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1 INTRODUCTION

1.0 Introduction

1.1 Purpose of the Neighbourhood Plan

The Summit of River Heights Neighbourhood Plan is a non-statutory plan that seeks to facilitate the planning and development of The Summit at River Heights neighbourhood.

The purpose of a Neighbourhood Plan is to provide a framework for the development of a community. A Neighbourhood Plan describes the community layout, the placement of parks, the built form, and transportation and servicing requirements.

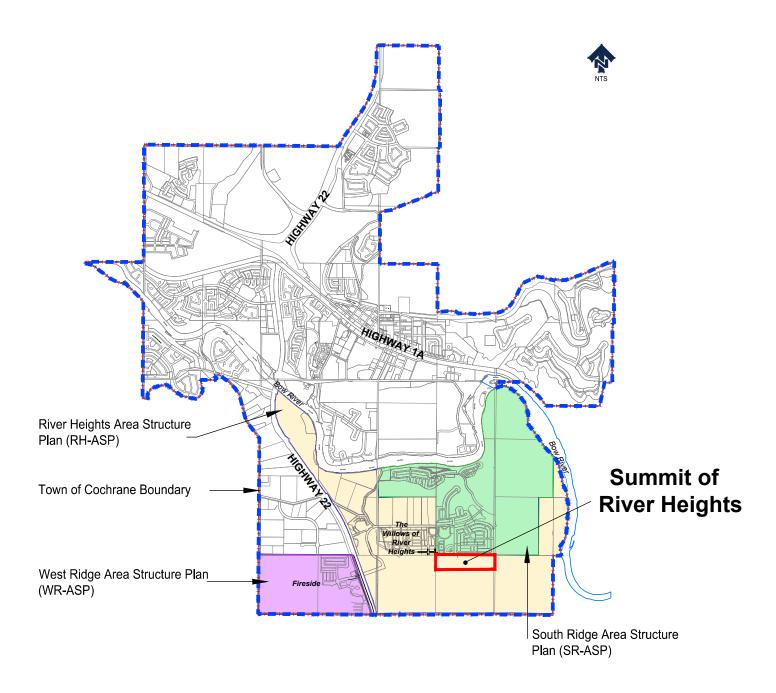
1.2 Vision

The Summit of River Heights Neighbourhood Plan is a residential neighbourhood offering multiple housing forms and access to a significant range of amenities. This neighbourhood will be compact and walkable, promoting residents' ability to access shopping, recreation, municipal services and jobs within a short distance of home.

The neighbourhood design reflects the existing residential development to the north and provides an attractive interface with the future James Walker Trail to the south. The neighbourhood is organized in such a way as to respond to these contextual design considerations while promoting walkability and mobility.

The Summit of River Heights enjoys access to many existing and planned amenities, both within and outside the Plan Area. There is a planned school site partially within the neighbourhood, as well as two neighbourhood parks and pathway connections. In addition, residents are in close proximity to other existing and planned school sites, the planned pedestrian-oriented village centre to the south, and extensive natural areas along the river to the north and east.

FIGURE 1: LOCATION



S SITE CHARACTERISTICS

2.0 Site Characteristics

2.1 Location & Context

The subject lands are comprised of roughly 16.17 hectares (39.95 acres) and are located in southwest Cochrane within the River Heights Area Structure Plan (ASP).

The Summit of River Heights Neighbourhood Plan area is bounded on the north side by the community of Riversong and the Bow Valley High School, and on three sides (west, south and east) by the future residential Neighbourhood Plan area of Southbow Landing, the lands for which are held under the current ownership of Qualico.

The Plan Area is defined by:

TO THE NORTH: Existing Riversong residential development and Bow Valley High School Site. There is one existing roadway connection from the north, and one pathway connection;

TO THE EAST: Future Southridge Boulevard, and potential residential development and environmental reserve within the Southbow Neighbourhood Plan.

TO THE SOUTH: Future extension of James Walker Trail, and future residential development;

TO THE WEST: A planned Middle School Site (a portion of which is within the plan area) and future residential development.

2.2 Legal Description & Ownership

The following are the legal descriptions for the subject lands within the Neighbourhood Plan area:

- Lot 1, Block 1, Plan 101 0781 within the SE 1/4 Sec 26-25-4-W5M;
- Lot 2, Block 1, Plan 101 0781 within the SE ¼ Sec 26-25-4-W5M;
- Lot 3, Block 1, Plan 101 0781 within the SE 1/4 Sec 26-25-4-W5M.

The municipal addresses for the subject lands within the Neighbourhood Plan are as follows:

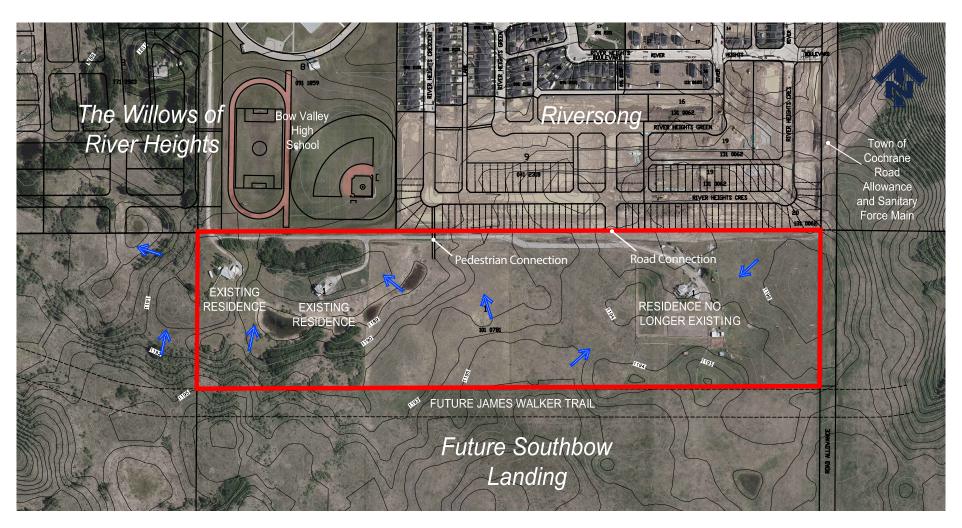
- 41143 River Heights Drive; and
- · 41145 River Heights Drive.

The Ownership for The Summit at River Heights Neighbourhood Plan is summarized in the table below,

TABLE 1: LAND OWNERSHIP

Legal Description	Land Ownership	Area ± Hectares	Area ± Acres	Percentage	
Lot 1, Block 1, Plan 101 0781	Summit Lands GP Ltd.	15.964	39.45	98.75%	
Lot 2, Block 1, Plan 101 0781	La Vita Land Inc	0.064	0.064	0.40%	
Lot 3, Block 1, Plan 101 0781	Summit Lands GP Ltd.	0.138	0.34	0.85%	
	Totals	16.166	39.95	100.00%	

FIGURE 2: CONTEXT MAP



Legend

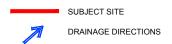
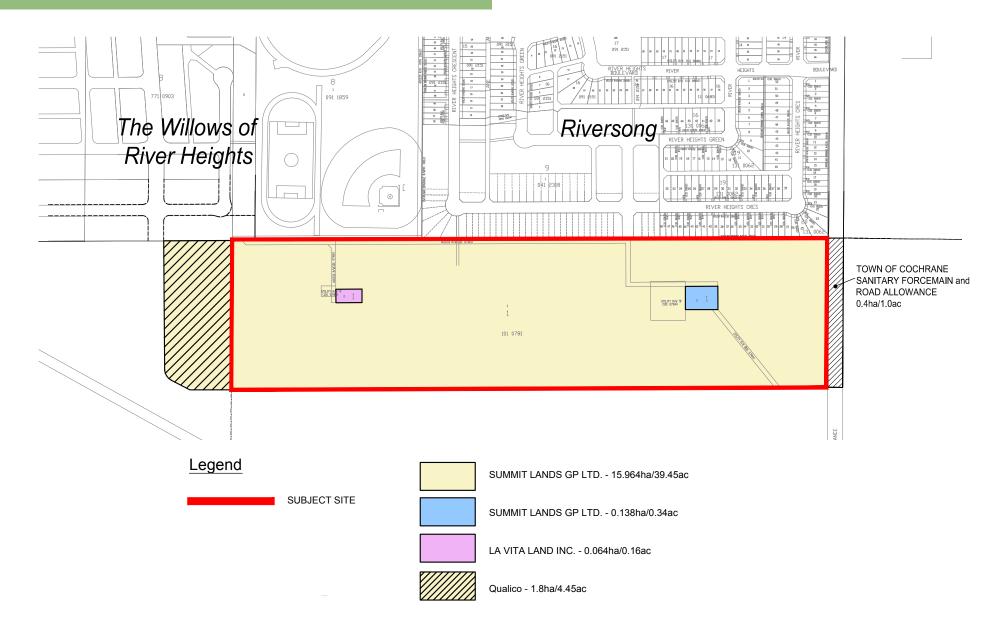


FIGURE 3: OWNERSHIP



2.3 Pipelines and Utility ROW

ATCO Gas and Pipelines Limited has an easement registered on the Certificate of Titles for a gas line that serves the two (2) existing single-family residences located within the Neighbourhood Plan area, as illustrated in Figure 3. This existing line will be re-aligned and integrated into the future proposed development configuration.

