plan area is within the Foothills County / City of Calgary IDP as it is located 1.6 kilometres south of the City of Calgary Limits. The ASP is required to be referred to the City of Calgary as the site is within the identified circulation referral area.

The IDP identifies this area as a place that can accommodate residential growth in Foothills County. Section 2.3 includes policies to protect regional assets such as the Pine Creek Watershed and other environmentally significant features, which also require circulation to the City of Calgary for comment. Furthermore, policies in section 3.7 Transportation Infrastructure will apply to the development, specifically 3.7.1.3 related to development along provincially administered transportation networks, which states:

*"The two municipalities should consult jointly with Alberta Transportation to coordinate planning and development along provincially administered transportation links in areas of mutual interest. This consultation may include, among other things; advocating for mutually beneficial improvements, promoting opportunities for cost sharing, consideration of transportation design principles for wildlife migration, compliance with dark skies regulations in each municipality, and/or a consideration of scenic landscapes" (p 26).*

### 2.2.4 Foothills County MDP

Under the Municipal Government Act (MGA) every municipal council must adopt a Municipal Development Plan (MDP). An MDP is a high-level planning document that establishes the overall vision for future growth and development in a municipality. Foothills County's Municipal Development Plan 2010 (MDP 2010) provides the following vision:

*"The MD of Foothills (sic) encompasses a diverse rural landscape in which leadership and planning support a strong agricultural heritage, vibrant communities, a balanced economy and the stewardship of natural capital for future generations" (p 4).*



### **2.2.5 Foothills County Growth Management Strategy**

The Foothills County Growth Management Strategy (GMS) builds on the direction provided in the MDP 2010 by identifying opportunities for growth and development and allocating it to logical areas “where it can be supported by a formal planning framework” (Foothills GMS, 2013, pg. 1). The strategy divides Foothills County into five (5) districts and identifies the Central District as the area that will accommodate most of Foothills County’s growth. This district is located directly south of Calgary and contains the Hamlets of Heritage Pointe, DeWinton and Aldersyde, both the Highway 2 and Highway 2A corridors, and surrounds the towns of Okotoks and High River. It also contains a number of recreational features, including five (5) golf courses and Spruce Meadows, a globally recognized equestrian facility.

Heritage Crossing is located in the Central District. Due to its proximity to major highways, existing urban development, and available piped water and wastewater servicing, this area is recognized as the growth engine for Foothills County. The Central District is where most development is intended to occur within Foothills County.

Foothills County intends to undertake further planning (including a plan for the Central District) to provide guidance on the principles, locations, and desired future growth and development.

### **2.2.6 Foothills County Land Use Bylaw**

The Foothills County Land Use Bylaw (LUB) divides municipal lands into a variety of land use districts (or zones). These districts determine the rules and requirements for developing the land. The LUB outlines the processes for redesignation, subdivision and development permit applications within Foothills County.

The Heritage Crossing ASP proposes to utilize the following land use districts:

**Residential Community District (RC)** to accommodate seniors’ bungalows, and the traditional single-family home;

**Residential Multi-Family (RMF)** to accommodate the semi-detached, villa housing typology;

**Municipal Land Reserve (MLR)** to provide public lands, an open space network, and parks or schools throughout the community; and,

**Public Utility District (PUL)** to provide for two stormwater retention ponds and lift stations.

The Plan also proposes Environmental Reserve to protect in perpetuity the environmentally significant features throughout the Plan Area.



## 2.0 Regulatory Framework



### 2.3 Approvals Process

Foothills County requires the preparation of an Area Structure Plan (ASP) to provide a framework for subsequent subdivision and development within the Plan Area.

Foothills County will consider adoption of this Area Structure Plan (the Plan) pursuant to the requirements of the Municipal Government Act. Following circulation of the Plan to the affected landowners in the area and a formal review conducted by County planning staff, the Plan will be presented to Foothills County Council. Council will consider the Plan at the First Reading and Public Hearing, at which time landowners have the opportunity to speak in support or opposition of the proposed Plan. Should the Plan be granted First Reading by Council, the Plan must be submitted to the Calgary Metropolitan Region Board (CMRB) for review in accordance with the Growth Plan. Following CMRB approval, the Plan must be considered again by Foothills County Council for third and final reading before it can be adopted through bylaw.

Subsequently, consideration of land use amendment, subdivision, and development permit applications will follow in accordance with the policies of the Plan and other Foothills County requirements.

### 2.4 Plan Implementation, Review and Amendment

This section describes the implementation process to ensure development within Heritage Crossing achieves the aspirations of this Plan in accordance with guiding policy.

The Plan is a statutory document that must be passed by Foothills Council following a statutory hearing and enacted through passing of a bylaw in accordance with the Municipal Government Act. The Plan does not supersede or replace any higher order statutory policy and is implemented in accordance with the Municipal Government Act, CMR Growth Plan, Intermunicipal Development Plan, Municipal Development Plan, Land Use Bylaw, and Growth Management Strategy.

The Plan provides a framework of policies that must be considered prior to approval of subsequent land use amendment and/ or subdivision applications for residential and development with the plan area.

#### 2.4.i

Periodic plan review and amendment may occur as required due to the evolving nature of the natural environment, changing market conditions, and local economies. Any amendment to the Heritage Crossing Area Structure Plan that may be required shall be conducted in accordance with the Municipal Government Act.



📍 3.0 Existing Site & Context





### 3.1 Regional Context & Plan Location

Heritage Crossing is a ±39.11 acre (±15.83 ha) residential development located south of the Heritage Pointe Hamlet in Foothills County. The new community is strategically located 1.6 km south of the City of Calgary limits and is bound by Dunbow Road to the north, Second Street E to the west and Eighth Street E to the east (refer to **Figure 2**: Regional Context). This location offers an alternative to high-density urban living while maintaining convenient access to the provincial highway system to connect residents to the nearby amenities. Heritage Crossing is close to local retail, services, and dining amenities within Heritage Pointe. Fire services and emergency response is provided by the Heritage Pointe Fire Hall which is in direct proximity to the site north of Dunbow Road. Heritage Crossing sits approximately 2.5 kilometres south of the Bow River and offers residents access to the Provincial Park system.

The lands surrounding the Heritage Crossing Plan Area possess a distinctly mixed rural and urban character. The regional landscape varies and includes urban communities such as Legacy, semi-urban communities such as Heritage Pointe and Artesia, and Country Residential acreage developments. Other existing land uses in the vicinity include home-based businesses, as well as three (3) world class golf courses (Heritage Pointe, Cottonwood, and Carnmoney golf courses) a commercial centre, and places of worship.

**Figure 2:** Regional Context, identifies the Plan Area in its regional context.

### 3.2 Legal Description

Heritage Crossing is located on lands described below:

Table 1: Legal Description

Owner	Legal Plan Description	Title Number	± Acres/Ha
2291463 Alberta Ltd.	NW 32-21-29-W4M, Plan 1530 LK, Block 1	201 206 605	6.89 / 2.78
2291463 Alberta Ltd.	NW 32-21-29-W4M, Plan 2211669, Lot 5, Block 7	221 235 030 +1	32.22 / 13.04
<b>TOTAL</b>			<b>39.11 / 15.83</b>

# 3.0 Existing Site & Context

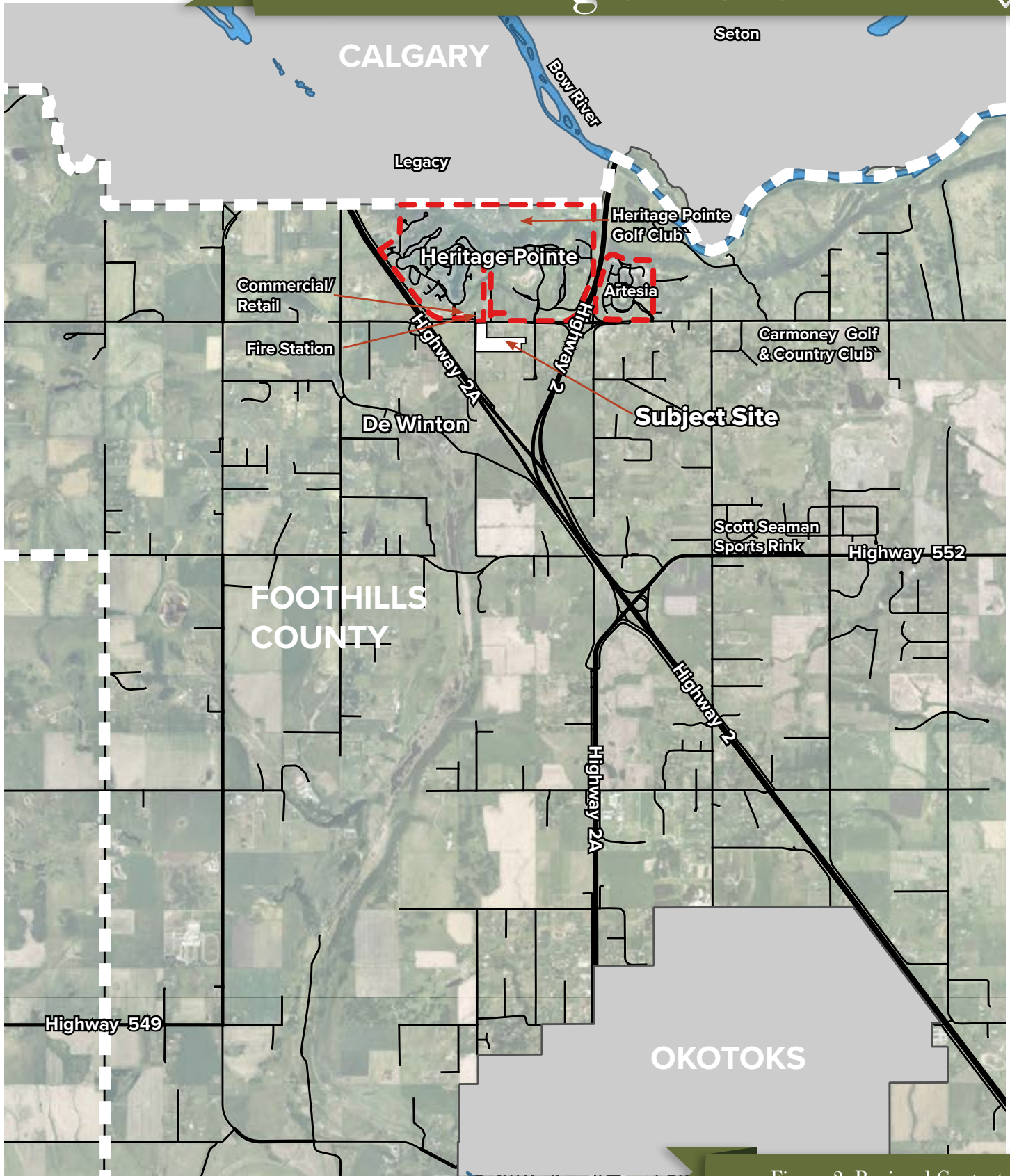


Figure 2: Regional Context

- Subject Site
- Hamlet of Heritage Pointe
- Central District (Growth Management Strategy)



### 3.3 Existing Topography

The Heritage Crossing Plan Area is located on the uphill side of a large ravine that leads under Dunbow Road eventually to Pine Creek. The concept design takes advantage of a relatively flat area with minimal topographic variations. The eastern most boundary of the site is bordered by a ravine that is protected as Environmental Reserve which provides a buffer between Heritage Crossing and the existing single-family residences.

The site drops from 1061 metres above sea level (masl) at the southwest corner to 1052.5 masl on the north with an average 2% slope. **Figure 3** identifies the site topography.

### 3.4 Hydrology & Drainage

There are two drainage courses that bisect the study area; the major drainage course runs from south to north along the east boundary of the proposed development and a minor course runs from south to north along the middle of the proposed development. Both natural drainage courses are protected as environmental reserve.

A Stormwater Management Plan was prepared by LGN Consulting Engineering Ltd. The study addresses overall surface water runoff in the study area to assess pre-development runoff discharge and the operation of the proposed ponds under post-development conditions. The Conceptual Design Report conducted by Associated Engineering includes a review of the structural, geotechnical, and hydrogeological engineering considerations, and the assessment of subsurface drainage conditions, underground piped drainage system, and the drainage of individual development lots.

The Stormwater Management Plan by LNG and the Conceptual Design Report conducted by Associated Engineering are detailed in Section 6 of this ASP and have been submitted to Foothills County under separate cover. **Figure 3** identifies the site topography and drainage.

# 3.0 Existing Site & Context



- Subject Site
- Natural Drainage Draw
- 0.5m Contours
- 1.0m Contours



Figure 3: Topography & Drainage



## 3.5 Soils & Surficial Geology

Topsoil was encountered at the surface in all the boreholes. The topsoil deposits vary across the site, especially within low-lying areas near the toe of slopes.

