

# GREYSTONE

## Development Area “C” Neighbourhood Plan

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August 13, 2018

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Amended March 25, 2024





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Approved August 13, 2018

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## TABLE OF CONTENTS

<b>1.0 INTRODUCTION</b>	<b>01</b>
1.1 Introduction	01
1.2 Policy Context	04
1.3 Existing Land Use	04
1.4 Smart Cities	04
<b>2.0 COMMUNITY IDENTITY</b>	<b>07</b>
2.1 Vision	07
2.2 Principles	09
2.3 Community Elements	11
2.4 Community Theme	11
<b>3.0 PUBLIC ENGAGEMENT</b>	<b>15</b>
3.1 First Open House	17
3.2 Second Open House	19
3.3 Third Open House	21
<b>4.0 LAND USES</b>	<b>23</b>
4.1 Residential - Single-detached Dwellings	24
4.2 Residential - Single and Semi-detached Dwellings	24
4.3 Residential - Townhomes	29
4.4 Residential - Multi-Unit	29
4.5 Commercial - Shopping Centre	29
4.6 Commercial - Central Business	30
4.7 Business Park	30
4.8 Industrial	30
4.9 Open Space	31
4.10 Buffer from Existing Industrial	37
4.11 Density Distribution	39



<b>5.0 TRANSPORTATION</b>	<b>41</b>	<b>10.0 IMPLEMENTATION</b>	<b>97</b>
5.1 Road Network	41	10.1 Interpretation	97
5.2 Transit Network	51	<b>APPENDIX - DESIGN GUIDELINES</b>	<b>99</b>
5.3 Pedestrian & Cycling Network	53		
<b>6.0 SERVICING</b>	<b>55</b>	<b>FIGURES</b>	
6.1 Water	55	FIGURE 1: Location	02
6.2 Sanitary	57	FIGURE 2: Site Plan	03
6.3 Stormwater	59	FIGURE 3: Existing Land Uses	05
6.4 Shallow Utilities	59	FIGURE 4: Community Elements	13
6.5 Fibre Optics	59	FIGURE 5A: Land Use Plan (Net Areas)	25
<b>7.0 SUPPORTING STUDIES</b>	<b>61</b>	FIGURE 5B: Land Use Plan (Gross Areas)	27
7.1 Geotechnical Study	63	FIGURE 6: Open Space Plan	32
7.2 Phase I Environmental Site Assessment	63	FIGURE 7: Buffer Cross-Section	37
7.3 Phase II Environmental Site Assessment	64	FIGURE 8: Density Distribution	40
7.4 Biophysical Impact Assessment	64	FIGURE 9: Road Network	42
7.5 Staged Master Drainage Plan	68	FIGURE 10: Transit Network	52
7.6 Transportation Impact Assessment	68	FIGURE 11: Pedestrian & Cycling Network	54
7.7 Pond Investigation	69	FIGURE 12: Water Network	56
<b>8.0 PHASING</b>	<b>71</b>	FIGURE 13: Sanitary Network	58
<b>9.0 ALIGNMENT WITH TOWN POLICIES</b>	<b>73</b>	FIGURE 14: Stormwater Network	60
9.1 Municipal Development Plan	74	FIGURE 15: Phasing	72
9.2 Growth Management Strategy	82	<b>TABLES</b>	
9.3 Cochrane Sustainability Plan	82	TABLE 1: Plan Statistics (Net Areas)	26
9.4 Integrated Neighbourhood Design Guidelines	84	TABLE 2: Residential Density	26
9.5 Greystone Area Structure Plan	85	TABLE 3: Plan Statistics (Gross Areas)	28
9.6 Land Use Bylaw	95		



## SECTION 1.0 INTRODUCTION

### 1.1 INTRODUCTION

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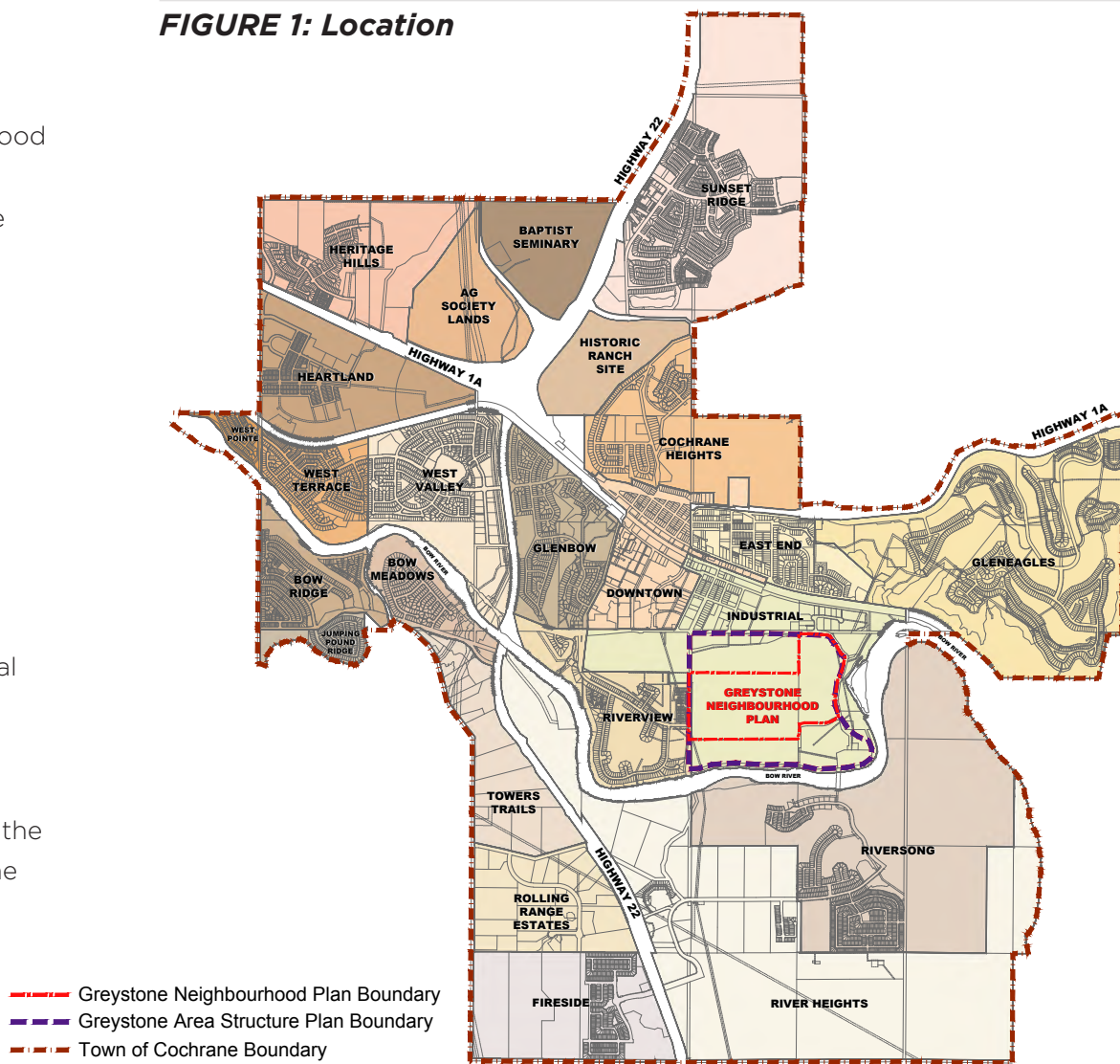
The Greystone Development Area C are lands contained within the Greystone Area Structure Plan (ASP) that have functioned as a gravel extraction operation in the Town of Cochrane since the 1940s which is over seventy years. The materials mined have contributed to some of the best known infrastructure for the Town of Cochrane and surrounding area including the Ghost Dam, the Sawmill, Shell Gas Plant, local malls, schools and homes. Gravel pit extraction was completed in 2015. The site will continue to store and distribute the remaining product until approximately late 2018 and/or use it for the redevelopment of the site.

The landowners, Rockland Holdings Ltd., have had preliminary conversations with the Town over the past few years about potential future land uses for the site. In the Spring of 2016, it was determined the time was right to start a planning process to determine the best possible infill redevelopment that can help complete and revitalize this area of Cochrane. These conversations helped inform the vision for the Greystone ASP, and also for this Neighbourhood Plan.



**FIGURE 1: Location**

The Greystone Development Area C Neighbourhood Plan (herein referred to as the Greystone Neighbourhood Plan) was undertaken to capture and implement the vision identified within the Greystone ASP, which provides for a mixed use community as the form of redevelopment of this area of Cochrane. This non-statutory Neighbourhood Plan provides a redevelopment framework that describes the community layout, the placement of parks, the built form and transportation and servicing requirements. It is intended that this document is aligned with the Town of Cochrane’s relevant planning policy documents and guidelines including the Municipal Development Plan, the Greystone Area Structure Plan and the Town of Cochrane Integrated Neighbourhood Plan Design Guidelines. The Greystone Neighbourhood Plan is also critical to the Town achieving its sustainability targets under the Cochrane Sustainability Plan and its vision under Cochrane’s Smart Cities initiative.



**FIGURE 2: Site Plan**



--- Greystone Neighbourhood Plan Boundary

## 1.2 POLICY CONTEXT

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This Neighbourhood Plan aligns with the policies approved within the Town of Cochrane Municipal Development Plan (October 2008), the Cochrane Growth Management Strategy (May 2013), the Cochrane Sustainability Plan (May 2009), the Integrated Neighbourhood Design Guidelines and the Greystone Area Structure Plan as outlined further in Section 9.0.

In regards to the Greystone ASP specifically, it is the community level statutory planning policy document that sets out a vision, as well as the standards, policies and expectations for all future development within this portion of Cochrane. This Neighbourhood Plan area is identified as Development Area C within the ASP which is intended as a future “Mixed Use Community” that includes residential, employment, commercial, public utility and open space land uses.

## 1.3 EXISTING LAND USE

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The existing land use district of the Neighbourhood Plan is Special Industrial (I-S), Parks and Recreation (PR), Residential Low Density (R-LD), Residential Mix (R-MX), Residential Medium Density (R-MD), Residential High Density (R-HD) and General Commercial (C-G) (See Figure 3: Existing Land Use). This Plan recommends redesignating the Plan Area to districts that better align with the Municipal Development Plan and the Greystone Area Structure Plan, both of which are the governing statutory planning documents which guide this Neighbourhood Plan. Policy alignment

of this Neighbourhood Plan to the Town of Cochrane’s guiding plan and policy documents can be found in Section 9.0.

## 1.4 SMART CITIES

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A recent community report (Cochrane Cares, 2017) recognized that 41% of people living in Cochrane feel lonely or isolated. To help resolve this situation, the Town has launched a *Smart Cities* initiative that is intended to build a stronger, more connected community. Through the following potential projects by the Town, the vision of the Smart Cities initiative may be achieved:

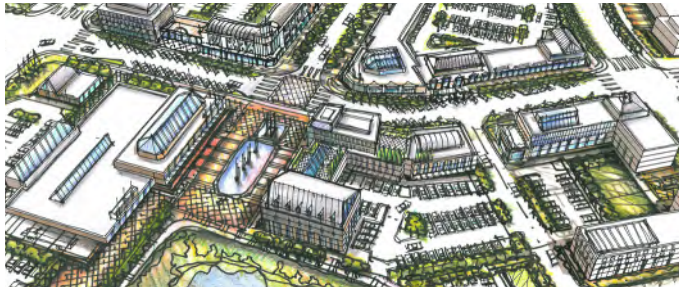
- Providing free basic high-speed internet as a municipal utility in a manner that is more economical to the community;
- Creating a platform that provides access for residents to applications that encourage community engagement using any internet-enabled device;
- Developing applications to facilitate transportation options such as real-time ride-sharing, car-sharing, bike-sharing and next generation transit;
- Developing applications that empower residents to access information about the community, find neighbours with similar interests, post requests for help and find opportunities to volunteer and engage in community service; and
- Gather data through smartphone sensors to enhance city management, reduce traffic congestion, increase public safety, and improve quality of life.

Greystone will support this initiative by servicing the neighbourhood with fibre optic cable to bring high-speed internet to all residents and businesses as described further in Section 6.5.

**FIGURE 3: Existing Land Use**



--- Greystone Neighbourhood Plan Boundary





## SECTION 2.0 COMMUNITY IDENTITY

### 2.1 VISION

Greystone brings vibrancy and has revitalized a part of Cochrane that has historically served as a gravel pit. While industrial and business park uses are still an integral part of the new neighbourhood, Greystone offers many additional uses such as a range of housing options, parks and playfields, local commercial services, a plaza and multiple pathways and connections that allows residents to enjoy the benefits of living in a **complete neighbourhood**. The front porches facing the street, the open spaces and roads that are strongly framed to create dynamic vistas and the architecture that reflects Cochrane's western heritage enables that **traditional neighbourhood** atmosphere. The development exemplifies **sustainability** through the re-use of previously developed land, the strategic location of uses, the comprehensive pedestrian network that ensures that residents and employees are within a five minute walk of neighbourhood amenities, the potential future transit and the re-introduction of trees, shrubs and grasses. The neighbourhood is supportive of the Town of Cochrane's **Smart Cities** initiative where communication and servicing is optimized through the introduction of a fibre optic network. The **form-based design guidelines** shaped development to establish a quality master planned neighbourhood. Greystone has **integrated and connected** its planned amenities with the Bow River, the Spray Lake Sawmills Family Sports Centre and the Bow RiversEdge Campground through roads, transit and pathways, to become a focal point for gathering, socializing and recreation. Life in Greystone is uniquely Cochrane: rich with amenities, active and connected.



# Our Vision for **GREYSTONE**



## 2.2 PRINCIPLES

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The following principles provide a guide for the build-out of Greystone into a refreshing new community.



### 1. Traditional Neighbourhood

The future development is to convey a traditional neighbourhood atmosphere that exudes a sense of place, supports social interaction and facilitates connections.



### 2. Complete Neighbourhood

All the necessities of daily life are found in Greystone including housing, employment, recreation and retail services.



### 3. Vibrancy & Safety

The combination of residential, commercial and business uses creates day and evening activity and provides natural surveillance to support a vibrant and safe neighbourhood.



### 4. Diversity of Housing

Greystone offers a wide spectrum of housing types to meet the changing needs, desires and circumstances of families to achieve a sustainable and complete neighbourhood.



### 5. Active Residents

Parks and playfields are situated in highly visible locations in each quadrant of the neighbourhood and accommodates an array of elements that promote an active lifestyle for all residents.

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## 6. Integrate Surrounding Uses

The neighbourhood design compliments and generates synergies with surrounding uses including the Riverview Community, the Bow River, the Spray Lake Sawmills Family Sports Centre and the Bow RiversEdge Campground.



## 7. Pedestrian & Transit Friendly

The strategic location of uses and the comprehensive pedestrian network ensures that residents and employees are within a five minute walk of neighbourhood amenities and possible future transit.



## 8. Efficient Road Network

The road network is a modified grid that provides for multiple routes that move vehicles efficiently through the neighbourhood and provides effective connections with the surrounding road system.



## 9. Smart City

The neighbourhood supports the Town of Cochrane's *Smart Cities* initiative through the introduction of a fibre optic network that delivers efficient communication and information.



## 10. Sustainable

The infill neighbourhood aligns with the Cochrane Sustainability Plan and other Town approved policy documents.

## 2.3 COMMUNITY ELEMENTS

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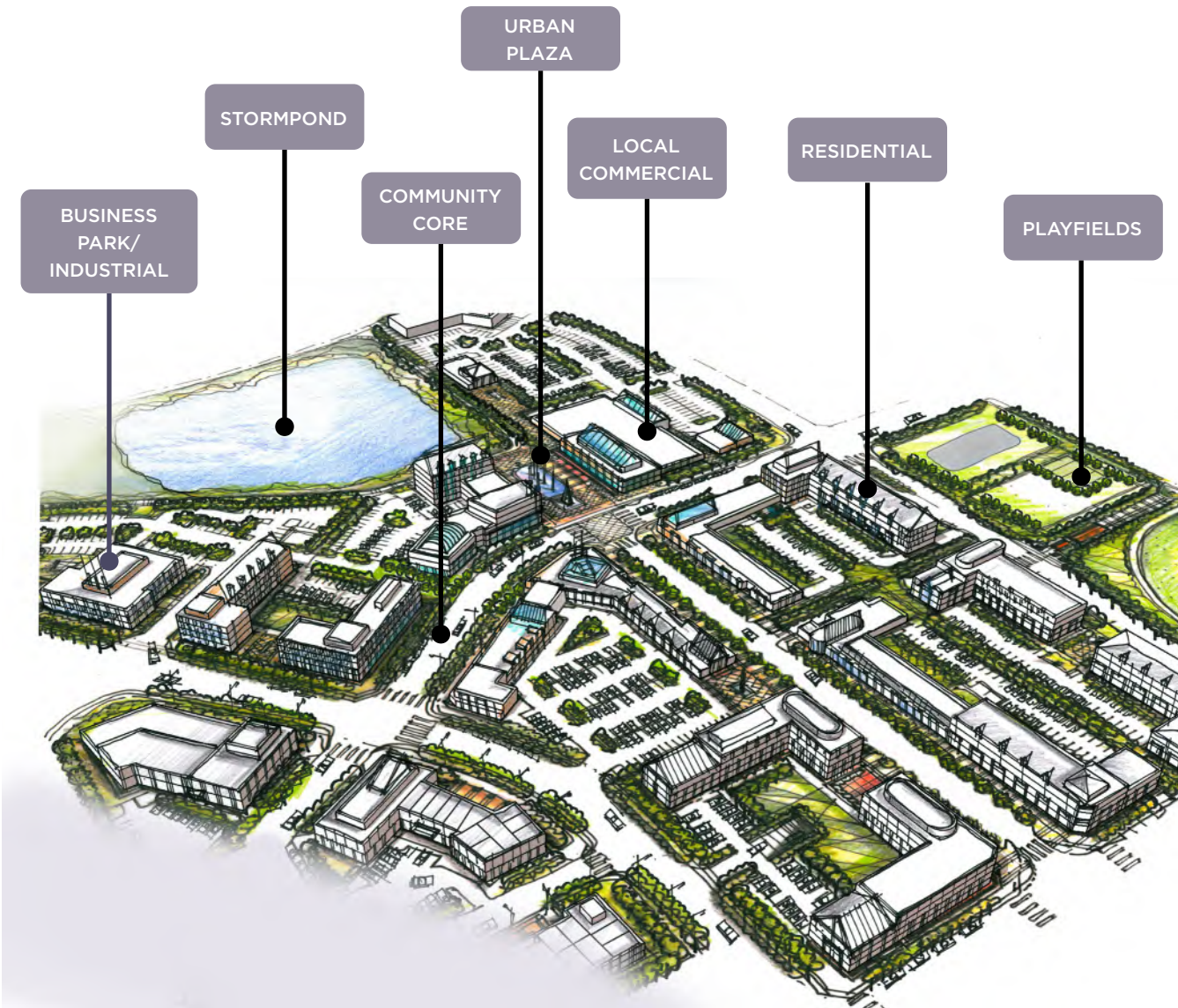
Expanding on the vision and principles, the following provides a conceptual overview of the main elements of the community.

- **Residential Area:** To appeal to a wide diversity of families, a variety of housing types will be offered in Greystone including single-detached dwellings, semi-detached dwellings, townhouses and multi-unit residential.
- **Commercial Areas:** Different scales of commercial will be offered in Greystone to meet the retail needs of the residents including larger format retail, local convenience and speciality shops.
- **Community Core:** A community core will be strategically located in the central-eastern portion of the neighbourhood where the residential, commercial, business and open space uses intersect. The interaction between these uses will create a dynamic environment that generates continued vibrancy and safety. The pedestrian nature of the core will be supported by buildings being oriented towards the streets and public spaces, modest sized blocks, narrow building façades, attractive streetscapes, sidewalks and pathways, reduced frontages, on-street parking and a plaza.
- **Business Park:** A business park will be established in the northeastern portion of the community and offer space for offices and light manufacturing.
- **Industrial:** The northeastern portion of the subject site is identified for manufacturing, warehousing and storage facilities in order to provide further employment opportunities.
- **Stormwater Management Facility:** A stormwater management facility is to be located in the eastern portion of the site to serve the development and offer an attractive amenity space to adjacent residential and commercial uses. The facility will improve water quality and reduce peak flows and flooding.
- **Park Spaces:** Each area of the community will incorporate a centralized park space for residents to gather, play and interact.
- **Playfields:** A set of playfields will be located in the southeastern portion of the development to support the recreational activities of the neighbourhood, community sports leagues and sporting events associated with the Spray Lake Sawmills Family Sports Centre. The playfields will compliment the recreation centre with active outdoor space and together become a recreation hub for the neighbourhood.

## 2.4 COMMUNITY THEME

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The built form for Greystone is envisioned to take strong inspiration from the Town's Western Heritage guidelines with a modern twist. Design guidelines found in the Appendix builds upon the broader direction provided in the Western Heritage Design Guidelines.



**FIGURE 4A: Community Elements**

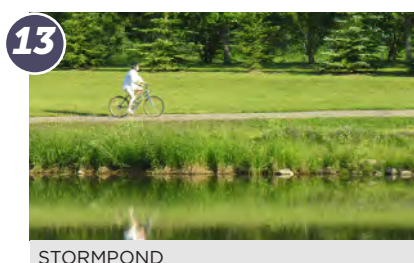
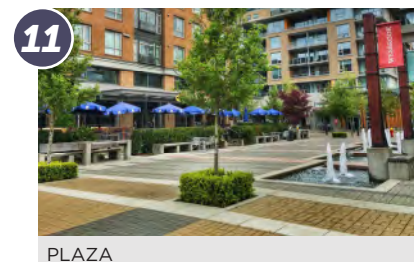
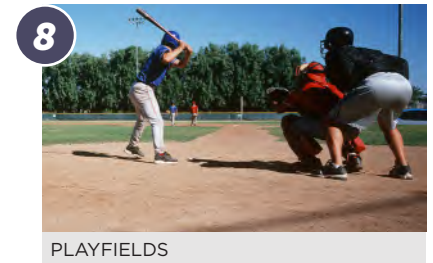


FIGURE 4B: Community Elements





## SECTION 3.0 PUBLIC ENGAGEMENT

A thorough communications and engagement strategy was a project priority from early stages, recognizing that this is a complex project in the heart of Cochrane. The goal of the project engagement strategy was to provide transparency and continual information-sharing with stakeholders. Public engagement was purposeful and targeted. The public engagement process began in summer 2016 and since that time, a number of engagement activities have been undertaken to gain feedback from the citizens of Cochrane on the redevelopment of the Plan Area. The engagement approach involved:

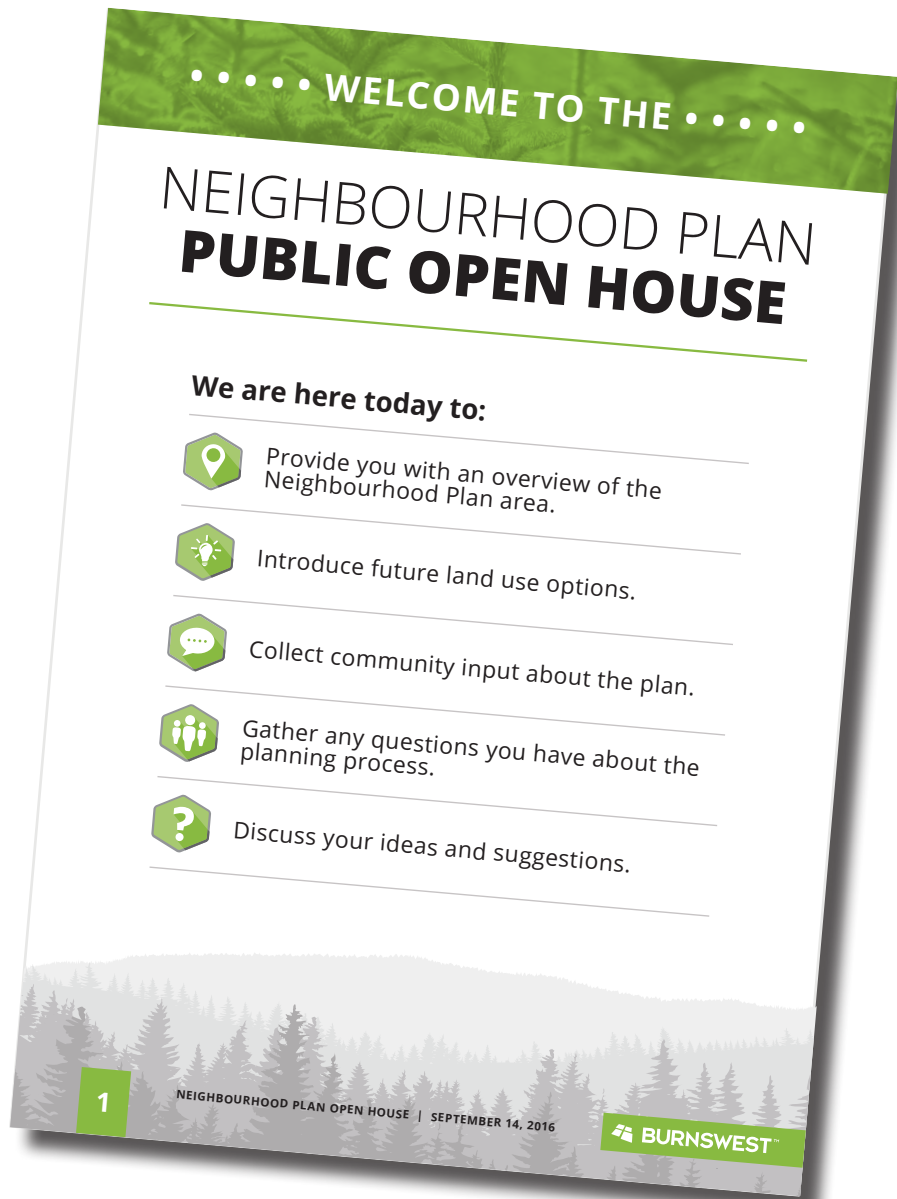
- Dozens of small stakeholder meetings;
- Three public open houses;
- The provision of regular stakeholder newsletters;
- Three What We Heard Reports;
- The launch of two informational videos for public viewing;
- Featuring engagement activities and materials on the project website and Facebook page which was actively updated with key information; and



- Development of a stakeholder database that has reached over 300 contacts In order to track and manage the growing list of stakeholders and interested citizens. This database was utilized and updated frequently to include newsletter subscribers, and to share important updates in a timely manner.

To manage the engagement process, an Engagement Specialist was deployed and available throughout the development and evolution of the Plan to provide regular updates to primary stakeholders, update website content, respond to inquiries from the public, plan and coordinate each engagement activity and draft all engagement reports. The project's dedicated Engagement Specialist also managed and coordinated all media relations for the project, acting as spokesperson for media requests. Having a consistent and continual point-of-contact enabled consistent responsiveness to stakeholder inquiries and flexibility to accommodate the public's interest in the project. The following sections provides more details with respect to the outcomes of each of the three open house sessions.





### 3.1 FIRST PUBLIC OPEN HOUSE

The first public Open House for the Greystone project was held on September 14th, 2016 which was advertised through a number of print and online advertisements, e-mails, temporary signage and a mail drop. During this first public engagement event, the project team presented three concept designs (Options 1, 2 and 3) to the public for their review and feedback. Over 200 engaged Cochrane residents filled the RancheHouse venue and provided over 500 comments of feedback to be considered by the project team. Option 3 was the favoured concept among the attendees as it:

- included playfields nestled adjacent to the Bow RiversEdge Campground;
- provided a better balance between commercial, business and residential space;
- offered a prominent pathway network; and
- mitigated short cutting and high vehicular speeds through the proposed road system.

Based on the support it received, Option 3, was used as the starting point for refining the Area Structure Plan and Neighbourhood Plan.

A What We Heard report was prepared after the first open house to document the feedback obtained. This report was provided to Town Administration and posted on the Greystone website.

# Open House #1 Promotion

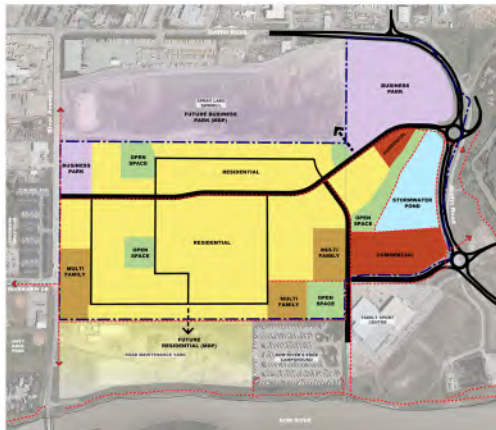
- + **Temporary Signage** on east and west side of project site
- + **Print & Online Adds** in the Cochrane Eagle and Cochrane Times
- + **Postcard Mail Drop** to 2,514 residents surrounding the project area
- + **Riverview Community Association (RCA)** – RCA forwarded the information amongst their residents, promoted on their website and included updates in two recent RCA newsletters
- + **Newspaper article** – in Cochrane Eagle and Cochrane Times

# Open House #1 At a Glance

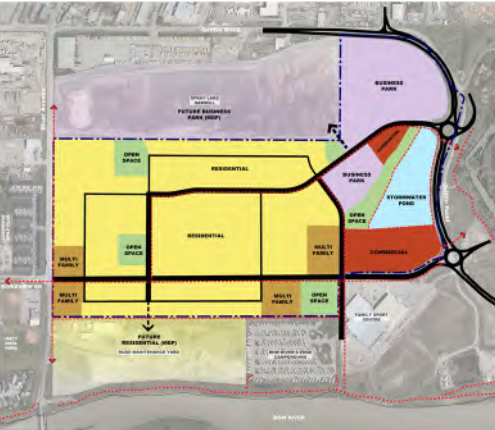
- 200 + ATTENDEES**
- 94 COMMENT FORMS COMPLETED**
- 142 NEWSLETTER SUBSCRIBERS**

The project team presented three concept designs (Options 1, 2 and 3) to the public for their review and feedback. Over 200 engaged Cochrane residents filled the RancheHouse venue and provided over 500 comments of feedback to be considered by the project team as they refined their concept and project vision. Option 3 was the favoured concept among the attendees.

