

# Aspen Lakes West Area Structure Plan

Town of Blackfalds

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Consolidated Bylaw 1283.23

Amendment **Bylaw 1300.24**

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# introduction

## 1.1 PURPOSE

The purpose of the Aspen Lakes West Area Structure Plan (ASP) is to describe the land use framework and development objectives for the east half of SW ¼ Sec. 34, Twp. 39, Rge. 27, W4M and part of the SE ¼ Sec. 34, Twp. 39, Rge. 27, W4M, located in the northwest corner of the Town of Blackfalds. The Aspen Lakes West Plan Area encompasses approximately 38.75 ha (95.75 ac).

On behalf of Brentwood Developments, Stantec Consulting Ltd. has prepared the Aspen Lakes West Area Structure Plan.

## 1.2 PLAN AREA

Aspen Lakes West is located on the northwest edge of the Town of Blackfalds, as shown in **Figure 1 – Location Plan** and **Figure 2 - Legal Boundary**, and is legally described as the east half of SW ¼ Section 34, Township 39, Range 27, West of the 4th Meridian and Lot 106, Block 6, Plan 152 1496.

## 1.3 ADJACENT PLANNING AREAS

Valley Ridge Estates, located south of the Plan Area is primarily low density residential homes. A park site located along the north boundary of the development

has been considered to provide consistency by continuing the open space network into Aspen Lakes West.

Aurora Heights is a two quarter section residential neighbourhood located east of Aspen Lakes West. Aurora Heights provides a variety of housing options, complemented by an extensive open-space network. The east boundary of Aspen Lakes West shares a wetland with Aurora Heights, connected by a connected trail system.

Both adjacent neighbourhoods form a logical extension of residential areas.

The Aspen Lakes West and Aurora Heights plan boundaries are shown on **Figure 3 - Planning Boundary**.

## 1.4 POLICIES AND RELEVANT PLANNING DOCUMENTS

The Aspen Lakes West ASP has been prepared using the guidelines and policies set forth by the Town of Blackfalds for the development of new areas. In addition, the following relevant documents have been reviewed and referenced in preparation of the ASP:

- Town of Blackfalds Municipal Development Plan (2009)
- Town of Blackfalds Land Use Bylaw 2022
- Town of Blackfalds 2007 Master Plan
- Town of Blackfalds Design Guidelines
- Town of Blackfalds 2015 Wastewater Master Plan
- 2016 Town of Blackfalds Water Model Update
- Town of Blackfalds Northwest Area Master Stormwater Management Plan (2018)
- Town of Blackfalds Transportation Study 2015
- Town of Blackfalds Facilities and Needs Assessment
- Recreation, Culture, and Parks Needs Assessment and Master Plan (2016)
- North Blackfalds Area Structure Plan (2007)
- Aurora Heights Area Structure Plan (2013)
- Valley Ridge Estate Area Structure Plan (2006)

Information outlined in these documents, as it relates to this Plan Area, is described below.