The soil assessment revealed near-surface soil conditions of glaciolacustrine deposits consisting of a conglomerate of types of materials ranging from silts and clays to well-sorted silty sand and gravelly deposits.

The thicknesses of topsoil ranged from 50 – 200mm and varied significantly across the site. The material encountered below the topsoil consists of the following from 1.8 metres below grade to a maximum of 12.2 metres below grade: silty sand, sand, glacial till, sandy/silty gravel, siltstone/sandstone bedrock. The sandy gravel soils provided effective refusal at depths of 5.2 and 5.5 metres below existing grade. The bedrock encountered between 6.1 and 9.1 metres below existing grade and was augerable.

Some perched water pockets, typically in more permeable soil layers, were encountered within the silty clay, particularly in the southern half of the development. Water was also encountered near the bedrock interface. These water pockets may be encountered within excavations for deep utilities or basements, however it is expected that the seepage from these layers can be controlled.

### 3.5.i

The encountered topsoil thicknesses from the boreholes shall not be used for topsoil stripping volume calculations without being supplemented from hand-dug test pits.

## 3.6 Historical Resources

Consideration of historic resources is a crucial component of sensitively and sustainably planning a new community. Given that many historic resources are not visible on the surface, the project team will be required to submit an application for approval through the Online Permitting and Clearance (OPaC) system. Depending on the results of the OPaC assessment, the project team may be required to conduct a Historic Resources Impact Assessment (HRIA).

### 3.6.i

The Plan Area may be subject to Historic Resources Act clearance and a Historic Resource Impact Assessment shall be conducted by the developer at the direction of Alberta Culture.



## 3.0 Existing Site & Context



### 3.7 Existing Transportation Infrastructure

The Plan Area is currently accessed by private driveways from Second Street East and Dunbow Road. The Plan Area is located approximately 0.65 kilometres east of the intersection of Highway 2A and Dunbow Road and .75 kilometers west of Deerfoot Trail. This location provides Heritage Crossing with convenient access onto these major provincial highways connecting the residents to the adjacent communities and the region.

#### 3.7.i

The design of future access points to the community shall be reviewed and approved by Alberta Transportation and Foothills County to ensure the design meets the development requirements for new Area Structure Plans and access to provincial highways.

#### 3.7.ii

Foothills County completed a Functional Planning Study of Dunbow Road, and the Heritage Crossing ASP shall be required to accommodate the resulting improvements from the study.

### 3.8 Easements & Rights of Way

There are shallow utility gas line Rights of Way registered on title. These utility Rights of Way have been reviewed and are not affected by the development of this site.



## 4.0 Concept Design





## 4.1 Concept Design Overview

The following section outlines the community planning framework including the land use concept for the Plan Area which highlights the intended form, use, and character of the various forms of residential design within the Plan Area.

The policy framework reinforces the vision for Heritage Crossing as a vibrant community that celebrates and protects the environment, champions efficiency in design and servicing, and balances the benefits of rural and urban living. The rural character of the community responds to the existing adjacent communities of Heritage Pointe and Artesia to create a cohesive pattern and context across all three communities.

The open space system consists of a series of pathways, public green spaces, and environmental reserves that create a connected and cohesive network throughout the community. Integrating Heritage Crossing with the surrounding context while adhering to the design standards for rural communities results in a strong sense of place and community character.

## 4.2 Community Structure

Heritage Crossing will be a holistically planned community with a series of unifying urban design elements that respond to the natural environment and foster a sense of character. The community is intentionally organized around the environmentally significant features and connected by a network of pathways. The site supports three (3) kinds of dwelling units: a seniors' bungalow, a semi-detached villa product, and the traditional single-family home. The seniors' bungalows and villas are set back from Dunbow Road and buffered by a stormwater pond. Semi-detached villa units are planned south of the bungalows along Second Street E.

The primary access to these residences is a new internal road between the multi-family units and the single-family homes. The land adjacent to Second Street East is dedicated as Municipal Land Reserve District (MLR) and contains a walk pathway. This MLR provides a

buffer between the street and the residences, attempts to retain existing trees, and makes efficient use of the natural green space to connect the community. The remainder of the community is primarily single-family residences connected by an internal transportation network.

The pathway system is thoughtfully designed and sensitively integrated into the residential areas to maintain the rural character of the area and create a cohesive community. Intentionally placed focal points provide destinations within the community and enhance the local landscape.

## 4.3 Land Use Concept

The land use concept design, as pictured in **Figure 4**, reflects how the land use policies inform the design of the Plan Area to create a cohesive community. The concept is derived from the vision and objectives identified in this Plan (sections 1.2 and 1.3) and should be reviewed when land use redesignation and/or subdivision applications within the Plan Area are submitted.

The following sections contain detailed policies and descriptions of each policy area as illustrated in **Figure 4: Land Use Concept**. **Table 2** details the Plan Area statistics and **Table 3** the proposed population density.

# 4.0 Concept Design



Figure 4: Land Use Concept

## Legend

CR	Country Residential District	MLR	Municipal Land Reserve	A	Agricultural District
RC	Residential Community District	ER	Environmental Reserve	REC	Recreation District
RMF	Residential Multi-Family District	PUL	Public Utility Lot	DC	Direct Control District



Table 2: Plan Area Statistics

Land Use	Estimated Units By Type	Area (ac)	Area (ha)	% of Net Developable Area
Gross Developable		39.11	15.83	
Environmental Reserve (ER)		3.29	1.33	
Net Developable		35.82	14.50	
Residential Community (RC)	81	10.54	4.26	29.42
Residential Multi-Family (RMF) Villas	62	5.15	2.08	14.37
Residential Community (RC) Bungalows	20	1.82	0.73	5.08
Municipal Land Reserve (MLR)	N/A	9.92	4.01	27.69
Public Utility Lot (PUL)	4	1.46	0.59	4.07
Road/Road Dedication	N/A	6.93	2.81	19.37

Table 3: Proposed Population Densities

Maximum Residential Units	Persons per dwelling	Estimated population	Units per net acre	Units per net hectare
163	2.7 *	440.1	4.55	11.17

\* 2016 census

## 4.0 Concept Design



### 4.3.1 General Residential Policies

Heritage Crossing is an intentionally designed neighbourhood with a variety of housing options incorporated to meet the needs identified by residents of the area and Foothills County. The result is a mix of residential villas, seniors' bungalows, and single-family residential homes.

#### 4.3.1.i

Housing typologies shall be suitably integrated and compatible with surrounding land uses and the existing community.

#### 4.3.1.ii

The residential density of Heritage Crossing shall be no greater than 4.55 dwelling units per acre (upa) across the Plan Area.

#### 4.3.1.iii

In accordance with Council direction, a 48m setback from the centre line of Dunbow Road shall be adhered to. No residences shall be included within the Dunbow Road setback area.

#### 4.3.1.iv

For all residential lots, the setbacks shall align with the minimum setbacks in the Land Use Bylaw Residential Community District and the exceptions granted for the Heritage Pointe Development.

**i)** The Heritage Pointe Exemptions that apply to Heritage Crossing shall include:

**a.** Front Yard setbacks: relaxation of up to 90% on front yard setbacks for corner lots for those properties under the Heritage Pointe Area Structure Plan;

**b.** Rear yard setbacks: 1.5 meter encroachment into regular rear yard setbacks requirements for above grade decks; for those properties within Heritage Pointe Area Structure Plan area;

**c.** A garage up to 50% of the dwelling size (provided that the garage does not exceed a maximum of 2,400 sq. ft.) split into two different structures, either attached or detached from the residence is permitted on parcels that are located on lands within the Heritage Pointe Area Structure Plan.

#### 4.3.1.v

As a condition of subdivision approval the developer shall provide the following to the satisfaction of Foothills County:

**i)** Architectural Controls to ensure the Controls align with Foothills County's Land Use Bylaw and Municipal Development Plan. The developer shall establish an internal review process for any development permit and/or building permit submission to ensure they meet the expectations of the Architectural Controls and Foothills County Land Use Bylaw prior to their release and acceptance by Foothills County;

**ii)** a conceptual landscape plan which outlines the transitional areas and buffers for any parcel in the Plan Area that is located adjacent to parcels north of the Plan Area; and

**iii)** a Construction Management Plan that addresses development phasing and provides detailed mitigation strategies that will help reduce the impacts of construction and development.



### **4.3.1.1 Residential Community Policies**

The areas designated Residential Community District (RC) will consist of single-family dwellings and bungalows targeted at supporting seniors. Both the housing typologies are designed to complement the country residential neighbourhoods adjacent to the Plan Area. These development typologies offer the benefit of fully serviced, single-family style homes in a semi-urban neighbourhood surrounded by ample natural amenities.

#### **4.3.1.1.i**

On lots designated Residential Community District, the housing form shall be single-family detached and shall align with the Foothills Land Use Bylaw and this ASP.

#### **4.3.1.1.ii**

On lots intended for the bungalow typology in the Residential Community District, no lot shall be smaller than 350m<sup>2</sup>.

#### **4.3.1.1.iii**

On lots designated Residential Community District, the maximum allowable dwelling density shall be one single-family home per lot.

#### **4.3.1.1.iv**

The maximum dwelling density for the Plan Area shall be the maximum residential units per acres listed in Table 3. Any additional density will require an amendment to the Area Structure Plan.



## 4.0 Concept Design



### **4.3.1.2 Residential Multi-family Policies**

The semi-attached villas provide a moderate density option within the country residential context. The villas will be comprised of one building with two dwelling units and provide options for a variety of home owners and lifestyles. Identifiable neighbourhood patterns are to be achieved through the use of architecture that is sensitive to surrounding development.

#### **4.3.1.2.i**

For the villa typology, individual buildings shall be comprised of no more than two (2) dwelling units;

#### **4.3.1.2.ii**

On lots intended for the villa typology, no lot shall be smaller than 292.5m<sup>2</sup> and no greater than 435m<sup>2</sup>, with the exception of corner lots which shall not exceed 626m<sup>2</sup>.

#### **4.3.1.2.iii**

The maximum allowable dwelling density for the villa housing typology (designated RMF District) shall be 12 units per net acre;

#### **4.3.1.2.iv**

Multi-family residential development should be encouraged to be located off the internal roadways and

in close proximity to open spaces in the Plan Area;

#### **4.3.1.2.v**

Clear development patterns composed of clusters of buildings with complementary architectural character should be created that are sensitive to the surrounding single-family developments;

#### **4.3.1.2.vi**

Clear pedestrian circulation patterns which relate to the internal collector road should be created.



## 4.4 Open Space System

### 4.4.1 Open Space Master Plan

The Open Space Master Plan completed by Navagrah Landscape Architecture + Urban Design (**Figure 5: Open Space Master Plan**) transforms the land use concept into a tangible vision of the community. The Open Space Master Plan describes the materials, pathway network, interface details, vegetation, and parks to provide a sense of place and reflect the experience of the Heritage Crossing community. The Open Space Master Plan sets the tone for the materials and amenities of the community and contributes to the sense of place within the context of Heritage Pointe.

The Open Space Master Plan proposes a green, walkable community connected by a network of paved pathways and sidewalks. These pathways connect people to each other and to destinations in the community such as parks and rain gardens. The open space design suggests how the open space amenities will function as destinations as well as critical infrastructure to maintain and protect the environment.

The detailed plans of amenities offer insight into the design of parks and pathways and how these could be used as active and passive activity areas that bring people together (please refer to **Figures 6 and 7: Park Detail and Pathway Detail**). These areas celebrate the environment and create a strong sense of place in this semi-urban community. Furthermore, the detailed elevations of design elements provide a standard for all landscaping infrastructure which reflects the character of the community and creates a strong identity for Heritage Crossing.

#### 4.4.1.i

The Open Space Master Plan should inform the type of uses, vegetation, pathway and sidewalk locations and widths, and design of natural infrastructure.

#### 4.4.1.ii

Detailed landscaping plans, including maintenance provisions, shall be provided to the satisfaction of Foothills County at the subdivision stage.

#### 4.4.1.iii

At the subdivision stage, the developer shall provide a breakdown of the lands designated as part of the open space system including those lands that may be Municipal Land Reserve, Environmental Reserve, or Public Utility Lot, and how those lands will be owned and maintained to the satisfaction of Foothills County.

#### 4.4.1.iv

The developer shall be responsible for construction of all pathways, the type and location of which shall be detailed at the subdivision stage.

#### 4.4.1.v

The Community Association shall be responsible for pathway maintenance upon completion of the maintenance period and issuance of the Final Acceptance Certificate to the satisfaction of Foothills County.

#### 4.4.1.vi

Landscape and Maintenance plans shall be completed by the developer at the subdivision stage to the satisfaction of Foothills County.

## 4.0 Concept Design



### 4.4.1.vii

The developer shall be responsible for constructing a unified fence along the northern property line, for adjacent landowners who wish to have it implemented, in order to provide separation between Heritage Crossing and adjacent private lands. The final design for the fencing shall be approved by Foothills County. Funding for the maintenance of the fence shall be incorporated into the Community Association's maintenance fund.