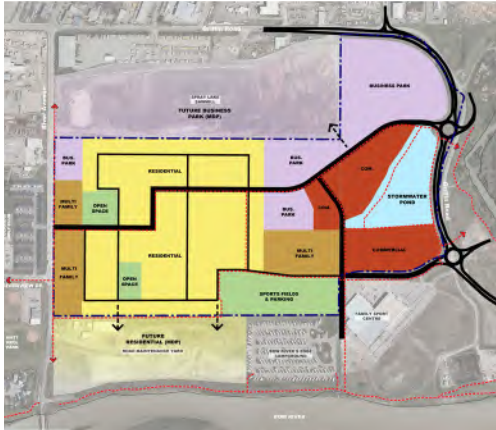
## Option 1




## Option 2



## Option 3



 Favoured Concept among attendees of the Open House



### 3.2 SECOND PUBLIC OPEN HOUSE

On June 14<sup>th</sup> 2017, a public open house at the Spray Lake Sawmills Family Sports Centre was held. During the three hour event, the refined Greystone Area Structure Plan and Neighbourhood Plan that were submitted to the Town of Cochrane on April 21<sup>st</sup> 2017 following a nine month public and stakeholder engagement campaign was shared. The objective of the open house was to share the refined Greystone Area Structure Plan and Neighbourhood Plan, collect and respond to questions, concerns and feedback from attendees

Open house attendees were invited to provide feedback on the Greystone project in two ways: through face-to-face dialogue with project planners and subject matter experts, as well as through comment forms that provided the option for participants to request a response from the project team.

Of the 140+ attendees, there were 40 feedback forms that were submitted. Overall, many attendees were supportive of the project. Many attendees sought assurance that the architectural features would be reflective of the existing character of the surrounding Cochrane community and that Greystone would provide new economic opportunities for local businesses and commercial chains. Many participants noted their appreciation for the green space and open space provided, and the ratio of single-family to semi-detached lots, which will provide an improved density transition within the Plan Area. The importance of properly managing traffic was brought forward by the participants as well as consideration of an appropriate amount of residential density. A What We Heard Report was posted on the project website and e-mailed to project stakeholders providing a response to the items raised at the open house. The resulting feedback provided by participants offered general support for the Area Structure Plan and Neighbourhood Plan as presented.

## Open House #2 Promotion

- + **Newsletter** - stakeholders that signed up for email updates received a project newsletter on May 18<sup>th</sup>, 2017 that included open house details
- + **Website Update** – open house details were posted on the project website on May 18<sup>th</sup>, 2017
- + **Open House Mail Drop**- A post card invitation was distributed to approximately 3,047 residents that live or work in close proximity to the proposed project area
- + **Newspaper ad** – half-page ads were placed in the Cochrane Eagle and Cochrane Times two weeks prior to the Open House. Digital ads were also placed on their websites
- + **Riverview Community Association (RCA)** – RCA forwarded the information amongst their residents, promoted on their website and included updates in two recent RCA newsletters
- + **Media promotion** – Shared information and participated in interviews with the Cochrane Eagle, Cochrane Times, and AIR 91.5 FM
- + **Signage** – Two temporary signs were installed at the Greystone project site starting May 30<sup>th</sup>, 2017

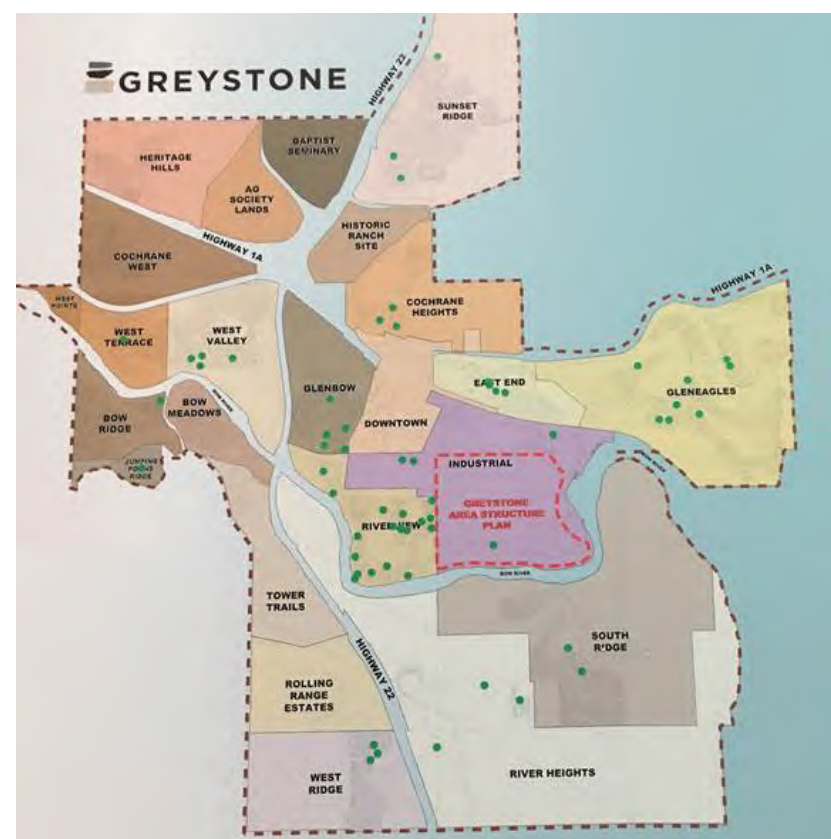
## Open House #2 At a Glance

**140 + ATTENDEES**

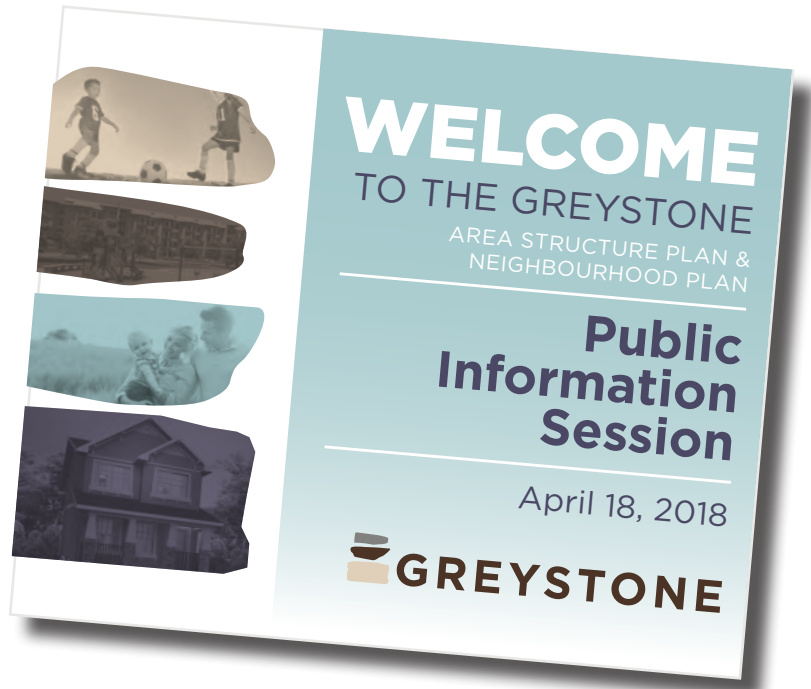
**40 COMMENT FORMS COMPLETED**

**261 NEWSLETTER SUBSCRIBERS**

### Where were the Open House Attendees From



- Greystone Area Structure Plan Boundary
- Town of Cochrane Boundary



### 3.3 THIRD PUBLIC OPEN HOUSE

On April 18th 2018, a Public Information Session was held at the Spray Lake Sawmills Family Sports Centre. The objective of the three-hour event was to share plan revisions and project updates with the public, and to respond to questions, concerns and feedback from the attendees.

Of the 160+ attendees, 47 feedback forms were submitted to the Greystone Project Team. The feedback forms were developed as a survey and comment-style form for participants to easily indicate their preferences of the Plan and to gauge the level of community-support.

Based on the responses of the surveys, it was calculated that the attendees of the Information Session were 74% satisfied with the Greystone public engagement efforts and 70% satisfied with the Greystone Plan. The majority of respondents indicated they were satisfied with:

- The amount and location of single family homes, and the size and location of the commercial area, the business park and the industrial area.
- The Open Space plan features including the park spaces, the playfields, the plaza and the stormpond.
- The internal street network, bike lanes, and the regional pathways outlined in the Plan.

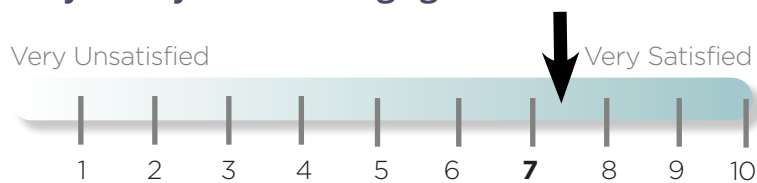
Participants utilized the additional space provided on the forms to explain in greater detail any unresolved concerns about the Plan. Of those who were unsatisfied with the project, the main concerns identified related to traffic and transportation issues outside of the Plan Area. Another point of concern expressed by Cochrane residents was the residential density of the plan and the variance between the anticipated and maximum densities. These concerns were recognized in the early stages of the project and measures were taken to determine how traffic could be appropriately managed; additionally the residential density was progressively reduced.

A comprehensive summary of the feedback received during the April 2018 session was compiled and published on the project website, the Facebook page, and distributed to project subscribers via an email blast.

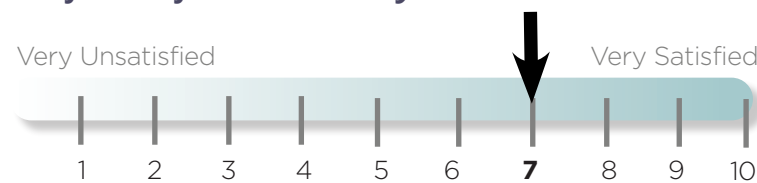
## Open House #3 Promotion

- + **Website Update** – Information Session details were posted on the project website
- + **Post Card Mail Drop**- A post card invitation was distributed to approximately 3,324 residents that live or work in close proximity to the proposed project area
- + **Newspaper ad** – 1/4 page ads were placed in the Cochrane Eagle and Cochrane Times, three weeks prior to the Information Session. Digital ads were also placed on their websites
- + **Riverview Community Association (RCA)** – RCA forwarded the information amongst their residents, promoted on their website and included updates in two recent RCA newsletters
- + **Media promotion** – Shared information and participated in interviews with the Cochrane Eagle and Cochrane Times
- + **Online Advertising** - Campaign launched April 3rd 2018; announcement on Facebook Page and Event Page was created
- + **Email Blast** – 300+ stakeholders received an email invitation.

### Level of Satisfaction - Engagement Process



### Level of Satisfaction - Greystone Plan



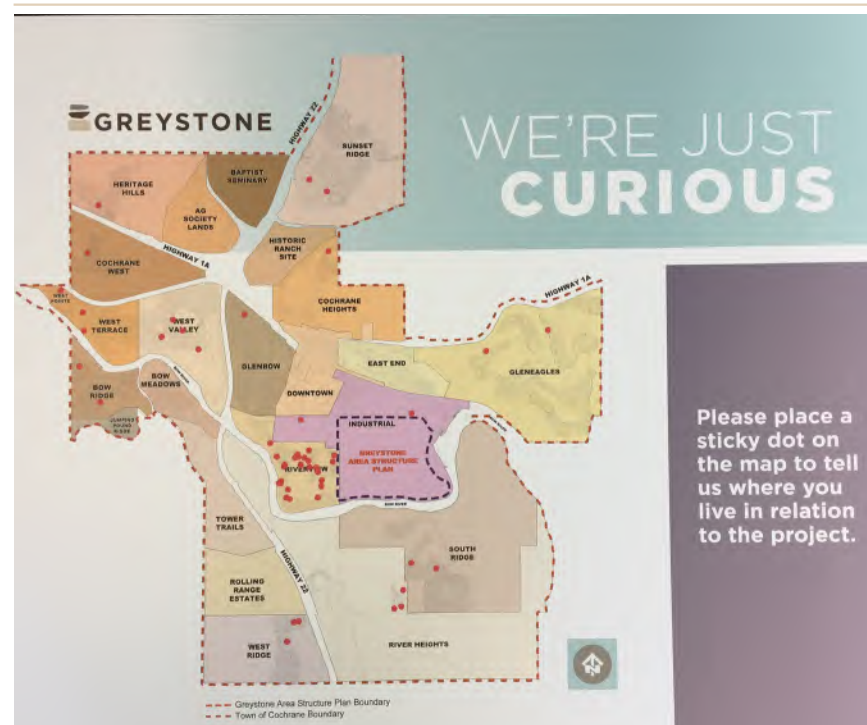
## Open House #3 At a Glance

160 + ATTENDEES

47 COMMENT FORMS COMPLETED

90 NEW PROJECT SUBSCRIBERS

### Where were the Open House Attendees From



- Greystone Area Structure Plan Boundary
- Town of Cochrane Boundary



## SECTION 4.0 LAND USES

To achieve the vision for this Greystone neighbourhood, the subject site is proposed to be redesignated and subdivided to provide for residential, commercial, business, industrial, and open space uses. The following provides details on the proposed land uses. The built form for all uses must adhere to the guidance set within the Town of Cochrane's Integrated Neighbourhood Design Guidelines and in strict accordance with the provisions of the Land Use Bylaw currently in force in the Town, or any other relevant and applicable guidelines currently approved/adopted by the Town.

Based on these land uses, it is anticipated that Greystone - Area C will have a population of approximately **2,243 people** based on 2.6 people per dwelling, which is the average household size for Cochrane according to the latest Statistics Canada census date, and generate approximately **1,000 new employment positions** or 77 jobs per hectare of employment land. It is anticipated that **863 units** will be constructed resulting in a density of 22.7 units per gross developable residential hectare (9.2 units per gross developable residential acre).

Design Guidelines have been included in the Appendix of this document to guide the built form of the anticipated land uses. The guidelines are intended to provide general direction to the Approving Authority in making decisions on development permit applications within the Plan Area to ensure the Plan vision is implemented. This guidance builds upon the broader direction found in the Western Heritage Design Guidelines and supplements the land use district rules applied to the Plan Area through the Land Use Bylaw.



## 4.1 RESIDENTIAL - SINGLE-DETACHED DWELLINGS

The majority of the western half of the subject site will be redesignated/subdivided to allow for single-detached residential dwellings. The purpose is to provide a mix of front and rear garage product, to create quieter residential enclaves in this part of the neighbourhood and to reflect the form and density of the existing Riverview community. To accommodate the identified dwellings, it is proposed that the Residential Low Density (R-LD) district be applied. The R-LD district is intended to provide for single-detached residential development with the opportunity for accessory suites. Vehicular access to the R-LD dwellings facing River Avenue will mainly be achieved from the rear lane in order to limit front driveways and maximize on-street parking along this street.



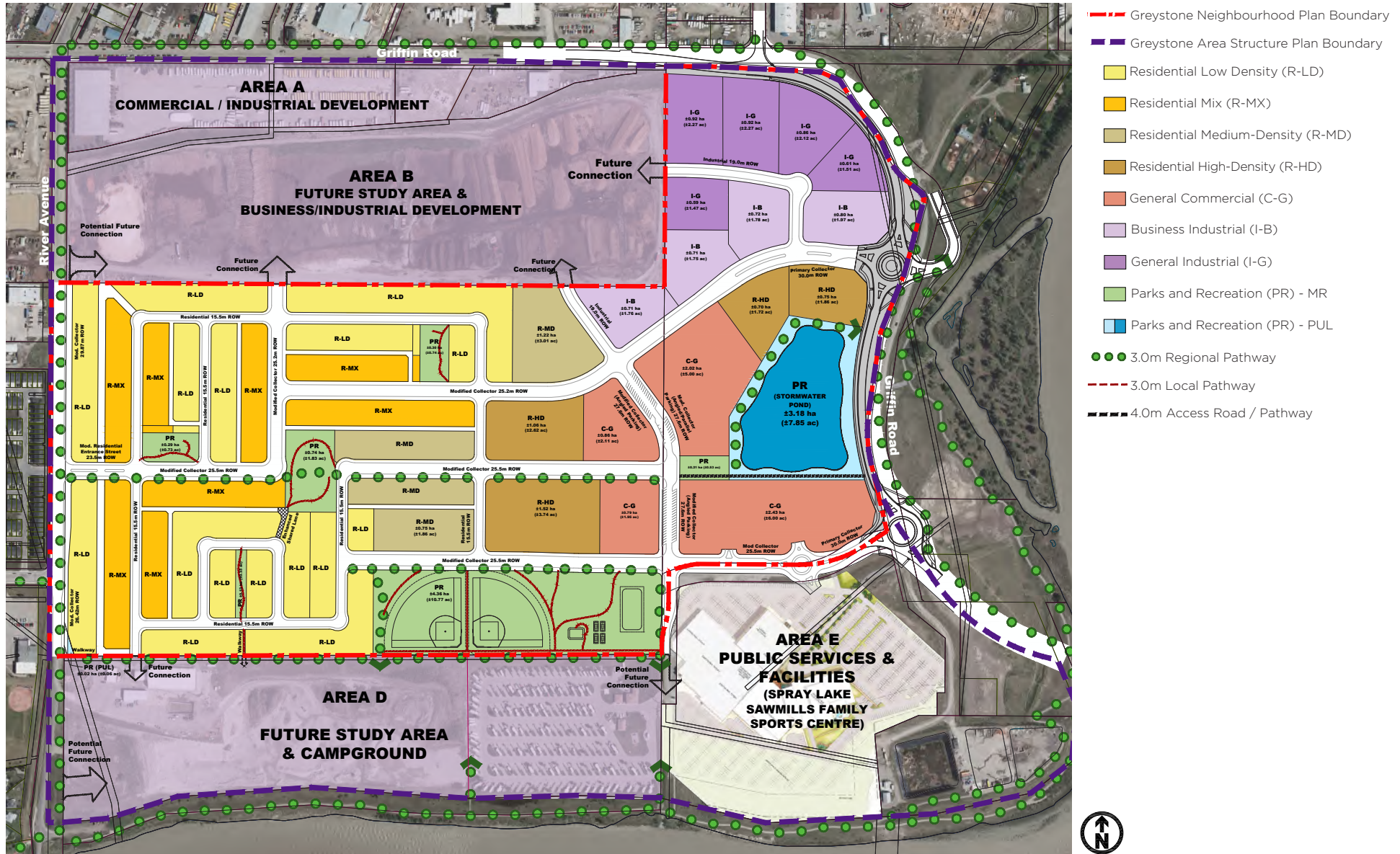
## 4.2 RESIDENTIAL - SINGLE AND SEMI-DETACHED DWELLINGS

Parts of the western half of the subject site will be redesignated/subdivided to allow for single and semi-detached dwellings as well as the possibility for duplexes and townhouses. These dwelling types will mainly include rear lanes and are strategically located to frame the western collector streets. The proposed land use district for this section of the community is Residential Mix District (R-MX) district. The R-MX district permits single-detached dwellings, semi-detached dwellings, duplexes and multi-unit dwellings of up to 4 units.

An innovative housing development is reserved for a block located in the southwestern portion of the subject site. It is anticipated that this block will include a unique bungalow style homes.



**FIGURE 5A: Land Use Plan (Net Areas)**



**TABLE 1: Plan Statistics (Net Areas)**

	Hectares	Acres	Anticipated Units	Percentage of Area
Residential Low Density (R-LD)	10.04	24.81	150	16.9%
Residential Mix (R-MX)	5.39	13.31	194	9.1%
Residential Medium-Density (R-MD)	3.29	8.14	121	5.5%
Residential High-Density (R-HD)	4.02	9.94	398	6.8%
General Commercial (C-G)	6.09	15.06		10.3%
Business Industrial (I-B)	2.94	7.26		4.9%
General Industrial (I-G)	3.90	9.64		6.6%
Parks and Recreation (PR) (MR)	6.04	14.93		10.2%
Parks and Recreation (PR) (PUL)	3.20	7.91		5.3%
Roads	12.42	30.69		20.9%
Griffin Road (within Boundary)	2.09	5.16		3.5%
<b>TOTAL GROSS DEVELOPABLE AREA (Rockland Property)</b>	<b>59.43</b>	<b>146.85</b>	<b>863</b>	<b>100.0%</b>
Portions of Park Street, Campground Road & River Avenue	1.37	3.38		
<b>TOTAL PLAN AREA</b>	<b>60.80</b>	<b>150.23</b>		

**TABLE 2: Residential Density**

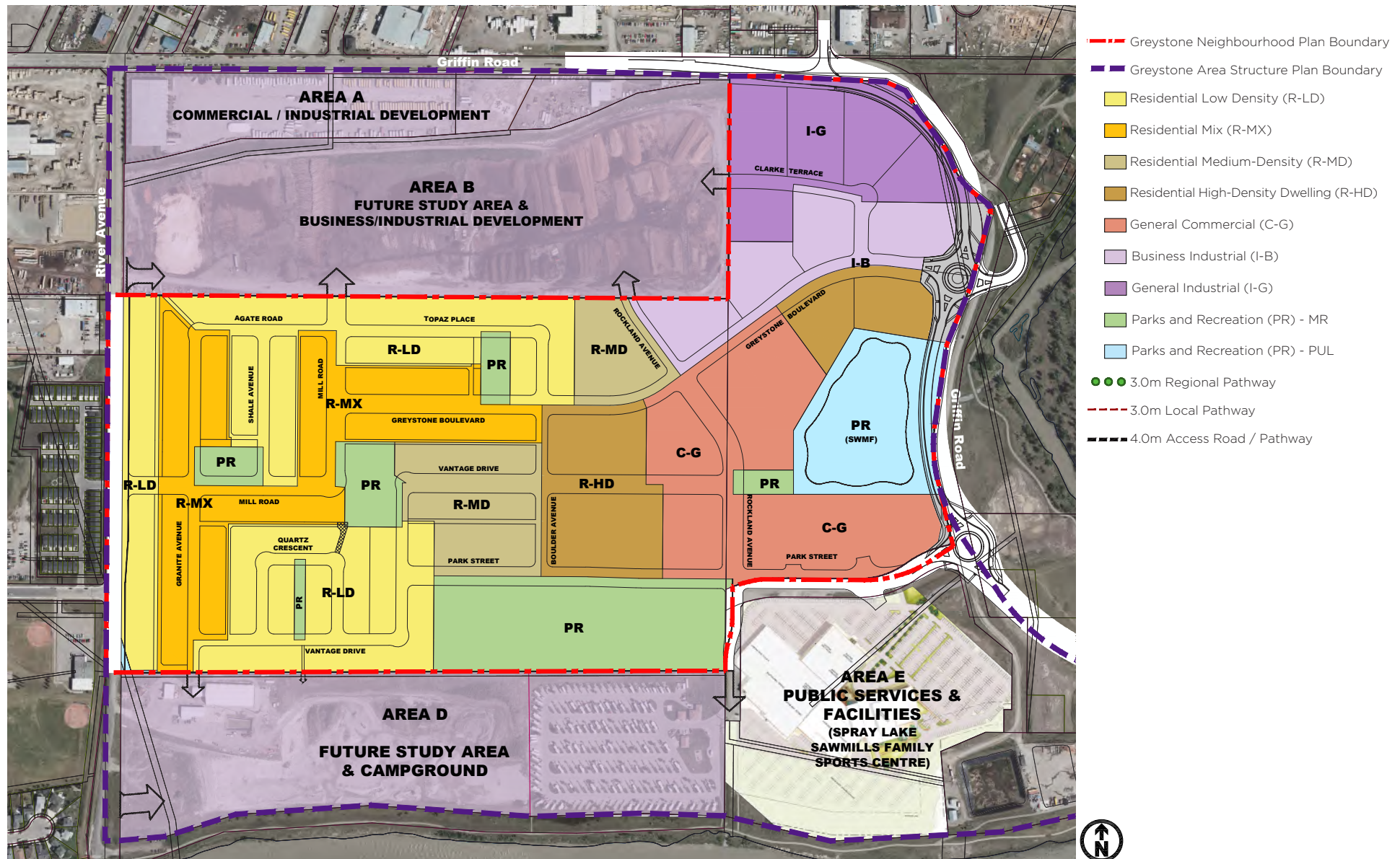
	Anticipated*
Units	863
Gross Developable Residential Area**	38.05 ha (94.02 ac)
<b>Density (Units per Hectare)</b>	<b>22.7</b>
<b>Density (Units per Acre)</b>	<b>9.2</b>

Note:

\*Market conditions and research dictate anticipated target density.

\*\*Gross Developable Residential Area is the gross area of land excluding non-developable lands (large roads) and regional land uses (major commercial and industrial areas).

**FIGURE 5B: Land Use Plan (Gross Areas)**



**TABLE 3: Plan Statistics (Gross Areas)**

	Hectares	Acres	Anticipated Units	Percentage of Area
Residential Low Density (R-LD)	13.59	33.58	150	22.4%
Residential Mix (R-MX)	8.16	20.16	194	13.4%
Residential Medium-Density (R-MD)	4.54	11.23	121	7.5%
Residential High-Density (R-HD)	5.63	13.90	398	9.3%
General Commercial (C-G)	7.84	19.37		12.9%
Business Industrial (I-B)	4.10	10.12		6.7%
General Industrial (I-G)	4.87	12.03		8.0%
Parks and Recreation (PR) (MR)	7.04	17.40		11.6%
Parks and Recreation (PR) (PUL)	3.67	9.06		6.0%
<b>TOTAL GROSS DEVELOPABLE AREA (Rockland Property)</b>	<b>59.43</b>	<b>146.85</b>	<b>863</b>	<b>97.8%</b>
Portions of Park Street, Campground Road & River Avenue	1.37	3.38		2.2%
<b>TOTAL PLAN AREA</b>	<b>60.80</b>	<b>150.23</b>		<b>100.0%</b>

### **4.3 RESIDENTIAL - TOWNHOMES**

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Portions of the subject site are identified for townhome development. The first is two blocks of laned townhomes framing Vantage Drive which leads from the central park to the commercial plaza. The second portion is located northwest of the commercial highstreet. To accommodate these housing forms, it is proposed that the Residential Medium-Density (R-MD) district be applied. The purpose and intent of this district is to provide for low-rise multi-unit dwellings of up to 15 metres in height.

### **4.4 RESIDENTIAL - MULTI-UNIT**

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Three blocks of the subject site are proposed for comprehensively designed multi-unit residential development. Two of the blocks are bounded by Greystone Boulevard to the north, commercial development to the east, Park Street to the south and Boulder Avenue to the west. Vantage Drive divides the two blocks and connects the central park and the commercial plaza. Those buildings along the collector street are to frame and activate the public spaces while also supporting the surrounding commercial uses. The third block is located at southwestern corner of the Griffin Road/ Greystone Boulevard to take advantage of views to the stormpond.

To accommodate this form of development, it is proposed that the Residential High-Density (R-HD) district be applied. The purpose of this district is to accommodate high density multi-unit dwellings with opportunities for neighbourhood-servicing commercial uses. The maximum building height under this district is 25.0 metres.

### **4.5 COMMERCIAL - SHOPPING CENTRE**

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Shopping centre commercial is identified for the eastern portion of the subject site and north of the Spray Lake Sawmills Family Sports Centre. This development has the opportunity to accommodate mainly vehicle orientated commercial including a grocery store and strip and convenience retail that serves the neighbourhood as well as surrounding communities. The commercial development is expected to create a synergy with the adjacent Spray Lake Sawmills Family Sports Centre by offering convenience retail to recreation centre users. Uses facing the urban plaza are intended to be pedestrian oriented and frame and activate this public space. The General Commercial (C-G) district is proposed for this portion of the subject site. The C-G district is to provide for a range of commercial, entertainment and professional office development.

## 4.6 COMMERCIAL - CENTRAL BUSINESS

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Central business commercial is identified for the eastern central portion of the development. The buildings are to front the highstreet and the urban plaza, include minimal setbacks and have narrower façade widths to create a pedestrian-orientated environment. A mix of commercial uses is anticipated including retail, personal/business services, office, grocery/food, cafes, restaurants, speciality shops, a hotel and/or a pharmacy. To accommodate these uses it is proposed that this portion of the subject site be designated General Commercial (C-G) district. The C-G district is to provide for a range of commercial, entertainment and professional office development.

## 4.7 BUSINESS PARK

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The eastern portion of the Greystone Boulevard is identified for office, light manufacturing and educational establishments. The proposed development will bring employment opportunities and act as a gateway to the community. It is proposed that this area of the subject site be redesignated to the Business Industrial (I-B) district. This district is to provide for a mix of light industrial and commercial uses, that do not create nuisance outside of an enclosed building and include a high standard of landscaping and site design.

## 4.8 INDUSTRIAL

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The northeastern portion of the subject site is identified for light manufacturing, warehousing and storage facilities. The proposed development is to accommodate industry and be compatible with the Spray Lake Sawmills uses. It is proposed that this area of the subject site be redesignated to the General Industrial (I-G) district. This district is to provide for a broad range of industrial uses that may carry out a portion of their operation outdoors or require outdoor storage areas.

## 4.9 OPEN SPACE

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The redevelopment of the Plan Area will reintroduce vegetation to lands that have been stripped bare through industrial activity. New vegetation will be accommodated through the provision of multiple parks, playfields, boulevards, yards and private amenity spaces. Each of these spaces will encompass trees, bushes, grasses and other vegetation that transforms the landscape from grey to green.

Seven main open spaces are identified for the subject site as labeled in Figure 5. The intension is to accommodate activities of various age groups and levels of mobility:

- **Local Parks:** Two local parks will be situated in the western portion of the development. They are intended to serve the social and recreational needs of these areas of the community and be framed by surrounding buildings and streets (See Figure 6A & 6D).
- **Central Park:** A central park is identified for the centre of the western portion of community. This park accommodates east-west sightlines, includes a high level of exposure and acts as the principal hub for residents to gather and socialize. Accessible playground elements will be included in this space (See Figure 6C).
- **Linear Park:** A linear park will be provided to offer a pedestrian connection from the southwest to the central park (See Figure 6B).
- **Playfields:** Two ball diamonds, an outdoor hockey rink, a pickleball court, passive open space and a playground will be provided. The playfields will accommodate the sporting needs of the community.

The outdoor activities are to also complement the indoor activities of the Spray Lake Sawmills Family Sports Centre (See Figure 6E).

- **Urban Plaza:** An urban plaza is centrally located in the eastern portion of the subject site and forms the eastern terminus of the connector street (See Figure 6F). The plaza is to be framed and activated by adjacent commercial buildings that are setback a minimal distance. No parking will be allowed between buildings and the plaza. The Design Guidelines located in the appendix provides further requirements regarding the relationship between the plaza and adjacent buildings.
- **Stormwater Management Facility:** A stormwater management facility is identified for the eastern portion of the development. While managing stormwater it also accommodates a regional pathway and views of the pond (See Figure 6G).
- **Pipeline Right-of-Way & Walkway:** An ATCO gas line cuts through the southwest coner of the subject site. In addition, a waterline is identified to connect through a walkway in the same location. The lands they occupy are identified as Public Utility Lots to accommodate these pieces of infrastructure.