The Neighbourhood Plan area is not impacted by either the ATCO Pipelines high pressure gas pipeline or AltaLink's 138 KV electrical transmission line, as identified in Section 2.2.6 Utility Right-of-Way Corridors within the River Heights Area Structure Plan.

2.4 Existing Condition and Natural Features

The subject lands within The Summit of River Heights Neighbourhood Plan area are currently developed as country residential acreages.

The topography of The Summit of River Heights Neighbourhood Plan area is predominantly flat with rolling hills. Site vegetation includes planted trees, shrubs and grass around the residences with grass pasture and natural aspen stands on the remainder.

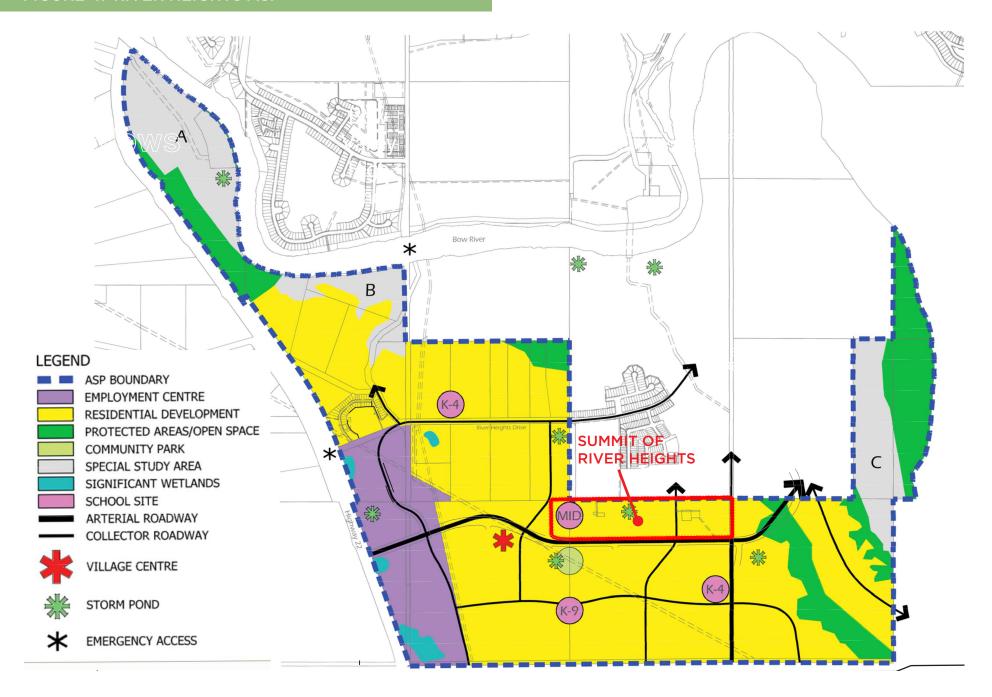
As identified in the River Heights Area Structure Plan, The Summit of River Heights Neighbourhood Plan area is not affected by design constraints and considerations such as the Bow River Flood Fringe, Areas of Slope greater than 15%, Significant Wetlands, Closed Roads, or Environmentally Significant Features. This conclusion is also expressed by the reports prepared in support of this Neighbourhood Plan and summarized in Section 10.





Existing residences on site

FIGURE 4: RIVER HEIGHTS ASP



Policy Context

The Summit of River Heights Neighbourhood Plan is located within the planning boundary of the River Heights Area Structure Plan, which was approved by the Town of Cochrane Council on October 24, 2011. The River Heights Area Structure Plan is the statutory planning policy document for the plan area and sets the standards, policies, and expectations for all future development within its planning boundary.

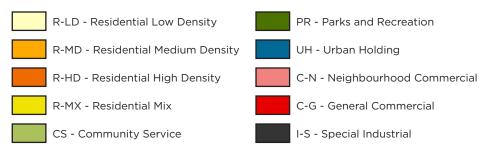
The Summit of River Heights Neighbourhood Plan area is identified as "Residential Development" within the River Heights Area Structure Plan Land Use Concept (see Figure 4). The proposed land uses within the Summit of River Heights Neighbourhood Plan comply with the policies in Section 5.2: Residential of the River Heights Area Structure Plan, and therefore no amendments are being requested to the River Heights Area

approved within the River Heights Area Structure Plan (September 2011), the Town of Cochrane Municipal Development Plan (October 2008), and the Cochrane Sustainability Plan (May 2009), as outlined further in Section 9.

Structure Plan. This Neighbourhood Plan meets the policies **Summit of River Heights**

Existing Land Use

The existing land use district of the Neighbourhood Plan is Urban Holding (UH) (See Figure 5). The land uses to the west and east are Parks and Recreation (PR) and UH, and the land use to the south is Residential Mix (R-MX). The land uses to the north are residential in nature with the addition of a school site Community Service district.



3.0 Neighbourhood Plan

3.1 Neighbourhood Name & Theme

The name "Summit of River Heights" reflects the neighbourhood's unique location and character as well as its relationship with adjacent neighbourhoods. The "Summit" component refers to the elevation of the Neighbourhood Plan relative to the surrounding neighbourhoods. The proposed name is also intended to complement the existing Willows of River Heights community, creating a feeling of integration while maintaining a separate neighbourhood identity.

Summit of River Heights is a walkable, active residential neighbourhood with inclusive and diverse streetscapes and housing options, open spaces, and access to nearby amenities.

3.2 Design Elements

The Design Elements of this Neighbourhood Plan are the components within Summit of River Heights that create a sense of place and make it a distinct residential neighbourhood. These Design Elements address the policies set out in the Integrated Neighbourhood Design Guidelines, and are illustrated in Figure 6: Design Elements.

Key design elements include integrated housing options, the strategic placement of density and open space, and a grid-like road network that emphasizes pedestrian and cyclist mobility.

The Summit of River Heights Neighbourhood Plan represents a conscious approach to create an inclusive and diverse built environment by integrating housing options throughout the plan area. A mixture of housing types, sizes, and price ranges are being proposed to meet the needs of Cochrane residents.

Townhouse style dwellings with rear lane access are proposed along the main collector road and along Summit Gate, east of the Multi-Family unit within the Neighbourhood Plan. The combination of street oriented townhouses, sidewalks on both sides and a treed lined boulevard are all design elements that will make the neighbourhood experience more intimate and attractive for the pedestrian, while providing a safer streetscape with better visibility. A neighbourhood entrance feature, or a neighbourhood identity feature in the parks adjacent to Summit Road will help provide a distinct neighbourhood. Design and placement of the neighbourhood feature will be determined at subdivision stage

Laneless and laned single and semi-detached blocks are located throughout the plan area. Open spaces are strategically placed to be highly visible and accessible.

A grid-like road pattern provides multiple routing options for vehicles and pedestrians. Lanes are utilized for all blocked fronting collector roads to improve traffic flow and reduce driveway conflicts.

In addition to the internal Design Elements, residents of Summit of River Heights will also have access to numerous nearby amenities, including planned schools, the regional amenity of the river and pathway systems, as well as the planned Village Centre to the south.

Regarding the interface along the north boundary, the existing hill that is located on the Summit land behind the Riversong homes will be lowered during the site grading process. The amount of lowering varies from 1 meter to 4.5 meters along the boundary. The homes that will back onto Riversong will be single family, to match the home type that is existing in Riversong. There will still be an elevation difference between the Summit and Riversong, so it is likely that all of the homes that back onto Riversong will be walk outs. The lots have been made as deep as possible to provide as much space between the existing and new homes.

The grade difference cannot be eliminated completely because of site servicing constraints but the ground will be lowered as much as possible. The fencing along the interface is proposed to be maintained for cohesive integration and to minimize impact on existing residents.