### 4.4.1.viii

The design of the Open Space system recognizes the need to create an overall sense of individual well-being and to encourage social gathering. To achieve this, the following should be incorporated into the open space design at the subdivision stage where appropriate and feasible to the satisfaction of Foothills County:

**a.** Integrate the open space into the wider community through safe, pleasant and efficient pathway routes.

**b.** Ensure seasonal adaptability for year-long usability through appropriate landscaping, site design, provision of street furniture, and recreational facilities.

**c.** Provide public visibility to the open space through visual corridors.

**d.** Encourage a diversity of user activities and opportunities through provision of recreational equipment or interpretive trails and signage.

**e.** Promote “eyes on the street” by using active building edges to frame and define neighbourhood parks, and playgrounds where possible.

**f.** Support linear parkways and linkages where appropriate to promote connectivity and to facilitate walking and cycling.

**g.** Ensure open spaces and amenities are located and designed in accordance with principles of universal access and barrier-free design.



DUNBOW ROAD

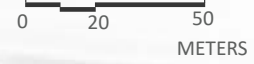


Figure 5: Open Space Master Plan

# 4.0 Concept Design



DAD



Berm with Spruce  
Property Line.  
Spruce, Colorado Spruce



8TH STREET E

STREET E

to Pg 31  
to Pg 32  
Inwater Pond  
Wide Asphalt Pathway

5 - Residential Area  
6 - Bridge to Cross ER  
7 - ER  
8 - Grass Berm with Tree Buffer Planting

9 - Rain Garden  
10 - Triangle Park  
11 - View Point with Seating  
12 - Property Line

13 - Entry Feature with Planting





Conceptual Design Only. Subject to Change

-  Sod
-  Trees
-  Shrubs
-  Perennials
-  Bench
-  Property Line

1. Main Entry
2. Entry Feature
3. Residential Area
4. Boulevard Trees
- 5a. 1.5m Wide Concrete Sidewalk
- 5b. 2m Wide Asphalt Pathway
6. Planting Bed
7. Grass Berm
8. Grass Berm with Planting
9. Multi-Sport Court
10. Community Board
11. Corner Plaza
12. Seating Node
13. Crosswalk



Figure 6: Park Detail

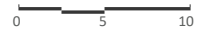
# 4.0 Concept Design



# 2



Conceptual Design Only. Subject to Change








-  Sod
  -  Trees
  -  Shrubs
  -  Perennials
  -  Bench
1. Residential Area
  2. Park Entry
  3. Entry Feature
  4. Grass Berm with Planting
  5. Boulevard Trees
  6. Kids Play Area
  7. 2m Wide Asphalt Pathway
  8. Green Open Space/ Winter Skating Area
  9. ER
  10. Planting Bed
  11. Crosswalk
  12. 1.5m Wide Concrete Sidewalk

Figure 7: Pathway Detail



## 4.4.2 Municipal Land Reserve

As depicted in **Figure 5: Open Space Master Plan**, the interconnected Municipal Land Reserve (MLR) and Environmental Reserve (ER) systems comprises a series of public spaces, natural areas, and other open spaces that will provide social, biophysical, and aesthetic functions.

Municipal Reserve (MR) lands, that are zoned using the Municipal Land Reserve (MLR) District provide passive and active recreation amenities for community residents to foster a sense of connection and enhance well-being. In Heritage Crossing, MLR offers linear and connected green spaces that act as buffers between different land uses and provide passive recreational opportunities through the network of trails and public green spaces. A multi-sport court is included as a more active recreational amenity.

All lands identified as MLR are intended to meet the requirements of the Municipal Government Act for Municipal Reserve.

**Figure 5:** Open Space Master Plan completed by Navagrah Landscape Architecture + Urban Design proposes a network of pathways connecting the active and passive recreational amenities. The result is a cohesive system of open space elements that support the well-being of residents and enhance the experience of Heritage Crossing.

### 4.4.2.i

Reserves shall be dedicated during the subdivision stage, in the full amount owing, in accordance with the requirements of the Approving Authority, pursuant to the Foothills County Municipal Development Plan (MDP) and Municipal Government Act (MGA).

### 4.4.2.ii

The allocation of reserve shall be determined at the of subdivision stage to the satisfaction of Foothills County. As a result of phasing development, certain phases in the Plan Area may be deficient of reserves while others may be over dedicated. The developer shall ensure that the required amount of reserve is dedicated throughout the course of the development to the satisfaction of Foothills County.



## 4.0 Concept Design



### 4.4.3 Environmental Reserve

Dedicating lands as Environmental Reserve (ER) preserves significant natural features or systems that play an important role in the biophysical functions of the region. ER lands are intended to be left in their natural state as much as possible, but public trails could be incorporated where conditions are suitable as determined by Foothills County. In Heritage Crossing, the ER is left primarily undeveloped. The design follows the natural contours of the land and preserves the environmentally sensitive areas through ER and are surrounded by MLR. A preliminary geotechnical study has been completed to inform the setbacks required from the ravine.

#### 4.4.3.i

Reserves shall be dedicated through the subdivision process in the full amount owing in accordance with the requirements of the Approving Authority, pursuant to the MDP and MGA.

#### 4.4.3.ii

Where there are significant slopes identified on the site, these lands shall be protected from development through the dedication of Environmental Reserve at the discretion of Foothills County.

#### 4.4.3.iii

Any existing structures in the Environmental Reserve areas shall be removed at the developer's expense prior to registering the areas as Environmental Reserve.

#### 4.4.3.iv

Where appropriate, methods to delineate private from public lands may be utilized. This could include chain link fence, post and rail fence, or other naturalized methods of making this distinction.





## 4.5 Environmental Assessment

One of the main objectives of Heritage Crossing is to minimize the impacts of development on the environment. To this end, Heritage Crossing will protect and enhance the natural environment and create a balance between development and the protection of environmental features. These features will be integrated into the community design in order to foster long-term preservation and oversight of these areas. An environmental reserve is planned to protect unique features and provide public access for passive recreation opportunities. Heritage Crossing will maintain the rural character of the area through preservation of functional natural areas, enhancement of recreational opportunities and open space, and protection of wildlife habitats and vegetation that are critical to the foothills landscape.

There may be lands throughout the Plan Area that are not protected by the Environmental Reserve designation but may still be significant to the natural systems in the area. In these instances, additional studies may be required, at the discretion of Foothills County.

A Geotechnical Slope Stability Assessment was prepared for the lands adjacent to the ravine to determine the appropriate setbacks and has been submitted under separate cover.

### 4.5.i

Foothills County may require that developers, in support of a proposal for redesignation, subdivision, or development, and at their sole expense, prepare and submit the following to the satisfaction of Foothills County and in accordance with all provincial requirements:

- a.** a geotechnical report pursuant to the provisions of the MDP.
- b.** any additional environmental testing or study deemed necessary by Foothills County (i.e. slope stability testing, percolation testing, high water table testing).
- c.** any additional soil and groundwater study as deemed necessary by Foothills County and/or Alberta Environment.

### 4.5.ii

Should Foothills County require further environmental assessment or reporting, the study(s) should identify and analyze any environmentally sensitive or significant areas and recommend ways to protect these features and address topography, geology, hydrology, soils, vegetation, and wildlife.

4.5

## 4.0 Concept Design



### *4.5.1 Biophysical Impact Assessment*

Foothills County's MDP contains policy that suggests that proponents of development or redesignation of land that Foothills County believes would be wholly or partly within an environmentally significant area, shall demonstrate that the proposal will not jeopardize or significantly damage the characteristics of the resource. Foothills County may ask that specialized studies such as a Biophysical Impact Assessment (BIA) be prepared at the developers expense. In this instance, there are no sites that are considered to be environmentally significant and a BIA was not required by Foothills County Administration.

#### **4.5.1.i**

A Biophysical Impact Assessment may be prepared by the developer, at the request of Foothills County, to determine the impacts of development and wherever possible provide for mitigation of those impacts at the subdivision stage.



## 4.5.2 Geotechnical Testing

A preliminary geotechnical assessment has been completed to provide a general overview of site conditions and establish requirements for additional assessments at future phases. To assess the geotechnical site conditions including stratigraphy, groundwater conditions, and soil properties, eleven (11) boreholes were drilled across the site and samples tested from each. Laboratory testing included natural moisture content, soluble sulphate, and Atterberg limit testing. Groundwater was also evaluated including any slough and presence or absence of free water. The results are summarized below:

- The geotechnical report conducted by Englobe concluded that the site primarily consists of suitable bearing soils provided several recommendations in the report are followed.
- The soils at the site, with the exception of the topsoil and other organic soils, are suitable for use as general engineered fill. The native soils are capable of supporting residential structures, with the exception to topsoil and browns. Some over excavation may be necessary if areas of loose silty sand or sand are encountered.
- The site soils are suitable to support deep and shallow utilities provided the recommendations in the report and those from any additional studies that may be required are followed.
- It is recommended that final site grading be provided to direct water to areas remote from all proposed structure. Minimum landscape gradients of 2 percent are recommended to reduce the risk of run-off ponding in localized areas. Furthermore, downspouts should be positively directed away from the buildings.

### 4.5.2.i

The recommendations of the Geotechnical Report prepared by Englobe dated February 14, 2022 shall be followed during the construction period. As a condition of subdivision approval, additional geotechnical assessments may be required at the expense of the developer and to the satisfaction of Foothills County.

### 4.5.2.ii

Groundwater levels fluctuate seasonally and annually, therefore additional groundwater testing may be required at Foothills County's discretion. Any additional testing required shall be undertaken by the developer at their expense and to the satisfaction of Foothills County.

### 4.5.2.iii

The footing design parameters of multi-family residential structures should be determined by a site and project specific geotechnical evaluation once further development plans are known, at the discretion of Foothills County.

## 4.0 Concept Design



### 4.6 Community Association

A Community Association (CA) for Heritage Crossing will be established by the developer to provide resources to members and assist with maintaining public community spaces. The CA will be established and governed by residents of the community who volunteer to be on the CA board. The CA will be based on a mandatory membership model whereby residents pay an annual maintenance fee. This fee is used to fund community events and initiatives, such as community gardens and maintenance of public open space. The CA board has the opportunity to work closely with Foothills County to ensure the needs of the community are met by the CA or a partnership between the CA and Foothills County. The CA will not take over maintenance of public spaces until such time as Foothills County has relieved the developer of their maintenance obligation.

#### 4.6.i

A Community Association shall be established upon issuance of the Final Acceptance Certificate at which point responsibility for Heritage Crossing is transferred from the developer to Foothills County. The developer will continue to maintain the open spaces until the Community Association has reached 50% of the community residents.

#### 4.6.ii

Members of the Community Association shall pay an annual fee, to be determined by the Community Association, to support and maintain Heritage Crossing.

#### 4.6.iii

The Community Association shall be responsible for the operation and maintenance of municipal reserves (MLR district) in collaboration with Foothills County.

#### 4.6.iv

Maintenance of Heritage Crossing shall be conducted in accordance with the Foothills County Community Standards Bylaw.

#### 4.6.v

The Community Association shall be responsible for maintenance of pathways upon issuance of the Final Acceptance Certificate, and release of the development to the CA, to the satisfaction of Foothills County.



## 4.7 Dark Sky Bylaw Compliance

Foothills County adopted a Dark Sky Bylaw to minimize the factors that contribute to light pollution in the rural environment. The Bylaw regulates the type of light sources and fixtures that can be installed in Foothills County in order to prevent future light pollution.

The bylaw actively seeks to prevent three types of light pollution:

- Glare, where bright lights reduce visibility and safety for both pedestrians and motorists.
- Up-lighting, where illumination is directed skyward for no reason, and
- Light trespass, where the glow cast by a fixture moves from a place requiring illumination to one that does not.

### 4.7.i

The Heritage Crossing ASP plan area shall adhere to the policies of the Foothills County Dark Sky Bylaw.

### 4.7.ii

The Heritage Crossing ASP may support streetlights in areas where public safety is critical (e.g. major intersections). Any streetlight fixture shall be Dark Sky compliant and implemented to the satisfaction of Foothills County.

## 4.0 Concept Design

### 4.8 Transitional Buffer Areas

Design guidelines have been developed in this ASP to provide a thoughtful approach to interfaces between the Plan Area and adjacent country residential lands. These design guidelines provide a tangible guide to respecting the needs of adjacent country residential lots and the needs of the residents of Heritage Crossing. The buffering strategy provides landowners with a sensitive transition from their lands to other development while promoting a comprehensive open space plan that incorporates pathways and low impact design.

Within Heritage Crossing, a minimum width of 10m of buffer area is maintained, and expanded in some areas, around the perimeter of the community through the use of MLR. These MLR areas introduce vegetation, integrate with the existing topography, and introduce man-made features, such as the stormwater ponds, to provide a physical and visual separation, and to reduce dust, trespassing, and noise. These spaces create a pathway network throughout the community as part of the Plan's dedication to sustainability and efficient use of land. The north property line transition is pictured in **Figure 8: Transitional Buffer Section**.