The open space areas are to be designated as the Parks & Recreation (PR) district. The area of municipal reserve to be dedicated meets the 10% requirement of the Municipal Government Act.

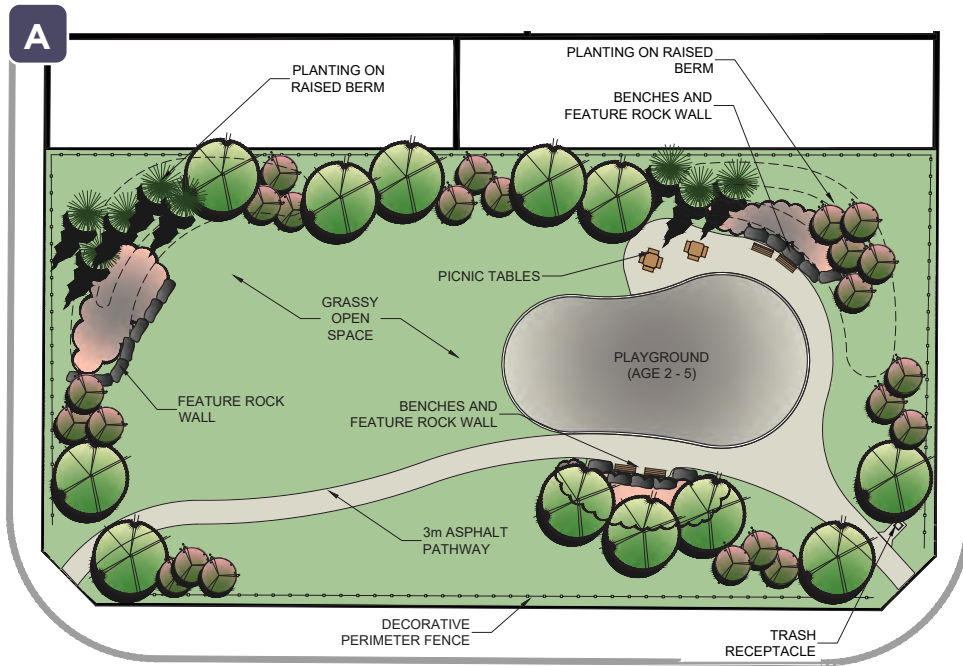
The subsequent open space concepts are preliminary and final design and programming will be resolved when the parks are developed based on Town and community needs.

FIGURE 6: Open Space Plan



--- Greystone Neighbourhood Plan Boundary

**FIGURE 6A: Local Park**



**FIGURE 6B: Linear Park**

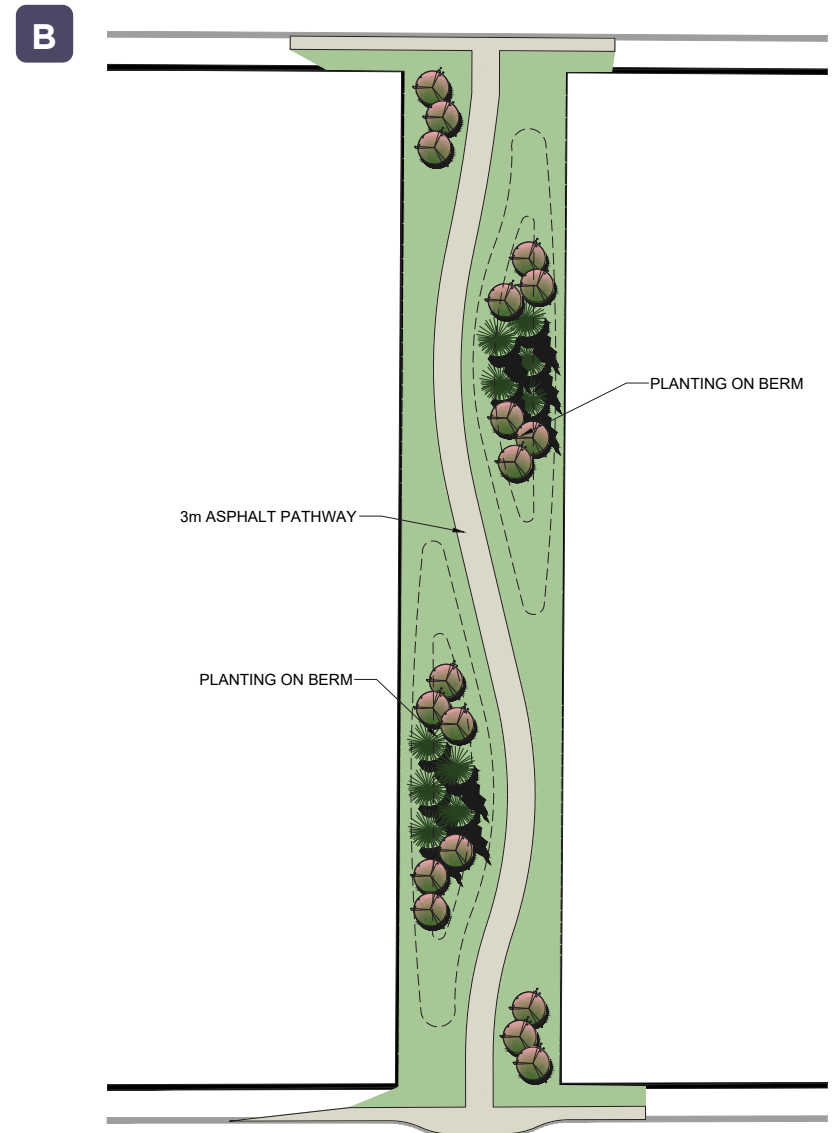


FIGURE 6C: Central Park

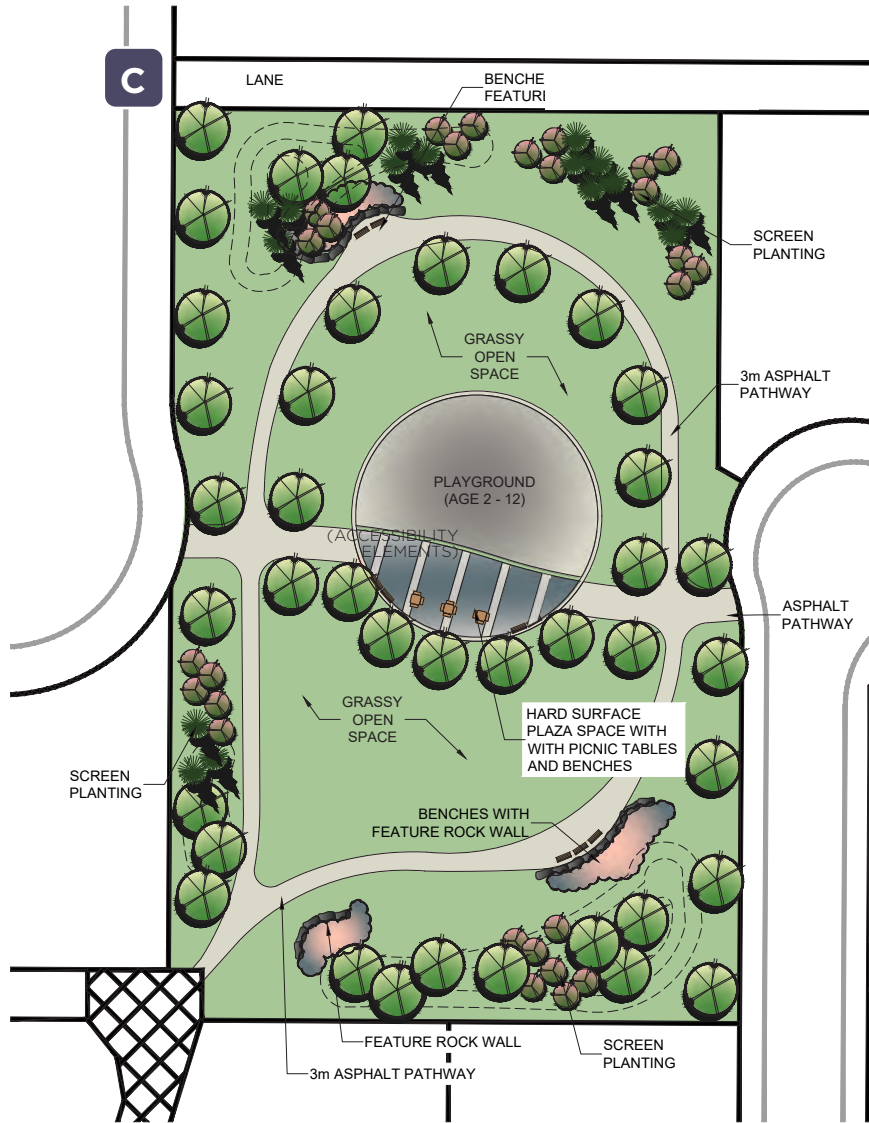
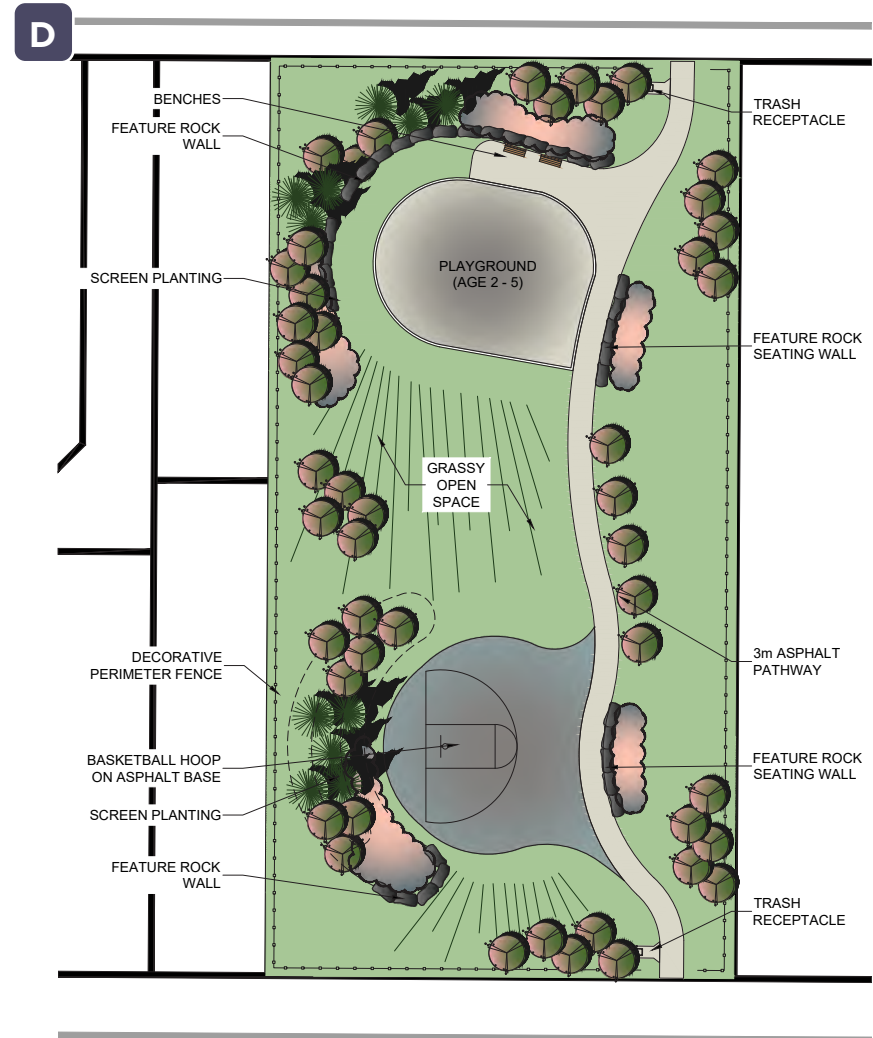
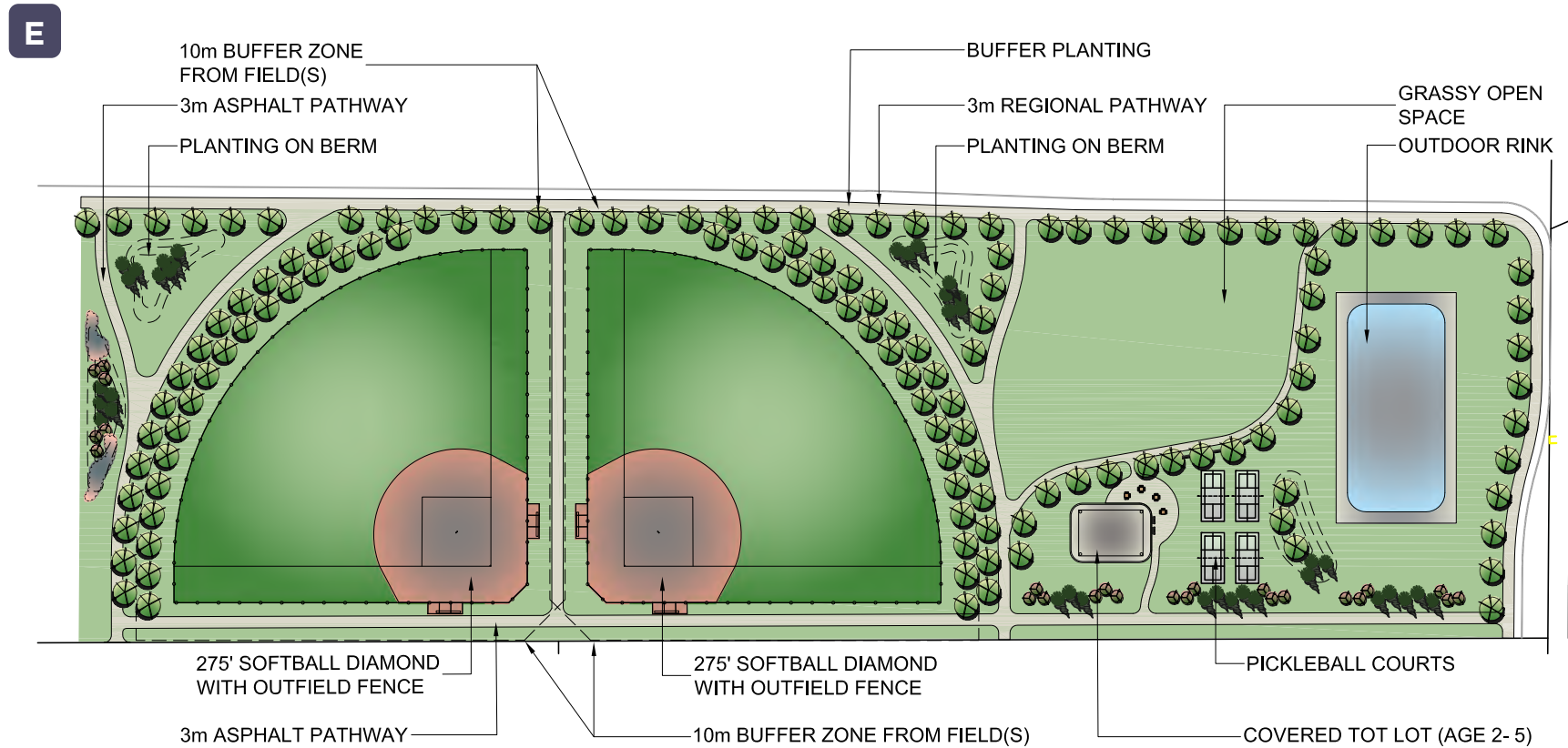


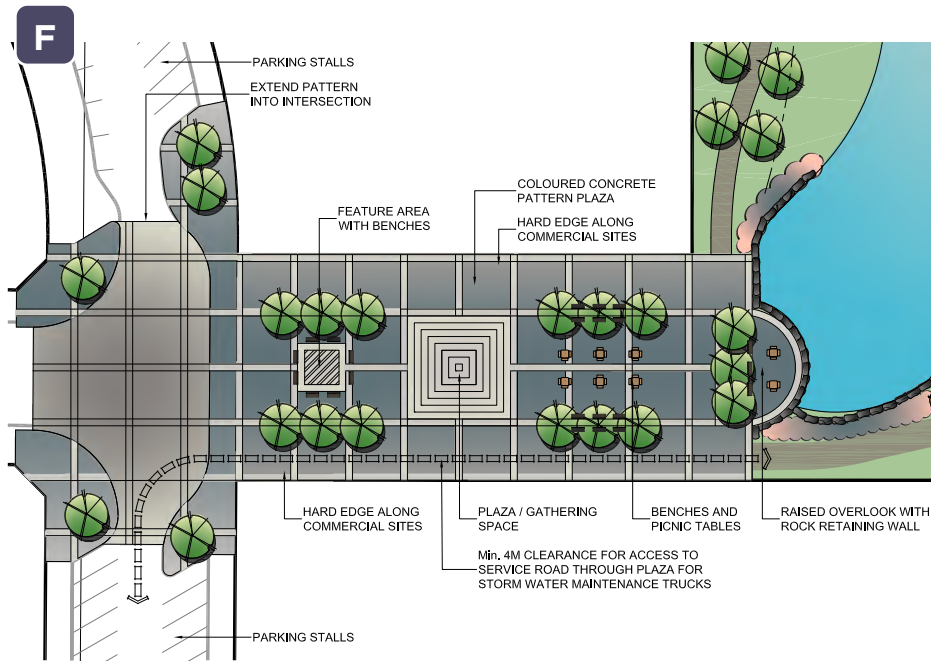
FIGURE 6D: Local Park



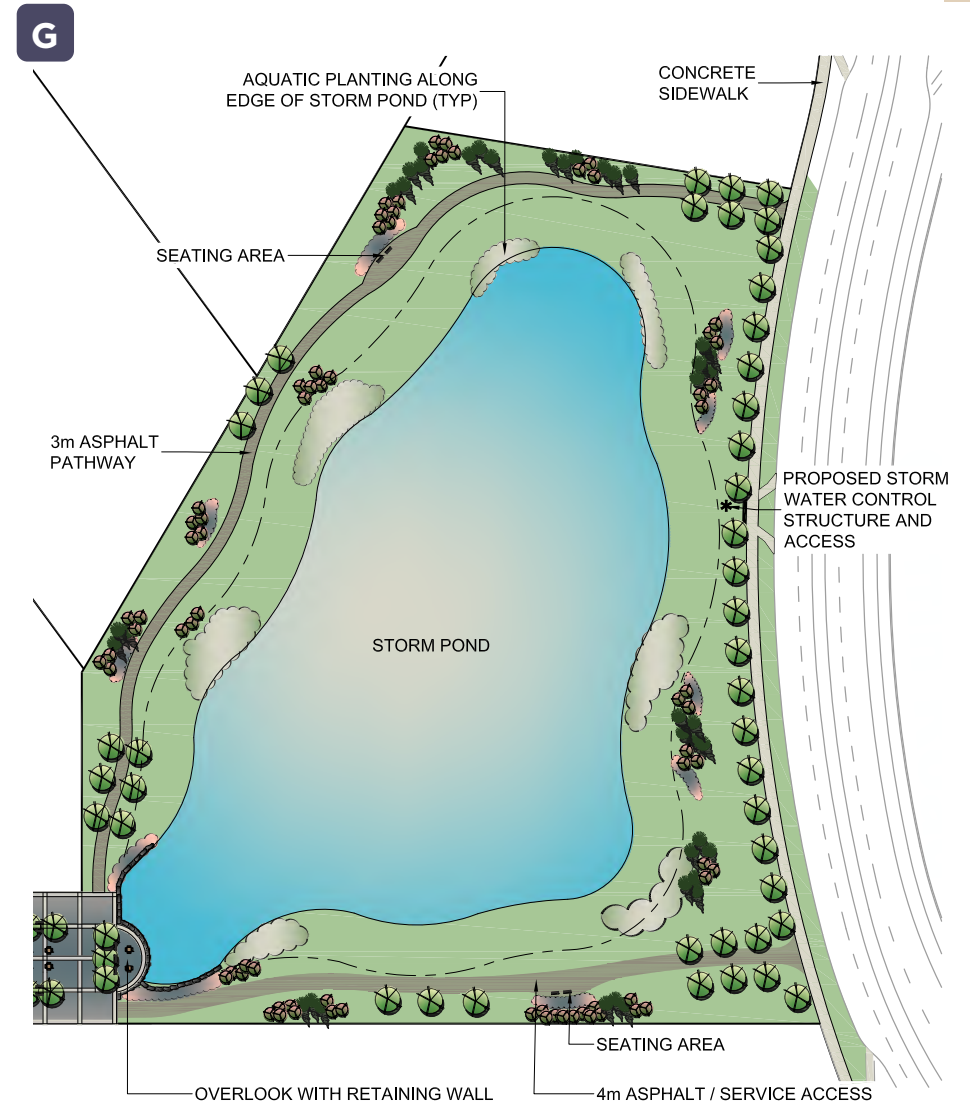
**FIGURE 6E: Playfields**



**FIGURE 6F: Urban Plaza**



**FIGURE 6G: Stormwater Management Facility**



## 4.10 BUFFER FROM EXISTING INDUSTRIAL

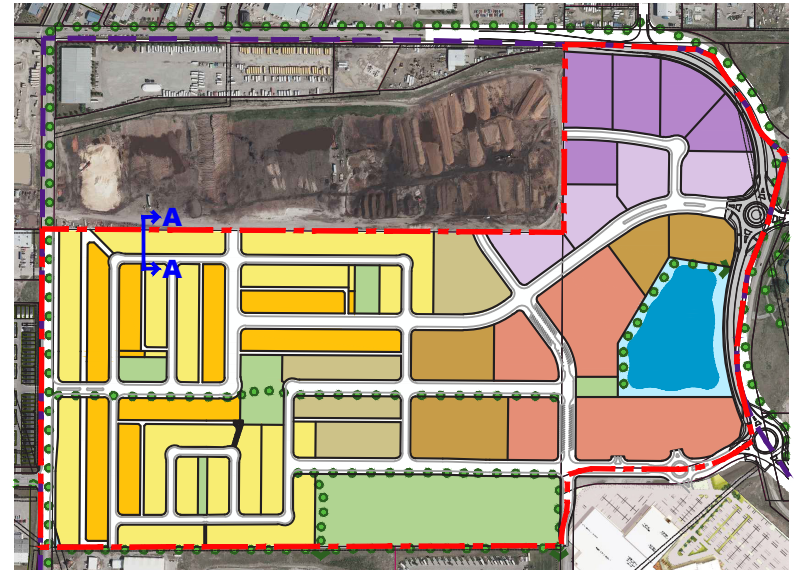
The Spray Lake Sawmills' storage yard is located to the north of the Plan Area. The materials stored in the yard includes timber to be processed in the mill on the other side of River Avenue to the west. Top spray mulch is also stored on the site. Potential impacts from this operation are anticipated to mainly be restricted to noise from vehicles moving materials and not from mill operations.

Notwithstanding, there are four ways in which the residential lots will be buffered from Spray Lake Sawmills activities to the north:

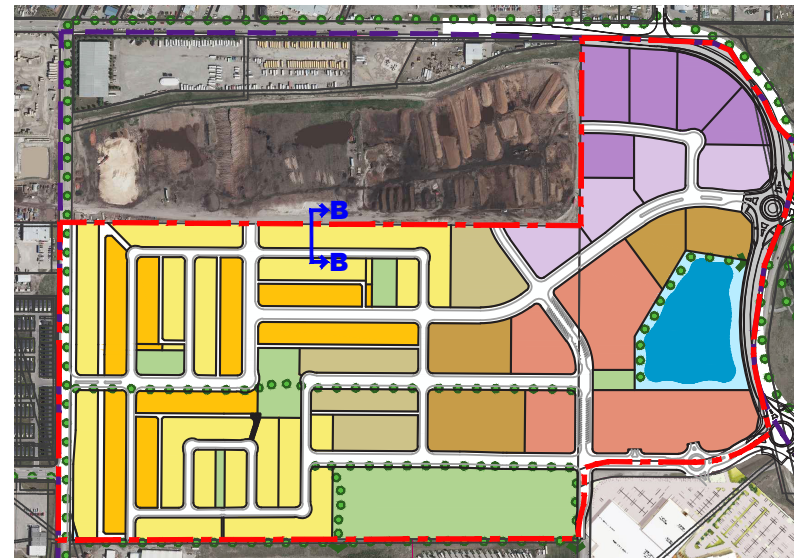
1. A 2.1 metre (7.0 foot) solid screen fence will be built between Spray Lake Sawmills and Greystone. This is as per an initial agreement between the two property owners.
2. The slope between the shared property line and the proposed residential road will be range from approximately 5.5% and 7.5%. This will mean the front of the proposed residential homes will be located approximately 2 metres below the Spray Lake Sawmills property.
3. The proposed residential lots will include a depth of approximately 38 metres. This lot depth is 3 metres deeper as compared to a standard 35 metre deep lot, which will provide a greater setback from a dwelling to Spray Lake Sawmills property. Providing 38 m lot depths in this location will be included as a condition of subdivision.
4. The additional 3 metres of depth will be landscaped to mitigate sound and visual impacts. A restrictive covenant will be registered on title requiring the maintenance of this landscape area by the landowner.

Two cross-section demonstrating these measures has been provided. In addition, the development area will ensure compliance with the current Fire Code of the day at the time of subdivision.

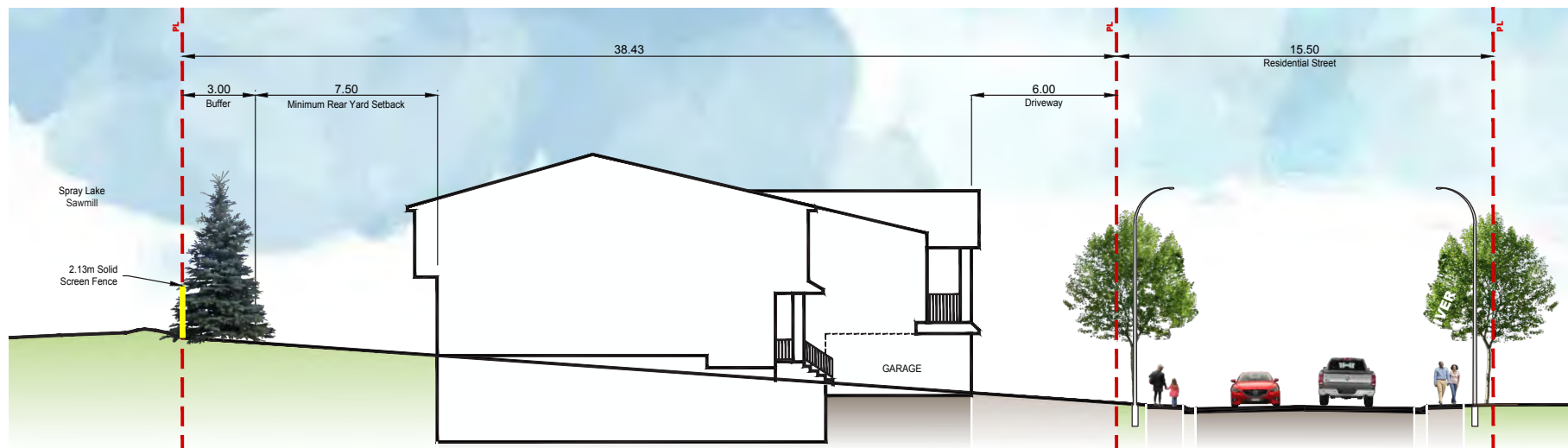
**FIGURE 7A: Buffer Cross-Section A-A Location**



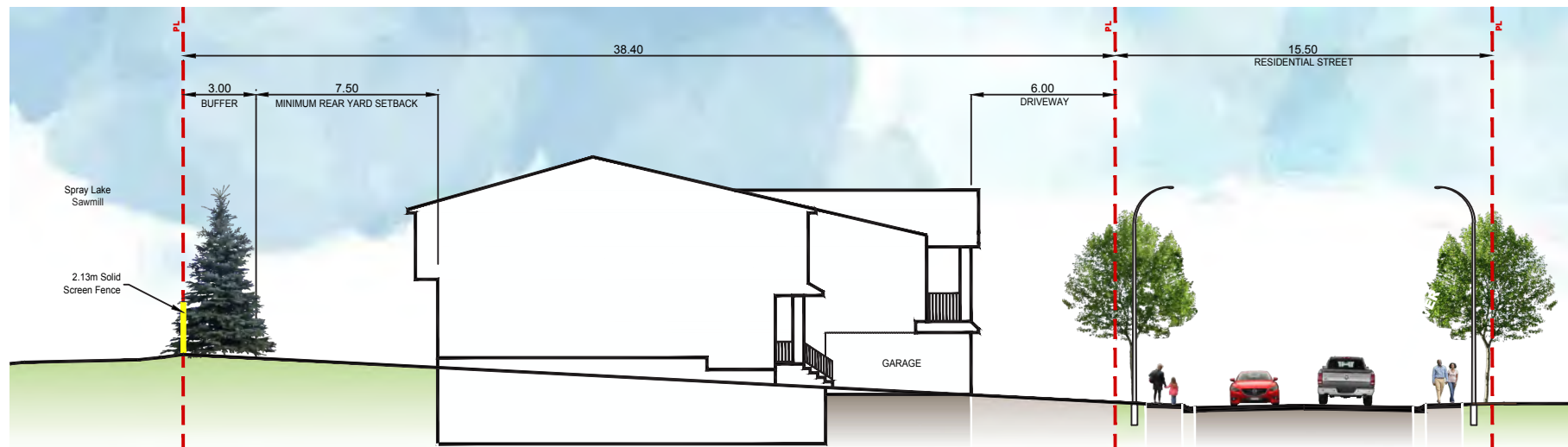
**FIGURE 7B: Buffer Cross-Section B-B Location**



**FIGURE 7C: Buffer Cross-Section A-A**



**FIGURE 7D: Buffer Cross-Section B-B**

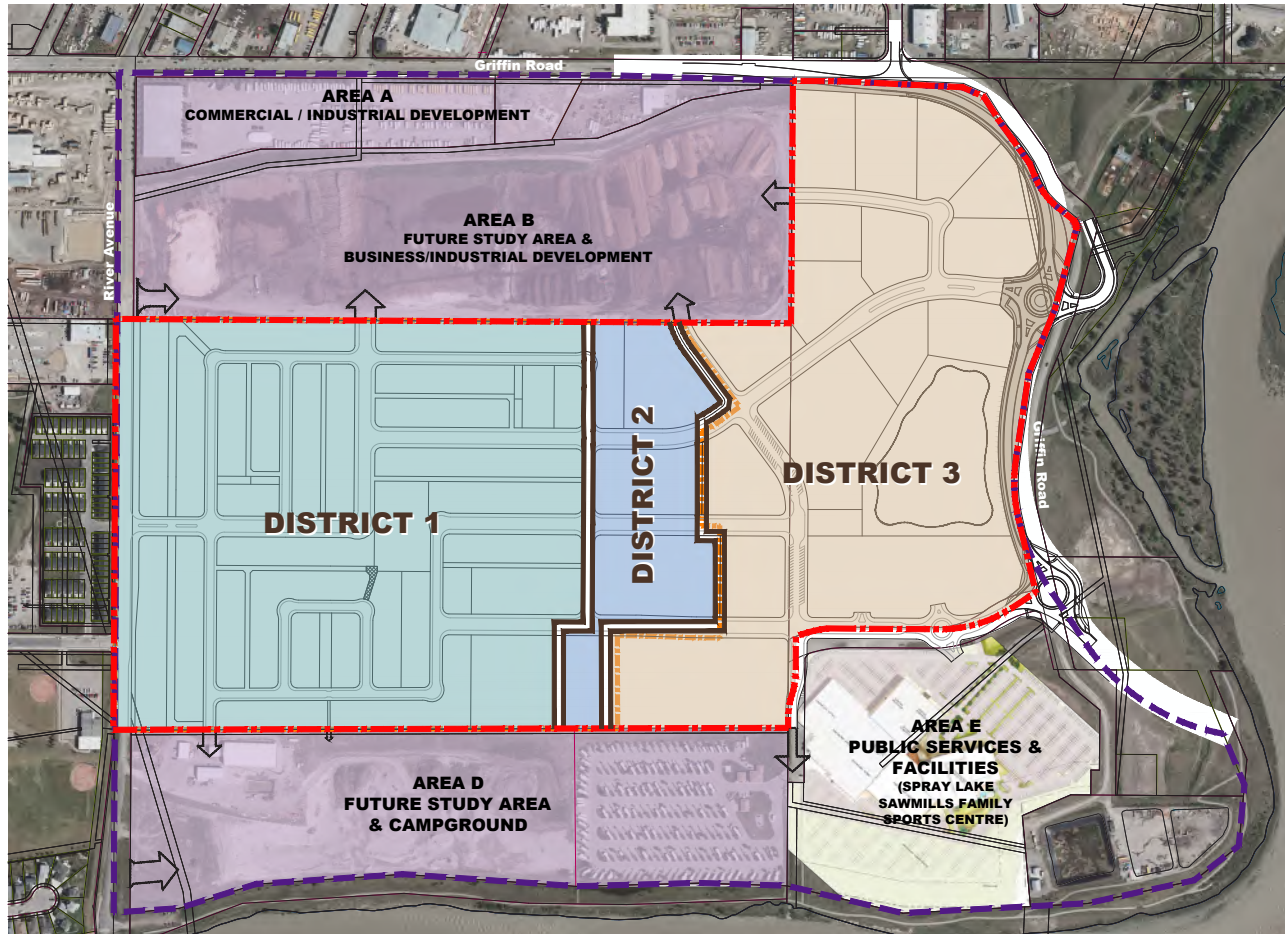







## 4.11 DENSITY DISTRIBUTION

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Starting from River Avenue, housing forms in Greystone begin with single and semi-detached dwellings, then move towards townhouses and finally to apartments. This gradual increase in residential density from west to east has been strategic. The lower density housing forms have been placed on the west portion of the development to reflect the character of the existing Riverview Community while the higher density forms have been located further to the east to activate the future highstreet and ensure that the majority of residents are within walking distance of major amenities, commercial services and employment. Locating the higher density residential forms further to the east also increases the potential of a higher number of residents using the Griffin Road access points rather than the one located on River Avenue and thus having less of an impact on Riverview residents.