FIGURE 6: DESIGN ELEMENTS

A SCHOOL SITE

is located partially within the plan area. A neighbourhood park provides residents with access to both school sites, as well as a green vista from the street. Street connection may be used as temporary

HIGHER DENSITY

housing is located along collector roadways and in close proximity to amenities to promote transit use and walkability. The R-MD site is intended for a townhouse style development.

PATHWAY CONNECTIONS

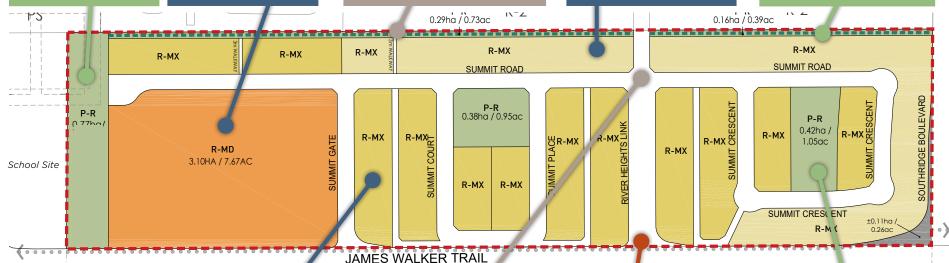
are provided to the north in order to increase permeability to the adjacent neighbourhood and school site. A regional pathway will also run along the south side of the adjacent James Walker Trail and a greenway runs along the north side of the Plan area.

DIVERSE STREETSCAPES AND

HOUSING OPTIONS will be provided throughout the plan area by the use of flexible land use designations that allow a variety of housing types to coexist within the same block.

NORTH INTERFACE is

proposed to maintain existing fencing and the existing ground to be leveled and lowered as much as possible. Homes on the new lots will be located as far forward on the lots as possible to create more space between homes.



PROXIMITY TO THE VILLAGE CENTRE and many other excellent amenities including schools and the regional environmental

amenity space adjacent

to the river.

LANED HOUSING is

provided throughout the neighbourhood plan area. All houses along collector roadways have laned access, creating a more attractive pedestrian environment and eliminating potential conflict between pedestrians and vehicles.

A GRID-LIKE ROAD

NETWORK responds to the design constraints created by the surrounding uses and provides direct connections for vehicular traffic while also offering multiple routing options for pedestrians and cyclists.

AN ATTRACTIVE

GATEWAY is created along James Walker Trail by the divided entrance road, roundabout and the window street.

NEIGHBOURHOOD

strategically in areas that are highly visible and provide pedestrian connections, while ensuring all residents can enjoy open spaces close to their homes and facilitating more active and healthy lifestyles.

3.3 Planning Considerations

The neighbourhood design of the Summit of River Heights Neighbourhood Plan is directly influenced by the edge conditions provided by the existing residential development of Riversong to the north, school sites to the north and west, and the proposed alignment of the future James Walker Trail to the south.

The road pattern conforms to the minimum intersection spacing standards along James Walker Trail and Southridge Boulevard, which limits the number of entrances to the neighbourhood and their potential locations. In combination with the plan area's size, intersection spacing also means that a full grid road network internal to the site is not feasible. However, the neighbourhood design will ensure that pedestrian permeability is retained.

The planned school site to the west and the existing high school to the north provide neighbourhood amenities and pedestrian permeability; however, they also eliminate vehicular connections from the west and northwest. The existing neighbourhood of Riversong to the north runs along the remainder of the plan area boundary and provides one road connection and one pathway connection.

The neighbourhood's road network and lotting configuration respond to these design constraints in order to provide permeability and accessibility within the site. The road network is linear and utilizes lanes along collector roads to provide access to homes while eliminating driveway conflict and providing a safer and more attractive pedestrian experience along collector roads.

To further improve pedestrian permeability through the site, there is a pathway connection to Riversong to the north as well as through the open space which connects the neighbourhood to both school sites. The greenway along the north side of the plan area creates separation between existing Riversong residents and future Summit residents while creating a safe pedestrian connection that connects from the school sites on the west across to the Road ROW on the east side of the Plan area. Where roadways terminate in cul-de-sac or loops, pedestrians and cyclists will be able to continue through to James Walker Trail and the regional pathway.

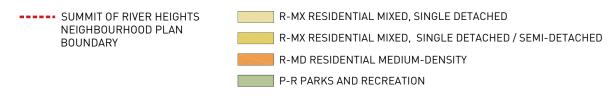
The existing residential development to the north establishes a pattern of development for this area of River Heights. The lots within this adjacent residential development back onto the Neighbourhood Plan area. The Summit of River Heights concept provides a buffer from the adjacent residential development and Bow Valley High School to the north with the pedestrian greenway. The configuration of lots backing onto the Bow Valley High School is consistent with the interfaces approved for both Riversong and Willows of River Heights, which are located on the east and west sides of the school site. Due to a grade difference between the existing development to the north and the subject site, proposed lots backing onto development to the north may be graded as walk-outs as shown in Appendix A.

Due to the fact that James Walker Trail is a proposed truck route, it is expected that sound attenuation of some kind will be necessary for residential lots that side directly onto James Walker Trail. Sound attentuation may be provided through traditional sound fencing or a unique solution, which may include upgraded building materials which offer higher noise mitigation. These needs will be evaluated at the subdivision stage. Summit of River Heights will also utilize design features to reduce the need for and impact of sound screening on low-density residential uses. These include a combination of frontage roads and open-ended culs-de-sac to provide pedestrian connectivity through any sound fencing, and using the road right-of-way and plantings to provide increased buffering on residential uses.

FIGURE 7: CONCEPT PLAN



Legend



3.4 Housing Diversity & Streetscape

Summit of River Heights will be a residential neighbourhood, with residential land uses comprising 11.06 hectares (27.33 acres), or approximately 69% of the net developable Neighbourhood Plan area.

The neighbourhood of Summit of River Heights will provide housing diversity within a compact neighbourhood with a variety of housing options. Including single-detached and semi-detached homes, and townhouses. Laned housing exists throughout the plan area, in addition to homes with attached and detached front-drive garages.

R-MX, as identified in Figure 7, will be applied across the plan, which provides flexibility and allows single detached and semi-detached homes to be built on the same block. This allows the developer to respond to market housing demands and provide a variety of housing options throughout the plan area. It also creates a varied streetscape where houses are non-uniform in size, type and appearance but still present a coherent visual theme based on the Town's Western Heritage Design Guidelines.

The range of housing options within the neighbourhood will cater to a variety of income levels and life stages. Opportunities for affordable housing exist in the plan area with the potential for rental units in the R-MD parcel.

3.5 Connectivity

The Summit of River Heights has been designed to ensure safe and convenient access for all modes of transportation. A grid-like road network provides direct access for vehicular traffic within the site, while the use of lanes throughout the neighbourhood will reduce pedestrian-vehicle conflicts and traffic on collector roads.

To improve permeability through the site for pedestrians, there is a greenway with pathway connections to Riversong on the north side of the Plan area. Where roadways terminate in cul-de-sac or loops, pedestrians and cyclists will be able to continue through to James Walker Trail and the regional pathway.

The neighbourhood parks within the plan area are strategically placed in locations with high visibility from the road and convenient pedestrian access. The central-park is meters from the north-south pedestrian corridor that links to open space areas in both neighbourhoods to the north and south, as well as to the regional pathway to the south. The eastern park is separated from James Walker Trail for safety, but is pedestrian accessible via the lane to the southwest.

3.6 Crime Prevention Through Environmental Design (CPTED)

Crime Prevention Through Environmental Design (CPTED) is a means of encouraging safety and the prevention of criminal activity through elements of built form. The Summit of River Heights Neighbourhood Plan is designed with a commitment to community safety, and implements the principles of CPTED by influencing the physical design of the built environment and encouraging positive social interaction as follows:

AWARENESS OF THE SURROUNDING ENVIRONMENT

 The community design uses a grid-like road network built around linear roadways, which offers unobstructed sightlines and avoids hidden spaces

VISIBILITY BY OTHERS

- Housing is oriented to the street, with laned homes located along collector roads and primary streets. This increases natural surveillance by residents and passing traffic.
- Neighbourhood parks and amenities are located in areas of higher density and along major routes, with residences either backing or siding onto them. This maximizes visibility in public areas.

SIGHTLINES

- The neighbourhood is composed primarily of linear roadways and pathways, which provides excellent sightlines.
- Where roadways are looped or end in a culde-sac, they terminate onto an open space or abut James Walker Trail, such that pedestrians will also have visibility in multiple directions.