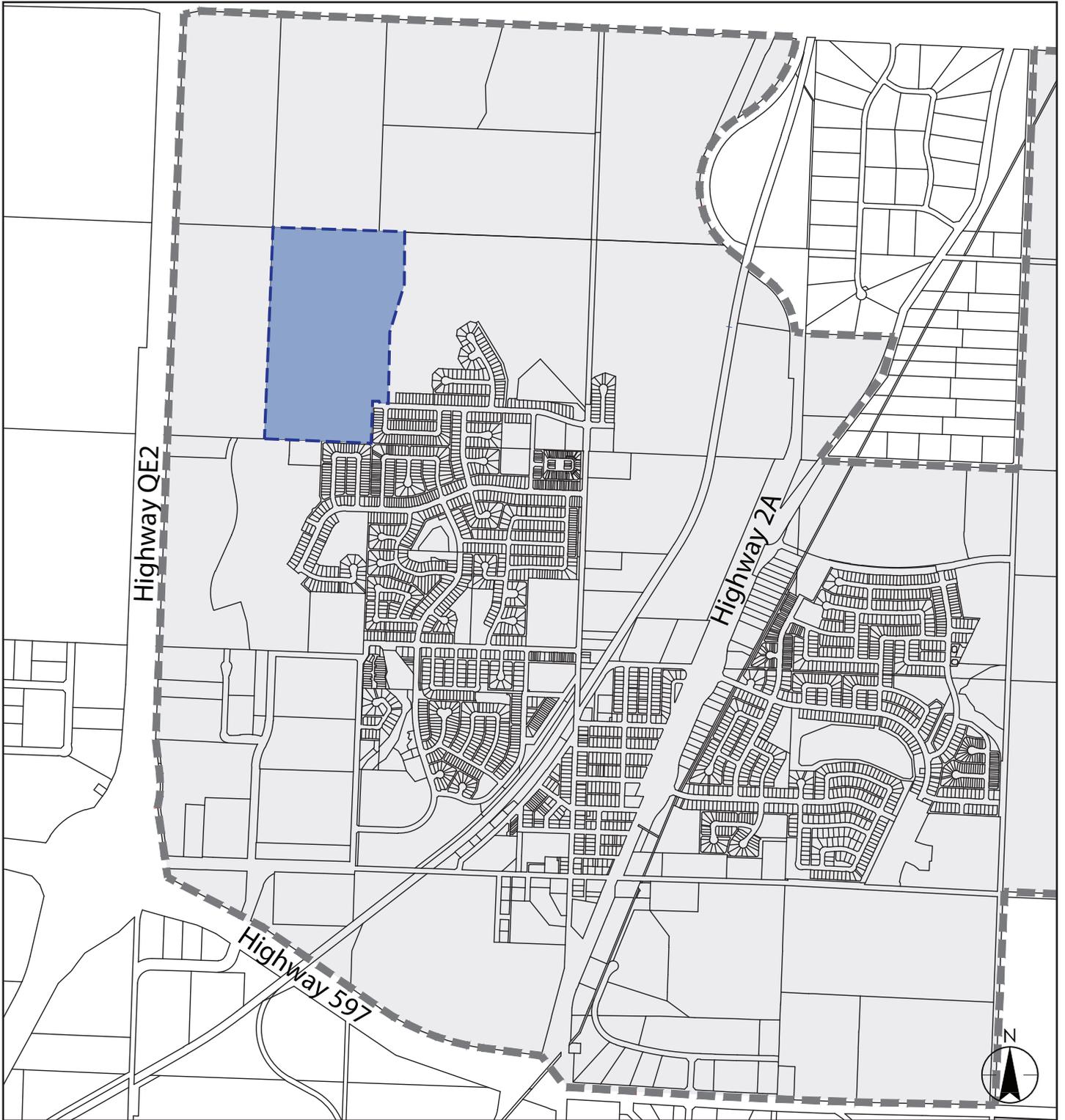
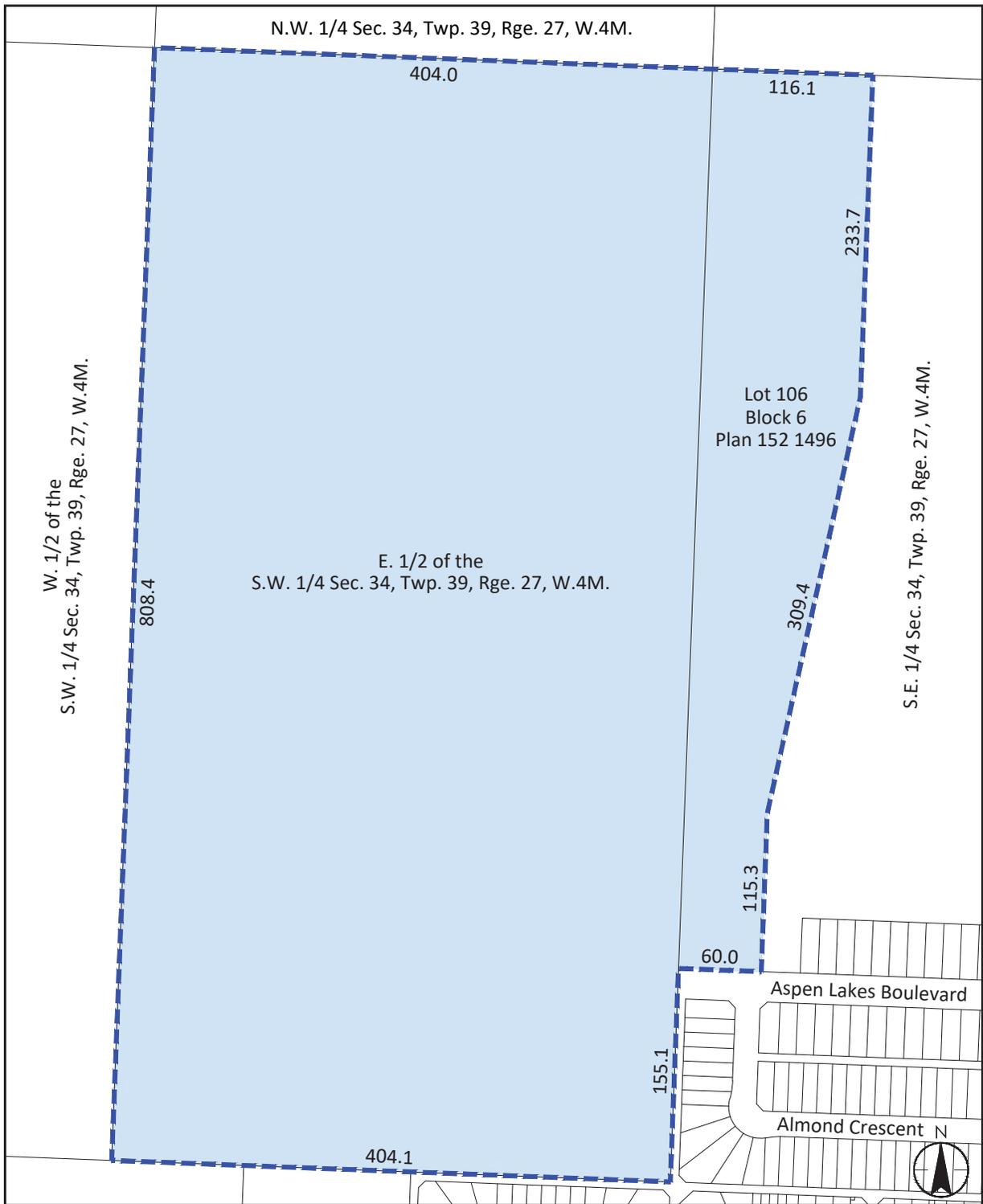