**FIGURE 8: Density Distribution**



 Greystone Neighbourhood Plan Boundary	 District 1 - ±27.11 ha (±66.98 ac) - 403 Units (Anticipated) - 6.0 upa	 District 2 - ±6.14 ha (±15.16 ac) - 316 Units (Anticipated) - 20.8 upa	 District 3 - ±27.56 ha (±68.09 ac) - 143 Units - 2.1 upa
 Greystone ASP Boundary			



## SECTION 5.0 TRANSPORTATION

### 5.1 ROAD NETWORK

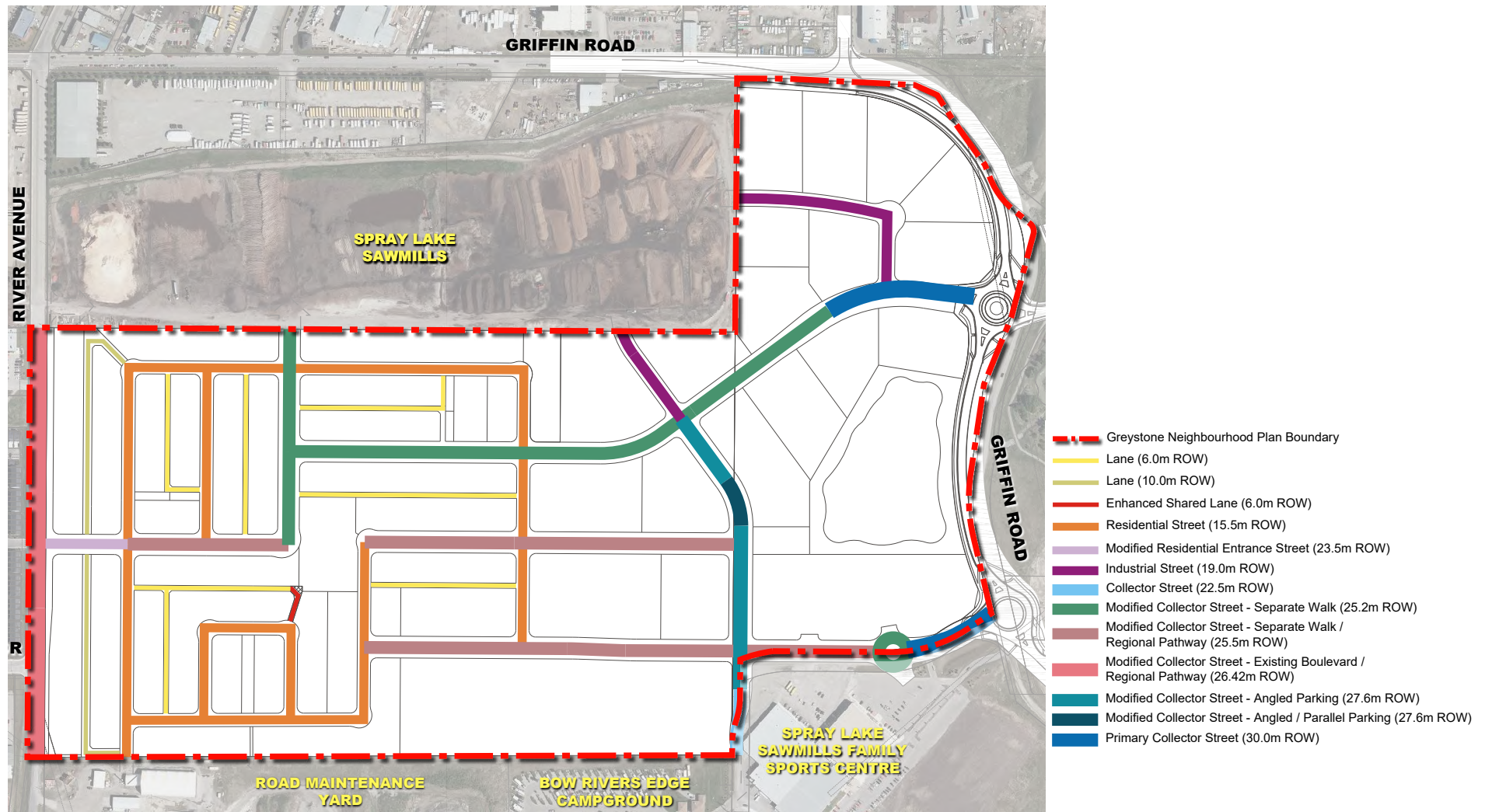
The transportation system will enable people to reach their destinations, both internal to the neighbourhood and to the wider Cochrane transportation network and beyond, as efficiently and safely as possible. Externally, this is accomplished by a transportation network that emphasizes connections to Griffin Road/Future James Walker Trail to the east via two future roundabouts. A connection to River Avenue to the west provides a vital entrance/exit to the mainly residential part of the Greystone community. Connections to the south and north are also offered to accommodate future redevelopment of the adjacent parcels. Internally, the transportation network is predominantly a modified grid that accommodates multiple connections throughout the site. The structure of the system is maintained by:

- Greystone Boulevard: East-west, 25.2m Modified Collector/30.0m Primary Collector;
- Vantage Drive: East-west/north-south, 25.5m Modified Collector/15.5m Residential;
- Park Street: East-west, 30.0m Primary Collector/25.5m Modified Collector/25.2m Modified Collector;
- Rockland Avenue and Clarke Terrace: North-south/East-west, 27.6m Modified Collector/19.0m Industrial; and
- Mill Road: East-west/north-south, 25.2m Modified Collector/25.5m Modified Collector/23.5 m Modified Residential Entrance

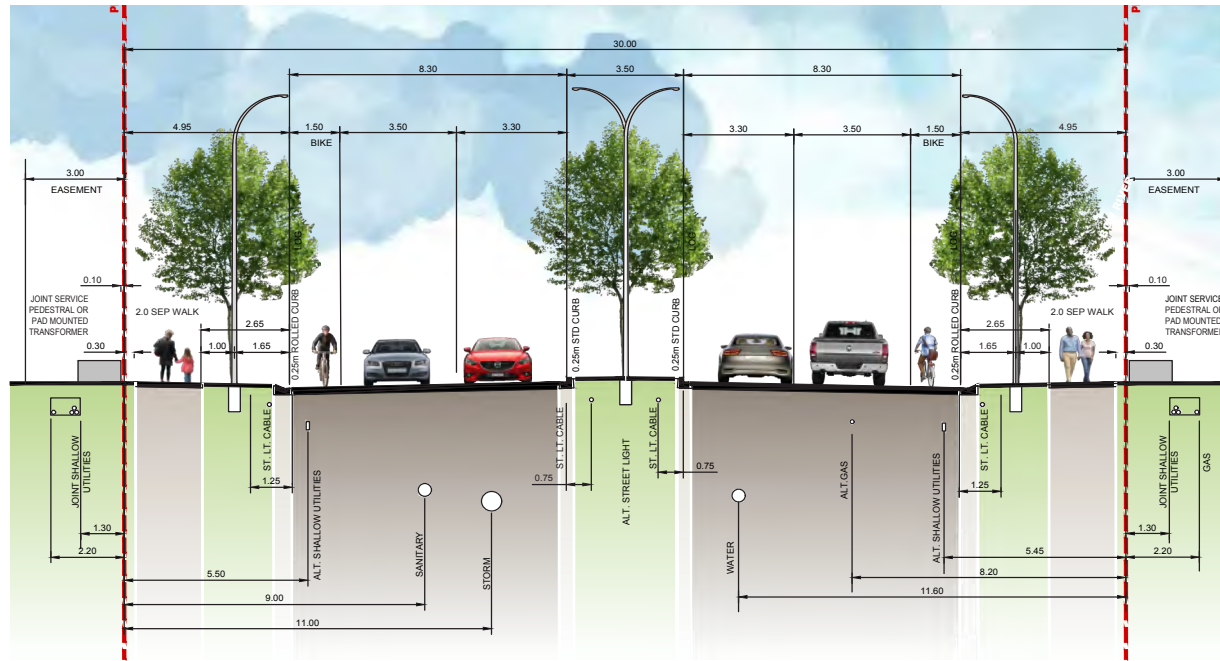
Residential and industrial roads branch off from the collector streets to provide access to the dwelling units and the employment uses. A number of the dwelling units have access to lanes. The following identifies the street network and related cross-sections.



**FIGURE 9: Road Network**

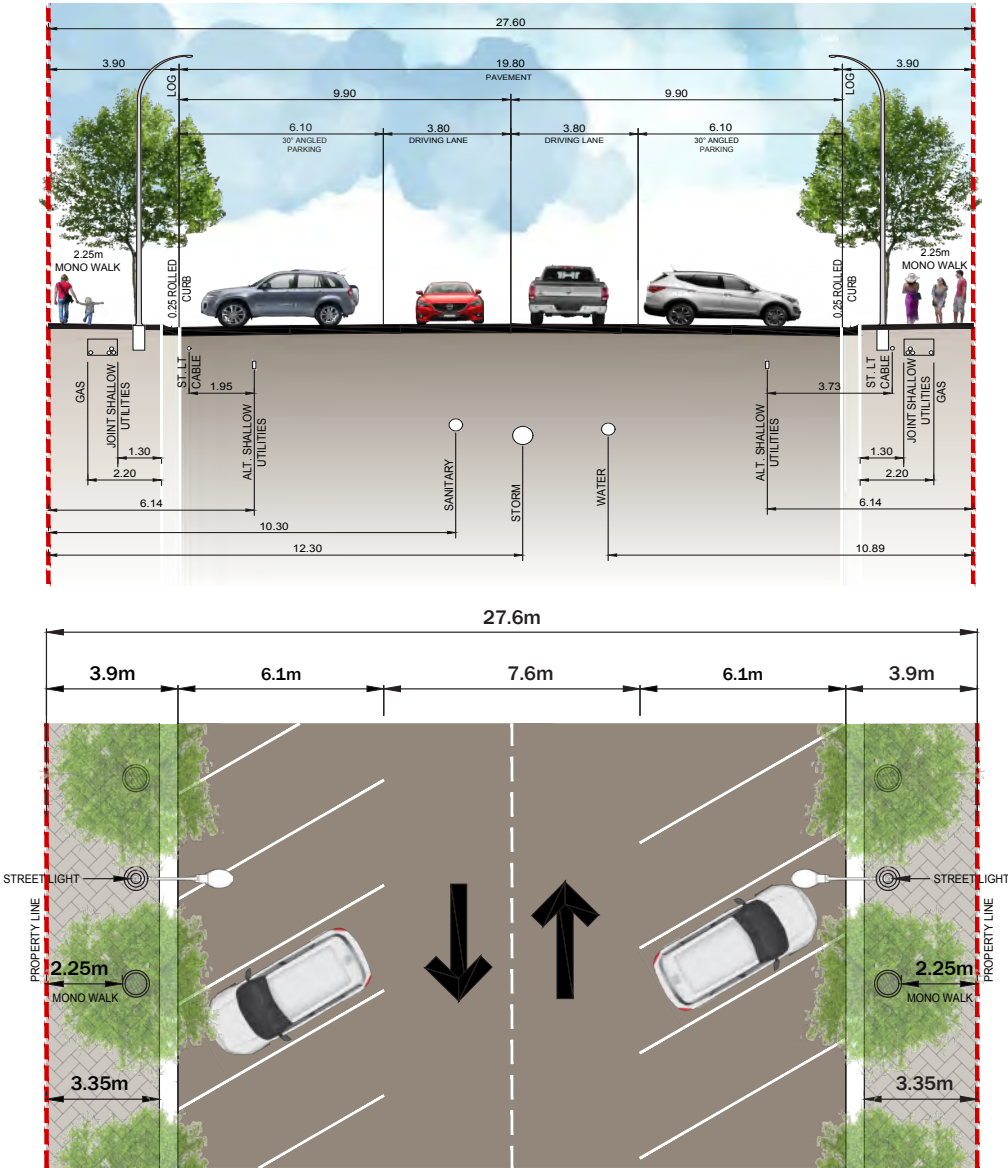


## 30.0 m Primary Collector



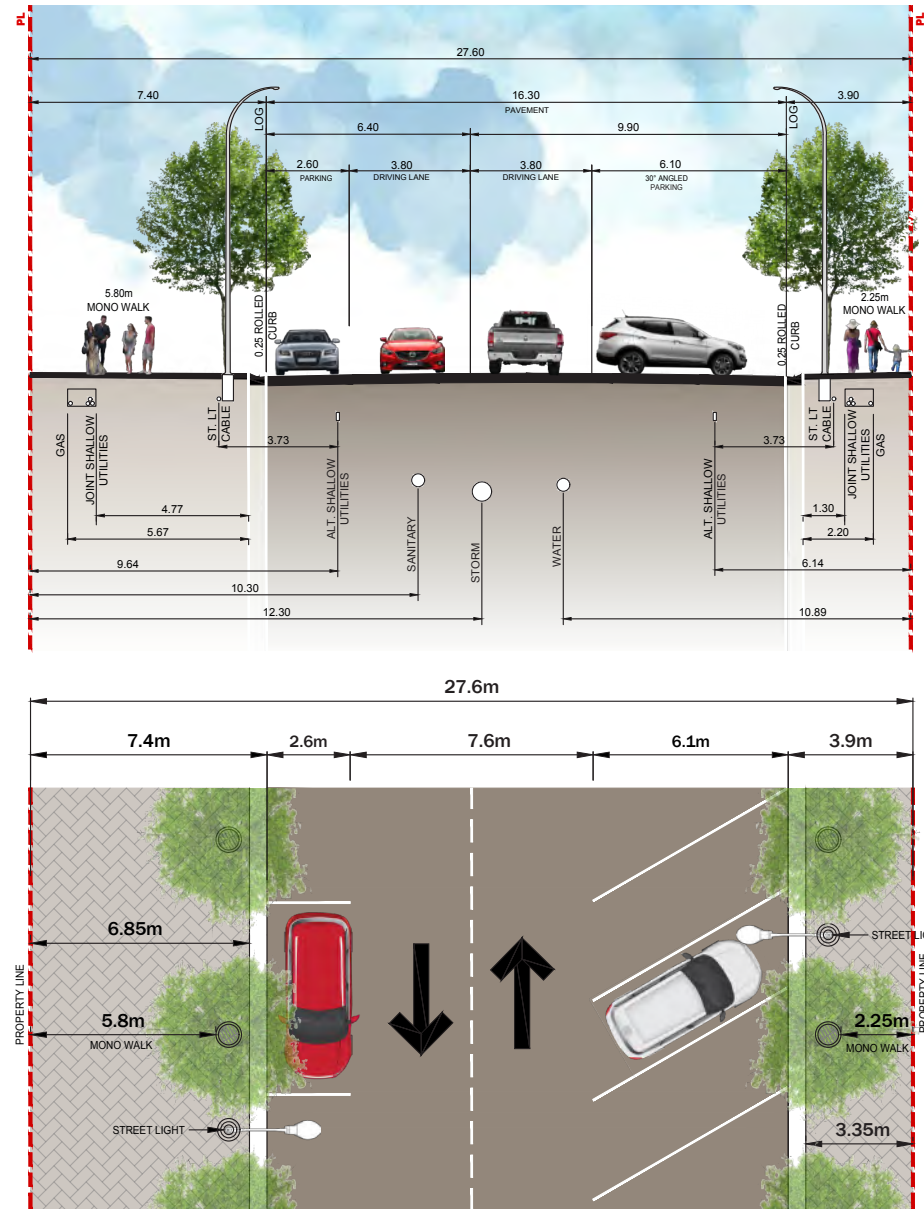
**27.6 m Modified Collector Street - Angled Parking**

Driveway access to Rockland Avenue will be limited in order to maintain the integrity of this highstreet.

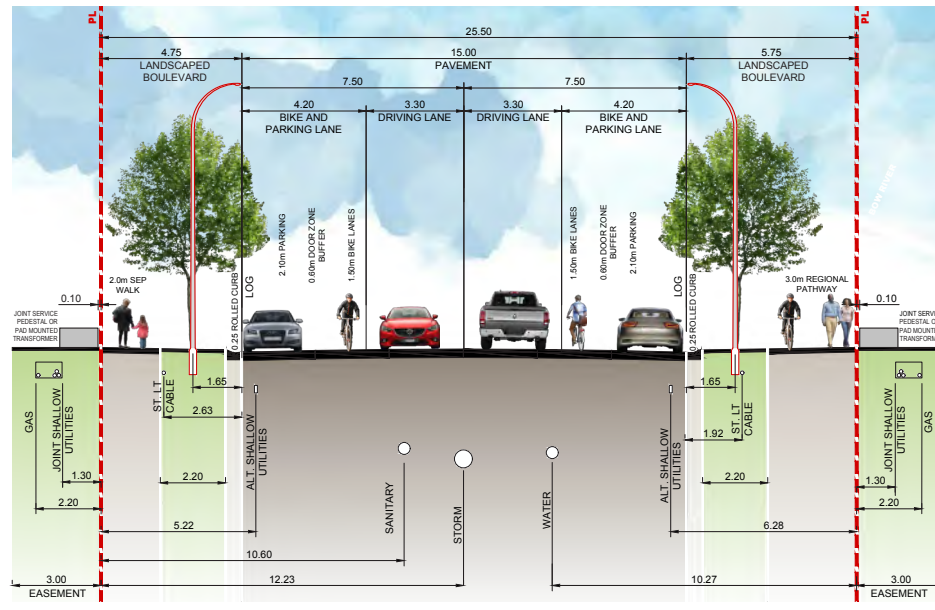


## 27.6 m Modified Collector Street - Angled/Parallel Parking

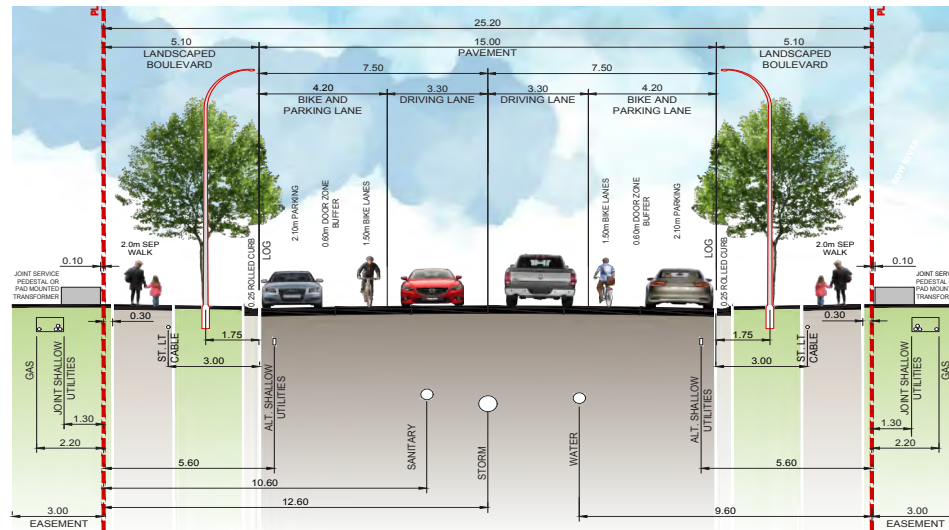
Driveway access to Rockland Avenue will be limited in order to maintain the integrity of this highstreet.



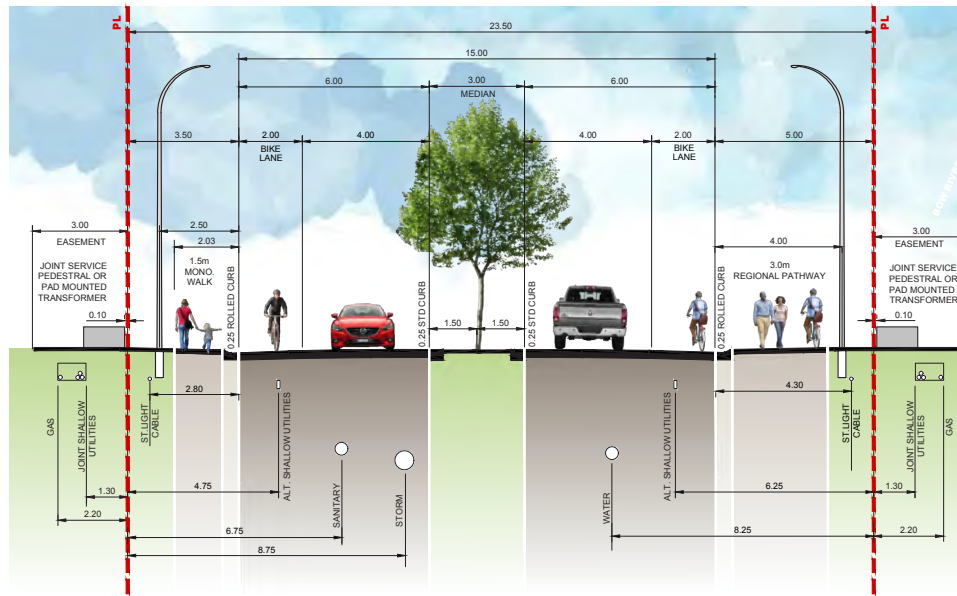
### 25.5 m Modified Collector Street - Separate Walk/Regional Pathway



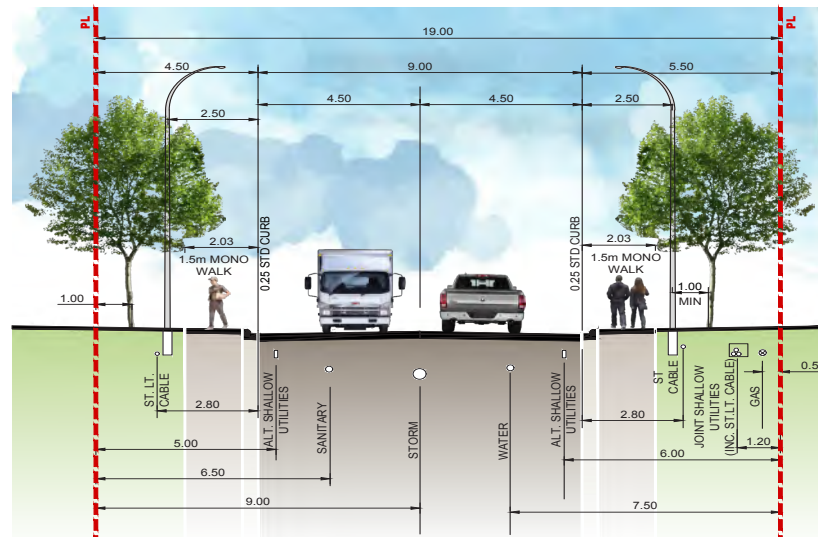
### 25.2 m Modified Collector Road - Separate Walk



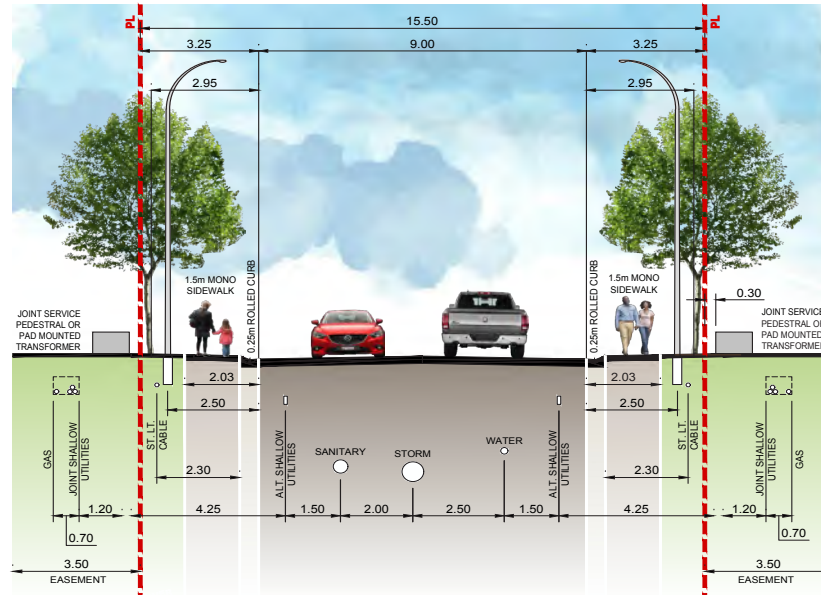
## 23.5 m Modified Residential Entrance Street - Regional Pathway



## 19.0 m Industrial Road



## 15.5 m Residential Road

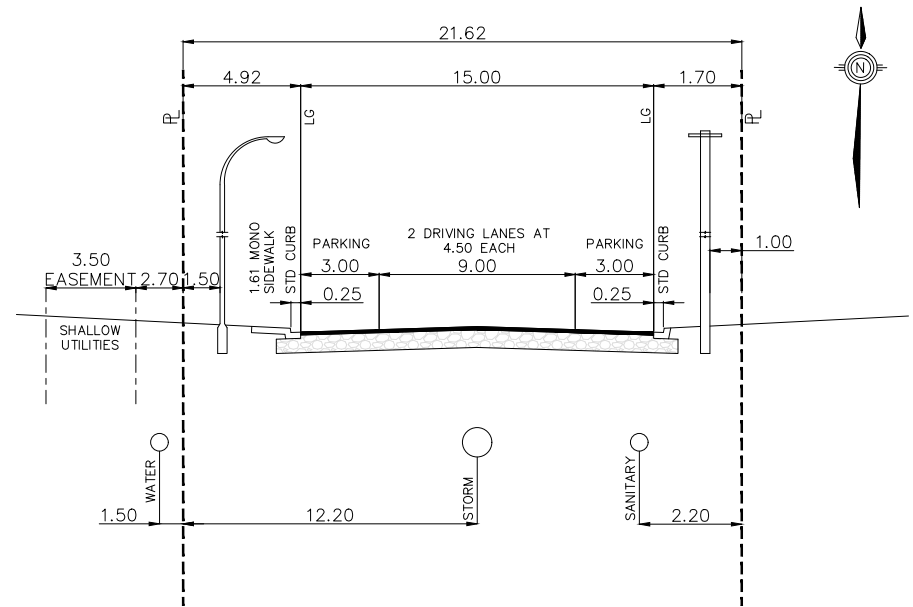


The portion of River Avenue that fronts the Rockland property is currently located within a 21.6 metre wide road right-of-way. North of Riverview Drive, River Avenue includes a 4.9 metre wide boulevard with a sidewalk running along the west side and a pavement width of 15.0 metres that ends within 1.7 metres of the western edge of the Rockland property line. South of Riverview Drive, there is no sidewalk and the pavement width tapers to approximately 8.0 metres. To manage the future anticipated traffic, the Greystone ASP identified that the portion of River Avenue fronting the Rockland property would need to be upgraded to accommodate the anticipated traffic volumes.