LIGHTING

- Care will be taken to provide street lighting in key locations throughout the plan area to allow visibility at night.
- Lighting options will be considered for laneways so that lanes are not areas of low visibility.

PREDICTABLE ROUTES

 The road structure is designed such that pedestrians have multiple routing options, even within laneways.

ENTRAPMENT SPOTS

- Parks have multiple entrance and exit points and will be designed to maximize potential for natural surveillance while also encouraging use at all times.
- The community design ensures that there are no isolated areas or small, shielded places. This will be promoted through the maintenance of sidewalks, walkways and landscaping.
- Summit of River Heights homes backing onto the greenway are proposed with chainlink fences with trees distributed along the path to enhance visibility and safety while addressing privacy for homeowners.

3.7 Neighbourhood Plan Statistics & Density

The Summit of River Heights Neighbourhood Plan will provide an anticipated 409 residential units in a combination of single, semi-detached and townhomes. The projected density for the plan area is 25.46 units per hectare, or 10.30 units per acre. This exceeds the minimum of 19.8 units per hectare (8 units per acre) as indicated in the River Heights ASP and the Cochrane MDP. Based on the assumption of 3 people/unit for single/semi-detached homes and 2 people/unit for multi-

family dwellings, the Neighbourhood Plan will accommodate approximately 1,074 people.

Municipal Reserve dedication is 12.7% of the gross developable area, provided by the school site and two neighbourhood parks and the greenway.

The adjacent table illustrates the anticipated neighbourhood statistics and density.

TABLE 2: NEIGHBOURHOOD PLAN STATISTICS

Developable Areas	Approx. Frontage (m)	Lot Width (m)/Density	Hectares	Acres	Number of Units	% of GDA
TOTAL LAND AREA			16.17	39.95		
Road Widening & Interchange			0.11	0.27		
GROSS DEVELOPABLE Area			16.06	39.68		
Residential Total	2,220		10.78	26.63	409	67.1%
R-MX, Single	740	10.36	2.61	6.45	71	16.3%
R-MX, Mixed	1,449	5.8/7.5/9.7	5.06	12.51	184	31.5%
R-MD, Townhomes		20 upa	3.10	7.67	153	19.3%
Roadways & Lanes			3.25	8.03		20.2%
Total Municipal Reserv	ve		2.03	5.02		12.7%
MR - School Site			0.77	1.90		
MR - Parks, Greenway			1.26	3.12		
Density			25.46 uph	10.30 upa		

4.0 Open Space Network

4.1 Open Space

The Summit of River Heights NP provides three open space components to provide local amenities for residents and create a sense of place. The open space components are identified in Figure 8 and are described below:

- A Middle School site, as identified in the River Heights ASP, is located partially within the plan area along the west boundary.
- The north-central Neighbourhood Park will provide recreation opportunities and visual and physical permeability within the neighbourhood.
- The eastern Neighbourhood Park is located off of Summit Road and provides an attractive community feature as well as an outdoor space for the entire community.
- The greenway includes a pathway, green space, and greenery creating a comfortable pedestrian space and buffers the new development and existing residents. The greenway that runs the length of the Plan area on the north side provides pedestrian permeability and allows for the extension of an interconnected pedestrian pathway system beyond the boundaries of the Summit of River Heights.

The proposed interconnected open spaces are strategically located within the Neighbourhood Plan area to provide meaningful open space and connectivity. The Middle School site is situated according to the River Heights ASP and through collaboration with landowners. There are also three additional existing and planned school sites within a short distance of the plan area, several of which include large play areas and sports fields. Additionally, the Glenbow Ranch Provincial Park area adiacent to the river will be a significant regional amenity within close proximity to the Plan Area. Based on an analysis of these existing and planned Open Space amenities contained within the surrounding area, it was determined that the locations proposed for the Neighbourhood Parks would serve the best allocation of the remaining Municipal Reserve dedication.

All the proposed open spaces have residential dwellings either backing or siding onto them and are open and visible from adjacent roads in order to provide visual surveillance opportunities and deter crime.

FIGURE 8: OPEN SPACE CONCEPT



5.0 Transportation Network

5.1 Boundary Road Network & Access

The ultimate primary access to the Neighbourhood Plan previously described will be provided by two connections to the future James Walker Trail and a connection to the existing community of Riversong to the north. This will be achieved by extending the connector road south from the Riversong development and north from the proposed Southbow Landing development.

Based on the MOU between the Town and Qualico, it is understood that James Walker Trail will be extended in 2025, providing primary access to the Summit. Secondary access is provided via the existing River Heights Link. River Heights Link is a 15.5m right-of-way which widens to a divided residential road of 23.5m right-of-way within the Neighbourhood Plan area and will ultimately connect to James Walker Trail south of the Neighbourhood Plan area. Appendix C illustrates this cross section.

If construction of James Walker Trail is not complete prior to occupancy of the first phase of development, an interim access option is available through a temporary road via the existing temporary access easement that connects the site to the Willows of River Heights. This easement will be developed to Town of Cochrane standards as a 13.0m residential street with sidewalk on one side (see Appendix B). Signage will be placed at the northwest corner of the roadway to indicate that the access is temporary only.

The existing right-of-way adjacent to the eastern boundary of the Neighbourhood Plan will bypass the Summit and provide access to the future development lands to the northwest and Southbow Landing. Additional land is required to accomodate the proposed roundabout at the intersection with James Walker Trail and has been accounted for in this Plan.

The Summit of River Heights Neighbourhood Plan area's existing access is secured via a legal and physical access by way of a legal right-ofway easement agreement, which is registered on the Certificate of Titles. This current access, as described by instrument requires that both legal and physical access must be maintained for the benefit of the Neighbourhood Plan area and cannot be discharged without the consent of the subject lands located within this Neighbourhood Plan. In the interim, this existing legal access will continue to serve the Neighbourhood Plan area and will at minimum remain as an emergency access to serve the Neighbourhood Plan area, until the future proposed connector is extended from the Riversong development to the Future James Walker Trail and alternative emergency access is provided.

5.2 Internal Road Network

As noted in Section 5.1, the proposed connector road from the Riversong development to the future James Walker Trail is the backbone of the proposed internal road network for the Neighbourhood Plan. The proposed internal road network branches to the east and west from a single intersection, which meets the intersection spacing requirement from the future James Walker Trail. No direct vehicular access from the Neighbourhood Plan area to the future James Walker Trail is permitted. All access to dwelling units will be via the proposed internal road network, which links to the proposed connector road and thereby connects to the Riversong development and the future James Walker Trail.

The remaining internal road network will be built with standard 15.5 m municipal right-of-ways and 6 m lanes, with the exception of Summit Road with a proposed modified 14m cross-section to accomodate the greenway - see Appendix A for details. The lanes will provide for internal looping within the Neighbourhood Plan and serve as alternative emergency routes.

The development orientation transitions to a north-south orientation of roads, which creates east-west facing residential dwellings with lanes. Residential dwellings having an east-west orientation take advantage of solar exposure in both the front yards and rear yards of the property.