#### 4.8.i

Transitional buffer areas may be incorporated at the discretion of Foothills County. If required, transitional buffer design shall be submitted for review and approval by Foothills County at the subdivision stage.

#### 4.8.ii

Buffers should result in sensitive transition utilizing vegetation, topography, low impact development strategies, and pathways where required.

#### 4.8.iii

Transitional buffer areas shall be designed by a Landscape Architect, and constructed and maintained at the expense of the developer, to the satisfaction of Foothills County.

# Key Plan



# Section 2 - 2

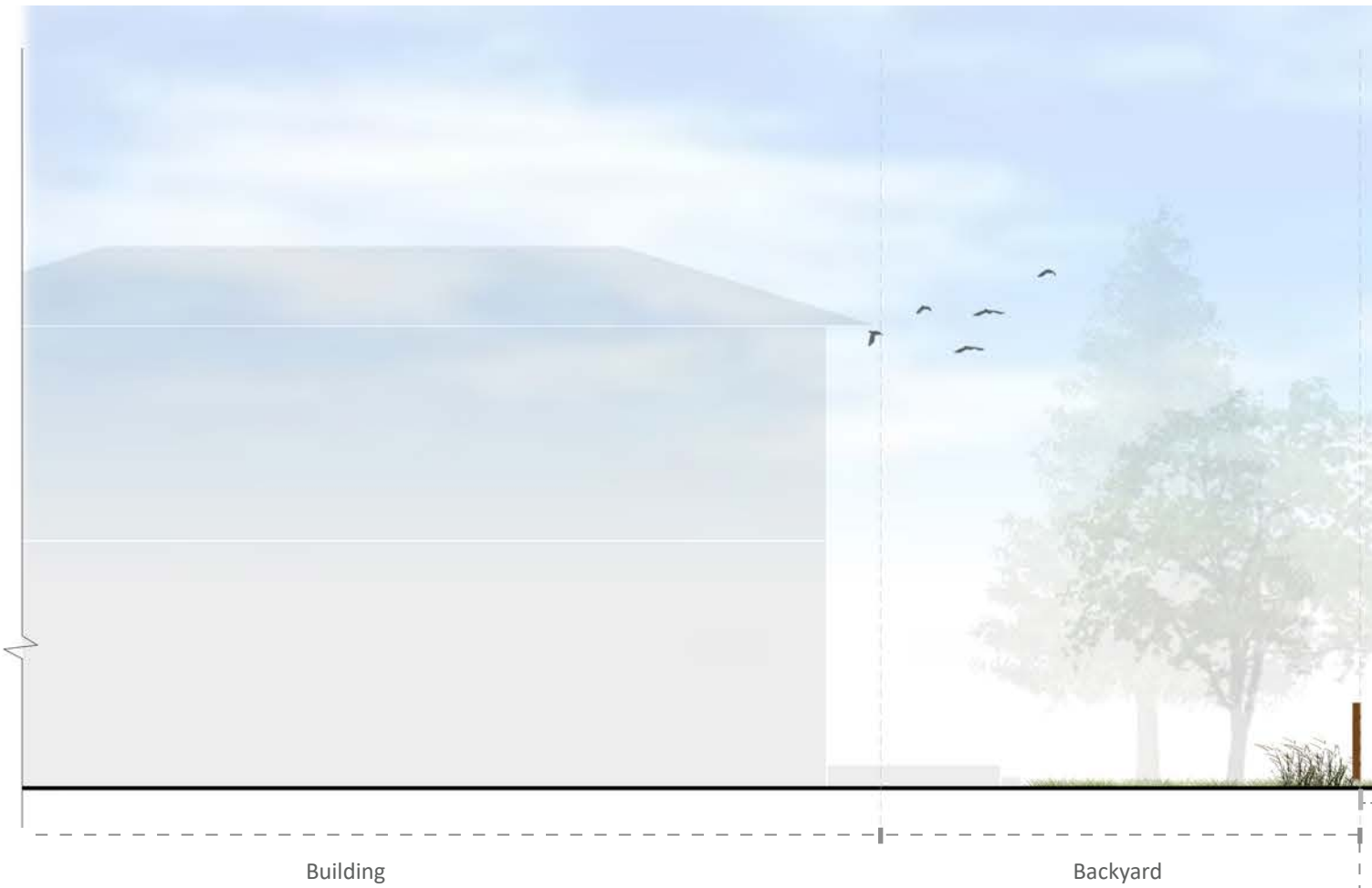
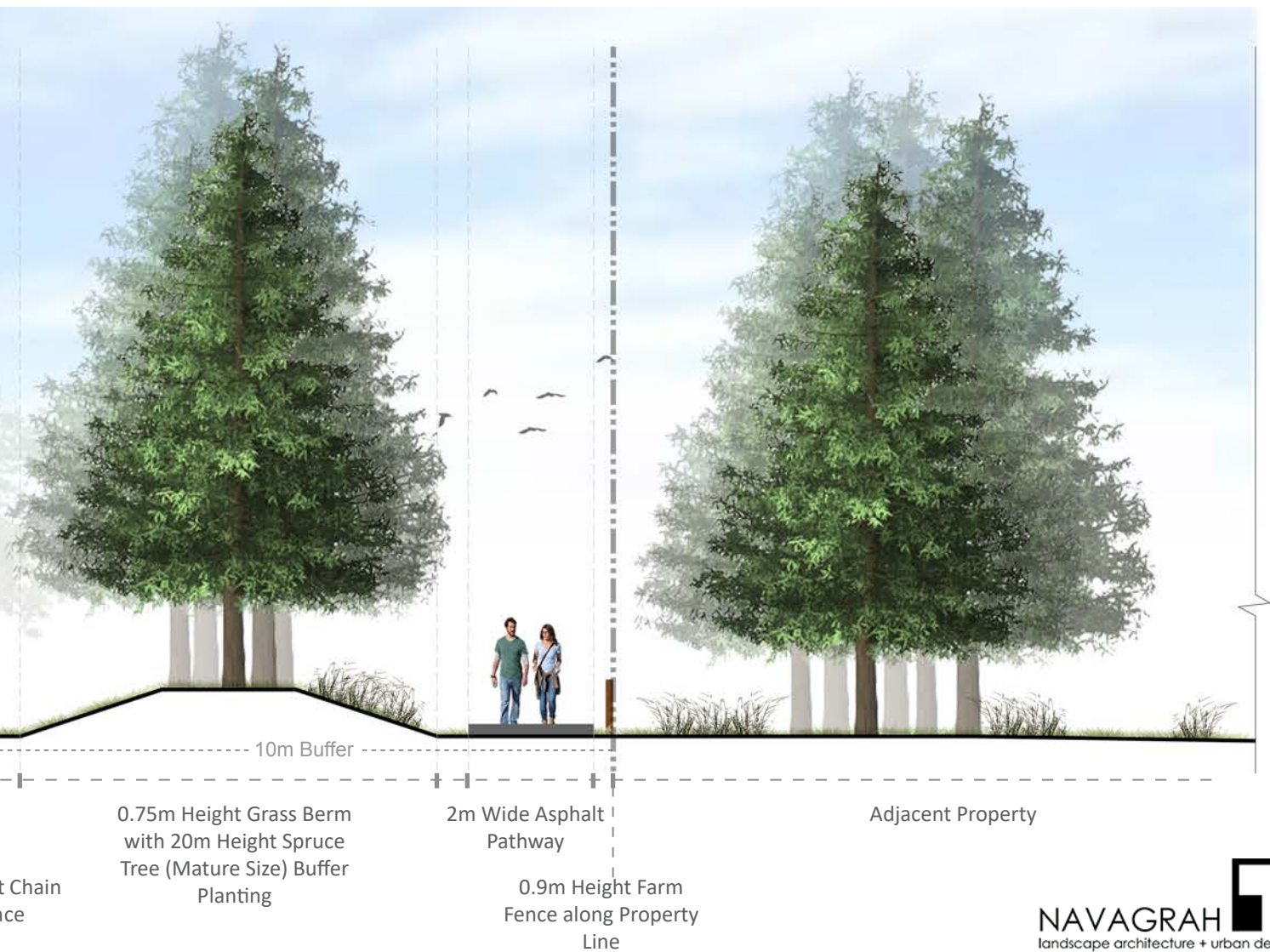


Figure 8: Transitional Buffer Section

1.2m Height  
Link Fence



# 4.0 Concept Design





## 5.0 Architectural Controls





## 5.1 Purpose

The intention of Heritage Crossing's Architectural Controls are to create a visually cohesive built form environment while allowing enough variety to create interest and represent the character of Heritage Crossing. These Architectural Controls are meant to inspire and guide developers in a manner that provides a variety of housing options while achieving a balance of form, colour, and theme.

## 5.2 Architectural Theme

The various housing forms in Heritage Crossing should possess their own individual character while contributing to a cohesive community aesthetic and experience. This balance shall be achieved through the Architectural Controls that allow a variety of housing types while drawing on themes established in the prevailing architectural form, style, and detailing of the homes in local developments such as the Lake at Heritage Pointe, Artesia, and Serenity.

Inspiration has been drawn from the local aesthetic and traditional architectural styles to create a cohesive architectural theme for Heritage Crossing. Developers should adhere to more traditional styles of French County, Tudor, Prairie, and Craftsman. These styles will be thoughtfully applied to the residential housing typologies proposed by this Plan. Topography in the Plan Area will further influence locations and orientations of buildings with respect to views, privacy, and park access.

### 5.1.i

The development of Heritage Crossing shall conform with the Architectural Controls established by the developer to the satisfaction of Foothills County and registered on title by restrictive covenant.

### 5.2.i

Similar themes, materials, massing and architectural styles shall be repeated in all phases within the Plan Area.

### 5.2.ii

The Architectural Controls shall contain a review and approval process that outlines the requirements for compliance and approval from the developer. This will ensure all controls have been met by the builder prior to submission of a formal building permit to Foothills County.

# 5.0 Architectural Controls



## 5.3 Architectural Style Examples

The photos on this page provide examples of appropriate built form and urban design within the project area.





## 6.0 Servicing





## 6.1 Deep Utility Servicing

Based on the proposed land use, there will be an estimated 163 residential units. Given an assumed average occupancy of 2.7 persons per unit the total projected population of the development is 440 people ( $163 \times 2.7 = 440$ ). Lee Maher Engineering, in working with Corix, has determined that the existing potable water and sanitary wastewater system in Heritage Pointe operated by Corix Utilities has the capacity to service the Heritage Crossing development. This new service area is proposed to connect to the existing infrastructure that services Heritage Pointe.

**Figure 9** indicates proposed deep utility tie-in connection locations.



# 6.0 Servicing



## 6.1.1 Water Servicing

Water demands were estimated based on the proposed land uses and the assumed design population of 440 residents. Design demand of 370 l/s per capita was used for planning purposes. Peaking factors were applied to calculate maximum day and peak hour flow rates, as summarized in **Table 4** Water Demand Scenario.

Based on these assumptions, water service for the Plan Area will require installation of new water mains within the proposed roadways and utility right-of-way within the Plan Area. Two off-site water main connections will be required to connect to the existing Heritage Pointe water system. These off-site water mains will create a looped water system that will be sized to provide sufficient capacity to meet the normal operating needs of the system as well as the fire protection requirements for the development.

Connection 1: One water main connection is required northwest of the Plan Area at the intersection of 2 St East and Dunbow Road. Construction of the new water main would be completed along the existing right-of-way on 2nd Street East, and connect to the existing water main located in the south side of Dunbow Road. The construction would have limited impact on motoring traffic in the area.

Connection 2: The second looped connection would be in the same general area as the first connection, however, the waterline would go west from the intersection of Dunbow Road and 2nd Street East for a short distance and then be directionally drilled going north under Dunbow road and connect to another existing water main on the north side of Dunbow Road. To minimize impact to existing traffic on Dunbow Road and Pine Creek Road, directional drilling of the waterline will be utilized as much as possible.

Table 4: Water Demand Scenario

Water Demand Scenario	Design
Estimated Population	440
Average Day Demand	1.8L/s
Maximum Day Demand Peaking Factor	2.9
Maximum Day Demand	5.2 L/s
Peak Hour Factor	4.0
Peak Hour Demand	7.2 L/s



### *6.1.1 Water Servicing cont.*

The two proposed watermain connections tie-in to two different existing watermains that are located on either side of the existing Heritage Pointe water storage reservoir located adjacent to the Fire Hall. Not only do these proposed tie-ins create internal water looping for the project, they also create two different offsite watermain lines for the project to tie into. If there is a problem with the existing waterline main that runs from the Heritage Pointe water treatment plant to the storage reservoir located next to the fire hall, then the existing watermain on the west side of the storage reservoir would still be able to provide water service to the development, and vice-versa. This creates ongoing serviceability for potable water to the development, even in the event of any potential offsite waterline problems.