The following will be undertaken to realize construction of the modified standard for the portion of River Avenue fronting the Rockland property:

- The portion of the River Avenue right-of-way fronting the Rockland property south of Riverview Drive will be widened to the east by 4.80 metres.
- The portion of the River Avenue right-of-way fronting the Rockland property north of Riverview Drive will be widened to the east by 8.25 metres to offer a larger boulevard and wider buffer between existing Riverview residents and Greystone.
- The existing pavement will be restriped and widened to the east to match the modified standard. A boulevard will be constructed on the east side of River Avenue with a regional pathway for the portion fronting the Rockland property.

### Existing River Avenue Cross-Section



The following provides street cross-sections to illustrate the above.

As part of the upgrade, the developer shall extend the regional pathway along River Avenue to the south to connect with the Bow River regional pathway. The specific route for the pathway and cost sharing shall be determined at the time of subdivision. The developer will work with the Town of Cochrane to determine a fair and reasonable cost recovery agreement. Should an agreement not be reached, the connection will be completed with the re-development of Area D.



## 5.2 TRANSIT NETWORK

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The Town of Cochrane has been exploring options for the implementation of future public transit and the possible provision of such a service has been accounted for in this Neighbourhood Plan. A transit route is identified to be located along Greystone Boulevard, Mill Road, Rockland Avenue and Park Street. The proposed transit stops will be distributed evenly and situated near community amenities and main intersections. This will provide all residents with access to public transportation. The typically accepted measure for determining walkability to public transit is to ensure 90% of all residential units are within a 400 m (5 minute) walking distance to a transit stop. The site area is designed such that 100% of all residential units are within 400 m and over 98% of residential units are within 300 metres of a transit stop. In addition, higher intensity uses such as multi-residential, commercial and business park have been concentrated in one general area to support a future transit hub where a higher level of service can be provided. The neighbourhood will be developed to ensure that any future provision will have transit stops at appropriate spacing and consideration will be made for locating a transit stop within the Shopping Centre portion of the development.

**FIGURE 10: Transit Network**



- - - Greystone Neighbourhood Plan Boundary
- 3.0m Regional Pathway ★ Proposed Bus Stop
- - - 3.0m Local Pathway
- - - 4.0m Access Road / Pathway
- Future Bus Route
- Proposed Bus Route

	R-LD	R-MX	R-MD	R-HD	Total	Percentage
<b>Total # of Units</b>					719	100.0%
Within 300m	138	194	121	254	707	98.3%
300-400m	12				12	1.7%

## 5.3 PEDESTRIAN & CYCLING NETWORK

Pedestrian and cycling circulation is facilitated throughout the site by a large network of sidewalks, pathways, on street bike lanes and an *enhanced shared lane*. The sidewalks are located on each side of every street to ensure pedestrian access to all land uses. Regional pathways are situated along the perimeter of the Plan Area, around the stormwater management pond and in an east-west direction along Mill Road, Vantage Drive and Park Street to extend the Town's pathway network. Local pathways are identified within the parks to offer access to the amenities. Bike lanes have been placed within all collector street right-of-ways to promote cycling.

The enhanced shared lane is fashioned on a European *woonerf* which is a narrow street that is shared between pedestrians and slow moving vehicles. With respect to this Plan, an enhanced share lane is proposed as a pedestrian connection to the central park and as a vehicle connection to the lane in the southwest portion of the site to offer a unique feature in the development and to reduce maintenance costs for the Town. Alternative pavement materials and/or markings are anticipated to delineate the enhanced shared lane and create an inviting link which will be determined at the time of subdivision. Overall, these pedestrian routes provide connectivity to all residences, commercial development and business parks, industrial areas and parks as well as to surrounding amenities and downtown.

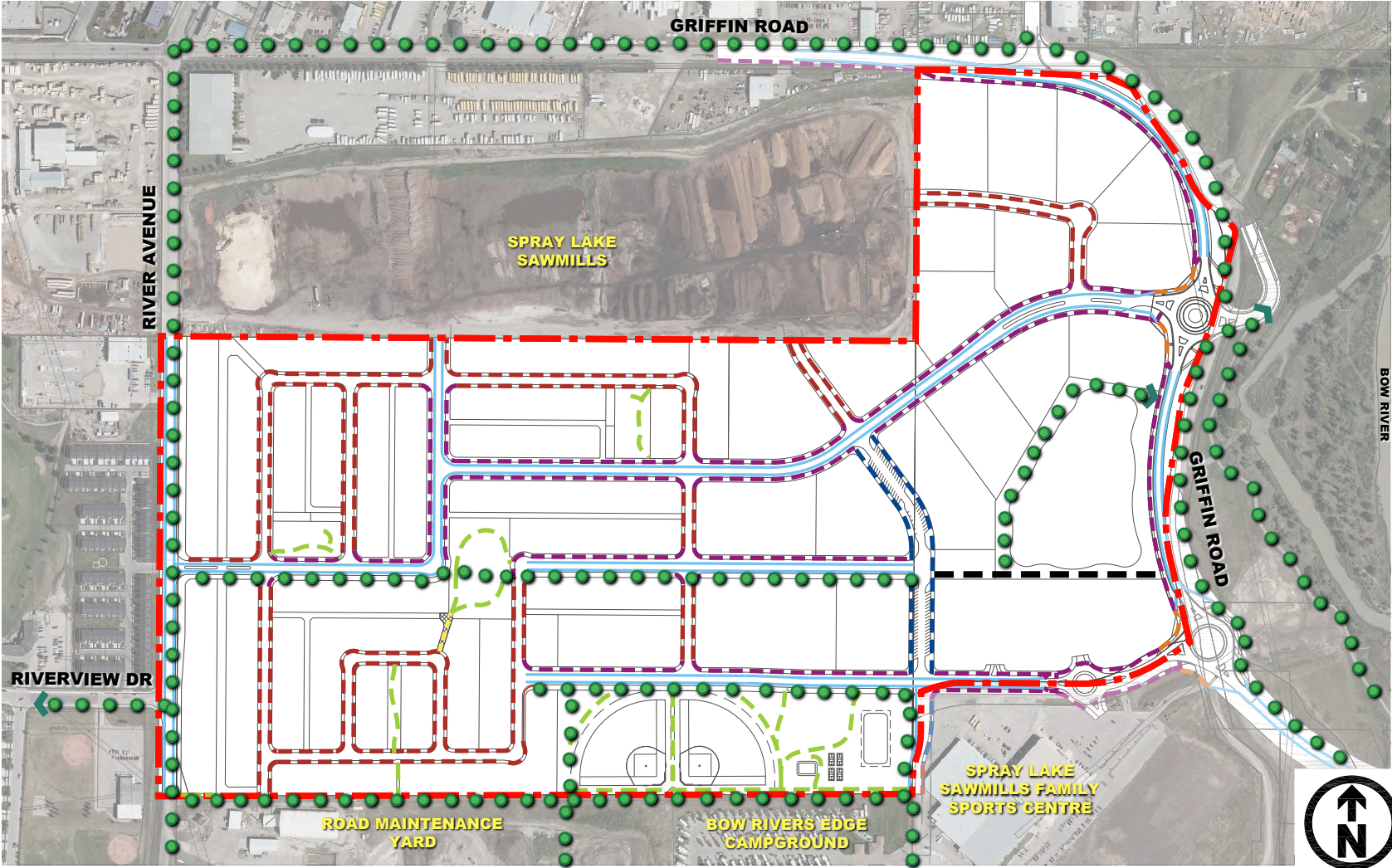
### What is an Enhanced Shared Lane?



- A lane shared by pedestrians, bicycles and slow moving vehicles
- Identified through the use of alternative pavement materials and/or markings and incorporates traffic calming measures
- Special signs identify the entrance to the lane and signals users to slow down and be mindful of each other
- Accommodates different modes of transportation in one right-of-way allows for savings in infrastructure and maintenance costs while connecting vehicles, pedestrians and cyclists safely to their destinations



**FIGURE 11: Pedestrian & Cycling Network**



- - - Greystone Neighbourhood Plan Boundary
- - - 6.0m Enhanced Shared Lane
- - - 1.5m Conc. Mono. Sidewalk
- - - 2.0m Conc. Separate Sidewalk
- - - 2.25m Conc. Mono. Sidewalk
- - - 3.0m Conc. Separate Sidewalk
- - - 3.0m Local Pathway
- - - 4.0m Access Road / Pathway
- ● ● 3.0m Regional Pathway
- - - 1.5m On-Street Bike Lane



## SECTION 6.0 SERVICING

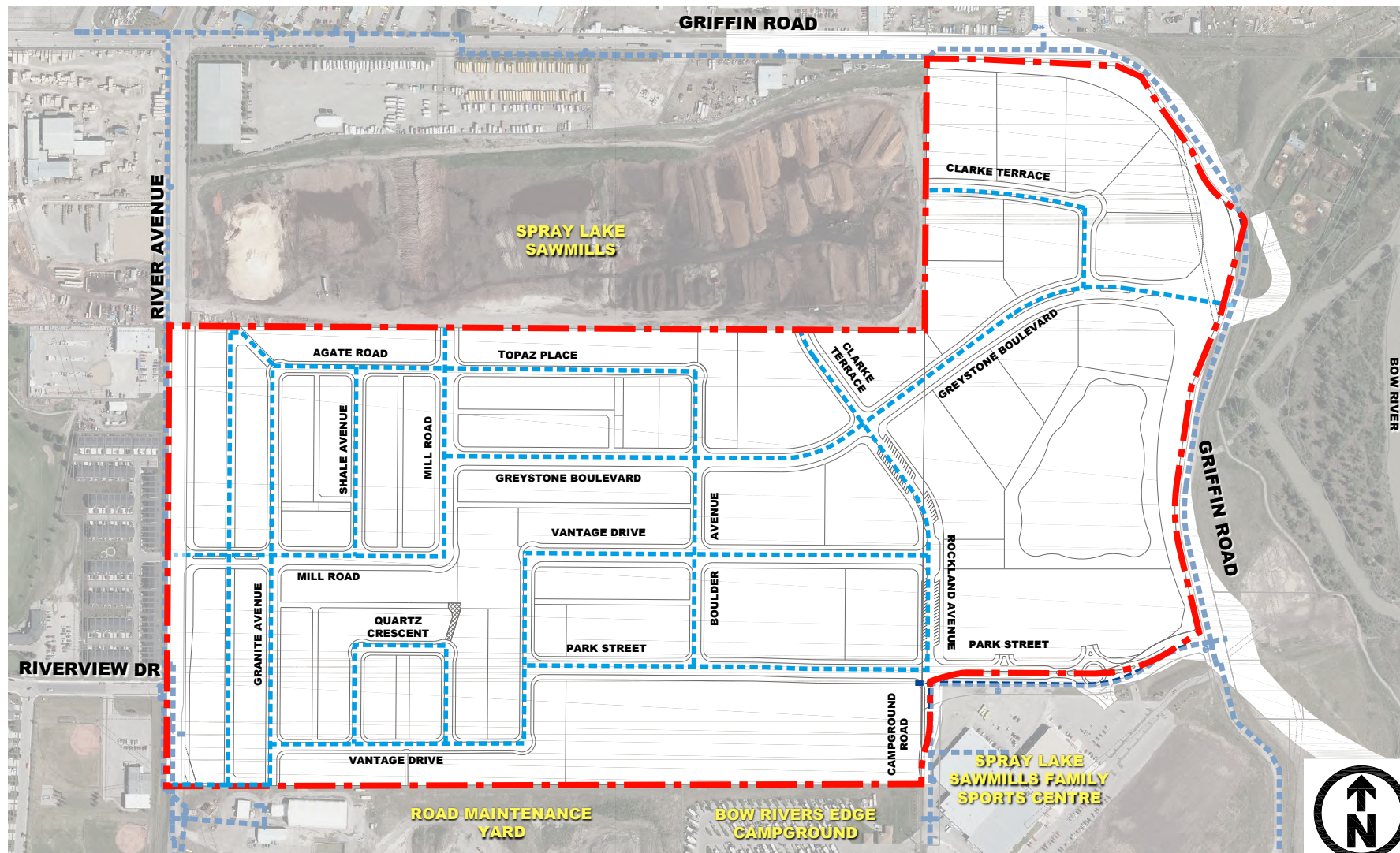
### 6.1 WATER

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Water servicing for the Greystone Neighbourhood is available from both the west (River Avenue) and east (Griffin/James Walker Trail). Both of the existing watermains are in the highest pressure zone in the Town providing adequate pressure and flow to service the Neighbourhood. As Greystone develops, the connections to the existing mains will be made to ensure adequate domestic and fire flows through each phase of development. Ultimately the Neighbourhood will have a connection at the River Avenue intersection, the proposed north roundabout on James Walker Trail and the proposed south roundabout on James Walker Trail. These connections and the internal system will provide better flows and water quality for the development and adjacent water users by providing an additional loop between the River Avenue and Griffin/James Walker Trail main. The internal system will also provide connections to the Spray Lakes Sawmill property to the north and Rocky View County property to the south.



**FIGURE 12: Water Network**



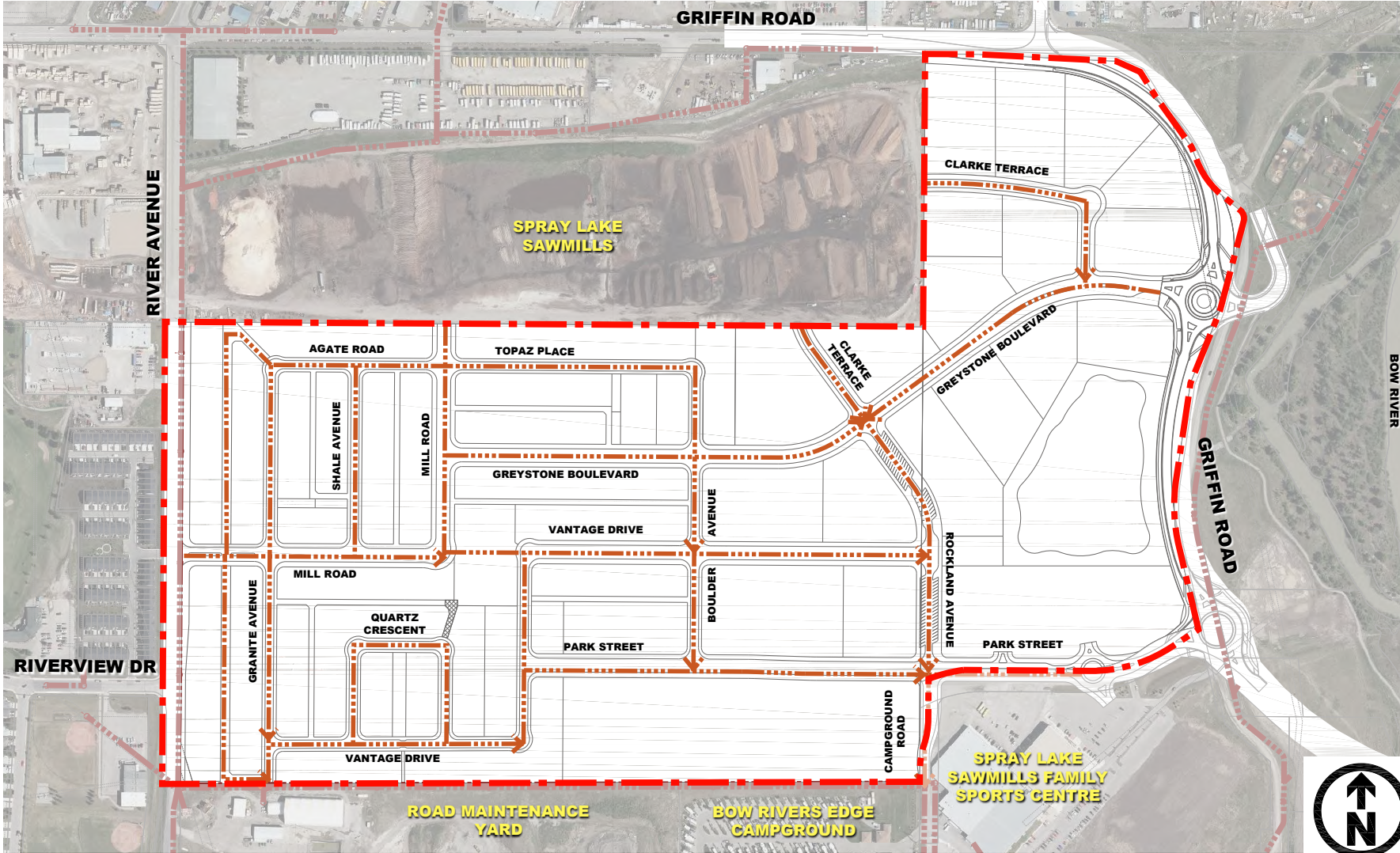
- - - Greystone Neighbourhood Plan Boundary
- - - Proposed Water Servicing
- - - Existing Water Servicing

## 6.2 SANITARY

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The “Burnco Trunk Sewer” was constructed as a levy project in 2003 to the benefit of future development lands including Greystone. As a beneficiary of the project, Greystone will be paying the levy and connecting to the trunk which is aligned along the south boundary of the neighbourhood. The trunk was constructed to accommodate full build out of the area including Greystone and therefore has adequate capacity in conveying flows from the Neighbourhood to the Town lift station that pumps all Town flows to Calgary for treatment. Connection to the trunk main will be located such that phasing of the internal Neighbourhood system can occur and servicing through the plan area to the Spray Lakes Sawmill property to the north is accommodated.

**FIGURE 13: Sanitary Network**



- - - - - Greystone Neighbourhood Plan Boundary
- . . . . Proposed Sanitary Servicing
- . . . . Existing Sanitary Servicing

## 6.3 STORMWATER

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Stormwater management for the Greystone Neighbourhood will follow the Rockland Stormwater Master Drainage Plan Draft (2017) prepared by Urban Systems Limited and the Greystone Staged Master Drainage Plan prepared by LGN Consulting Engineering Ltd. (2017). The draft Master Drainage Plan provides high level policy direction for drainage in the area while the Staged Master Drainage Plan provides the design basis for the overall drainage concept.

The Greystone Neighbourhood will be serviced by a single stormwater management facility at the east side of the plan area that will attenuate and treat the water to meet or exceed all applicable regulations up to and including the 1:100 year storm event. The facility will be designed to provide a flow through for the Spray Lake Sawmills and will not be providing any further stormwater management for other properties. Downstream of the stormwater facility the water will flow through a culvert beneath Griffin Road and from there be conveyed to the Bow River by the existing channel, minimizing any disruption to the existing foreshore area. It is acknowledged that maintenance access will need to be provided to the inlet and outlet structures when their final location is determined at the detailed design stage.

Best Management Practices will be applied throughout the Neighbourhood to provide supplementary naturalised stormwater management more closely mimicking the water cycle and providing reduced flows, better water quality and opportunities to reuse the resource.

## 6.4 SHALLOW UTILITIES

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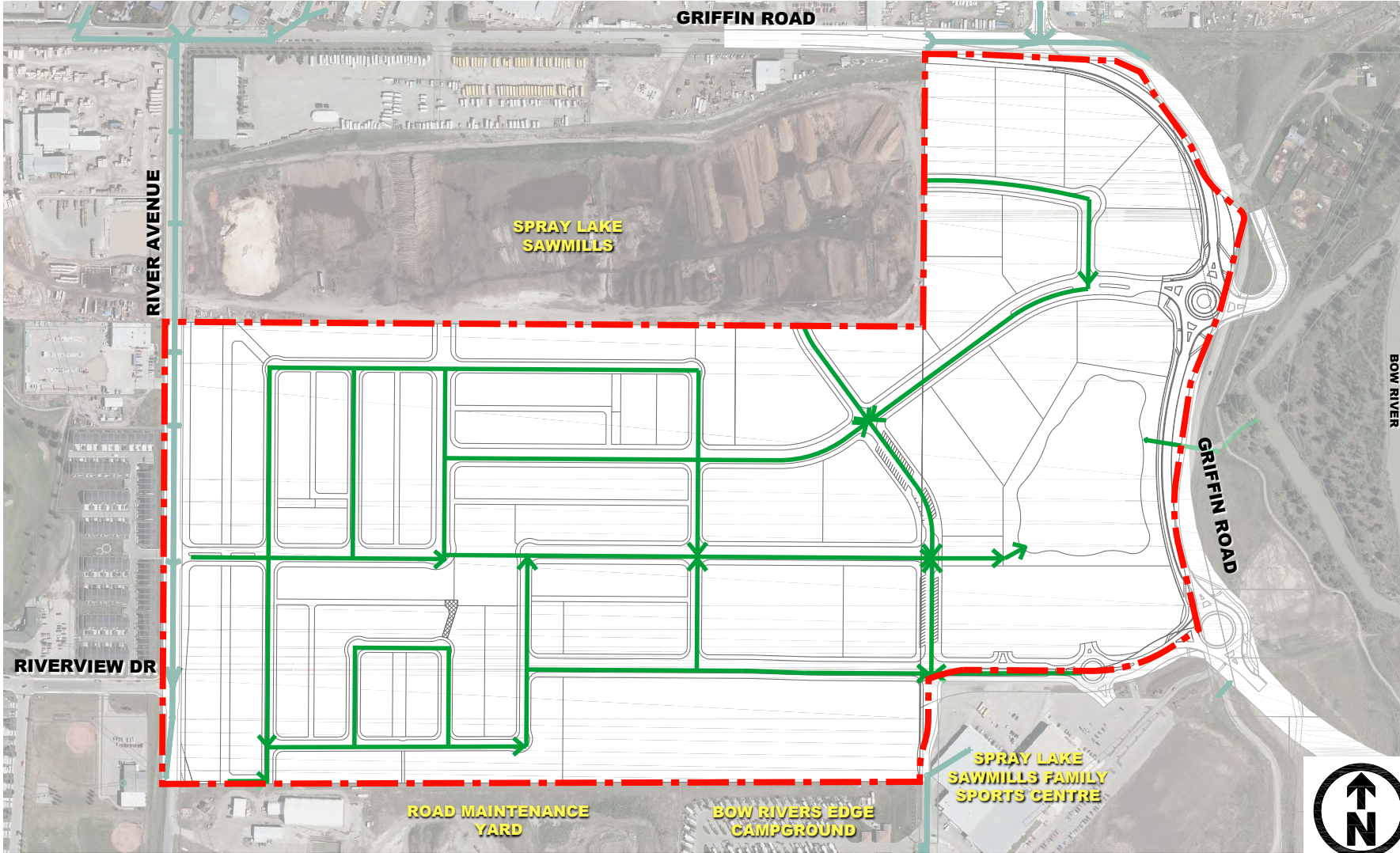
Shallow utilities comprised of telecommunication, cable, power and gas will be extended through the site from existing systems on both the west and east sides of the plan area. All shallow utilities will be buried underground to provide for clear views of the sky and surrounding vistas. Street lighting will be provided throughout the Neighbourhood respecting dark skies through design and providing for a safe neighbourhood.

## 6.5 FIBRE OPTICS

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The neighbourhood will be serviced with fibre optics. This form of cable is well suited for delivering high levels of digital information in a clear and secure manner. The provision of such service will optimize communication for offices, telecommuters and home businesses. In addition, it will provide the municipality with the opportunity to monitor the performance of its infrastructure assets such as roads, lighting, transit and utility servicing in real-time in order to adjust and deliver the highest and most efficient level of service to the community. It also allows for interactive technology to be installed by the Town to increase information sharing with the public through digital signs, websites and devices. The intent is to lay the foundation for supporting the Town of Cochrane's *Smart Cities* initiative as described in Section 1.4.

**FIGURE 14: Stormwater Network**



- Greystone Neighbourhood Plan Boundary
- Proposed Stormwater Servicing
- Existing Stormwater Servicing



## SECTION 7.0 SUPPORTING STUDIES

### 7.1 GEOTECHNICAL STUDY

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A geotechnical report was completed for the subject lands by McIntosh Lalani Engineering Ltd. (M•L) in 2016. The objective of the evaluation was to assess the general subsurface soil and groundwater conditions of the site with respect to planning the development and design of grading, surface works and utilities for development.

The fieldwork consisted of advancing 31 test pits across the site using a tracked excavator. A variety of different materials were encountered including topsoil, organic and inorganic fill, gravel, silty clay and bedrock. Isolated groundwater seepage was encountered, especially in the bedrock.

A summary of the geotechnical considerations for design and construction of the proposed development are presented below:

- Conventional shallow strip and spread footing foundations are considered feasible for single family residences and a net allowable bearing capacity of 100 kPa may be used for design for all native undisturbed soil and approved engineered fill soils. Areas of the site designated for commercial or multi-family uses should have separate site specific geotechnical assessments once the type of development is known.



- The native soils in the development, once stripped of all topsoil, vegetation and deleterious soils such as organic fill and debris are suitable for use as General Engineered Fill as defined elsewhere in this report and in the appendices. The fill soils on site are a mixture of suitable and non-suitable soils as engineered fill. Determination of suitable and non-suitable soils will need to be directed by M•L during site grading.
- The native soils are suitable for construction of slabs-on-grade provided that visual inspection prior to construction is carried out to verify that no topsoil, vegetation, loose or deleterious materials are present. Portions of the fill soils may also be suitable for support of slabs-on-grade however the suitability must be verified during excavation.
- Excavations in the native silty clay soils may be constructed with a vertical cut of maximum height 1.5 metres above which trenches should be backsloped with a gradient of 1 Horizontal to 1 Vertical or flatter. Additional backsloping may be required if significant sloughing or groundwater seepage is encountered. All excavations must be carried out in accordance with the requirements of Alberta Occupational Health & Safety (OH&S).
- It was anticipated that bedrock would be encountered at relatively shallow depths with respect to normal construction excavation depths. Test-pitting was performed in part to assess the strength and excavatability of the bedrock. The borehole logs include detailed notes on excavatability.
- Generally, the approximately top 2 metres of bedrock were excavatable using the bucket only, and excavation beyond 2 metres could be carried out using a ripping tooth. In boreholes 20 through 23 however, refusal was encountered within the bedrock using a ripping tooth. These boreholes are in the area of the proposed storm pond as shown on the test-pit location plan provided by BSEI Municipal Consulting Engineers dated March 2016.
- Groundwater was encountered at depths as shallow as 1.55 metres below the existing grade. Generally groundwater was produced from fractures within the bedrock. Seepage into the excavations was generally not significant, but six of the test-pits were wet upon completion. It is expected that dewatering can be accomplished with a system of ditches and sumps equipped with submersible pumps. Permanent dewatering requirements should be further assessed upon establishing final grades and building design. For single family housing with below grade development, perimeter weeping tile is required.
- A liner is required for the proposed stormwater pond if a permanent water level is to be controlled. Either imported clay material or a geosynthetic clay liner would be suitable options. The site soils are not suitable for use as a storm pond liner.

- The site soils are suitable to provide pipe support. It is recommended that if open-graded gravels are used for pipe bedding, that compacted clay plugs be installed at intervals along the pipe to prevent water from flowing through the bedding gravels and eroding the fill soils and bedrock.

These design recommendations were provided under the assumption that an adequate level of inspection will be conducted during construction and that construction will be carried out by a suitable qualified contractor, experienced in underground utility installation and earthworks.

## 7.2 PHASE I ENVIRONMENTAL SITE ASSESSMENT

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Rockland Holdings Ltd. (Rockland) retained Tetra Tech EBA Inc. (Tetra Tech) to conduct a Phase I Environmental Site Assessment (ESA) of the Cochrane property in September 2016. The objective of the Phase 1 ESA was to comment on whether any past or present land use, either off site or on site, may have a potential to cause environmental impairment to the site.

In general, there are two distinct types of potential environmental risk to any property. The first type of risk is from potential contamination from on-site land uses, while the second type of risk is from contamination caused by adjacent property owners.

Potential on-site sources for contamination were identified. These sources were mainly confined to the west portion of the site and

related to infrastructure and buildings established to support the gravel operation. The gravel pit itself was identified as a potential source in terms of fill material, debris and hydrocarbon staining.

The Spray Lake Sawmills, located at 305 Griffin Road West, was identified as a potentially off-site source due to potential impacts on soil and groundwater quality resulting from the activities historically undertaken on that property.

Based on the present study, Tetra Tech recommended that a Phase II ESA be conducted to investigate the areas of potential concern as identified in their report. In addition, the report offered recommendations concerning approaches to the redevelopment of the property:

- Prior to extensive renovations or demolition, a hazardous building materials assessment should be undertaken.
- If buried debris or staining are encountered during future investigation or ground disturbance a qualified environmental professional should be contacted.
- If soils containing organics are encountered during future investigation or ground disturbance, they should be removed from building footprints and not be reburied; a qualified environmental professional should be contacted.
- Any disturbance to surface waterbodies should be done in accordance with the Alberta Water Act.
- If encountered during future development, any water wells

or septic systems should be appropriately decommissioned according to the relevant regulations.

### 7.3 PHASE II ENVIRONMENTAL SITE ASSESSMENT

---

Rockland Holdings Ltd. (Rockland) retained Tetra Tech EBA Inc. (Tetra Tech) to conduct a Phase II Environmental Site Assessment (ESA) of their Cochrane property in July 2017. The objective of the Phase II ESA was to assess soil and groundwater quality at the site in relation to areas of potential environmental concern (APECs) identified in the Phase I ESA conducted for the site by Tetra Tech in September 2016, and determine management solutions to address any environmental impacts identified in order to facilitate site redevelopment. It was understood that the APECs assessed for this study were located where the former processing plant was recently removed and will be part of later phases of the proposed site development plan.

Their investigation detected concentrations of contaminants that were within Alberta guidelines or did not preclude the proposed redevelopment of the site after mitigative measures were completed as outlined below. Tetra Tech recommended:

- Removing the petroleum hydrocarbon (PHC) impacted soils from the former fueling area prior to, or during, site redevelopment;
- Removing calcium chloride (pH) or Electrical Conductivity (EC) impacted soils located at the truck wash and drum mixer

ponds prior to, or during, site redevelopment.

- Removing the PHC and polycyclic aromatic hydrocarbons (PAH) impacted soils at the former waste oil above-ground storage tank prior to, or during, site redevelopment;
- Removing fill soils with asphalt material and debris from the site prior to, or during, site redevelopment; and
- Re-sampling the groundwater monitoring wells on site to evaluate seasonal trends and develop a Materials Handling Plan to guide management of environmental impacts in conjunction with redevelopment of the affected development phases.