FIGURE 9: ROAD NETWORK

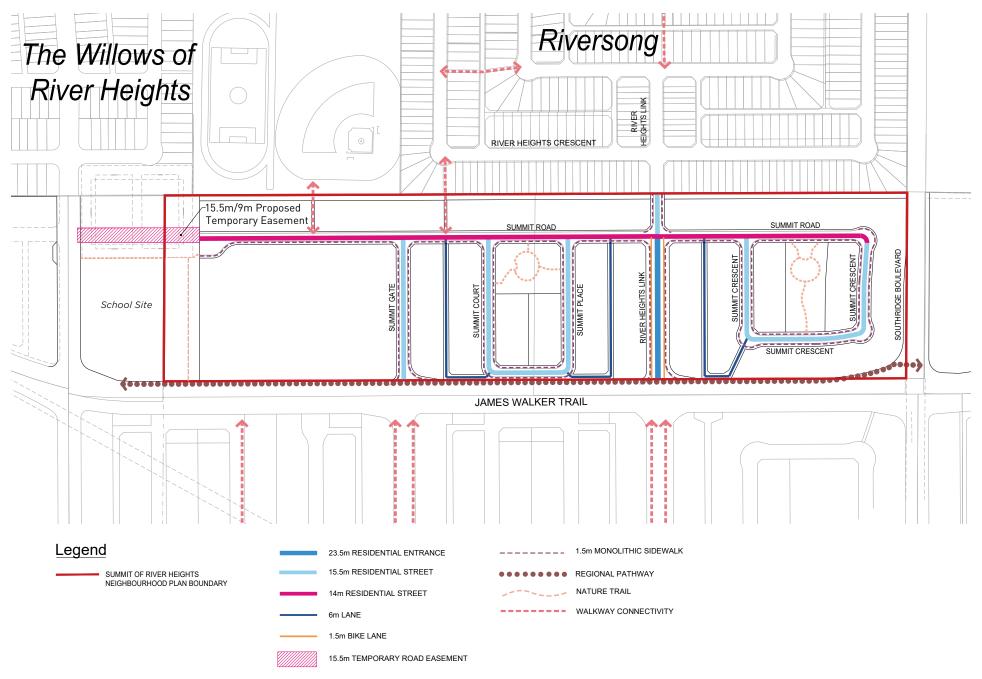
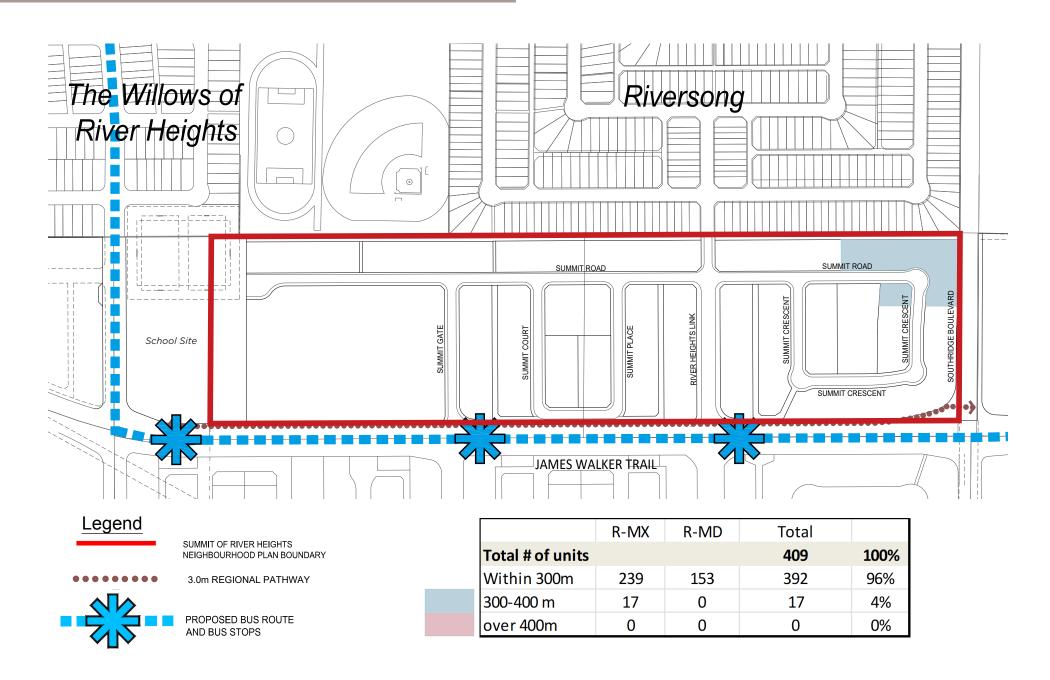


FIGURE 10: TRANSIT



5.3 Transportation Impact Assessment

The original approved Summit of River Heights Neighbourhood Plan was taken into consideration as part of a Traffic Impact Assessment (TIA) prepared by Bunt and Associated entitled River Heights Residential Development Transportation Impact Assessment Final Report, dated February 2008. This report was submitted under a separate cover letter and was updated in June 2013 in the Summit of River Heights Neighbourhood Plan TIA Update. According to Bunt and Associates, changes to the design concept since that time have not affected trip generation and therefore the TIA is still applicable.

In the TIA Update, Bunt & Associates concluded the following regarding the Summit of River Heights site:

- •The on-site roads are adequate for the accommodation of site generated traffic. The amount of traffic expected to be generated by the site as currently proposed is not significantly different from what had been expected in the original 2008 higher order assessment. As such, there are no additional regional impacts associated with the development.
- •Based on the existing level of development and traffic present on River Heights Drive, and a previous approval by the Town to accept interim daily traffic volumes in the order of 18,000 vehicles per day on River Heights Drive, it would appear that sufficient residual capacity exists along River Heights Drive to accommodate approximately 700 additional dwelling units beyond those that have been approved in Tentative Plans for surrounding developments along River Heights Drive.

- •The developer of the Summit of River Heights has secured a temporary access through the Willows development via a temporary road to be constructed to Town standards. This roadway would accommodate the initial phases (up to 135 units) of the Summit of River Heights development and could potentially accommodate growth beyond that level.
- •Ultimate transportation capacity will be provided by connections to James Walker Trail at two intersections on the boundary of the plan area.
- •In general, the report confirms that the proposed internal and external road networks will provide an acceptable level of service.

A TIA update will be provided following, and in alignment, with the James Walker Trail TIA.

5.4 Pedestrian Circulation & Active Transportation

Monolithic sidewalks will be constructed on both sides of the residential streets and pathways will be constructed to the Town of Cochrane's design standards providing interconnectivity within the Neighbourhood Plan area.

Throughout The Summit of River Heights
Neighbourhood Plan area sidewalks will be
provided on both sides of the street with a
separate greenway at the north end in order to
promote and enhance the walkability within the
Neighbourhood Plan and to provide connectivity
to the adjacent school sites, development areas,
and proposed regional pathway envisioned within
the future James Walker Trail right-of-way.

5.5 Transit

A future public transportation route is anticipated to utilize River Heights Drive, Willow Drive, and James Walker Trail, which are all collector standard roads or greater. This future public transportation route will provide access to public transportation within 400m walking distance for 100% of all units within the Neighbourhood Plan area.



6.0 Land Use Redesignation

6.1 Residential Land Use

The following table outlines the land use configuration and redesignation for the Summit of River Heights Neighbourhood Plan area. The Summit of River Heights will be predominantly residential uses with supporting public service uses.

The residential areas make extensive use of the Town's R-MX District due to the flexibility that it affords for providing a variety of housing forms that can meet market demand and create a unique and varied streetscape. The R-MD and R-MX land uses are applied adjacent to the school sites in

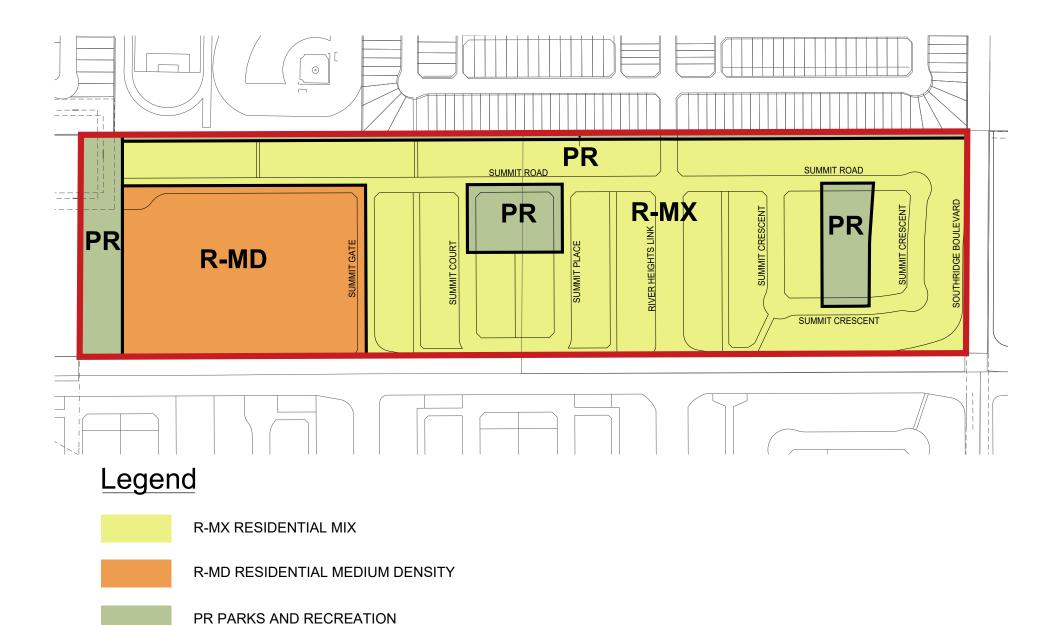
order to provide an attractive visual interface and ensure an appropriate mix of housing forms in the plan area. The R-MX land use is applied along major roadways to allow street-facing townhomes that provide visual appeal and concentrate density in areas with the best access to transit.