The conceptual water distribution system and water tie-in connections are shown on **Figure 10: Water Servicing System**. This figure is subject to change upon confirmation from Corix. Any construction requirements and methods within offsite road right-of-ways will be discussed with the County throughout the detailed design stage.

The predicted design flows for the potable water system are not expected to cause the existing water system to operate outside of its existing capacity. The design of the servicing for the development should proceed based on the criteria defined in the Conceptual Design Report completed by Associated Engineering and in cooperation with the utility service providers. Opportunities for potential future water servicing connections from the Heritage Crossing Plan Area to future communities within close proximity should be considered.

## 6.0 Servicing



### 6.1.1.i

All residential lots, regardless of size, shall be connected to piped water and wastewater servicing systems.

### 6.1.1.ii

The capacity for the potable water system shall be verified by the utility provider at the subdivision stage, to the satisfaction of Foothills County.

### 6.1.1.iii

Final watermain alignments shall be determined by detailed design engineering at the subdivision stage, to the satisfaction of Foothills County.

### 6.1.1.iv

The water system infrastructure may be required to be designed to be oversized in order to accommodate future connections, to the satisfaction of Foothills County. The oversized infrastructure shall be at the discretion of the utility operator and may be subject to endeavours to assist.

### 6.1.1.v

The developer shall be responsible for all costs necessary to expand and/or upgrade the water system to service Heritage Crossing and any required off-site connections, including Water Act and Environmental Protection and Enhancement Act approvals to the satisfaction of the utility provider and provincial regulatory agencies.

### 6.1.1.vi

Foothills County encourages the reduction and reuse of water in accordance with provincial laws and regulations. Development and buildings within Heritage Crossing shall use low-flow fixtures and appliances to promote water conservation. As outlined in the Architectural Controls, no exterior irrigation utilizing treated potable water should be permitted.

### 6.1.1.vii

The developer shall execute and comply with a development agreement to the satisfaction of Foothills County for the construction of all required on-site and off-site utility infrastructure.

### 6.1.1.viii

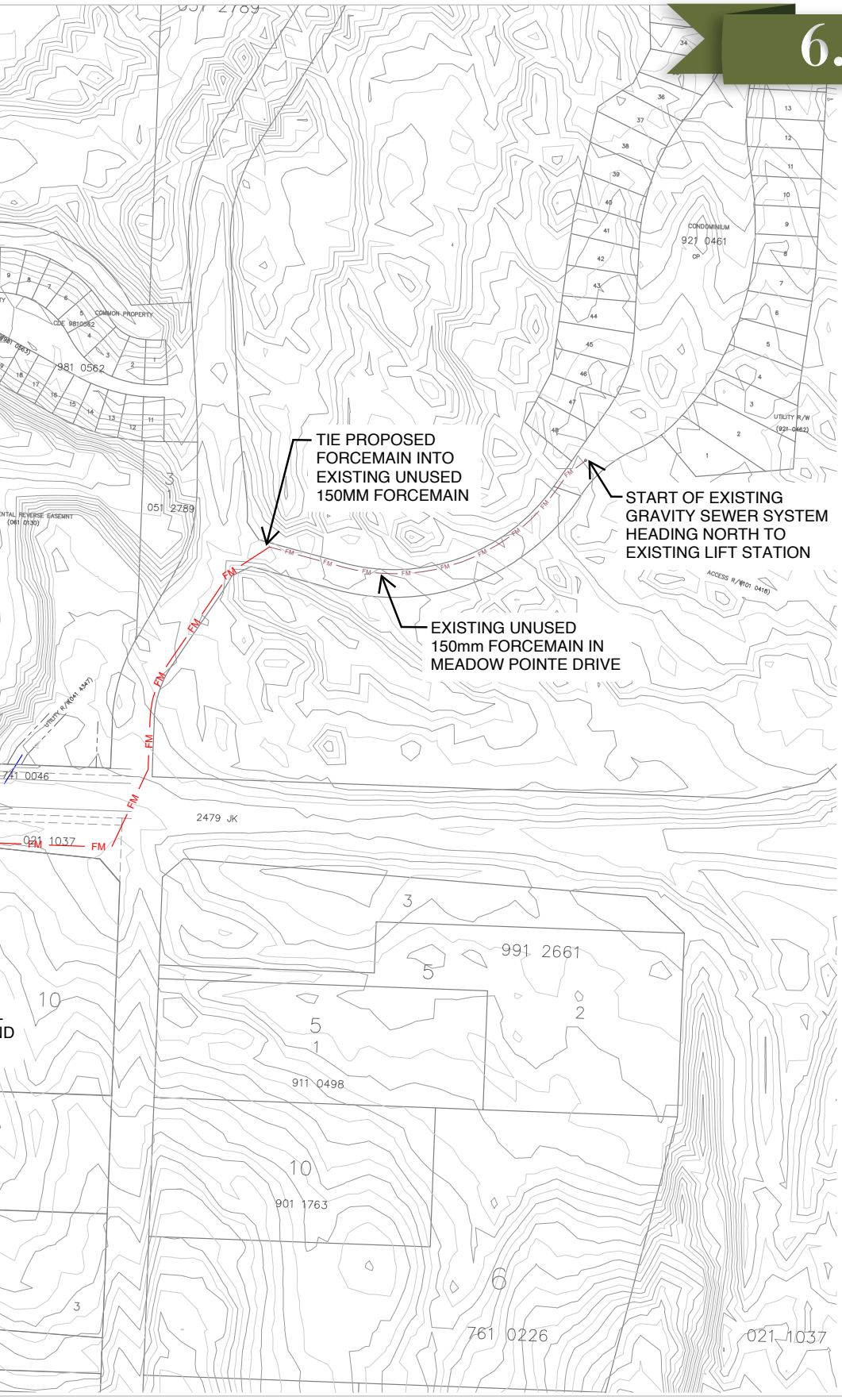
Future connections shall be at the discretion of the utility provider and Foothills County. Endeavors to Assist to support the existing developers responsible for bringing services to the area shall be considered at the subdivision stage.

### 6.1.1.xi

The location of all water utilities and the provision of rights-of-way, easements, and related line assignments should be addressed to the mutual satisfaction of Foothills County, the developer, and the utility provider.



# 6.0 Servicing



## LEGEND

- EXISTING OFFSITE SANITARY FORCEMAIN
- PROPOSED OFFSITE SANITARY FORCEMAIN
- EXISTING OFFSITE POTABLE WATERMAIN
- PROPOSED OFFSITE POTABLE WATERMAIN
- PROPOSED STORM WATER OUTFALL
- PROPOSED STORM WATER POND
- PROPOSED SANITARY LIFT STATION

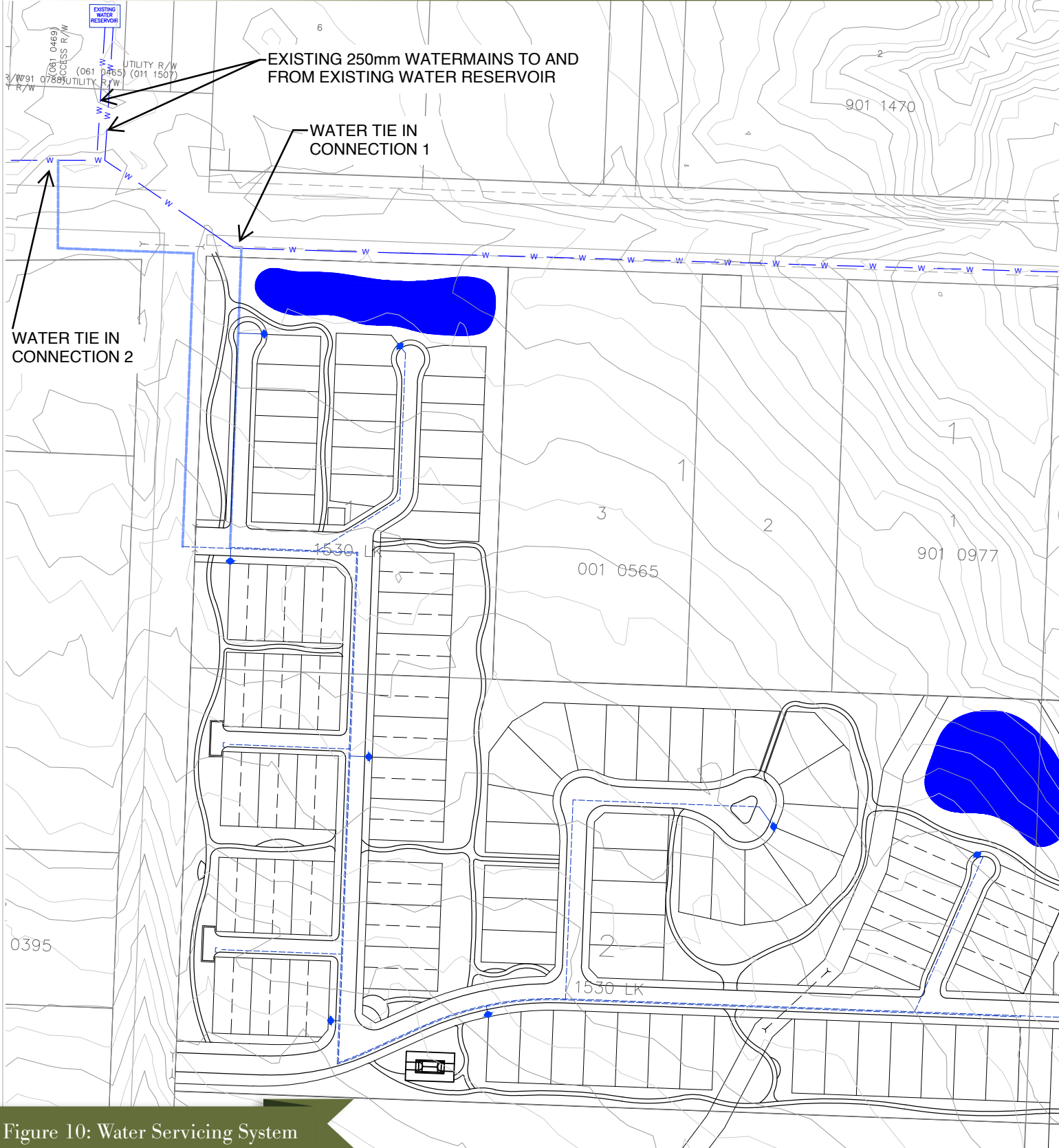
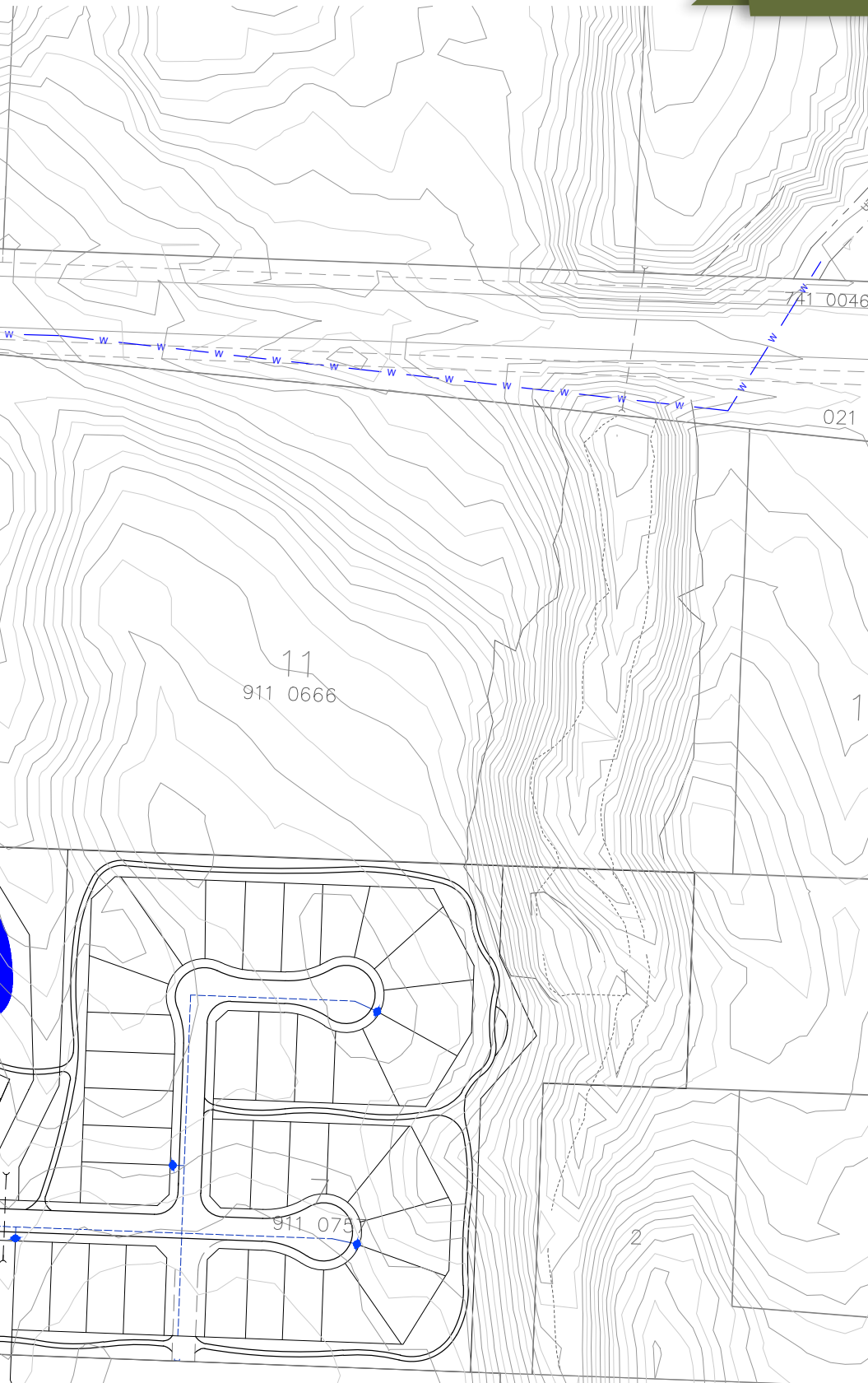