figure 1 - location plan



**Legend**

 Area Structure Plan Boundary

figure 2 - legal boundary

### 1.3.1 MUNICIPAL DEVELOPMENT PLAN

*The Town of Blackfalds Municipal Development Plan (MDP)* is intended to serve as a common guide to promote orderly development which is appropriate, sustainable, efficient, and enhances opportunities for businesses and the quality of life of residents.

The Aspen Lakes West Plan Area was identified in the MDP for residential development with the following policies. These policies have been referenced in the creation of the Aspen Lakes West ASP as they will specifically shape the development:

- Residential density for new neighbourhoods shall be a minimum of 10 residential units per gross developable hectare (4 per gross developable acre).
- The Town may approve a development in excess of 17 residential units per gross developable hectare (7 per gross developable acre) provided it is defined within an approved Area Structure Plan.
- The Town shall require a mix of housing types and forms in all residential neighbourhoods and avoid excessive concentration of any single type of housing.
- Multiple family housing sites should not exceed 1.75 hectares (4.32 acres) unless special site characteristics or design features will reasonably accommodate large sites within the context of the characteristics of the neighbourhood and surrounding land uses.
- Except apartments, densities on multiple family housing sites should not exceed 30 units per net hectare (12 units per net acre).
- Manufactured homes may be permitted only:
  - » on individual lots and only when part of a comprehensively designed manufactured home subdivision that is suitably integrated with the design and character of the residential neighbourhood.
- A variety of parks, including tot lots and playgrounds, must be integrated into residential development areas.
  - » Playgrounds and tot lots should be located on local residential streets and accessible to the immediate neighbourhood
  - » Neighbourhood parks should be centrally located and accessible to the entire neighbourhood.
- For all new development, the provision of open spaces shall be guided by the Facility and Parks Needs Assessment Master Plan or as otherwise