Public service land use districts within the neighbourhood consist of a portion of the Middle School Site on the west boundary of the site, and two neighbourhood parks.

TABLE 3: LAND USE REDESIGNATION STATISTICS

From	То	hectares	Acres
Residential Urban Reserve (UH)	Residential Mix (R - MX)	10.51	25.97
Residential Urban Reserve (UH)	Residential Medium - Density (R - MD)	3.41	8.43
Residential Urban Reserve (UH)	Parks and Recreation (PR)	2.25	5.55
Total		16.17	39.95

FIGURE 11: LAND USE REDESIGNATION



7.0 Utility & Emergency Servicing

7.1 Sanitary

Sanitary (wastewater) from The Summit of River Heights of Neighbourhood Plan area will be carried through a gravity main system, designed by BSEI Municipal Consulting Engineers. This system will tie into the existing sanitary main located in River Heights Crescent which ultimately ties into the gravity main in River Heights Drive. This main crosses the Bow River at the existing bridge and ties into the forcemain to The City of Calgary, as specified in the 2005 Sanitary Master Plan Drawing.

The Town has entered into an agreement with Tamani Communities identifying the Summit of River Heights as a contributing area to downstream infrastructure (sanitary and storm). The Town has agreed to endeavor to assist Tamani in cost recoveries for this oversizing.

Figure 12: Utility Servicing illustrates how The Summit of River Heights can be serviced by extending existing sanitary services.

7.2 Storm

The stormwater system designed by BSEI Municipal Consulting Engineers for The Summit of River Heights Neighbourhood Plan area will be managed by a series of trap lows that will direct the water to the gravity pipe system. The collected stormwater will be conveyed through a series of underground pipes to a water quality

control facility, in the Willows Stormpond, where the water will be treated to Alberta Environment specifications. From this facility the treated stormwater will be released at a rate specified in the River Heights Area Structure Plan (16.9 ha @15 L/s/ha), through a series of underground pipes to the stormwater main in River Heights Drive.

Emergency overland drainage will be directed to the emergency route access and into the trap low in River Heights Crescent.

Figure 12: Utility Servicing illustrates how the subject site can be serviced by a combination of on-site storm water storage and retention based on the release rates set for The Summit of River Heights Neighbourhood Plan area.

7.3 Water

The St. Mary's reservoir and pump house, located to the west of the development will supply The Summit of River Heights Neighbourhood Plan area through the distribution main located in River Heights Crescent.

Fire protection will be provided through fire hydrants that will be installed along the water distribution system. The hydrants will be sized and spaced appropriately, to allow for an adequate supply of water for firefighting purposes, as specified by the Town of Cochrane.

The developer will be eligible for the recovery of an appropriate portion of the costs associated with any utility oversize or distribution main construction if applicable, in accordance with the Terms and Conditions of the Development Agreement.

Figure 12: Utility Servicing illustrates how the Summit of River Heights Neighbourhood Plan area can be serviced by extending existing water services.

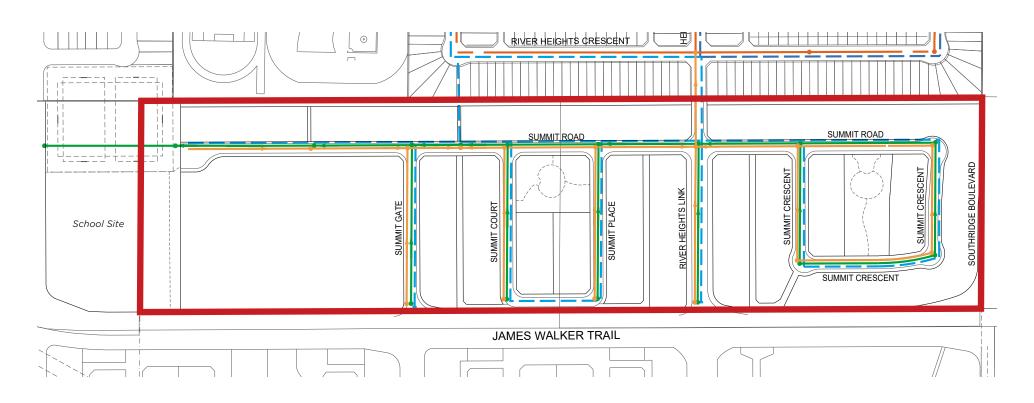
7.4 Shallow Utilities

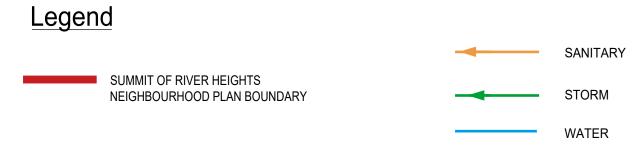
Shallow utilities for The Summit of River Heights Neighbourhood Plan area will be an extension of the existing lines located in River Heights Link which provide service to the Riversong community. All telephone, cable and power lines will be buried within the development.

Street lighting will be provided on all roadways, temporary and permanent.

7.5 Emergency Services

The site meets emergency access requirements with two emergency access points from the south, one to the west and one to the north. Once James Walker Trail is built out to Summit Gate, the site will be within the Town's 10 minute emergency response time.





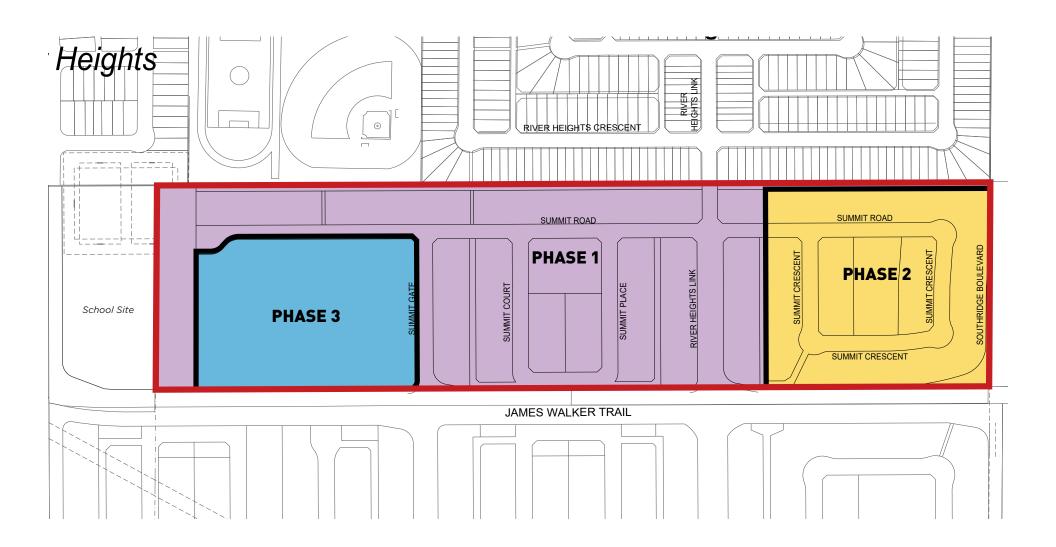


8.0 Phasing

8.1 Phasing of Development

The Summit of River Heights NSP will be developed in three phases as shown in Figure 13. The phase boundaries have been delineated based on servicing reviews and transportation capacity. The PR site on the west boundary, adjacent to the school, has been included in Phase 1 to accommodate the temporary emergency access should it be required. The entire length of the greenway is also included in Phase 1 to provide convenient and timely access for all pedestrians in the area.

Phasing in this manner also allows servicing to be extended from the existing adjacent communities. Actual stage size and location will be dependent on future market conditions and infrastructure requirements.





Alignment with the 9.0 **Town of Cochrane Policies & Guidelines**

9.1 River Heights Area Structure Plan (ASP)

The River Heights ASP is a statutory document that provides long term development direction with a vision for a complete community of River Heights, and adheres to the principles of the Cochrane Sustainability Plan and the Town of Cochrane Municipal Development

Section 4.2 of the River Heights ASP identifies the desire to provide a sustainable community. Additionally, Section 4.3 identifies the area as a Mobility and Transit Centre. The Summit of River Heights Neighbourhood Plan embraces these goals and principles by providing a walkable, compact community in close proximity to some of the key design features of the ASP area including schools, the shopping and employment of the Village Centre, and major transportation routes.

The Summit of River Heights NP will adhere to all policies within the River Heights ASP, particularly the policies in Section 5.2: Residential which outline the need for a mix of housing types within each neighbourhood and providing connectivity for residents.