### 7.4 BIOPHYSICAL IMPACT ASSESSMENT

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Tetra Tech EBA Inc. (operating as Tetra Tech) was retained by Rockland Holdings Ltd. (Rockland) to conduct a Biophysical Impact Assessment (BIA) for the proposed Cochrane development. A Biophysical Overview (BO) was conducted as part of the BIA to convey the current biophysical conditions of the proposed development area. Using the information outlined in the BO, the BIA predicts, interprets, and evaluates mitigation measures to effectively develop the subject lands in a safe and environmentally friendly manner.

Existing environmental conditions of the subject site were characterized by the Parkland Natural Region which is a transitional

climate between Grassland and the Cordilleran and Boreal ecoclimatic provinces in the south and north, respectively. The landscape is rolling to hilly and the soils are dominated by Orthic Black Chernozems in grasslands and open woodlands, and Orthic Dark Gray Chernozemic soils in forested areas. No naturally occurring wetlands or watercourses were identified within the project footprint. Current waterbodies identified onsite are the result of development within the gravel pit for water management purposes.

A desktop review was conducted to determine historical occurrences of wildlife, particularly Species of Management Concern (SOMC) within the project area. Species having the potential to occur within the project area were determined by reviewing species ranges in addition to other resources. Tetra Tech determined that 66 SOMC have the potential to be found within the project area: 54 bird species, 8 mammal species, 2 reptile species and 1 amphibian species. During the site visit, Tetra Tech identified a total of 12 species, including 6 species of birds and 6 mammals.

Fish and fish habitat in the Bow River were reviewed using information from the Fish and Wildlife Internet Mapping Tool (FWIMP). This identifies any fish species recorded within a 1.0km radius of the project footprint. Two species of fish, Brown Trout and Rainbow Trout were identified using the internet mapping tool within a 1.0 km radius point of the culvert and the side channel of the Bow River. Additionally, there are many other species of forage fish that have the potential of occurring within 1.0 km of the culvert location. The project footprint is predominately characterized by managed grass and low shrub vegetation, typically dominated by

forage grass species including smooth brome, Kentucky blue grass, quackgrass, pea species including sweet clovers, as well as isolated stands of willows and balsam poplar. Weeds and invasive, non-native species were also common across the footprint.

Based on the desktop review and site visit, several potential effects to the Valued Ecosystem Components (VECs) associated with the project were identified. There may be local loss or alteration of intact vegetation, spread of weeds and invasive species, negative effects to aquatic resources, fish and wildlife habitat, soils, and groundwater as a result of project construction and operation. However, it is concluded that the majority of the predicted effects that may result from the proposed project can be mitigated during the construction and ongoing use of the project. There are a number of mitigation measures that are recommended and as a result, there are no residual effects or cumulative effects that are considered to be significant.

Tetra Tech recommended the implementation of the following mitigation measures to reduce the extent of effects to VECs that may be potentially affected by construction and operation of the Project. It is expected that the effectiveness of implemented mitigation measures will be monitored by Rockland and/or the Project contractor.

#### Land Use

- Construct the Project in accordance with the Town of Cochrane Noise Control Bylaw (Town of Cochrane 2011) to provide limits to the duration and level of noise permitted; and

- As part of the Project, a system of sidewalks and pathways should be developed to provide residents with pedestrian infrastructure within the community. This could potentially include a pathway around the stormwater wet pond to provide an onsite alternative to walking within the Bow River riparian area.

#### Soils and Terrain

- To prevent erosion of fine material from topsoil (or other erosion prone soil encountered during construction), avoid handling such soils during windy conditions or increase moisture content via watering.
- Stabilize stockpiles through use of hydroseeding and tackifier where salvaged soils shall be stored for long periods of time.
- Suspend or alter construction activities involving earthwork during periods of wet weather.

#### Compaction/Loss of Soil Structure

- Limit the use of heavy equipment and transport of soil materials during construction and on fine-textured (clay loam to clay texture) soils during wet conditions.
- Construction activities utilizing heavy equipment and vehicles should be conducted during dry conditions, or on previously disturbed areas.
- Restrict unnecessary vehicle access to the Project Footprint.

#### Admixing

- In areas where soil salvage occurs, the topsoil will be stripped and stored in a separate location from underlying subsoil (B and/or C horizons) so the potential for soil admixing is limited.

#### Aquatic Resources

- Construction should occur only during dry conditions or when appropriate measures have been taken for the management of surface water on site;
- Locate soil stockpiles away from areas which could have connectivity to the Bow River, utilizing existing disturbed areas to the greatest extent feasible with appropriate ESC measures in place;
- Borrow materials for the Project should be acquired from a reputable source that guarantee non-contaminated materials are brought to and used in the Project Footprint;
- Transport, handling, and storage of deleterious substances and wastes generated within the Project Footprint should adhere to applicable procedures and guidelines. Any release of deleterious substances should be reported to the appropriate authorities in a timely manner;
- Spill response procedures should well communicated amongst Project staff and be adhered to during the construction of the Project; and

- Stormwater management infrastructure should be designed in accordance with municipal and provincial standards; ensure that necessary regulatory authorizations and/or notifications are in place prior to commencement of construction activities.

#### Fish and Fish Habitat

- Avoid construction near direct pathways to the Bow River during wet, windy, and rainy periods to reduce potential for erosion.
- Utilize secondary containment structures for any hydrocarbon-based fuel powered equipment to contain all harmful materials should a spill, leak, or overflow occur.
- Washing or refuelling of any equipment or vehicles should not be permitted within 30 m of any waterbody.
- Conduct on-site monitoring to identify potential sedimentation risk and possible fluid leaks from vehicles, equipment and machinery that may not be observable to the operator. A spill containment kit should be kept on-site that is capable of handling twice the potential volume of a spill. All construction personnel must be trained in spill response procedures and proper use of a spill containment kit.
- Manage surface water on site and prevent releases to the Bow River during Project Construction. Ensure stormwater management for the Project meets the applicable municipal and provincial standards.

- Clearly indicate the locations designed for recreational use of the Bow River and associated riparian habitat via pathway maps/signs within the community.

#### Vegetation

- Ensure that all equipment arrives on-site clean and free of soil and vegetation debris.
- Implement weed management measures (e.g., hand-pulling, spraying, mowing) throughout all phases of construction and operation of the Project.

#### Wildlife and Wildlife Habitat

- Conduct a pre-construction survey for nests or other species with provincial or federal restricted activity periods (Appendix D). Clearing activities should be avoided during the bird breeding season (approximately March 1 to August 31). Additional setback distances may be applied to active breeding sites for species with provincial or federal restricted activity periods (Appendix D).
- Active nests, dens, roosts, hibernacula, burrows, or other wildlife features should all be searched and documented by a qualified wildlife biologist, no more than 3 days prior to construction activities, and followed up with the appropriate regulatory agencies on avoidance and mitigation options, to comply with the federal MBCA and SARA as well as the AWA where applicable.

- Monitor wildlife disturbance during construction activities. Consult with a professional wildlife biologist if activity is detected during construction.
- Garbage, construction debris, and other materials should be contained in wildlife-proof containers to prevent attraction of wildlife.

## 7.5 STAGED MASTER DRAINAGE PLAN

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A staged Master Drainage Plan was completed by LGN Consulting Engineering Ltd. Storm runoff from the entire development will be collected and conveyed to a stormwater facility (wet pond) by a storm dual system composed of overland and underground systems. The wet pond will control the peak discharge from the development into the Bow River to the rate established by the Rockland Master Drainage Plan (DRAFT), February 2017. Water quality enhancement that meets AENV and the Town of Cochrane requirements will be achieved by a forebay installed upstream of the stormwater facility.

## 7.6 TRANSPORTATION IMPACT ASSESSMENT

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A Transportation Impact Assessment (TIA) was completed by Bunt & Associates. The TIA is based on a road network that include the extension of James Walker Trail, including the new bridge over the river. The background traffic volumes that were used include the new expansion to the Spray Lake Sawmills Family Sports Centre and an increase in traffic along Griffin Road as a result of the construction of James Walker Trail.

The recommendations from the TIA in relation to the full build-out of the ASP area are:

- That at full build-out Griffin Road will need to be a four lane arterial road;
- River Avenue will need to accommodate primary collector traffic volumes north of the Mill Road and collector traffic volumes south of Mill road;
- The intersection of Griffin Road and River Avenue will need to be signalized; and
- Upgrades to pedestrian and bike paths to connect to the surrounding communities and natural amenities along the river will be required.

## 7.7 POND INVESTIGATION

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Waterline Resources Inc. (Waterline) was retained by Rockland Holdings Ltd. (Rockland) to complete a pond investigation within the proposed Greystone development. Two perennial ponds associated with the investigation are located in the northwest corner of the development area, adjacent to the north boundary. These ponds are referred to as Pond A (smaller west pond) and Pond B (larger east pond).

The objective of the investigation is to determine whether the ponds are considered spring fed, and whether reclaiming the ponds by backfilling the depressions will compromise the development of those lands.

The site reconnaissance was completed on November 9, 2017. A Waterline hydrogeologist completed an inspection of the ponds to look for evidence of groundwater discharge along the pond banks, and indications of bedrock exposure below the surficial sand and gravel, above the pond level. No evidence of either spring discharge or bedrock exposure was observed. An inspection of the north bank of the Bow River located south of the development site, also did not reveal evidence of spring discharge or bedrock exposure.

Maidment Land Surveys Ltd. completed location and level surveys of the pond water levels, Bow River water levels, and selected top of casings of existing monitoring wells, to tie in the borehole logs and surface water elevations to a single datum.

Although a sampling program had recently been completed on the Rockland development lands by SNC Lavalin Environment (SNC) on behalf of the Spray Lake Sawmills, Waterline measured water levels in the identified monitoring wells to confirm SNC results.

Based on the survey results, and an interpretation of the hydrogeological environment, both Pond A and Pond B are considered manifestations of the water table. In other words, the ponds are dug down, below the phreatic surface, or level of water in the ground under atmospheric pressure. Under these conditions, the surface water stored in the ponds is influenced by evaporation, but is also recharged from groundwater. However, the ponds are not considered spring fed with groundwater flowing to surface under pressure. These ponds are analogous to digging a hole in beach sand, where water in the pore space of the sand, below the adjacent lake, fills the hole to lake level.

Under these conditions, if the ponds are backfilled during site regrading, the pore space in the backfill material will fill to the water table level. The pore space in the backfill material above the water table will remain unsaturated, similar to the rest of the development site. To achieve similar conditions to the rest of the development site, the developer will follow the required geotechnical specifications for the backfilling of material so that reclamation of the ponds does not compromise the development of the lands in the area of the existing ponds.

The logo for Greystone features a stylized icon on the left consisting of three stacked, rounded rectangular shapes. To the right of this icon, the word "GREYSTONE" is written in a bold, uppercase, sans-serif font.



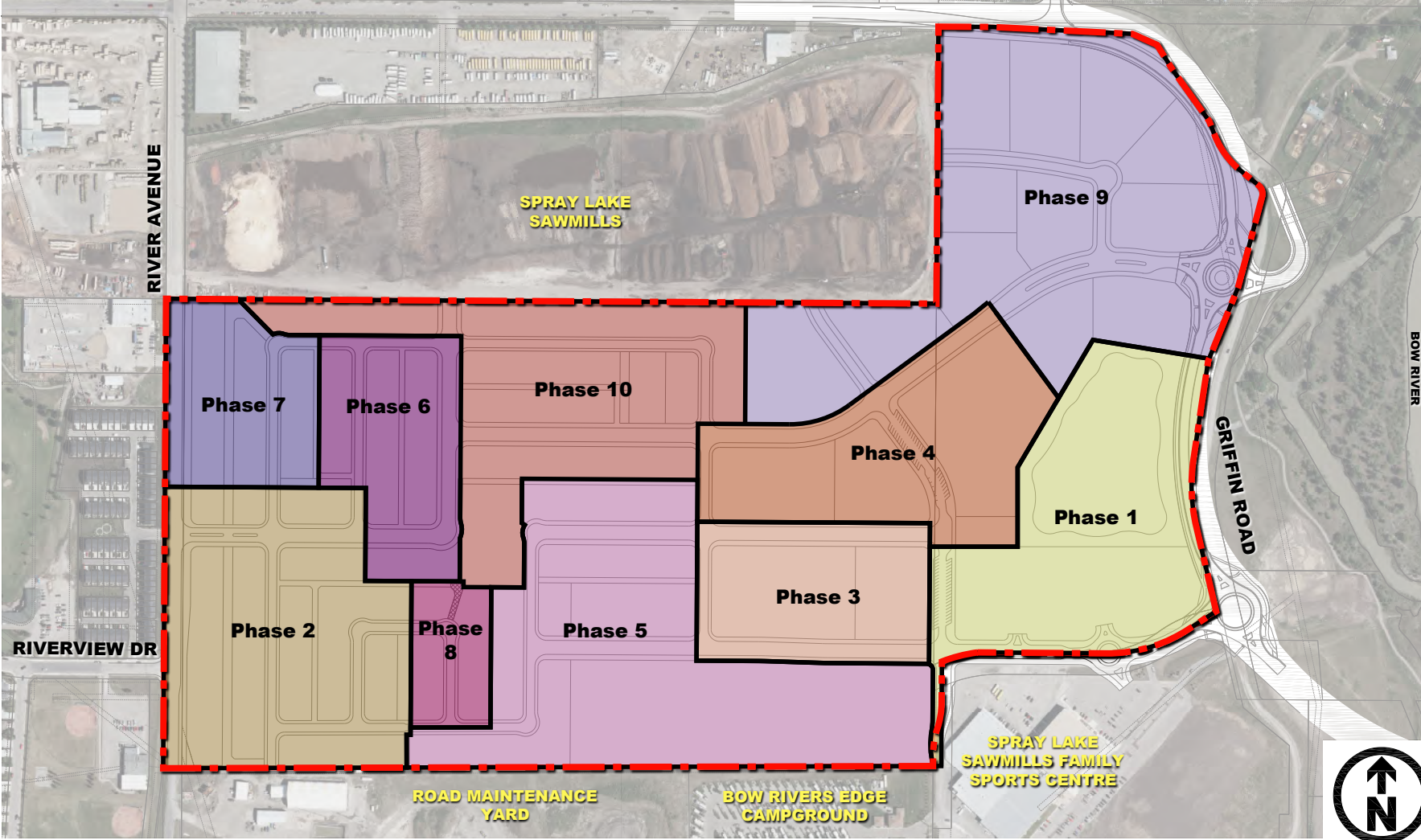
## SECTION 8.0 PHASING

It is anticipated that Greystone will be developed in twelve phases between approximately 2018 and 2025. The phase boundaries have been ordered sequentially based on servicing reviews and forecasts for housing and commercial absorption. Development will start on the east. Phasing in this manner allows servicing to be extended in a logical manner and connected to existing services. Phasing will be coordinated to provide full and emergency access as required over the development of the neighbourhood, and may be developed un-sequentially to meet the market demand as long as required access is in place. Actual phasing size, sequencing and timing will be dependent on future market conditions and infrastructure requirements. Deviation from the sequencing or phase boundaries as shown on Figure 15 will not require an amendment to this Plan as long as infrastructure and access requirements are met.

As part of the land use application that incorporates any residential land use within Greystone - Area C, an air quality assessment shall be undertaken by a qualified professional in proximity to the Spray Lake Sawmills storage yard operation to ensure air quality is within the applicable standard of safety for residential development as established by the Province of Alberta.



FIGURE 15: Phasing



--- Greystone Neighbourhood Plan Boundary

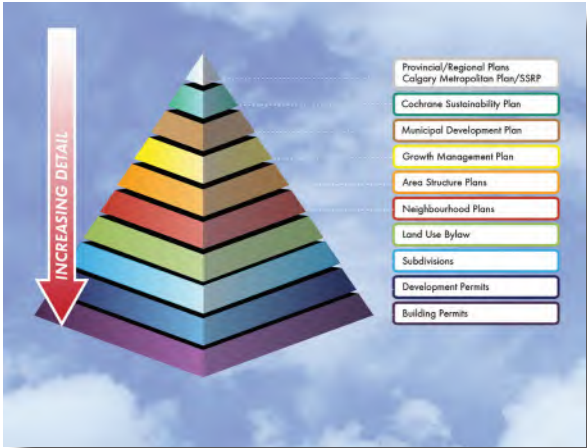


# SECTION 9.0 ALIGNMENT WITH TOWN POLICIES

The Town of Cochrane has established policies and guidelines to uphold quality design for new neighbourhoods and to ensure they meet the needs of citizens. The documents that apply to Greystone, in order of hierarchy, include:

- Municipal Development Plan
- Growth Management Strategy
- Cochrane Sustainability Plan
- Integrated Neighbourhood Design Guidelines
- Greystone Area Structure Plan
- Land Use Bylaw

The following identifies how the Neighbourhood Plan meets these requirements of the Town.





## 9.1 MUNICIPAL DEVELOPMENT PLAN

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The Municipal Development Plan includes direction on the development of future communities in its overall policies as well as its Planning Principles, Crime Prevention Through Environmental Design guidelines and Municipal Environmental Impact Statement. The following demonstrates how the Greystone Neighbourhood Plan complies with these policies.

### Overall Policies

The proceeding lists overall Municipal Development Plan policies that relate to neighbourhood design and demonstrates how Greystone complies with these policies.

*Policy 8.3.6 (a): Developers shall design residential neighbourhoods to achieve a sense of community by providing for the social, local recreational, and neighbourhood commercial needs of residents in the area.*

Greystone meets this policy by providing a plaza to support social activities, parks and playfields to accommodate recreational pursuits and local commercial uses that will meet the daily needs of residents.

*Policy 8.3.6 (b): New subdivision areas shall meet a minimum residential density level of 19.8 dwelling units per gross developable hectare (8 units per gross developable acre),*

Greystone meets this policy by providing an anticipated density of 22.7 dwelling units per gross developable hectare (9.2 units per gross developable acre).

*Policy 8.3.10(a): Developments are subject to design controls as outlined in the Western Heritage Design Guidelines (see Appendix H) to ensure developments complement and reflect the character of Cochrane's heritage.*

Greystone meets this policy by requiring that development meet the design requirements of the Western Heritage Design Guidelines.

*Policy 8.3.16(b): Additional lot depth requirements shall be considered in order to facilitate buffering when residential uses abut non-residential uses.*

Greystone meets this policy by requiring additional lot depths for single-detached dwellings that back onto existing the Spray Lake Sawmills' storage yard.

*Policy 8.3.17(b): As new subdivisions are developed, the regional pathway system shall be expanded into these areas to create a continuous system of walking and cycling trails throughout the Town.*

Greystone meets this policy by extending the Town's regional pathway system through the neighbourhood and towards adjacent lots and amenities.

*Policy 8.3.17(c): Subdivision design shall emphasize the importance of walking and cycling paths for transportation as well as for recreational purposes.*

Greystone meets this policy by incorporating sidewalks, pathways and bike lanes into the neighbourhood.

*Policy 8.3.19(a) Developers of new developments shall be responsible for increasing the capacity of utilities and infrastructure, if they are needed for their developments.*

Greystone meets this policy by identifying the utilities and infrastructure that the developer will be responsible for constructing to service the development.

*Policy 8.4.3(a): New residential areas shall accommodate comprehensively designed communities that provide a mix of dwelling units from single detached, duplex, and semi-detached units to multiple-unit dwellings.*

Greystone meets this policy by comprehensively designing 59.43 hectares (146.85 acres) of land with a mix of single-detached, semi-detached, duplex and multi-unit dwellings as well as commercial, business park and industrial uses.

*Policy 8.4.3(b): Multiple-unit dwelling developments shall be dispersed throughout Cochrane to avoid large concentrations of such housing in any one area and thereby to integrate these developments throughout the community.*

Greystone meets this policy by providing, along with single and semi-detached dwellings, a limited amount of multi-unit dwelling development in the form of townhouses and apartments.

*Policy 8.4.3(c): A range of tenure options should be available in new residential areas, including fee simple, condominium, and rental housing units.*

Greystone meets this policy by providing the opportunity for various forms of tenure to be established.

*Policy 8.4.5(a): The Rockland area, as identified on Map 1: Area Plans in Effect, shall be developed as a compact and comprehensively designed residential community with a mix of single-detached, semi-detached, duplex, and multi-unit dwellings.*

Greystone meets this policy by comprehensively designing 59.43 hectares (146.85 acres) of land with a mix of single-detached, semi-detached, duplex and multi-unit dwellings as well as commercial, business park and industrial uses.

*Policy 8.4.5(b): In addition to an Area Structure Plan and prior to redesignation, the Town may require a neighbourhood plan that addresses, but is not limited to, the following:*

*(i) a proposal for buffering the development cell from adjacent industrial land uses;*

Greystone meets this policy by requiring additional lot depths for single-detached dwellings that back onto existing the Spray Lake Sawmills' storage yard.

*(ii) an estimation of traffic volumes and impacts on local roads;*

Greystone meets this policy by submitting a Transportation Impact Assessment that identifies estimated traffic volumes, impacts on local roads and transportation upgrades to accommodate future traffic.

*(iii) a subdivision layout, including land uses and roads.*

Greystone meets this policy by providing a land use plan that identifies the future subdivision layout, land uses and roads for the neighbourhood.

*Policy 8.4.5(c) The Subdivision/Development Authority shall determine the number of direct accesses to River Avenue at the time of subdivision or development approval.*

Greystone meets this policy by identifying one future connection to River Avenue to accommodate the future development.

*Policy 8.5.3(a): Commercial areas outside the downtown shall be restricted to local neighbourhood and highway commercial functions.*

Greystone meets this policy by providing land that is intended for future local commercial uses.

*Policy 8.6.3(b): New industrial areas shall be located adjacent to major transportation corridors in order to reduce the negative effects of industrial traffic on the Town.*

Greystone meets this policy by providing industrial land adjacent to Griffin Road.

*Policy 8.6.3(d): Industrial developments shall be separated, screened, and buffered from adjacent non-industrial land areas and major transportation corridors.*

Greystone meets this policy by requiring additional lot depths for single-detached dwellings that back onto existing the Spray Lake Sawmills' storage yard. The slope adjacent to Griffin road will buffer the future industrial lands from this major road.

*Policy 8.6.4(b): Prior to redesignation, a comprehensive Neighbourhood Plan that addresses, but is not limited to, the following issues shall be prepared to the satisfaction of the approving authority:*

*(i) integration with adjacent land uses;*

Greystone meets this policy by providing design guidelines within the Neighbourhood Plan that identify how the development will be integrated with adjacent land uses.

*(ii) land uses;*

Greystone meets this policy by providing a land use plan within the Neighbourhood Plan.

*(iii) transportation,*

Greystone meets this policy by providing a transportation plan within the Neighbourhood Plan.

*Policy 8.7.4(a): At the time of subdivision approval, the maximum municipal reserve dedication will be required and used, in accordance with the provisions of the Act.*

Greystone meets this policy by providing for the maximum municipal reserve dedication at the time of subdivision.

*Policy 9.3.1(e): The transportation network shall address alternative modes of transportation that include automobile, walking, cycling, and local and regional transit.*

Greystone meets this policy by incorporating sidewalks, pathways and bike lanes into the neighbourhood and accommodating the opportunity for possible future transit.

*Policy 9.3.1(f): The transportation network shall incorporate designs and standards appropriate for a public transit service,*

Greystone meets this policy by accommodating the potential for possible future transit.

*Policy 9.4.2(a): The transportation network shall respect the small town atmosphere of Cochrane and shall focus on efficient internal movement of people at a scale consistent with development in Town.*

Greystone meets this policy by incorporating a modified grid system of streets that reflects Cochrane's small town atmosphere while moving people efficiently through the development.

*Policy 10.3.1(a): The Town shall make land use decisions within servicing capacities and in coordination with upgrading programs.*

Greystone meets this policy by planning for the upgrade of the surrounding road and utility system in concert with future development.

*Policy 10.3.7(a): As a component to the Neighbourhood Plans, and prior to the issuance of site grading development permits and subdivision approvals, the developer shall submit a stormwater management report, prepared in accordance with the Town of Cochrane Stormwater Management Study, as amended from time to time, and to the satisfaction of Alberta Environment and the Town of Cochrane.*

Greystone meets this policy through the submission and approval of a Staged Master Drainage Plan.

## Planning Principles

Section 1.2 of the MDP provides a set of planning principles intended to motivate and guide development within the Town and to provide a framework for decision-making bodies. The following identifies each of these principles and how Greystone meets their intent.

### PRINCIPLE 1: RESPONSIBLE GROWTH MANAGEMENT

*Responsible growth management demands that we make every effort to meet the needs of a growing population, in an ecologically-aware and efficient manner, with limited natural, human, built and financial resources.*

Greystone meets this principle in the following manner:

- The extension of transportation and utility infrastructure will be minimized as a result of the development's close proximity to existing services;
- Densities that meet the minimum required under the MDP are anticipated to make efficient use of the proposed infrastructure; and
- The development limits the outward urban expansion of the Town by developing over a former gravel operation while accommodating future population and economic growth.

### PRINCIPLE 2: SOCIAL WELL BEING

*Social well-being and a high quality of life is a reflection of living in a community that creates a safe, healthy, and comfortable environment in which to live, work and play.*

Greystone meets this principle in the following manner:

- A diversity of housing, amenities and employment will be offered in the community;
- Regional and local transportation links will be delivered in the form of a modified grid system of roads, pathways, sidewalks and bike lanes;
- Opportunities for recreation and congregation will be offered in form of a plaza, parks, playfields, pathways and bike lanes;
- The development is designed to meet Crime Prevention Through Environmental Design (CPTED) guidelines.

### PRINCIPLE 3: ENVIRONMENTAL STEWARDSHIP

*Environmental stewardship highlights the Town's commitment to careful and responsible management of our natural resources and ecological assets.*

Greystone meets this principle in the following manner:

- The remediation of the gravel operation for urban development will reduce the outward expansion of Town and its impact on ecological resources;
- The mix of uses in close proximity to each other and the strong pedestrian network will promote alternative modes of transportation which will reduce vehicular carbon emissions;
- Air quality will be enhanced by reintroducing vegetation to the site in the form of trees, bushes and grasses; and
- This Neighbourhood Plan anticipates the establishment of low-impact industrial development.

#### **PRINCIPLE 4: ECONOMIC VITALITY**

*Economic vitality provides the foundation for a healthy, diverse, active, prosperous, and resilient economy.*

Greystone meets this principle in the following manner:

- A range of employment opportunities will be generated by the proposed commercial and industrial uses;
- The proposed business park will accommodate research and development, technology, service and tourism industries;
- Economic synergies will be created between the proposed commercial development and the adjacent Spray Lake Sawmills Family Sports Centre and the BowRivers Edge Campground;
- The commercial and industrial uses provide for an appropriate balance with the proposed residential development to support a strong tax base.
- The proposed urban plaza has the potential to host arts and cultural events.

#### **PRINCIPLE 5: COMMUNITY ENGAGEMENT**

*Community engagement builds trust, ensures accountability, and improves the quality of decision making as the public plays a valuable role in the formulation of plans and developing services.*

Greystone meets this principle in the following manner:

- Cochrane citizens have been engaged on the Greystone project since its inception through three public open houses, a website, a facebook page and newsletters;

- Before the submission of this Neighbourhood Plan, the Community Enhancement Evaluation for the project was presented to Council for comment and refinement; and
- The project team has met with surrounding stakeholders on several occasions to answer questions, address concerns and garner support for the project.

#### **Crime Prevention through Environmental Design**

As per Section 8.3.15 of the MDP, Crime Prevention Through Environmental Design (CPTED) is to be incorporated into subdivisions and development. CPTED is a means of encouraging safety and the prevention of criminal activity through elements of built form. The Greystone 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 public streets bounding them on at least two sides. This maximizes visibility and surveillance in the public areas.

### **SIGHTLINES**

The neighbourhood is composed primarily of linear roadways and pathways, which provides excellent sightlines.

### **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.

## **Municipal Environmental Impact Statement**

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**

The Biophysical Impact Assessment (BIA) completed for the site indicated that no rare vascular plants or rare plant communities were detected during field surveys.

### **WETLANDS**

According to the BIA, no naturally occurring wetlands or watercourses were identified within the project footprint. Current waterbodies identified onsite are the result of development within the gravel pit for water management purposes.

### **WILDLIFE**

The BIA determined that the Plan Area provides temporary habitat for birds and small mammals. Mitigation measures of the BIA will be followed in the construction of the development.

### **ECOLOGICALLY SIGNIFICANT LANDS**

As per the BIA, the subject area does not lie within any environmentally significant areas, as defined by Alberta Community Development.

## **GEOTECHNICAL**

A geotechnical report was completed for the subject lands by McIntosh Lalani Engineering Ltd. in 2016 to obtain and evaluate information on the physical properties of the existing ground conditions. Based on the findings, the report provided design and construction guidelines which will be followed in the development of the site.

## **FLOOD POTENTIAL**

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

## **STORMWATER STUDY AND WATER QUALITY / QUANTITY**

A Staged Master Drainage Plan has been completed to support the development. Storm runoff from the entire development will be collected and conveyed to a stormwater facility (wet pond) by a storm dual system composed of overland and underground systems.

## **AIR QUALITY**

Greystone will be a complete, compact, mixed use community with a modified grid-pattern of streets. The design of the community encourages pedestrian and bicycle transportation as an alternative to internal use of motor vehicles. The opportunity for transit is incorporated in the design. The Plan Area is mainly barren of any vegetation and the development of the lands will reintroduce vegetation through the planting of grasses, bushes and trees. These measures will lead to a reduction in average emissions and an

improvement in air quality.

## **VISUAL RESOURCES**

The views within the Plan Area are relatively moderate and increase as the land slopes away from the Bow River. Views to the Bow River will be maintained by the development following the contours of the site. The introduction of long corridors along streets will create new views to the proposed central park and plaza.

## **LAND AND RESOURCE USE**

The proposed development will make efficient use of the land. The proposed development is to be considered an infill development as the community will be built on land that was previously used for gravel extraction. In addition, the densities proposed for the Plan Area are to meet those required under the MDP.

## **CULTURAL AND HERITAGE RESOURCES**

A Historical Resource Act application was made and clearance was granted by the Province in April, 2016 for the site. Completion of a Historic Resources Impact Assessment was not required.