Figure 10: Water Servicing System

# 6.0 Servicing



### LEGEND

-  EXISTING OFFSITE POTABLE WATERMAIN
-  PROPOSED OFFSITE POTABLE WATERMAIN
-  PROPOSED POTABLE WATERLINE
-  PROPOSED FIRE HYDRANT



## 6.1.2 Sanitary Servicing

Sanitary Servicing will require installation of new sanitary sewers within the proposed roadways and utility right-of-way within the Plan Area. The servicing concept also includes a new onsite lift station located near the northwest entrance to the subdivision that will pump sewage collected in the proposed gravity mains to the existing wastewater system in Heritage Pointe.

The existing receiving gravity system will also need to accommodate these flows. The lift station will pump sewage off site to the Heritage Pointe development through a forcemain that is proposed to run along Dunbow Road, and ultimately crossing Dunbow Road at 8th Street East/Heritage Pointe Drive through horizontal directional drilling methods to minimize the impact to the current function of all roadways at this intersection.

The proposed forcemain will connect to the existing system at the intersection of Heritage Pointe Drive and Meadow Pointe Drive. The actual connection point and forcemain route will be identified during the detailed design stage.

Currently, the existing capacity of the existing Heritage Pointe gravity sewer system located in Meadow Pointe Drive is deemed to have capacity to accept the regulated flows from the Heritage Crossing lift station. Should it be determined at the detailed design stage that the existing downstream receiving infrastructure does not have sufficient capacity to handle peak flow demands, then an off-peak pumping option has already been discussed and accepted by Corix as an alternative solution to ensure the downstream system is not overburdened during peak flow times.

If required, Foothills County may seek endeavours to assist for any oversized infrastructure.

For the offsite forcemain and tie-in to the existing gravity system, temporary access and traffic deviation may be required. Communication with private landowners may also be required, as there may be temporary disturbances during the installation.

A potential option to help minimize impacts along Dunbow Road and to the existing homes along the south side of Downbow Road, if required, would be to install the forcemain (or sections of it) by horizontal directional drilling to avoid impacts to traffic along the road.

Easements and/or land acquisitions could be required to protect the utility right-of-way of the proposed pipe. Any construction requirements and methods within offsite road right-of-ways will be discussed with Foothills County throughout the detailed design stage.

The proposed sanitary sewer system and proposed tie-in connections area shown on **Figure 11: Sanitary Servicing System**.



## 6.0 Servicing



### 6.1.2.i

Final sanitary sewer mains and force main alignments shall be determined by detailed design engineering at the subdivision stage, to the satisfaction of Foothills County.

### 6.1.2.ii

Sump pumps and stormwater drainage systems shall not be connected to the wastewater system.

### 6.1.2.iii

The developer shall be responsible for all costs necessary to expand and/or upgrade the wastewater utility system to service Heritage Crossing, including Water Act and Environmental Protection and Enhancement Act approvals to satisfaction of the utility provider and the provincial regulatory approvals agencies.

### 6.1.2.iv

The developer shall execute and comply with a development agreement to the satisfaction of Foothills County for the construction of all required on-site and off-site utility infrastructure, including that required for wastewater.

### 6.1.2.v

The wastewater system infrastructure may be required to be designed to be oversized in order to accommodate future connections, to the satisfaction of Foothills County. The oversized infrastructure shall be at the discretion of the utility operator and may be subject to endeavours to assist.

### 6.1.2.vi

Future connections are at the discretion of the utility provider and Foothills County. Endeavors to Assist shall be considered at the subdivision stage to reimburse existing area developers for bringing services to the area.

### 6.2.vii

The location of all wastewater utilities, the provision of rights-of-way, easements, and related line assignments shall be addressed to the mutual satisfaction of Foothills County, the developer, and the utility provider.

### 6.1.2.viii

Opportunities for future wastewater servicing connections from the Plan Area to new communities within close proximity to Plan Area should be considered at the land use or subdivision stage.

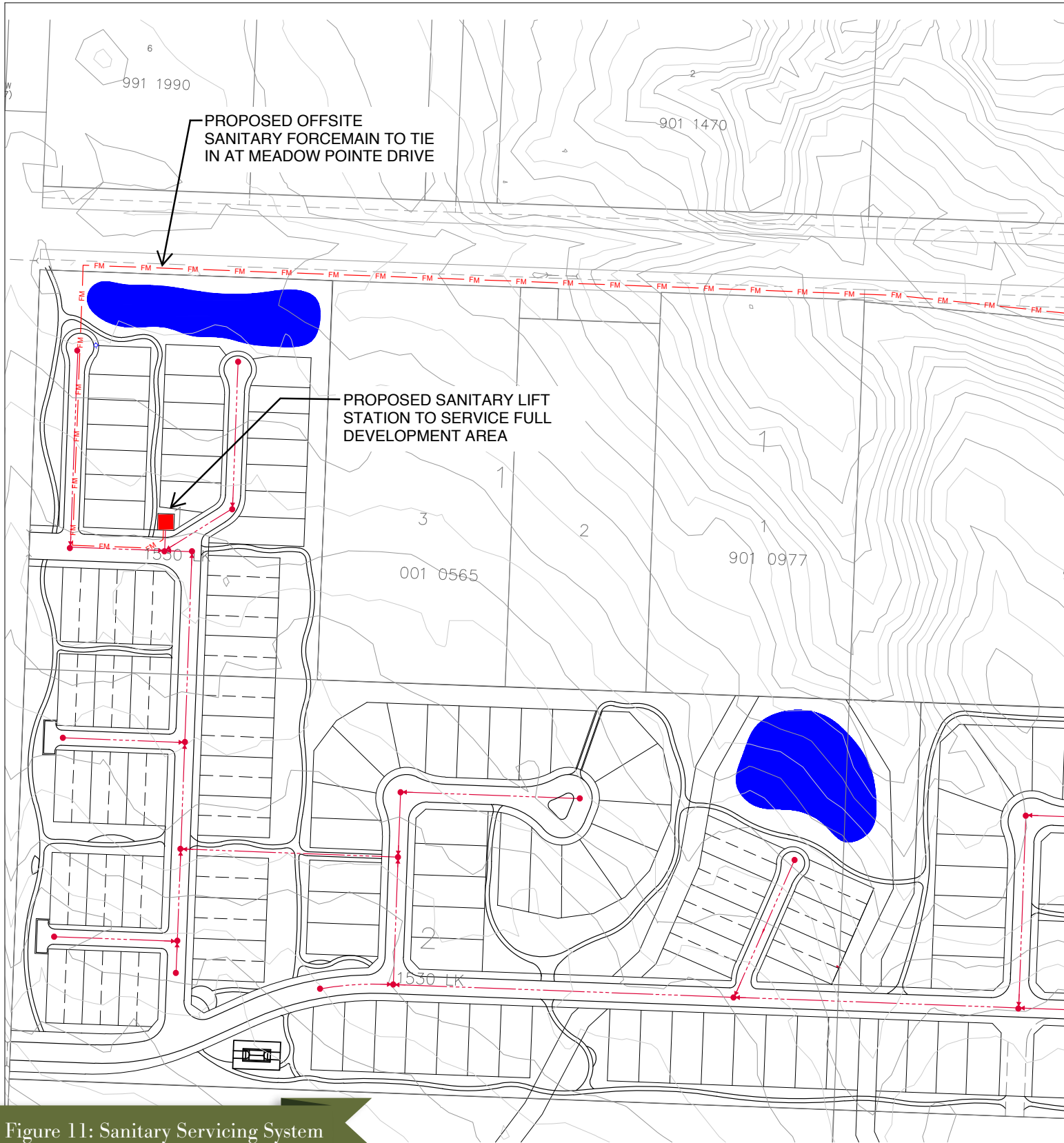
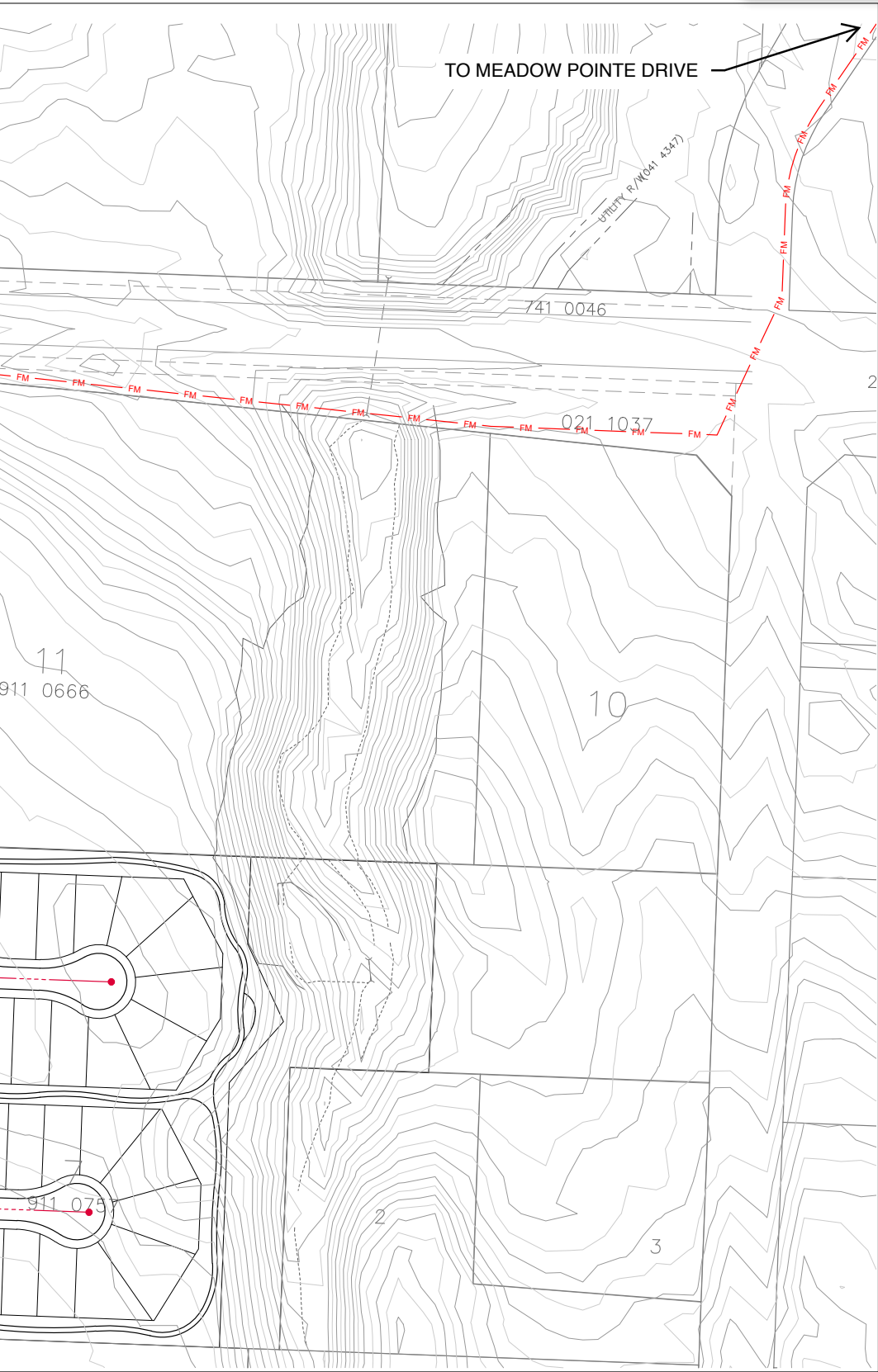


Figure 11: Sanitary Servicing System

# 6.0 Servicing



**LEGEND**

- PROPOSED OFFSITE SANITARY FORCEMAIN
- PROPOSED SANITARY LIFT STATION
- PROPOSED SANITARY GRAVITY LINE WITH FLOW DIRECTION
- PROPOSED SANITARY MANHOLE



### 6.1.3 Stormwater Servicing

The stormwater management system concepts presented are based on the Stormwater Management Plan by LGN Consulting Engineering Ltd. The Stormwater Management Plan outlines the drainage concepts that will be implemented in the development. The stormwater management system will follow a traditional dual drainage system with a minor pipe system and a designed overland drainage system that incorporates the roads, curbs, and other designed overland flow paths as well as stormwater management facilities. Catchment boundaries were defined in the Stormwater Management Plan, divided into the North Pond and South Pond areas. The pond in the middle of the development will be designed as a wet pond, the pond to the north, closest to Dunbow Road, will be a dry pond.