9.2 Cochrane Sustainability Plan

The Cochrane Sustainability Plan (CSP) was adopted by Council in May 2009. The CSP identifies 13 Pathways to the Future that represent goals for guiding sustainable future development in Cochrane. The CSP goals are outlined below along with how the River Heights ASP will address each of them.

9.2.1 We Build a Culture of Responsibility

1. We are a socially responsible and empowered community.

The Summit of River Heights NP addresses socially responsibility and the sense of community by designing a compact neighbourhood that includes and is adjacent to existing and future school sites and a future community node (Village Centre).

Design elements within the neighbourhood will help to create a sense of community such as the neighbourhood parks, which are located adjacent to homes and provide connections to pedestrian routes, schools and surrounding neighbourhoods. Residents of Heritage Hills will feel connected to the greater community of River Heights and to the town overall as a result of the integration with surrounding neighbourhoods.

9.2.2 We are Responsible Citizens of the Planet

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

The compact design of the community is considered to be more environmentally responsible than lower-density communities due to the more efficient use of services. Summit of River Heights NP will utilize existing stormwater management infrastructure, reducing the need for additional servicing infrastructure.

In addition, there will also be opportunities for alternative transportation modes and transit use because the area is identified as a mobility and transit hub in the River Heights ASP. Improved walkability and convenient amenities will reduce reliance on vehicles, reducing climate impact.

9.2.3 We Live Locally

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

The Summit of River Heights NP will provide homes for approximately 1,074 residents in a compact residential neighbourhood. These residents will have access to numerous local amenities within and outside the plan area, including places to grow and learn, places to shop and work, and community gathering places.

One planned school site is located partially within the plan area and another existing site is located immediately adjacent to the neighbourhood, with two more schools planned in the neighbourhood to the south. These schools will accommodate the educational needs of all ages and also function as community hubs for activities.

The planned Village Centre to the south will also serve community functions as well as providing shopping and employment opportunities for residents.

9.2.4 Cochrane is a Complete Community

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

The Summit of River Heights NP will provide a range of housing options for residents of a variety of incomes, ages and housing needs. This is envisioned as a neighbourhood where residents can 'age in place' by living in a community that provides suitable housing options for any age and income level.

Residents will be 'close and connected' as a result of the compact, walkable community design in close proximity to amenities. Pathways, both local and regional, will connect residents to amenities within the neighbourhood as well as to nearby recreational, commercial and institutional amenities.

James Walker Trail will be a multi-modal connection that offers transit services and a regional pathway connecting to surrounding neighbourhoods and to Glenbow Ranch Provincial Park.



COCHRANE POLICIES & GUIDELINES

9.3 **Integrated Neighbourhood Design Guidelines (INDG)**

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

The INDG contains a series Design Principles which were referenced in the development and design of the Summit of River Heights NP. Key elements of the INDG reflected in the foundation of the neighbourhood design include the integration of mixed housing types within blocks, transitions between neighbourhoods, encouraging healthy active living through a connected street and pathway design, and the retention of views.

9.4 Cochrane Municipal **Development Plan (MDP)**

The MDP was adopted in October 2008 and outlines the Town's vision for development. The Summit of River Heights NP provides the required elements to be addressed in a Neighbourhood Plan as per Section 14.3.2 of the MDP.

Municipal 9.5 **Environmental Impact** Statement (MEIS)

The Town of Cochrane Municipal Development Plan Section 6.3.2 requires a Municipal Environmental Impact Statement (MEIS). The MEIS provides a description of existing and proposed environmental conditions, and any environmental issues that must be addressed.

VEGETATION

This assessment indicated that no rare vascular plants or rare plant communities were detected during field surveys.

WETLANDS

A wetland impact assessment for thirteen wetlands located within or next to the Summit of River Heights property was completed. The majority of elements associated with the functionality of Wetlands were found to be highly disturbed or removed. The overall functionality of these wetlands was rated as very low to low. Compensation for the loss of thirteen wetlands has been paid under the Water Act rather than retention due to the low functionality and small size of the wetlands.

WILDLIFE

A Biophysical Impact Assessment was completed for the Summit at River Heights by Hab-Tech Environmental (2013). Two vertebrate species at risk were detected during field surveys - Sora and Swainson's hawk. Both species are listed as sensitive by the Province of Alberta. No federal designations exist for either of these species.

Mitigation will be addressed by limiting land clearing activities to times outside of the

breeding and nesting season (April 15-August 20) which will also comply with the Migratory Birds Convention Act (MBCA).

ECOLOGICALLY SIGNIFICANT LANDS

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

GEOTECHNICAL

Two separate Shallow Subsoil Site Investigations were prepared by Almor Engineering Associates Ltd. dated July 2007 and April 2008 in accordance with Section 2.2.4 Geotechnical Assessment of the River Heights Area Structure Plan.

Groundwater was encountered at variable depths within the proposed development area and may have an impact on the site grading operations; however, the investigations concluded that the subsurface conditions are considered to be suitable relative to foundation support for the proposed development.

The topography of the site is generally flat to rolling, and there are no significant areas of slope greater than 15% identified; therefore a Slope Stability Assessment is not deemed necessary.

FLOOD POTENTIAL

There are no floodways or flood fringes within the Neighbourhood Plan area.

STORMWATER STUDY AND WATER **QUALITY / QUANTITY**

The proposed stormwater management system within Summit of River Heights will utilize the capacity of the stormwater pond existing in the development of Willows of River Heights, which has been sized to have capacity for the plan area lands.

AIR QUALITY

The Summit at River Heights area is predominantly a residential neighbourhood. The design of the community encourages pedestrian and bicycle transportation as an alternative to internal use of motor vehicles.

Although any development that results in the removal of existing vegetation will have some impact on existing air quality, there is some opportunity for retention of natural vegetation within the northwest neighbourhood park and school site. The neighbourhood design also incorporates public landscaped areas to replace natural vegetation lost during construction and offset potential air quality impacts from the adjacent James Walker Trail.

VISUAL RESOURCES

The views available from the highest points in Cochrane are of visual significance. Although the Summit of River Heights Neighbourhood Plan area is situated at one of the highest points in the River Heights ASP, viewsheds to the valley and town may tend to be limited due to the existing pattern of urban development in Riversong to the north. However, the development pattern of Summit of River Heights has been intentionally laid out to provide clear north-south view corridors and provide the best possible opportunities for views of the valley.

LAND AND RESOURCE USE

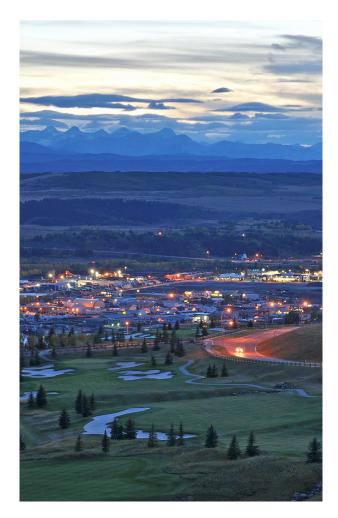
The plan area is designated by the Town as land for residential development, which by its nature generally disturbs a large proportion of land. The development concept for Summit at River Heights proposes a compact urban development that will provide residential accommodation to residents while consuming less land, thus making the best use of the land resource available.

CULTURAL AND HERITAGE RESOURCES

A Historic Resources Impact Assessment (2008) was prepared by Lifeways of Canada Ltd. for the Neighbourhood Plan area. In consideration of the low artifact density, no further work was recommended and Historical Resources Act clearance was obtained in December of 2008.

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

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



10.0 Supporting Information

10.1 Geotechnical Assessment

Almor Engineering Associates Ltd. was retained at the request of BSEI Municipal Consulting Engineers to perform a Shallow Subsoil and Groundwater Site Investigation for proposed residential development for the Neighbourhood Plan area.

In the July 2007 report, Almor conducted shallow subsoil and groundwater site investigation within the Neighbourhood Plan area, which included seven (7) test holes that were drilled within the Neighbourhood Plan area to facilitate shallow groundwater monitoring

In the April 2008 report, Almor conducted shallow subsoil and groundwater site investigation within the Neighbourhood Plan area, which included two (2) test holes that were drilled within the Neighbourhood Plan area to facilitate shallow groundwater monitoring. The investigation confirmed that groundwater was encountered at variable depths within the proposed development area and may have an impact on the site grading operations; however the investigation concluded that the subsurface conditions are considered to be suitable relative to foundation support for the proposed development.