## **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.

## 9.2 GROWTH MANAGEMENT STRATEGY

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The Town of Cochrane Growth Management Strategy (GMS) is a non-statutory planning document that aligns with other plans, policies and strategies for the orderly and appropriate growth of Cochrane. The GMS envisions that future growth will come in the form of mixed use, compact, attractive and highly accessible development as identified in the vision and objectives of the Cochrane Sustainability Plan and the Municipal Development Plan. The GMS mainly focuses on how much land is required to accommodate anticipated growth, what infrastructure is required to support the growth, the alignment between land supply and demand and initiatives required to achieve the Town's overall growth vision.

The following lists specific land use needs identified in the GMS to achieve the Town's vision and how they relate to Greystone:

- A need for an additional 12,105 people to be accommodated within the existing developed areas of the Town to meet its 25% intensification target.

Greystone supports this target by accommodating an anticipated population of 2,243 people within the existing footprint of the Town.

- Development achieving a minimum density of 8 upa while encouraging densities of 10 upa or greater.

Greystone anticipates achieving a minimum density of 9.2 upa while the proposed land use districts allow for a higher density to be realized.

- A need for 56 additional hectares of employment land of which 7 hectares should come in the form of business park uses.

Greystone offers 12.9 hectares of employment lands of which 2.9 hectares is identified for business park uses.

## 9.3 COCHRANE SUSTAINABILITY PLAN

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The Cochrane Sustainability Plan (CSP) was adopted by Council in May 2009. The CSP is a long term, community based plan that helps guide the Town towards a more sustainable future. The document includes thirteen Pathways to the Future that are grouped under four headings. Each pathway includes a description of success and current reality and targets. The CSP anticipates these approaches will be incorporated in the strategic decisions of Cochranites.

The pathways that most relates to the development of new communities fall under the "Cochrane is a Complete Community" heading. These pathways include:

1. *Everyone has a roof over their head;*
2. *There's enough room for everything a community should have;*

3. *Wherever you are in Cochrane, you're close and connected;*
4. *There are diverse options for getting around; and*
5. *We build Cochrane on the strengths of our natural and cultural heritage.*

To lead Cochrane in that direction, the document includes several targets under this heading. The following identifies the targets and how Greystone contributes to their achievement:

**1. *By 2029, there is a variety of tenure and housing types on the market (rental, own, rent-to-own, attainable housing).***

Greystone will incorporate a variety of dwellings types including single-detached, semi-detached, townhouses and apartments which have the potential to be purchased or rented.

**2. *By 2039, municipal tax revenues are 60% residential/40% non-residential with 100% environmentally sensitive areas protected.***

Greystone provides for a variety of land uses including industrial, business park, commercial and residential in order to diversify the tax base.

**3. *By 2059, density on the 2009 existing footprint of Cochrane has increased by 25%.***

The infilling of the subject site will introduce a new population on what was practically vacant land and thus contribute strongly to

increasing the density of the existing footprint of the Town.

**4. *By 2029, 50% of the population of Cochrane are within 400m and/or 5 minute walk of a transit stop.***

Approximately 100% of residents within Greystone will be within 400m and/or a 5 minute walk of a transit stop.

**5. *By 2029, 100% of the community is within 400m of some form of public open space.***

100% of residents in Greystone will be within 400 m of some form of public open space.

**6. *By 2029, there is a complete interconnected mode and corridor network throughout Cochrane and its region that is accessible to the full range of vehicular and non-vehicular uses/users.***

Greystone's modified grid pattern provides for a complete and interconnected transportation system that accommodates vehicles, transit, bicycles and walking.

**7. *By 2020, natural areas and habitat are maintained or increased.***

Greystone does not include any natural areas or habitat but the infill nature of the project will allow the Town to accommodate growth while limiting its expansion into natural areas and habitat.

**8. *The values of Western Heritage and meeting the needs of the current reality of the Agriculture sector are reflected in the Town of Cochrane's development, planning and decision-making processes.***

Greystone will comply with the Western Heritage Design Guidelines.

## 9.4 INTEGRATED NEIGHBOURHOOD DESIGN GUIDELINES

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The Integrated Neighbourhood Design Guidelines were (INDG) created to preserve Cochrane's unique sense of community and history. The Guidelines set out a series of policies under four main topics: Context Sensitivity, Neighbourhood, Connections and Commercial.

Development within the Greystone Neighbourhood Plan responds to each:

### **Context Sensitivity**

The intent of the Context Sensitivity Guidelines are to retain Cochrane's natural features, landscapes and views. The Greystone Neighbourhood Plan includes lands that have been previously used for gravel extraction. Therefore, there are no remaining natural features within the Neighbourhood Plan boundary that are required to be preserved. However, the plan is sensitively planned

with regard to the existing community around it. Lower density residential development transitions into more intense, industrial and commercial land uses as you move from west to east. This allows a good transition from the existing low density residential uses found within the neighbouring community to the west.

As development permit applications come forward, considerations such as those outlined within the Section 2.0 shall be included.

### **Neighbourhood**

The purpose of the Neighbourhood Guidelines are to ensure new neighbourhoods continue to meet the broad and ever changing needs of existing and future Cochrane residents. As mentioned above, Greystone Neighbourhood Plan has paid special attention to the transition of land uses and intensity from west to east, to ensure compatibility. In addition, as development proceeds, attention to Building Relationships (Section 3.2), Form and Massing (Section 3.3) and Mixed Blocks (Section 3.4) will be critically important to ensure the vision of the Greystone ASP and Neighbourhood Plan are upheld. In addition, the Privacy and Fencing/Screening guidelines shall be utilized between any industrial or commercial uses that are adjacent to a residential development.

### **Connections**

The Connections Guidelines within the INDG ensure that new communities are connected, walkable and offer transportation choices that are accessible for all ages and abilities.

Connectivity and access has been a key discussion point arising from the Greystone public engagement. While there is recognition of the need for good connectivity, in Greystone traffic flow was balanced with traffic calming, discouraging short cutting and minimizing the impacts of industrial traffic. The internal street network is grid-like in it's layout, and in locations where streets may not connect directly, a greenspace and pathway is provided so that non-vehicular traffic is not inconvenienced. This creates a safe, walkable community that places non-vehicular traffic as a priority.

The parks within Greystone have been placed to be highly visible and accessible, and to allow for a variety of programing. Playgrounds, passive and active recreation spaces, sports fields and plazas are all included in the open space programing for Greystone.

### **Commercial**

The Commercial Guidelines of the INDG are intended to provide direction for neighbourhood commercial design to reflect pedestrian-oriented community focal points. Elements such as building placement, entrance locations, patios & outdoor seating, sidewalks and landscaping shall be reviewed at the development permit stage to foster a pedestrian oriented environment.

## **9.5 GREYSTONE AREA STRUCTURE PLAN**

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The Greystone Area Structure Plan (ASP) identifies the suitable land uses, parks/open space, transportation networks and servicing for the Greystone Community. This Neighbourhood Plan is Area C of the ASP and is identified for Lower Density Residential, Higher Density Residential, Commercial, Employment, Public Utility and Open Space/Public Service. The following identifies the relevant policies that apply to this Neighbourhood Plan and demonstrates how the future development of Area C meets these requirements.

*Policy 6.3.1: A Neighbourhood Plan shall be submitted to guide the future development of Area C. Section 11.1 outlines the requirements of a Neighbourhood Plan.*

Greystone meets this policy through the submission of this Neighbourhood Plan.

*Policy 6.3.2: Area C land uses, transportation network and servicing shall comply with the applicable policies in Section 7.0, Section 8.0 and Section 9.0 of this Plan.*

Greystone meets this policy by complying with the policies found in Section 7.0, 8.0 and 9.0 of the Greystone ASP.

*Policy 7.1.1: Amendments to the Land Use Bylaw shall generally comply with the Land Use Plan (Figure 10), recognizing that this Plan is intended to show the general nature of the land uses and is subject to refinement at the land use amendment stage.*

Greystone meets this policy by aligning the location of the proposed land uses with that shown in Figure 10 of the ASP.

*Policy 7.1.3: The outer boundaries of development shall incorporate appropriate interface treatment to mitigate potential impacts on and project a positive visual appearance towards adjacent land uses with special consideration for:*

- *Development facing the Spray Lakes Sawmills Family Sports Centre where an attractive interface shall be established that compliments the recreation centre;*

Greystone meets this policy by providing a set of design guidelines that provides guidance on establishing an appropriate interface with the recreation centre.

- *Employment and commercial development that is adjacent to residential uses where potential conflicts shall be mitigated through landscaping, berming, fencing and/or increased setbacks;*

Greystone meets this policy by providing single-detached lots that back onto the Spray Lake Sawmills storage yard with a depth of approximately 38 metres. This lot depth is 3 metres deeper as compared to a standard 35 metre deep lot, which will provide a greater setback between a dwelling and the Spray Lake Sawmills property. Providing 38 m lot

depths in this location will be included as a condition of subdivision.

- *Development adjacent to the Bow RiversEdge Campground where the interface shall not compromise the continued operation of the campground; and*

Greystone meets this policy by placing playfields adjacent to the campground and thus buffering the campground from future residential and commercial development to the north.

- *Development adjacent to existing neighbourhoods, buildings, open spaces and periphery roads where a compatible and sensitive interface shall be created.*

Greystone meets this policy by providing design guidelines that give guidance on establishing a compatible and sensitive interface with adjacent existing buildings, open spaces and periphery roads.

*Policy 7.1.4: The specific land use zones for each Development Area shall be identified through a Neighbourhood Plan with the exception of Area A.*

Greystone meets this policy by identifying the intended land use districts for the Plan area.

*Policy 7.1.6: The Western Heritage Design Guidelines, or other applicable Council approved policy which may be in force at that time, shall be adhered to.*

Greystone meets this policy by requiring that future development comply with the Western Heritage Design Guidelines.

*Policy 7.1.7: The Integrated Neighbourhood Design Guidelines, or other applicable Council approved policy which may be in force at that time, shall influence and inform Neighbourhood Plans, land use amendments and development permit applications.*

Greystone meets this policy as demonstrated in the preceding section.

*Policy 7.1.11: Development should incorporate winter design principles including but not limited to:*

- *Incorporate design strategies to block wind, particularly prevailing winds and downdrafts;*

To be determined at the development permit stage.

- *Maximize exposure to sunshine through orientation and design;*

Greystone meets this policy by orientating the majority of the dwellings units in a north-south direction to maximize exposure to sunshine. .

- *Use colour to enliven the winterscape;*

To be determined at the development permit stage.

- *Create visual interest with light, while being mindful of intensity, spread, contrast and colour; and*

To be determined at the development permit stage.

- *Design and provide infrastructure that supports desired winter life and improves comfort and access in cold weather; and*

To be determined at the development permit stage.

- *Integrate four season amenities that supports year-round outdoor activity.*

Greystone meets this policy by providing a range of spring/summer/fall amenities including a half basketball court, playgrounds, a pickleball court, baseball diamonds, a plaza, pathways and a highstreet. Winter amenities include a hockey rink while the plaza and highstreet have the potential of being used year-round when maintained and programmed for winter use.

*Policy 7.1.12: An appropriate height transition shall be provided between different land uses to allow for the physical compatibility of various forms of development.*

Greystone meets this policy by allowing heights to gradually increase from the west to east across the development. This

transition will be controlled and maintained through the identified land use districts.

*Policy 7.1.13: Gross residential densities shall meet the 19.8 units per hectare (8.0 units per acre) minimum required under the Town of Cochrane Municipal Development Plan and be identified in the corresponding Neighbourhood Plan.*

Greystone meets this policy by identifying an anticipated density of 22.7 units per hectare (9.2 units per acre).

*Policy 7.1.14: Low profile forms of housing that do not exceed three storeys shall be the housing form in the Lower Density Residential Zone.*

Greystone meets this policy by identifying land use districts for the Lower Density Residential Zone that allow a maximum height of three storeys.

*Policy 7.1.15: A mix of housing types including single-detached, semi-detached and duplex dwellings should be provided in the Lower Density Residential Zone.*

Greystone meets this policy by identifying land use districts for the Lower Density Residential Zone that only allow for single-detached, semi-detached and duplex dwellings.

*Policy 7.1.16: Housing in the Lower Density Residential Zone should include a balance of dwellings with street and lane facing garages, lane facing parking pads and/or other innovative residential parking solutions.*

Greystone meets this policy providing a mix of dwellings with street and lane facing garages.

*Policy 7.1.17: Consideration should be given to reducing block lengths and avoiding cul-de-sacs in order to provide efficient pedestrian connectivity and movement.*

Greystone meets this policy by providing modest sized blocks and by not offering any cul-de-sacs.

*Policy 7.1.23: The Higher Density Residential Zone should include apartments and/or townhouses but may include other forms of multi-residential housing or the incorporation of semi-detached dwellings and duplexes.*

Greystone meets this policy by identifying land use districts for the Higher Density Residential Zone that only allows for townhouses and apartments.

*Policy 7.1.31: In the design of the commercial area, emphasis shall be placed on the relationship between the buildings and public spaces, including streets and parks, to ensure a pedestrian-oriented development.*

Greystone meets this policy by providing a set of design guidelines that provides direction on establishing an appropriate interface between buildings and public spaces.

*Policy 7.1.33: Uses within the employment zone should mainly include businesses uses such as offices, warehouses, light manufacturing, self-storage or other similar uses.*

Greystone meets this policy by identifying land use districts for the employment zone that allows for various employment uses such as offices, warehouses and manufacturing.

*Policy 7.1.34: Buildings should be oriented to frame non-industrial public streets.*

Greystone meets this policy by providing a set of design guidelines that requires that employment buildings be oriented to frame non-industrial streets.

*Policy 7.1.42: All land use zones shall dedicate the full amount of Municipal Reserve owing.*

Greystone meets this policy by requiring the dedication of the full Municipal Reserve owing.

*Policy 7.1.44: Local neighbourhood parks of sufficient size shall be established throughout the Plan area.*

Greystone meets this policy by ensuring each parks space is large enough to accommodate at least two neighbourhood amenities.

*Policy 7.1.45: The park and open space system shall provide a variety of passive and active recreational opportunities for residents of all ages.*

Greystone meets this policy by offering four grassy open spaces for passive recreational pursuits as well as four playgrounds, a half basketball court, two ball diamonds and an outdoor rink for active recreation.

*Policy 7.1.46: A pedestrian/cyclist system shall link residents with parks, amenities, commercial and employment areas as well as the wider Town and regional pathway network.*

Greystone meets this policy by linking the proposed amenities through the provision of sidewalks, bike lanes and pathways.

*Policy 7.1.47: Community parks should contain a range of facilities that ensures they can be used and enjoyed year round.*

Greystone meets this policy by providing a range of spring/summer/fall amenities including a half basketball court, playgrounds, a pickleball court, baseball diamonds, a plaza, pathways and a highstreet. Winter amenities include a hockey rink while the plaza and highstreet have the potential of being used year-round when maintained and programmed for winter use.

*Policy 7.1.48: All residential development should be within 400 metre radius of some form of open space.*

Greystone meets this policy locating open spaces within 400 metres of all residents.

*Policy 7.1.49: Open space concept plans shall be provided as part of a Neighbourhood Plan submission. Final design details and open space elements shall be determined at the subdivision/detailed landscape drawing stage.*

Greystone meets this policy providing open space concepts in the Neighbourhood Plan.

*Policy 7.1.50: Uses within the public utility zone should mainly accommodate public utilities including stormwater management facilities.*

Greystone meets this policy providing a stormwater management facility within the public utility zone.

*Policy 7.1.51: Pathways and landscaping may be incorporated with the public utilities zone.*

Greystone meets this policy providing pathways and landscaping adjacent to the stormwater management facility.

*Policy 8.1.1: The road network shall be constructed to accommodate the anticipated traffic volumes as generally shown in Figure 11. The final road network, road cross-sections and right-of-ways required to accommodate the anticipated traffic volumes shall be determined at the Neighbourhood Plan and subdivision stage.*

Greystone meets this policy by providing details on the road network as per Figure 9: Road Network in accordance with the Greystone ASP.

*Policy 8.1.2: Notwithstanding Policy 8.1.1, street cross-sections may be modified from the typical accepted standard at the discretion of the Approving Authority while accommodating anticipated traffic volumes.*

To implement the overall transportation vision for Greystone, several streets have been modified from the typical accepted standard through negotiations with the Town as identified in Figure 9: Road Network.

*Policy 8.1.3: Existing road right-of-ways may need to be widened to accommodate the anticipated Plan Area traffic volumes. The Town may acquire the additional road right-of-way through the subdivision process, voluntary dedication by land owners and/or through other mechanisms available to the Town through the Municipal Government Act*

River Avenue is identified to be widened and acquired through the subdivision process to accommodate a future primary collector for the portion fronting the Rockland property as detailed in Section 5.1 - Road Network.

*Policy 8.1.4: Connections to the external road network should be maximized to ensure multiple connections into the Plan Area while adhering to the requirements for intersection spacing.*

Greystone meets this policy providing one connection to River Avenue and two connections to Griffin Road in accordance with the submitted Transportation Impact Assessment. Additional connections will be established through the development of adjoining development areas.

*Policy 8.1.5: Internal street networks should be in the form of a modified grid.*

Greystone meets this policy providing a street network that is in the form of a modified grid.

*Policy 8.1.6: Lanes for rear lot access are encouraged where residential frontage occurs on large volume roadways.*

Greystone meets this policy providing laned product where low density residential frontage is along a large volume roadway. For higher density product located along large volume roadways, access points are limited by the design guidelines.

*Policy 8.1.7: The use of cul-de-sacs should be minimized and should mainly be used to resolve topographical or geometrical constraints.*

Greystone meets this policy by not offering any cul-de-sacs.

*Policy 8.1.8: Residential block sizes should be minimized to support multiple points of access.*

Greystone meets this policy by providing modest sized blocks.

*Policy 8.1.9: With each Neighbourhood Plan and any subsequent development applications a Transportation Impact Assessment shall be provided to review the potential impacts on the generated traffic on the surrounding road network and provide mitigation measures for any identified adverse impacts.*

Greystone meets this policy through the submission of a Transportation Impact Assessment. The results of the study were incorporated in the Neighbourhood Plan.

*Policy 8.1.10: The developer of each property shall be responsible for improvements to the surrounding road network to accommodate their specific development as determined by any future Transportation Impact Assessment that may be required.*

Greystone meets this policy by identifying the required transportation improvements that the developer will be responsible for as presented in Section 5.0.

*Policy 8.2.1: Neighbourhood plans shall identify future transit routes and bus stops.*

Greystone meets this policy by identifying potential future transit routes and bus stops.

*Policy 8.3.1: An interconnected pedestrian and cycling system shall be provided through pathways, sidewalks and on-street bike lanes.*

Greystone meets this policy by providing an interconnected pedestrian and cycling system through pathways, sidewalks and on-street bike lanes.

*Policy 9.1.1: The water distribution system for the ASP area shall be designed as generally shown on Figure 14 to adequately and efficiently serve the ultimate development of the Plan Area.*

Greystone meets this policy by providing a water distribution system that reflects that presented in the ASP to serve the ultimate development.

*Policy 9.2.1: The sanitary sewage system for the ASP area shall be designed generally as shown on Figure 15 and to adequately and efficiently serve the ultimate development of the area.*

Greystone meets this policy by providing a sanitary system that reflects that presented in the ASP to serve the ultimate development.

*Policy 9.3.1: The stormwater management system shall be designed generally as shown on Figure 16 and to adequately and efficiently serve the ultimate development in terms of public safety and environmental protection.*

Greystone meets this policy by providing a stormwater management system that reflects that presented in the ASP to serve the ultimate development.

*Policy 9.3.4: Each development area (Area A, B, C, D and E) shall provide separate stormwater management facilities that are in accordance with the Master Drainage Plan specific to each area utilizing common existing outfalls to the Bow River where possible.*

Greystone meets this policy by providing a stormwater management system that reflects that presented in the ASP to serve the ultimate development.

*Policy 9.3.5: Stormwater management facilities, such as stormwater ponds, are encouraged to be integrated into park and open space areas.*

Greystone meets this policy by providing a plaza, landscaping and a pathway system adjacent to the identified stormwater management facility. A storm pipe runs below the plaza.

#### *Policy 11.0.5 Neighbourhood Plan*

- a. *A Neighbourhood Plan shall be prepared for each Development Area as outlined in Figure 9, with the exception of Area A. Neighbourhood plan applications must include the requirements listed in Section 11.1.*

The provision of this Neighbourhood Plan meets this requirement.

#### *Policy 11.1.1: A Neighbourhood Plan shall address:*

- a. *a future land use scenario including lot design and configuration;*

Greystone meets this policy through the presentation of a future land use scenario.

- b. *parcel size and residential density;*

Greystone meets this policy through the identification of the size of larger parcels and residential density.

- c. *the anticipated commercial/industrial employment ratio per hectare, where applicable;*

Greystone meets this policy by identifying the anticipated employment per hectare.

d. *proposed open space, including active and passive open areas, natural areas and both pedestrian and bike linkages to other existing or potential adjacent developments;*

Greystone meets this policy by presenting the future open spaces and pedestrian and bicycle linkages.

e. *Municipal Reserve and Environmental Reserve dedications as well as other appropriate means of protecting environmentally significant areas and open space;*

Greystone meets this policy by presenting the future municipal reserve dedication.

f. *open space linkages with adjacent lands within and outside the Plan Area;*

Greystone meets this policy by presenting future open space linkages with adjacent lands within and outside the Plan Area.

g. *development phasing, illustrating full build-out;*

Greystone meets this policy by presenting a phasing plan.

h. *innovative and efficient means to provide access and internal road circulation over both the immediate and long term;*

Greystone meets this policy by presenting the future transportation network.

i. *measures to provide for the integration of the proposed development with existing and adjacent development in a manner that ensures compatibility with adjacent land uses;*

Greystone meets this policy by providing design guidelines that give direction on the integration of future development with existing and adjacent development.

j. *mitigation measures such as landscaping, screening, or berming to address any on-site or off-site visual impacts;*

Greystone meets this policy by requiring deeper lots, fencing and screening adjacent to Spray Lake Sawmills' storage yard.

k. *any constraints to development, including but not limited to: geotechnical, environmental, and hydrogeological conditions; archaeological or historically significant features;*

Greystone meets this policy through the submission two Environmental Site Assessments, a Biological Impact Assessment, a Geotechnical Study and a Pond Investigation. Results were incorporated into the Neighbourhood Plan.

- l. a Stormwater Management Plan which will determine Best Management Practices for stormwater management;*

Greystone meets this policy through the submission of a Staged Master Drainage Plan. The results were incorporated into the Neighbourhood Plan.

- m. water and wastewater servicing strategies, including identification of rights-of-way required for connection to Town systems;*

Greystone meets this policy by presenting a water and a wastewater servicing plan to identify required connections to the Town's systems.

- n. Traffic Impact Assessment (TIA) that addresses the location of existing and future transportation networks, detailing traffic generation and its cumulative impacts on the road network, including necessary improvements based upon traffic volume and engineering advice;*

Greystone meets this policy through the submission of a Transportation Impact Assessment. The results of the study were incorporated in the Neighbourhood Plan.

- o. Biophysical Impact Assessment (BIA) that includes field assessments which maps the habitats, describes the wildlife and vegetation, identifies and ranks wetlands according to significance, analyzes habitats and potential for species at risk, evaluates the regional ecosystems,*

*habitat connectivity and potential for wildlife corridors, and provides recommendations for management and mitigation of the lands subject to its review;*

Greystone meets this policy through the submission of a Biological Impact Assessment. The results of the study were incorporated in the Neighbourhood Plan.

- p. transit plan showing future routing and transit stops;*

Greystone meets this policy by presenting potential future transit routes and stops.

- q. an overall landscaping concept for all public spaces, including, but not limited to: municipal reserves (including school sites), road right-of-ways, pathways and storm water features;*

Greystone meets this policy by presenting overall landscape concepts for public spaces.

- r. design guidelines;*

Greystone meets this policy by presenting design guidelines to guide the neighbourhood's built form.

- s. road names and road cross sections in accordance with approved Town policy;*

Greystone meets this policy by presenting road names and cross-sections.

t. *proposed school sites;*

According to the Town, no school sites are required within Greystone;

u. *recreational lands and facilities;*

Greystone meets this policy by providing a site for playfields;

v. *input from affected community stakeholders, including community organizations, and social service agencies; and*

Greystone meets this policy by presenting the results of a comprehensive engagement process.

*Policy 11.1.6: Each Neighbourhood Plan within Greystone shall consider and address the Integrated Neighbourhood Design Guidelines or other applicable Council approved policy which may be in force at that time,*

Greystone meets this policy by identifying how the development meets the requirements of the Integrated Neighbourhood Design Guidelines in the previous section.

## 9.6 LAND USE BYLAW

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The Town of Cochrane Land Use Bylaw is the principle tool that the Town uses when considering development of specific land uses. In consideration, the text, tables, imagery and figures of this document have been produced with due consideration of the requirements of the Land Use Bylaw. The overall intension of this approach is to help ensure that future development complies with the direction given in this Neighbourhood Plan and the requirements of the Land Use Bylaw.

The logo for Greystone, featuring a stylized icon of three stacked rectangular blocks on the left, followed by the word "GREYSTONE" in a bold, uppercase, sans-serif font.



## SECTION 10.0 IMPLEMENTATION

The Greystone Neighbourhood Plan is to serve as a guide to Administration and Council for future land use redesignations, subdivisions and development within the Plan Area. Review of the Neighbourhood Plan is to be undertaken every 5 years to determine if updates are required to ensure the relevance of this document. Amendments to the Greystone Neighbourhood Plan will require a public hearing and approval by Council.

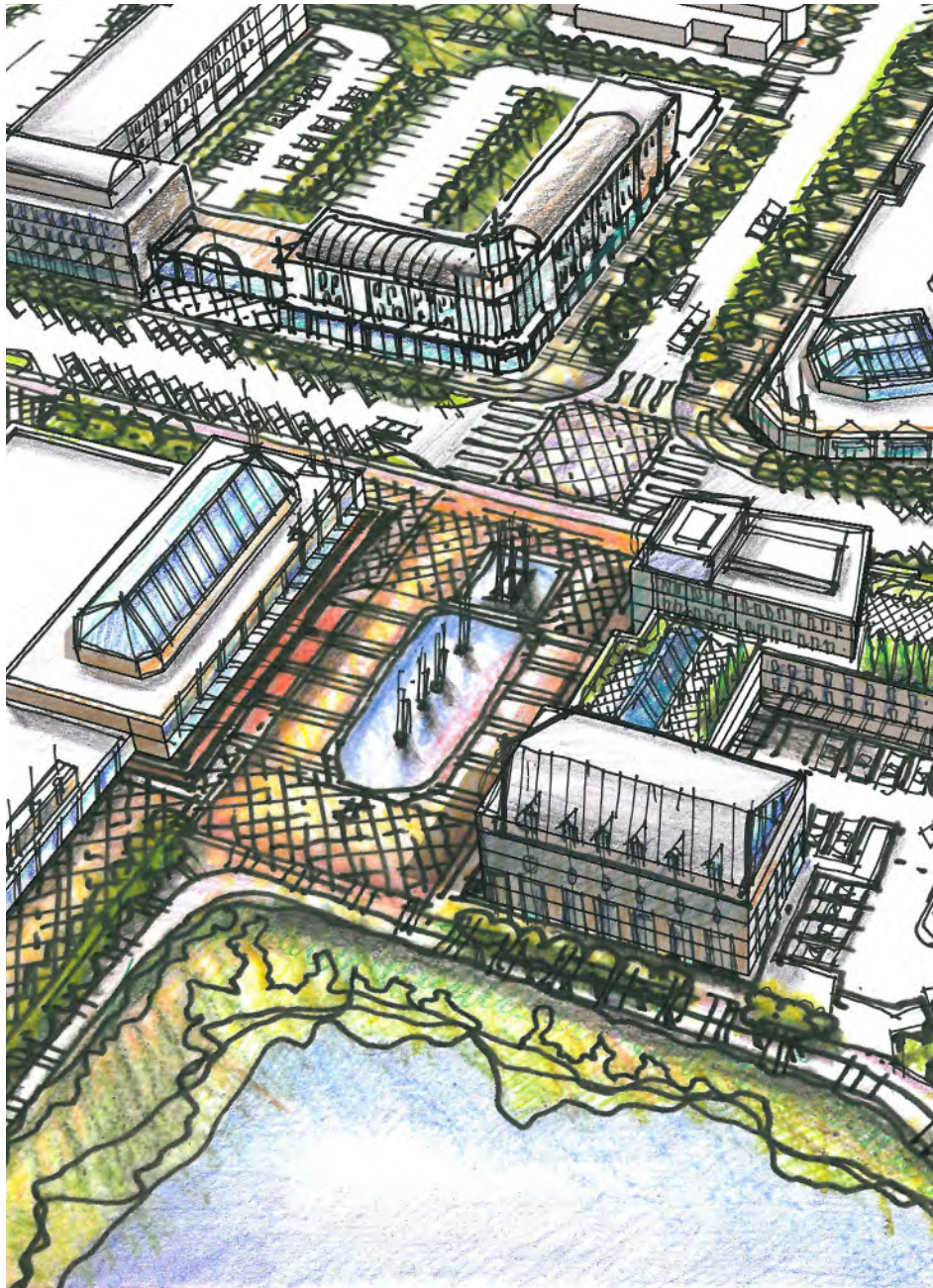
### 10.1 INTERPRETATION

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The following provides guidance to the Approving Authority when interpreting this Neighbourhood Plan:

- It is recognized that in certain instances, an inconsistency may arise between this Neighbourhood Plan and a provision of the Land Use Bylaw; and, if this occurs:
  1. The Approving Authority may grant a relaxation of the Rules of the Land Use Bylaw in accordance with the provisions of the Bylaw or the Municipal Government Act (as the case may be), where the Plan provides clear direction in support of the relaxation; and

2. Where the Approving Authority lacks the jurisdiction to grant the relaxation of the Rules contained in the Land Use Bylaw, the Land Use Bylaw should prevail over the Plan.
- A requirement within this Plan, or any quantity or figure, may be relaxed, unless otherwise noted, where in the sole opinion of the Approving Authority:
    1. The application of the requirement in a specific situation is determined to be unworkable or impractical; or
    2. The intent of the requirement can be achieved in another manner that will result in an equivalent or improved design outcome; and
    3. The relaxation will not compromise the overall intent of the Plan.
  - All proposed land use zones and road and utility alignments and classifications may be subject to further study and may be further refined by the Approving Authority at the land use amendment, subdivision and/or development permit stages in alignment with applicable policies without requiring an amendment to this Plan. Any major changes may require an amendment to this Neighbourhood Plan or the Greystone ASP.
  - All illustrations and photos are intended to illustrate potential outcomes and are not an exact representation of an actual intended development. They are included solely as examples of what could possibly occur after implementation of the Neighbourhood Plan and Land Use Bylaw requirements.
  - If a conflict arises between an illustrative or conceptual map or graphic and a textual statement in the Plan, the textual statement must take precedence.