#### North Pond Catchment

The proposed dry pond facility will generally be designed to meet the following criteria:

Upstream Drainage Area: 4.88 ha  
Active Storage, Volume: 2,612 m<sup>3</sup>, Depth: 1.5 m  
Freeboard Elevation 1055.3 m  
Approximate HWL: 1055.0 m  
Pond Bottom: 1053.5 m  
Design detention release rate of 22.9 l/s

The north pond outlet will be connected to the existing ditch located on the south side of Dunbow Road. Construction of the pond outlet will require a control structure that will limit the off-site discharge to the defined design release rate.

The outlet to the ditch will require erosion protection. Easements and/or land acquisitions would be required to protect the utility right of way of the proposed water main. The final arrangement for the discharge will be subject to municipal, Environmental Protection and Enhancement Act, and Water Act approvals.

The proposed stormwater management system is shown on **Figure 12: Stormwater Management System**.

The stormwater runoff drains from the high point in the South West corner into two catchment areas. This runoff will drain into respective stormwater ponds through major and minor systems before being released into the downstream drainage system.

An oil grit separator will be required upstream of both ponds and 70 l/s/ha for minor system flows.

#### South Pond Catchment

The proposed wet pond facility will generally be designed to meet the following criteria:

Upstream Drainage Area: 9.2 ha  
Permanent Pool: Volume: 1,561 m<sup>3</sup>  
Depth below water line: 2.5 m  
Active Storage: Volume: 4,526 m<sup>3</sup>  
Depth Above NWL: 2.0 m  
Freeboard Elevation 1,053.8 m  
Approximate HWL: 1,053.5 m  
Pond NWL: 1,051.5 m  
Pond Bottom: 1,053.5 m  
Design detention release rate of 43.2 l/s

The south pond outlet is intended to be connected to the existing natural drainage channel at the east edge of the development site. The flow path continues across the private lands north of the site, running through a culvert under Dunbow Road. Construction of the pond outlet will require a control structure that will limit the off-site discharge to the defined design release rate. The outlet will require erosion protection. Easements and/or land acquisitions could be required to protect the utility right-of-way of the proposed storm outlet. Each agreement will need to protect the outlet drainage path from alteration or removal. The final arrangement for the discharge will be subject to Municipal, Environmental Protection and Enhancement Act, and Water Act approvals.

## 6.0 Servicing



### 6.1.3.i

Management of stormwater should not exceed pre-development runoff discharge (both volume and peak discharge). The analysis supporting such a stormwater management strategy will be undertaken using a continuous simulation, Water Balance Model approach.

### 6.1.3.ii

At the subdivision stage, where a stormwater management facility is proposed, the developer shall submit a detailed Stormwater Management Plan that is consistent with the Preliminary Stormwater Management Plan prepared by LGN Consulting Engineering Ltd. The Stormwater Management Plan should address operations and maintenance, include a conceptual design plan, and a landscape plan, and any other information determined to be necessary by Foothills County or other applicable regulatory body to evaluate the proposed facility.

### 6.1.3.iii

Land identified as a PUL contains either stormwater features or lift stations required for wastewater services. Foothills County shall take responsibility of these PUL parcels upon issuance of a Final Acceptance Certificate to the satisfaction of Foothills County.

### 6.1.3.iv

The location of all stormwater utilities and the provision of rights-of-way and easements, and related line assignments shall be addressed to the mutual satisfaction of Foothills County, the developer, and the utility provider.

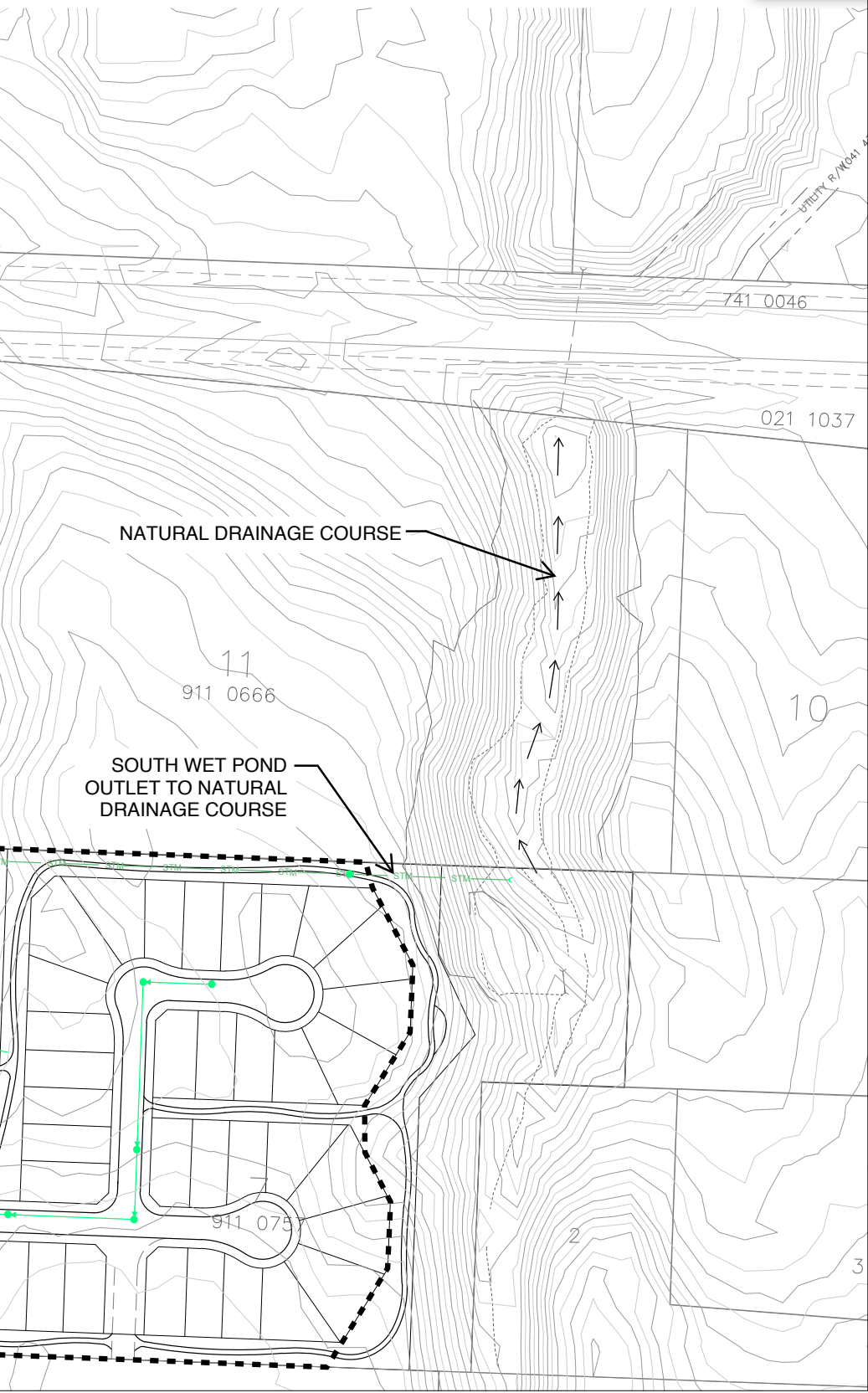
### 6.1.3.v

A detailed lot grading and drainage plan shall be conducted once lot configuration and road layouts are finalized. The lot grading and drainage plan shall be completed at the developer's expense and to the satisfaction of Foothills County.








Figure 12: Stormwater Management System

# 6.0 Servicing



### LEGEND

-  PROPOSED STORM WATER OUTFALL
-  PROPOSED STORM WATER POND
-  PROPOSED STORM WATER LINE WITH FLOW DIRECTION
-  PROPOSED STORM MANHOLE
-  PROPOSED STORM CATCHMENT BOUNDARY - MINOR SYSTEM



## 6.2 Shallow Utility Servicing

It is expected that the shallow utility needs of the development (natural gas, electrical, communications, and cable) will be provided by an extension of existing infrastructure in the area. Utility providers in the area should be engaged during subsequent planning and design to determine specific utility requirements on-site, as well as potential upgrades to off-site infrastructure that may be required to support the development.

### 6.2.i

The Plan Area shall be serviced by shallow utilities including electricity, gas, cable, telephone, and high-speed internet, and must be installed at the sole expense of the developer to the extent required in the Development Agreement. Any upgrades required for shallow utility service shall be the responsibility of the developer to the satisfaction of the utility provider and Foothills County.

### 6.2.ii

Utility rights-of-way and easements, public utility lots, and road rights-of-way may be required as determined necessary to facilitate order and sequential development. A developer may be required to provide the utility rights-of-way or easements necessary to accommodate the extension of Municipal utilities through or adjacent to a site to allow for its servicing.

### 6.2.iii

The developer shall execute and comply with a Development Agreement to the satisfaction of Foothills County for the construction of all required on-site and off-site utility infrastructure.

### 6.2.iv

The location of all shallow utilities and the provision of rights-of-way and easements and related line assignments should be addressed to the mutual satisfaction of Foothills County, the developer, and the utility provider.



# 6.0 Servicing





## 7.0 Infrastructure





## 7.1 Transportation

### 7.1.1 External Transportation Network

In 2005, Alberta Transportation completed a study to determine the land requirements and design of an interchange at Dunbow Road and Macleod Trail. **Figure 13: Dunbow Road Interchange**, depicts the interchange as recommended by the Province. In 2015, Foothills County installed the signalized intersection at Dunbow and Highway 2A as an interim measure to improve safety.

In 2019, Foothills County undertook a Functional Study of the Dunbow Road corridor between Highway 2A (Macleod Trail) and Deerfoot Trail to accommodate additional growth and ensure efficient access to Dunbow Road for emergency vehicles. Dunbow Road has been constructed to a two-lane rural standard between Deerfoot Trail and Macleod Trail. It functions as a major collector and will be upgraded to a four-lane standard. 2nd Street East has been identified as requiring upgrades to accommodate Heritage Crossing.

The intersection of Dunbow Road and 8th Street was constructed to a flared standard with a dedicated left turning lane and two through lanes in both the eastbound and westbound directions. The intersection of Dunbow Road and 2nd Street East has also been equipped with left turning bays but it has only one through lane eastbound and one through lane westbound. Acceleration and deceleration lanes have been constructed to accommodate right turns on its southbound approach.

Foothills County and Watt Consulting Group completed a Functional Planning Study in March of 2022, which outlines options for improving conditions at the intersections of Dunbow Road and 2nd Street East and Dunbow Road and 8th Street. Bunt & Associates completed a Transportation Impact Assessment (TIA) in August of 2022, which determined that the functional planning work completed to date, including the recommendations regarding the treatment at Dunbow Road and 2nd Street East intersection, meets the requirements to facilitate Heritage Crossing to the satisfaction of Foothills County.

#### 7.1.1.i

The developer shall execute and comply with a Foothills County Development Agreement for all transportation related construction and contributions at the time of subdivision to the satisfaction of Foothills County.

#### 7.1.1.ii

The developer shall contribute to the improvement of Dunbow Road by way of Foothills County's Community Sustainability Fee, as outlined in Foothills County's Development Agreement, the value of which shall be determined and paid for at the subdivision stage to the satisfaction of Foothills County.

#### 7.1.1.iii

2nd Street East shall be upgraded to a nine (9) metre paved surface within a 30 metre right of way in accordance with the Bunt & Associates Transportation Impact Assessment, at the sole expense of the developer and to the satisfaction of the Foothills County. The developer shall dedicate land necessary to accommodate the upgrade to the satisfaction of Foothills County.

#### 7.1.1.iv

Upgrades to 2<sup>nd</sup> Street East and timelines for the upgrades shall be identified in an executed Development Agreement to the satisfaction of Foothills County. The Development Agreement shall indicate the specific length of 2<sup>nd</sup> Street East to be upgraded by the developer.

The long-term conceptual illustration on **Figure 13: Dunbow Road Interchange** is for illustrative purposes only. The illustration identifies how the long term road system could be supported, and it can be revised without amendment to this plan.