10.2 Phase 1 - Environmental Site Assessment

Two separate Phase 1 Environmental Site Assessments (ESA's) were prepared by Base Property Consultants Ltd. dated May 18. 2007 and October 23, 2007 for the Neighbourhood Plan area in accordance with the Section 2.2.3 Environmental Site Assessment of the River Heights Area Structure Plan.

The Phase 1 ESAs suggest that the most easterly and westerly residences within the Neighbourhood Plan area may be built prior to 1979, indicating that they could contain lead-based paints, asbestos containing construction material, and fluorescent light fixtures with PCBs in their ballast. The report also suggests that a regulated substance assessment be undertaken before any demolition or renovations are planned to occur on-site. In addition, when the water wells and septic sewer systems are no longer required they would have to be reclaimed. The report indicates that historical air photos show surface disturbances and Base Property Consultants requests that they be contacted if any stained soils are encountered during site development or after removal of the buildings.

Based upon the results of the historical review, site reconnaissance and information available to Base Property Consultants, at the time of preparing their report, their opinion was that no significant environmental impairment exists on the subject site and that further environmental investigation was not required at that time.

10.3 Historical Resources Impact Assessment

A Historic Resources Impact Assessment (HRIA) was prepared by Lifeways of Canada Ltd. and included their findings in a report dated June 2008 for the Neighbourhood Plan area in accordance

with Section 8.4.2 Neighbourhood Plans of the River Heights Area Structure Plan.

According to the report, portions of the Neighbourhood Plan area have been impacted by prior development and driveways. The report identifies EgPo-121 within the Neighbourhood Plan area as a small, low density artifact scatter of local archaeological significance. In review of the report, EgPo-121 appears to be located in the general vicinity of the proposed public utility lot surrounded by municipal reserve area.

The report states that "no further work is recommended at EgPo-121". Historical Resources Act clearance was obtained in December of 2008.

10.4 Biophysical Impact Assessment

A Biophysical Impact Assessment (BIA) was prepared by Hab-Tech Environmental dated October 2013 for the Neighbourhood Plan area in accordance with the Section 2.2.5 Biophysical Impact Assessment of the River Heights Area Structure Plan.

The BIA report indicates that most of the subject site is covered by habitats with low overall relative habitat significance. Although the area contains suitable habitat for species at risk, especially in the form of native grassland and wetlands, past and current levels of human development within and surrounding the property area have significantly reduced the land's overall potential to harbor most

species at risk. The overall species at risk potential for this property is estimated to be low.

Two vertebrate species at risk were detected during field surveys - Sora and Swainson's hawk. Both species are listed as sensitive by the Province of Alberta. No federal designations exist for either of these species. Mitigation will be addressed by limiting land clearing activities to times outside of the breeding and nesting season (April 15-August 20) which will also comply with the Migratory Birds Convention Act (MBCA).

A wetland impact assessment for thirteen wetlands located within or next to the Summit of River Heights property was completed. Wetlands #1, 2, 3, 4, 5, 6, and 7 are classed as ephemeral and the majority of elements associated with their functionality were found to be highly disturbed or removed. The overall functionality of these wetlands was rated as very low to low. Wetlands #8. 10. 11. 12 and 13 were classed as temporary wetlands and the report were found to have a low functional capability from a hdryological and biological perspective as a result of disturbance from agricultural uses and grazing. Wetland #9 was classes as seasonal wetland. The overall functionality of was rated as moderate because all hydrological and ecological functions remained with limited alteration.

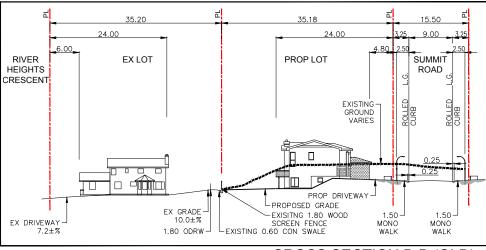
Compensation for the loss of thirteen wetlands has been provided to Alberta Environment for a total of 0.863-ha.

The report concludes that levels of human-use, habitat loss/fragmentation and disturbance within and adjacent to the Summit of River Heights property limit the environmental significant of the property as a whole and of individual habitats. No environmentally significant areas exist within the Summit of River Heights property. Development of the property will not contribute significantly to regional fragmentation and will not alter regional movement of sensitive wildlife species.

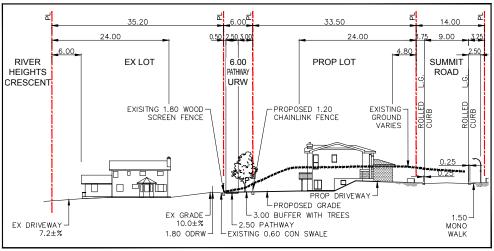


Appendix A

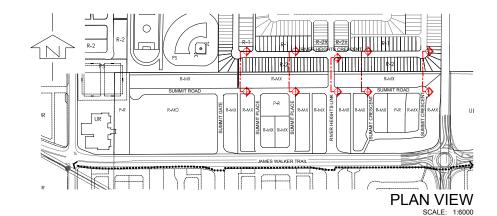
Boundary Cross Sections

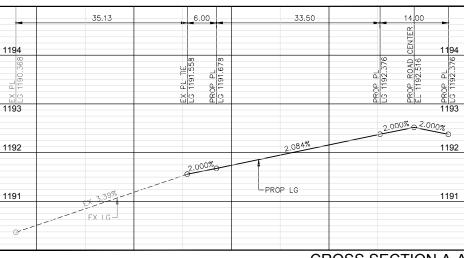


CROSS SECTION B-B (OLD)



CROSS SECTION B-B (NEW)





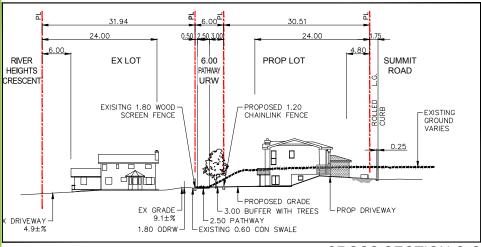
CROSS SECTION A-A

SCALE: NTS

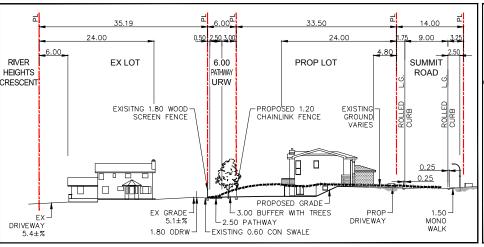


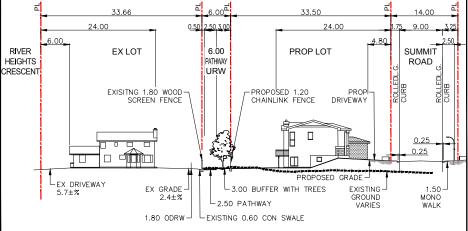
PLATE 1.0





CROSS SECTION C-C





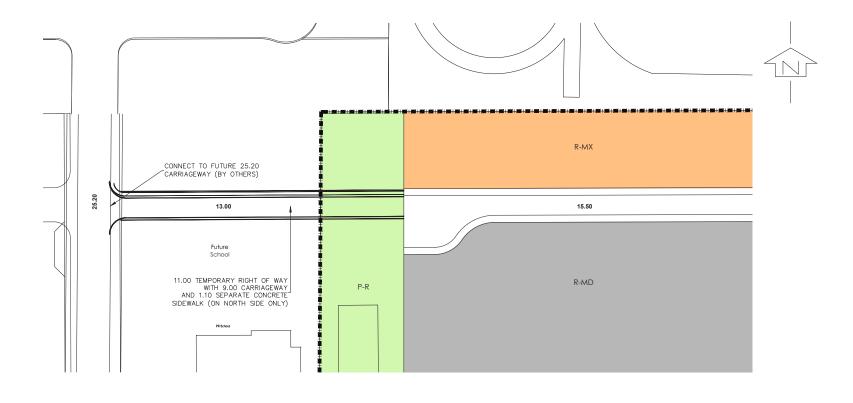
CROSS SECTION D-D

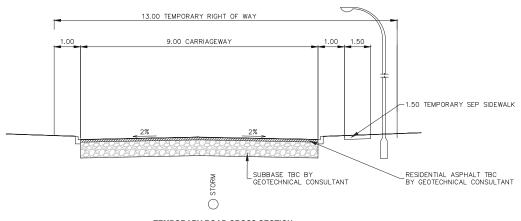




Appendix B

Temporary Access Road Cross Section





TEMPORARY ROAD CROSS SECTION

Appendix C

Non-Standard Road Cross Sections

River Heights Link - 23.5 m Cross Section