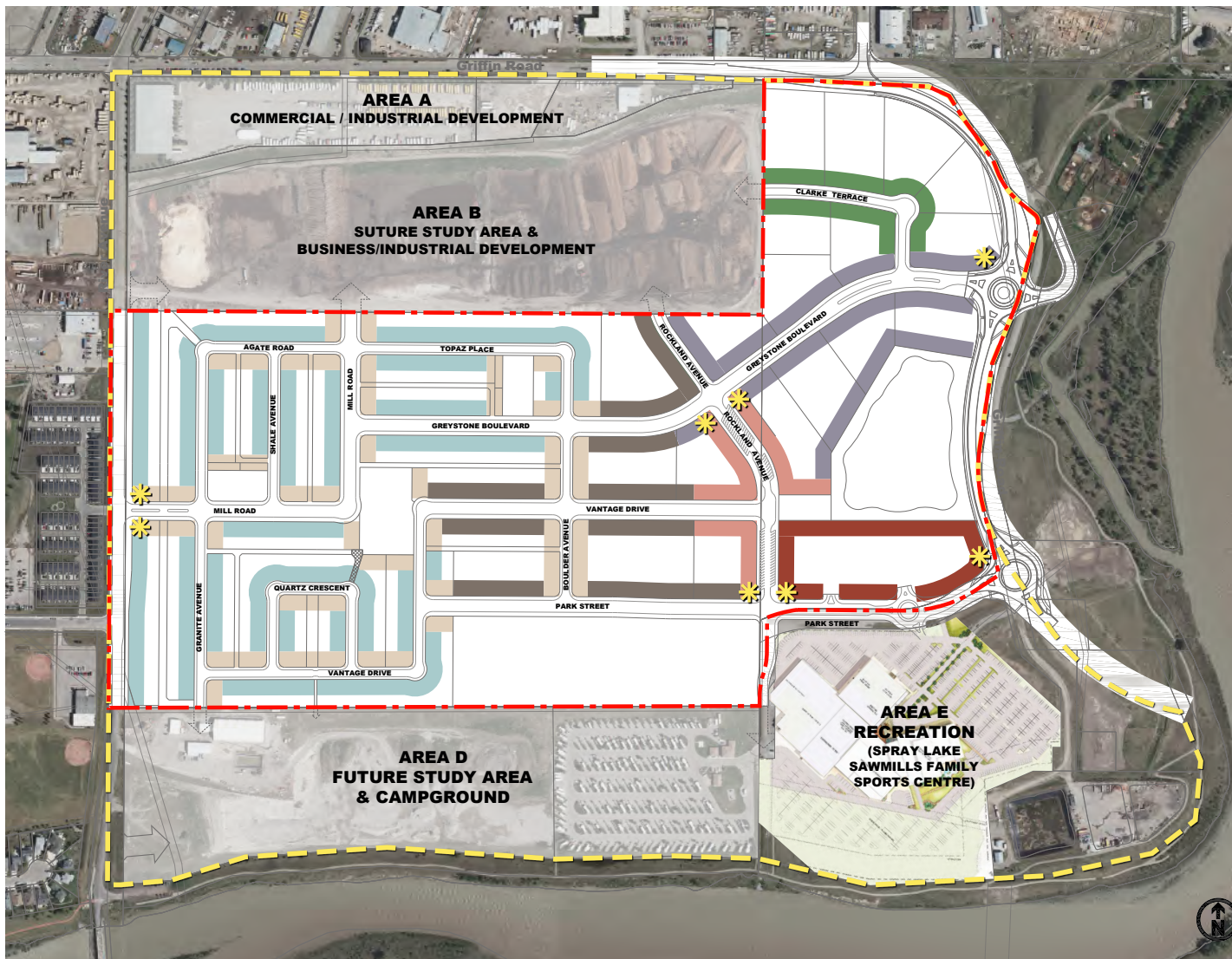
## APPENDIX DESIGN GUIDELINES

The design guidelines in this Plan are intended to provide general direction to the Approving Authority in making decisions on development permit applications within the Plan Area. This guidance builds upon the broader direction found in the Western Heritage Design Guidelines and supplements the land use district rules applied to the Plan Area through the Land Use Bylaw. These design guidelines have a number of characteristics that are not found in conventional land use guidance including:

- A strong focus on the neighbourhood character and an emphasis on built form rather than use of the land;
- A comprehensive set of standards that demonstrates the interrelationship between various design elements including buildings, roads and open space; and
- A broad range of design guidance primarily delivered through diagrams, maps and tables as opposed to only text.

The Plan Area has been divided into seven precincts and each have their own character as defined in the following pages. The anticipated location of gateway features are shown on the following plan which may take on the form of a sign, enhanced architectural features and/or high quality landscaping.

It should be noted that where a development permit application does not conform to all the applicable direction of these guidelines, but maintains the intent, the Approving Authority may grant a relaxation to the requirements.



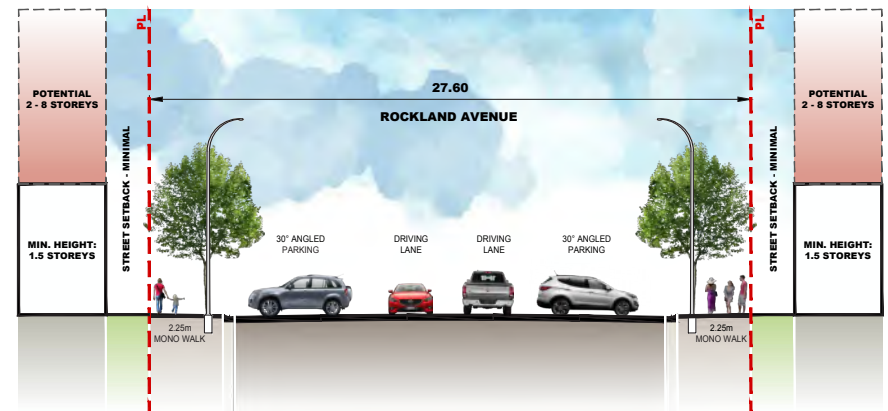
- - - Greystone Neighbourhood Plan Boundary
- - - Greystone ASP Boundary
- Active Frontage
- Urban Boulevard
- Ground Oriented
- Flankage
- Northeast Gateway
- Commercial Edge
- Flex Space
- ✱ Gateway Feature

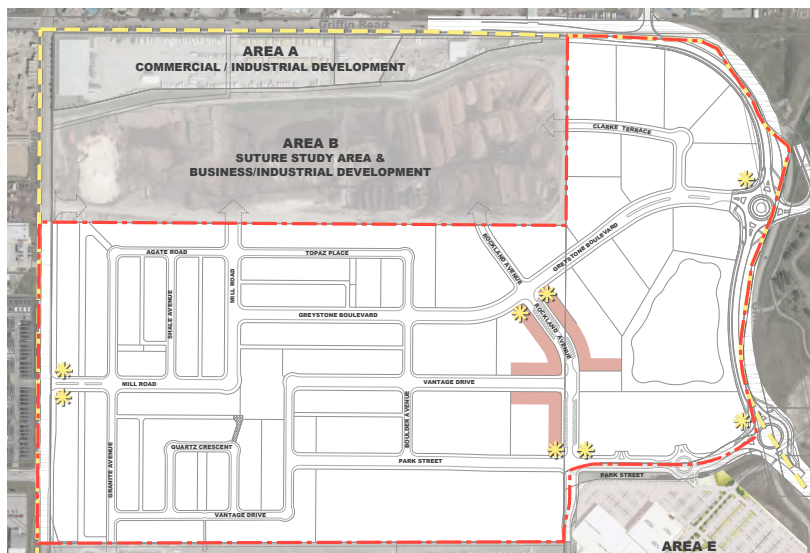


## APPENDIX DESIGN GUIDELINES

### Active Frontage Precinct

The Active Frontage precinct will be characterized by a pedestrian-oriented traditional highstreet (Rockland Avenue) and a plaza. The uses will mainly be smaller format stores, which are envisioned as a cohesive grouping of retail and services integrated with potential complementary uses such as residential, office and hotel. Buildings within this area are to frame and have entrances that face Rockland Avenue and the plaza, include narrower facade widths, offer higher levels of articulation and glazing and provide mainly contiguous uses. It is anticipated that this precinct will be the commercial focal point of the neighbourhood and offer a fine grained and animated retail experience that draws people from the surrounding commercial, residential, business park and recreation uses.





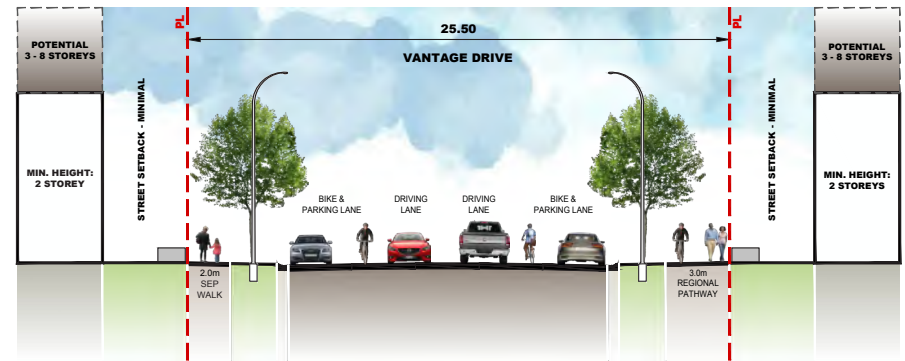
COMPONENT	Requirements
Applicable Interface	Rockland Avenue and Plaza
Height Minimum	1.5 Storeys
Minimum Street Wall	Two-thirds of Block Face
Maximum Street Setback	Minimal
Building Articulation & Glazing	Rockland Avenue and Plaza Facing Facades
Maximum Facade Widths	Narrow Facade Widths
Building Entrance Orientation	Towards Rockland Avenue and Plaza
Building Stepback	1 Metre After 4 Storeys
Off-street Parking between Building and Public Street	Not Permitted
Loading	Facing Public Street - Not Permitted
Vehicular Access Points to Public Street	Limited
Landscape Emphasis	Rockland Avenue and Plaza

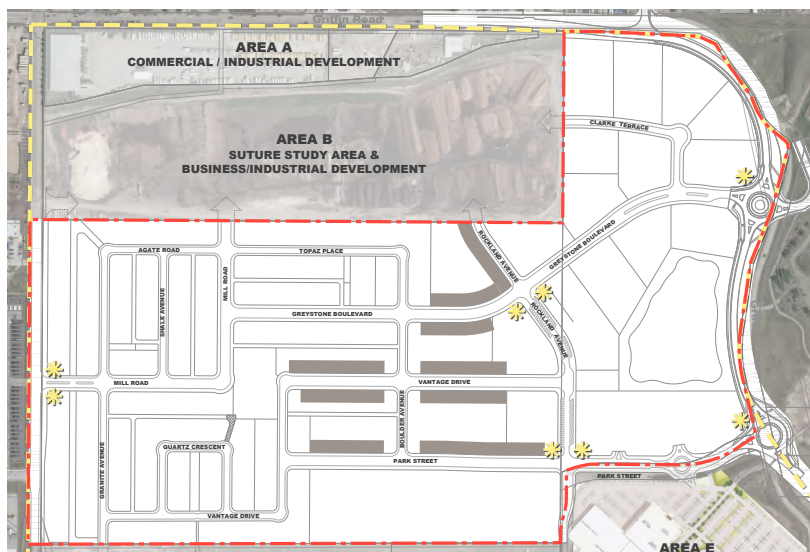


## APPENDIX DESIGN GUIDELINES

### Urban Boulevard Precinct

The Urban Boulevard precinct will be characterized mainly by medium to high density housing including apartments and townhouses. Buildings within this precinct are to be ground-oriented, have medium heights and narrow to moderate facade widths. Building are expected to be situated close to the road with their entrances oriented towards the street, and possibly towards the interior of the site, in order to provide for a comfortable and interesting street environment. This precinct is anticipated to result in strongly framed streets and to create dramatic vistas.





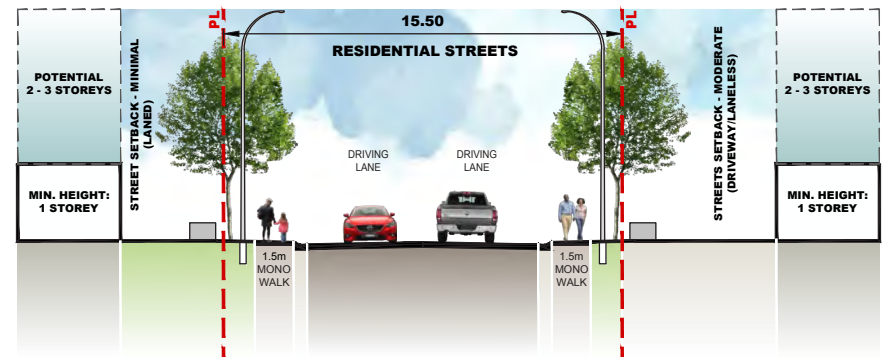
COMPONENT	Requirements
Applicable Interface	Public Streets
Height Minimum	2 Storeys
Minimum Street Wall	Two-thirds of Block Face
Maximum Street Setback	Minimal
Building Articulation & Glazing	Public Street Facing Facades
Maximum Facade Widths	Moderate Facade Widths
Building Entrance Orientation	Towards Public Street - Required Towards Site Interior - Optional
Building Stepback	1 Metre After 4 Storeys
Off-street Parking between Building and Public Street	Not Permitted
Loading	Facing Public Street - Not Permitted
Vehicular Access Points to Public Street	Limited
Landscape Emphasis	Public Streets

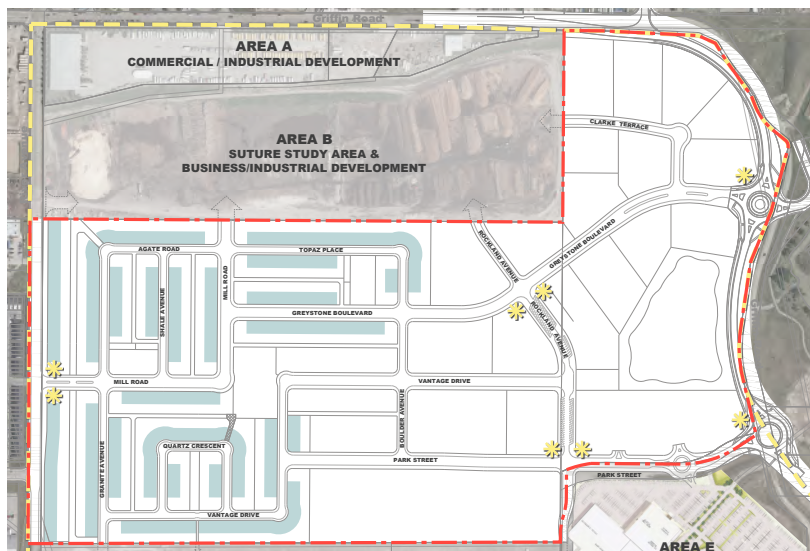


## APPENDIX DESIGN GUIDELINES

### Ground Oriented Precinct

The Ground Oriented precinct will be characterized by low density housing including single-detached, duplexes and semi-detached dwellings. Buildings within this precinct are to be ground-oriented, have low heights and narrow facade widths. Front drive garages and driveways are anticipated for laneless housing while laned housing is expected to be situated close to the street in order to provide for a comfortable and interesting street environment. This precinct is anticipated to result in tight-knit relationships where neighbours lookout for each other.





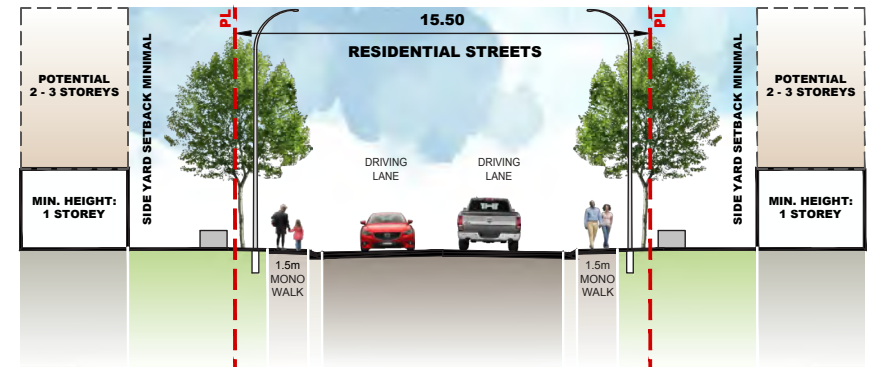
COMPONENT	Requirements
Applicable Interface	Public Streets
Height Minimum	1 Storey
Minimum Street Wall	Majority of Block Face
Maximum Street Setback	Laned Housing - Minimal Laneless Housing - Moderate
Building Articulation and Glazing	Public Street Facing Facades
Maximum Facade Widths	Narrow Facade Widths
Building Entrance Orientation	Public Street
Building Stepback	Not Applicable
Off-street Parking between Building and Public Street	Laned Housing - Not Permitted Laneless Housing - On Driveway
Loading	Facing Public Street - Not Permitted
Vehicular Access Points to Public Street	Laned Housing - Limited Laneless Housing - From Driveways
Landscape Emphasis	Public Street

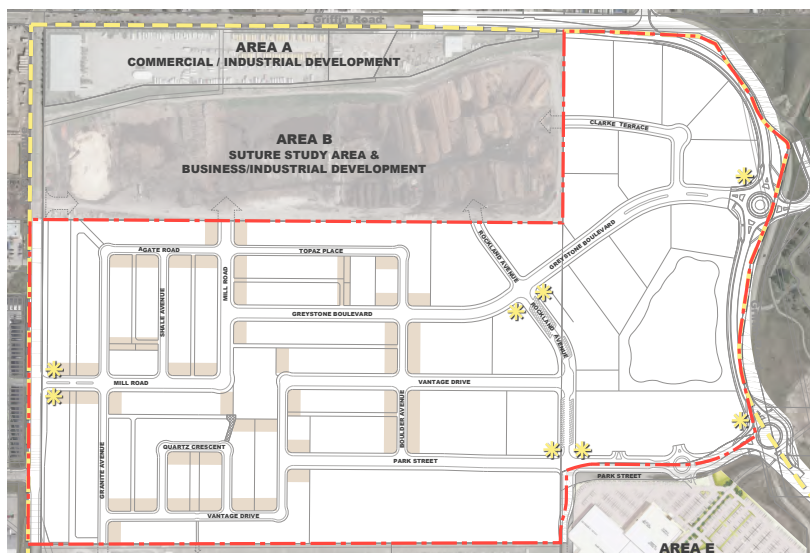


## APPENDIX DESIGN GUIDELINES

### Flankage Precinct

The Flankage precinct encompasses the side elevations of dwellings at the end of blocks. The intent is for public streets and open spaces to be framed by side elevations that have attractive facades. To achieve this, side elevations are to include a moderate amount of glazing and articulation, have minimal setbacks and the opportunity for entrance on the side facade. It is envisioned that this precinct will support a safe and attractive pedestrian-oriented environment.





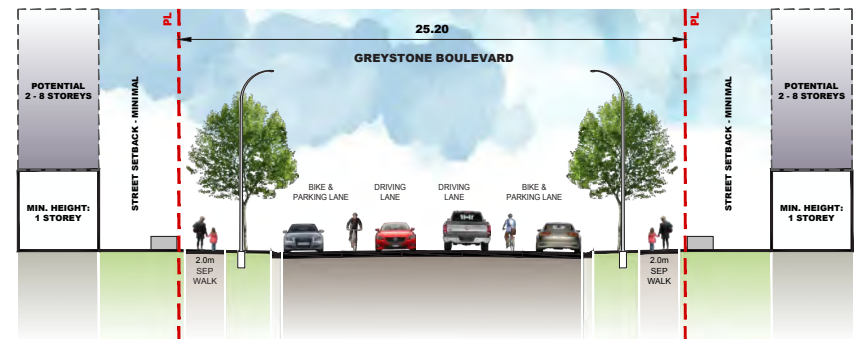
COMPONENT	Requirements
Applicable Interface	Public Streets
Height Minimum	1 Storey
Minimum Street Wall	Majority of Block Face
Maximum Street Setback	Minimal
Building Articulation & Glazing	Public Street Facing Facades
Maximum Facade Widths	Moderate Facade Widths
Building Entrance Orientation	Front Elevation - Required Side Elevation - Optional
Building Stepback	Not Applicable
Off-street Parking between Building and Public Street	Laned Housing - Not Permitted Laneless Housing - On Driveway
Loading	Facing Public Street - Not Permitted
Vehicular Access Points to Public Street	Limited
Landscape Emphasis	Public Street



## APPENDIX DESIGN GUIDELINES

### Northeast Gateway Precinct

The Northeast Gateway precinct will be characterized by its interface with gateway elements including Greystone Boulevard, the stormpond and Clarke Terrace. The area will mainly accommodate light manufacturing, commercial, offices, warehouses and higher density residential. Building that accommodate these uses are to provide an inviting introduction to Greystone by lining Greystone Boulevard and Clarke Terrace, incorporating moderate facade widths and being situated close to the public street. Setback areas should include attractive landscaping to soften the appearance of the buildings and parking areas. It is anticipated that this precinct will offer a quality work environment and an inviting neighbourhood gateway while accommodating the functional needs of development.





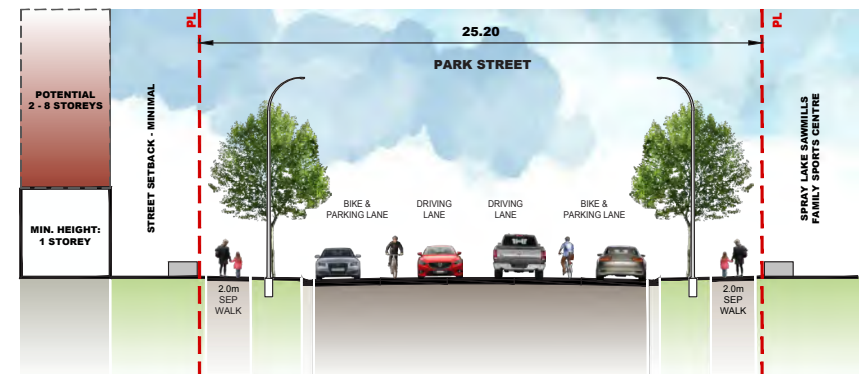
COMPONENT	Requirements
Applicable Interface	Greystone Boulevard, Clarke Terrace, Stormpond
Height Minimum	1 Storey
Minimum Street Wall	One-third of Block Face
Maximum Street Setback	Greystone Boulevard, Clarke Terrace - Minimal
Building Glazing & Articulation	Facades Facing Greystone Boulevard, Clarke Terrace and Stormpond
Maximum Facade Widths	Moderate Facade Widths
Building Entrance Orientation	Towards Public Street and/or Parcel Interior
Building Stepback	No Requirement
Off-street Parking Between Building and Public Street	Not Permitted along Greystone Boulevard and Clarke Terrace
Loading	Facing Greystone Boulevard and Clarke Terrace - Not Permitted Facing Stormpond - Permitted if Screened
Vehicular Access Points to Public Street	As Permitted
Landscape Emphasis	Public Streets and Stormpond

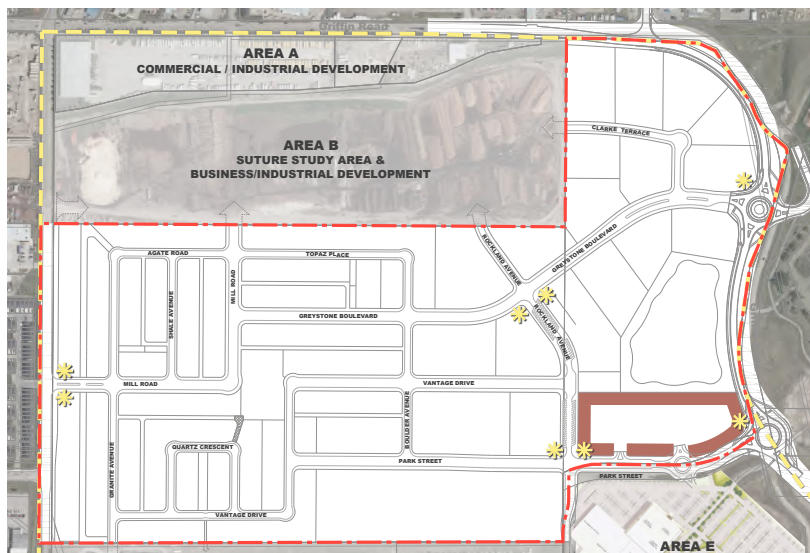


## APPENDIX DESIGN GUIDELINES

### Commercial Edge Precinct

An integrated mix of retail formats is intended in the Commercial Edge precinct to create a dynamic commercial environment. To achieve this, the predominant uses in this precinct will be a mix of small, medium and large format retail uses but can also include offices and hotels. Buildings within this area are to offer a variety of façade widths, entrances that typically face surface internal parking areas and a mix of stand alone and contiguous uses. Buildings and landscaping are intended to be located along the perimeter of the site in order to screen views of the internal parking fields from the public streets, plaza, stormpond and the adjacent recreation centre. All facades will include a moderate amount of glazing and articulation. This precinct is anticipated to be an attractive commercial area that serves the daily needs of the surrounding residents and beyond.





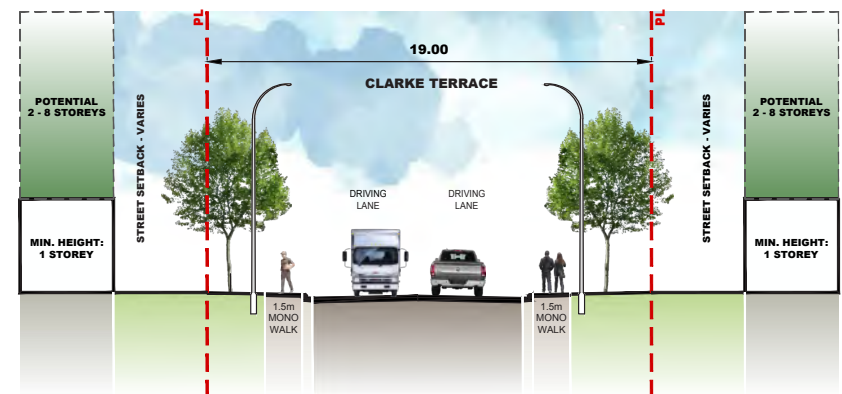
COMPONENT	Requirements
Applicable Interface	Public Streets, Plaza, Stormpond
Height Minimum	1 Storey
Minimum Street Wall	One third of Block Face
Maximum Street Setback	Minimal
Building Articulation and Glazing	All Facades
Maximum Facade Widths	Narrow, Moderate and Large Facade Widths
Building Entrance Orientation	No restriction
Building Stepback	1 Metre After 4 Storeys
Off-street Parking between Building and Public Street	Not Permitted
Loading	Facing Interior of Site - Permitted Facing Park Street, Rockland Avenue and Plaza - Not Permitted Facing Griffon Road and Stormpond - Permitted if Screened
Vehicular Access Points to Public Street	Rockland Avenue - Limited Park Street - As Permitted Griffon Road - Not Permitted
Landscape Emphasis	Public Streets, Plaza and Stormpond

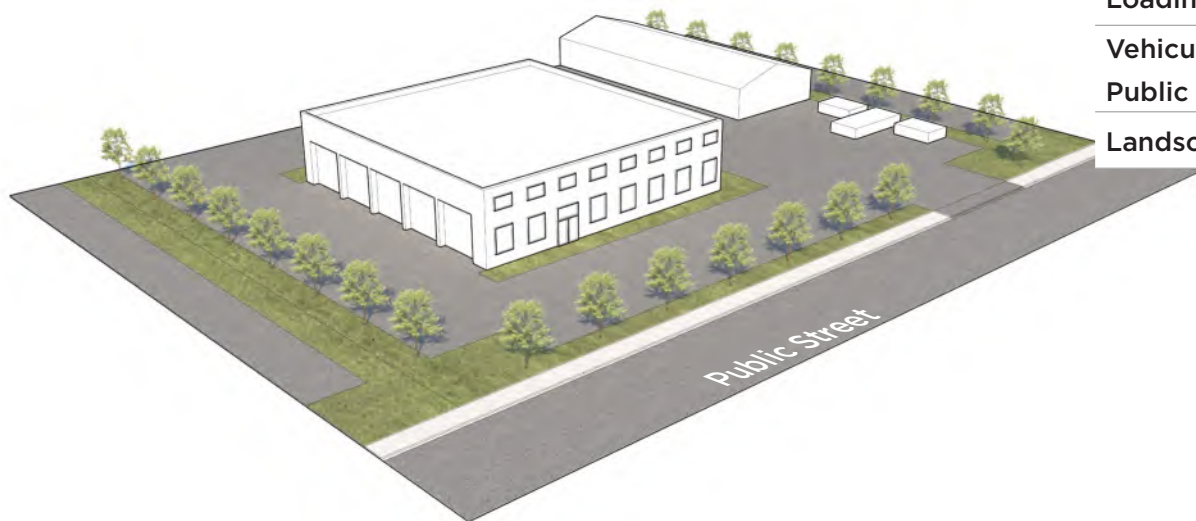


## APPENDIX DESIGN GUIDELINES

### Flex Space Precinct

The Flex Space precinct is intended to accommodate a diversity of types of industrial, manufacturing, offices and warehouse uses. Buildings within this area have the potential to include a variety of façade widths, floor areas, coverage and orientation. Thus, the anticipated form is not fully defined in order to accommodate a diversity of businesses. Nevertheless, parking, loading, work yards and outside storage should be screened from surrounding streets through the use of hard and soft landscaping and/or through the strategic placement of buildings. The precinct is anticipated to be an employment hub that adapts to the ever changing needs of the business market.





COMPONENT	Requirements
Applicable Interface	Public Streets
Height Minimum	1 Storey
Minimum Street Wall	No Restriction
Maximum Street Setback	No Restriction
Articulation and Glazing	No Restriction
Maximum Facade Widths	No Restriction
Building Entrance Orientation	No Restriction
Building Stepback	No Restriction
Off-street Parking between Building and Public Street	No Restriction
Loading	No Restriction
Vehicular Access Points to Public Street	As Permitted
Landscape Emphasis	Site Perimeter