## 7.0 Infrastructure



### 7.1.2 Internal Transportation Network

Internal roads are intended to be constructed by the developer and owned and maintained by Foothills County upon issuance of a Final Acceptance Certificate. In order to allow for walkable connections throughout the community, it is proposed that a 16 metre residential road standard be utilized as depicted in **Figure 14**.

A second internal road standard has been developed for the connections to the multi-family villas, and provides a 12 meter road right of way as depicted in **Figure 15**: Villa/Bungalow Street Section. The final design and construction of internal roads will be engineered in conjunction with the Public Works department to the satisfaction of Foothills County.

**Figure 16**: Entry Street Section provides a conceptual design for the entrance to Heritage Crossing and the design elements that could be incorporated.

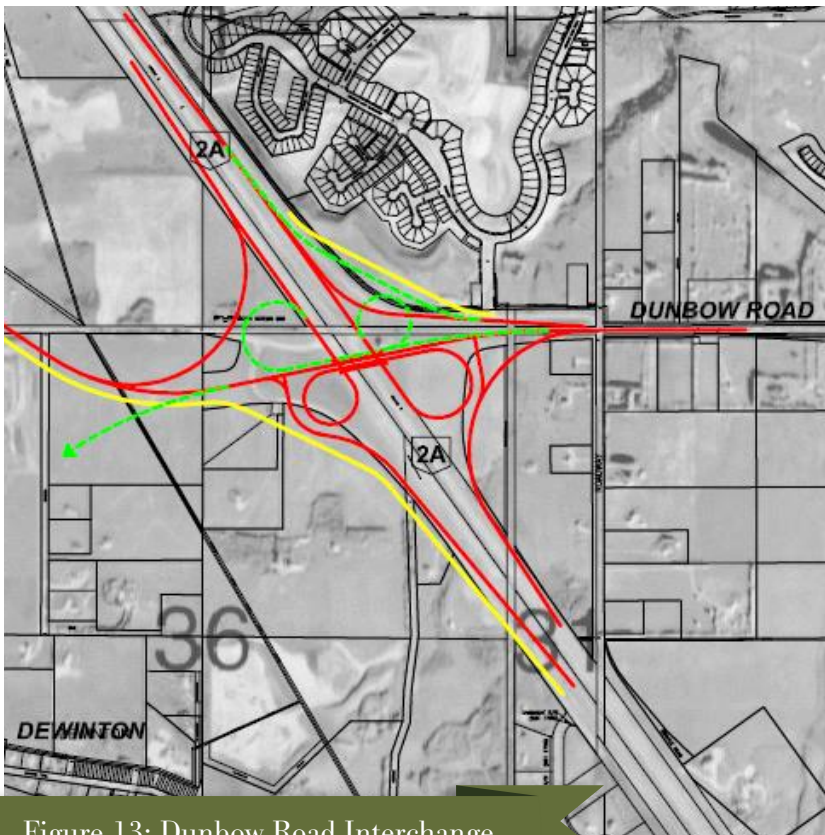


Figure 13: Dunbow Road Interchange

#### 7.1.2.i

The designation and design of local roadways within the internal transportation network, such as the classification and intersection/access spacing, shall be designed to the satisfaction of Foothills County.

#### 7.1.2.ii

All internal roads shall be constructed by the developer to the satisfaction of Foothills County. Foothills County will own and maintain the internal roads upon issuance of a Final Acceptance Certificate.

#### 7.1.2.iii

Endeavors to Assist should be considered, in collaboration with Foothills County, to address planned excess capacity (i.e. - oversizing) or in providing assistance to benefiting areas, as a result of constructing infrastructure improvements or boundary roads. This consideration ensures appropriate compensation is provided to the developer who front ended the cost for benefiting lands. Applicable Endeavors to Assist are typically determined at the subdivision stage and shall be to the satisfaction of Foothills County.

#### 7.1.2.iv

Vehicular access to the adjacent lands to the south may be provided through the proposed internal road network, to the satisfaction of Foothills County.



Figure 14: 16m Residential Street



Figure 15: 12m Villa Street



## 7.0 Infrastructure



### 7.2 Emergency Services

Emergency services include fire, EMS, and protective service needs. Fire and EMS services will be provided by the Foothills Fire Department from the Heritage Pointe station, while the protective services will be provided from local Royal Canadian Mounted Police (RCMP) detachments. As growth and development occurs within the Plan Area, the developer needs to ensure an appropriate and efficient level of fire and protective service is made available for current and future residents in order to provide a safe and livable community.

#### 7.2.i

At the land use stage, the developer, in association with Municipal Fire Services, the RCMP, and other emergency service providers, shall ensure an adequate level of service is provided, as established by the provincial authority, to meet current and future needs based on projected population growth and demographic change in the Plan Area.

#### 7.2.ii

All development within the Plan Area shall provide fire suppression in accordance with Foothills County requirements.

#### 7.2.iii

Policing will be provided by the RCMP as per the Provincial Police Service Agreement, until such time as another policing solution is required or sought out.


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## Key Plan



### Legend

-  Sod
-  Trees
-  Shrubs
-  Perennials
-  Bench
-  Property Line

- 1. Main Entry
- 2. Entry Feature
- 3. Residential Area
- 4. Boulevard Trees
- 5a. 1.5m Wide Concrete Sidewalk
- 5b. 2m Wide Asphalt Pathway
- 6. Planting Bed
- 7. Grass Berm
- 8. Grass Berm with Planting
- 9. Multi-Sport Court
- 10. Community Board
- 11. Corner Plaza
- 12. Seating Node
- 13. Crosswalk



Figure 16: Entry Street Section



# 7.0 Infrastructure





 8.0 Implementation Framework





## 8.1 Phasing

Phasing within Heritage Crossing will be determined by market demand and servicing efficiency at the discretion of the developer. A phasing strategy may be developed at a subsequent stage once the correct location for off-site and on-site servicing upgrades have been confirmed. More than one phase may proceed at the same time and the order and size of phases may change without amendment to this plan.

## 8.2 Plan Amendment

The Heritage Crossing ASP falls within a hierarchy of applicable statutory plans at the regional and municipal levels. Any amendment to the plan will align with the applicable statutory plans and Foothills County's process for amending Area Structure Plans.

### 8.1.i

Each stage of development may contain one or more phases at the discretion of the developer.

### 8.1.ii

The developer shall be responsible for providing a road naming plan at the subdivision stage for first phase of development.

### 8.1.iii

The phasing strategy shall be determined based on the availability of servicing and market conditions at the time of construction.

### 8.2.i

Any changes to the Heritage Crossing ASP, be they text or map alterations, may require amendment of the Plan unless otherwise stated or deemed necessary by the Approving Authority. Applicants within the Plan Area shall submit all necessary supporting information to Foothills County to allow for evaluation of the potential amendment.



## 8.3 Public Engagement

The project team has initiated a robust engagement strategy to communicate key goals with area residents, stakeholders, Foothills County councillors, and the general public. The overarching goal was to effectively engage with the public and stakeholder groups to raise awareness of the plan, encourage feedback on its details, and gain support for the resulting Heritage Crossing ASP.

The project team is dedicated to a transparent and inclusive engagement process. We recognize that the experts about a site are those who live in the area and are committed to working with stakeholders to achieve our client's vision.

### *Tools and Strategies*

The project team provided an array of feedback mechanisms that allowed both event attendees and those who could not attend the opportunity to provide their thoughts and concerns to the project team in a variety of ways. The team aimed to be transparent, inclusive, responsive, and timely throughout the process to build community and stakeholder trust.



A project website was created to provide updated information regarding the vision, objectives, and progress of the project. The website allows updates to be provided as they happen to keep residents and stakeholders apprised of progress and encouraging feedback at each stage.



A letter detailing the vision, site specifics, and objectives was sent to all residents in a 0.5 mile radius of the Plan Area and all residents of Heritage Pointe. The letter included the website and an email address which respondents could use to provide their feedback.



An open house was held on Thursday June 09, 2022 prior to submission of the ASP Application. The open house was framed as a community conversation with members of the Township Planning team.



### *“What We Heard” Report*

All input from participants in the engagement process has been recorded and compiled into a “What We Heard” report. This “What We Heard” document was made available to the public through the associated project website and has been included under separate cover with this ASP application. Every effort will be made to listen to and incorporate public feedback.

We acknowledge that not all suggestions from stakeholders have been incorporated into the final design. In light of this, the “What We Heard” Report identifies participant suggestions and concerns and outlines which feedback has been incorporated. When input has not been integrated the team has addressed why these changes were not applied.



## 9.0 Glossary





## 9.1 Terminology

**Architectural Controls:** a set of guidelines to create a unified and cohesive visual community. In this case, the architectural controls aim to create a rural residential neighbourhood theme and provide for balance in forms, colours, and materials to make a beautiful and architecturally varied community.

**Area Structure Plan:** is a statutory plan, adopted by Bylaw which provides a framework for redesignation, subdivision and development of a specific area of land.

**Biophysical Impact Assessment:** A Desktop Analysis with some field verification, identifying any potential biophysical constraints or issues and providing recommendations for potential future Biophysical Impact Assessment work required.

**Built Form:** the shape, configuration, and appearance of buildings and the relationship of these buildings to the streetscape and one another.

**Dwelling Density:** the number of dwelling units per acre.

**Gross density:** the number of dwelling units per acre of the entire Plan Area (gross area).

**Net density:** the number of dwelling units per acre of the developable acreage.

**Development Agreement:** an agreement between the developer and Foothills County that outlines the terms and responsibilities for the completion of the community.

**Easement:** means a dedication of land, or an interest or right held by a municipality, for the purpose of locating public utilities.

**Environmental Reserve:** land may be dedicated as environmental reserve if it meets the criteria established in the Municipal Government Act. Within Heritage Crossing they are typically lands that are considered unsuitable for development to protect the natural environment, people, and property from hazardous conditions (eg. flooding) and provide public access to or along lakes and rivers. ER lands are intended to be left in their natural condition as much as possible. Public trails may be developed where conditions are favourable.

**Forcemain:** a pipeline dedicated to conveying wastewater from one point to another with the aid of a pump, typically pumping wastewater from a lift station to a catchment area or discharge point.

### Hierarchy of Roads

**Local:** local roadways serve traffic within a localized area. The local roadways are typically the main access for developments and agricultural, resource and natural areas of the province.

**Collector:** collector roadways convey traffic from major centres such as communities, and / or commercial, or industrial developments but with overall shorter travel distances. These roadways provide the connection between local roads and arterials, and generally serve traffic between municipalities only.

**Arterial:** arterial roadways convey people, goods and services intra-provincially only and support traffic over long distances. Access is limited to connections with Highways and Collector roads.

**Highway:** these highways accommodate the movement of people, goods, and services inter-provincially and internationally. Access is limited and generally only provided for connection to arterial roads.



## 9.0 Glossary



**Land Use Concept:** The proposed community planning framework inclusive of the Land Use Concept for the Plan Area. The land use concept highlights the intended form, use, and character from a community design perspective within the Heritage Crossing.

**Lift Station:** a point along the conveyance path of wastewater that pumps the wastewater from a lower elevation to a higher elevation.

**Municipal Land Reserve District:** a land use district in the Foothills County Land Use Bylaw used to allow for schools, parks, community facilities, and recreation facilities on municipally owned recreation or educational properties, and land dedicated as reserve, municipal school reserve, community reserve, public reserve, and reserve pursuant to the Municipal Government Act.

**Municipal Reserve:** land may be dedicated as municipal reserve if it meets the criteria established in the Municipal Government Act. Within Heritage Crossing, these lands are typically intended for the allocation for recreation facilities or public use. MR may provide important access links to other lands such as river access, and can offer undeveloped green spaces.

**Oil Grit Separator:** Oil/grit separators are underground storage tanks with multiple chambers designed to remove heavy particulates, floating debris and hydrocarbons from stormwater.

**Open Space:** lands that are dedicated to the passive or active recreational uses throughout the plan area for public use. These could be designated as MR, MLR, or ER.

**Public Utility Lot:** Public Utility Lots accommodate public and private utilities and facilities needed to serve the County. They may retain stormwater and are often designed as public amenity spaces for use during dry periods.

Within Heritage Crossing, these areas, often empty during dry periods, are low points in the Plan Area that water is conveyed to in times of 1:100 year events, heavy rainfall, snow melt, or flood events.

**Restrictive Covenant:** a condition placed on a portion of land through an instrument on Title that restricts the uses allowed on that land.

**Stormwater Management Plan:** A report outlining the strategies for stormwater conveyance and retention for the entirety of a Plan Area. A more detailed version of the SWMP will be required at subsequent stages and will focus on smaller areas of land.

**Transportation Impact Assessment:** A Transportation Impact Assessment is completed by a transportation engineer and determines the road network upgrades required over time to support population growth from buildout.

**Villa:** a housing form characterized by two units side-by-side on a lot. In Heritage Crossing, these are a single-storey residence.