provided for in an approved Area Structure Plan.

- The Town will encourage the development of an integrated trail system for pedestrians and/or bicycles to provide linkages between open spaces, community facilities, schools, and the central commercial core and housing areas.
- In residential subdivisions, rear lanes are to be provided unless an Area Structure Plan approved by Council provides for laneless lots, usually adjacent to parks and natural open spaces.

### 1.3.2 LAND USE BYLAW

*The Town of Blackfalds Land Use Bylaw (LUB)* describes all available land use districts to be utilized throughout the Town. Land uses presented in the ASP represents the LUB regulations and expected housing types.

### 1.3.3 MASTER PLAN 2007

*The Town of Blackfalds 2007 Master Plan* identifies all future servicing layouts for the Town including roadway alignments, sanitary servicing, water servicing, and stormwater drainage. All development within the Plan Area will be designed to respect the proposed servicing shown in this Master Plan.

### 1.3.4 DESIGN GUIDELINES

*The Town of Blackfalds Design Guidelines (2011)* lays out the Town's standards regarding subdivision design, servicing, and the construction approval processes. All development within the Plan Area will be designed in accordance with the Town's Design Guidelines.

### 1.3.5 WASTEWATER MASTER PLAN 2015

With the fast growth within the Town and the Lacombe County Joint Economics Areas, the Town completed a Wastewater Master Plan Update. The Plan identifies required new infrastructure as well as upgrades for the wastewater collection and treatment systems to keep up with the wastewater volume demands.

### 1.3.6 WATER MODEL UPDATE 2016

The Town of Blackfalds completed an update to the existing water model based on the current infrastructure and the future development plans for the Town. The updated water model provides insight into existing capacities of the storage facility volumes, pumping capacity and the distribution pipes .

### 1.3.7 NORTHWEST AREA MASTER STORMWATER MANAGEMENT PLAN 2018

The Northwest Area Master Stormwater Management Plan provides a conceptual design for the overall Northwest Area storm drainage system which ensures that future development within Northwest Blackfalds has the appropriate stormwater management system. The conceptual/preliminary designs will provide a valuable direction to be followed during subsequent planning and development activities, and will facilitate the development of funding mechanisms.

### 1.3.8 TRANSPORTATION STUDY

The 2015 Transportation Study was created to update the known transportation requirements for the Town of Blackfalds due to an increased population, and development of new residential areas on the east side of Highway 2A.

### 1.3.9 FACILITIES AND NEEDS ASSESSMENT

The purpose of the *Blackfalds Facility and Parks Needs Assessment Master Plan* was to help guide Town Council and administration in the future provision of community facilities, parks, open spaces, and programs. The following items were identified in the Assessment which may impact the development of Aspen Lakes West's open spaces:

- Non-motorized trails, picnic areas, and child playgrounds were noted as high priorities with the Blackfalds community
- The TransCanada Trail was identified for development with a portion of the trail constructed along the west side of the Aspen Lake, and south through Aspen Lakes West.

### 1.3.10 RECREATION, CULTURE, AND PARKS NEEDS ASSESSMENT AND MASTER PLAN

This Recreation, Culture and Parks Needs Assessment and Master Plan has been developed to provide the Town of Blackfalds with a roadmap for the future delivery of recreation, culture, and parks facilities and services over the next 10 years and beyond. The Master Plan is built upon the Town's 2008 Facility and Parks Needs Assessment Master Plan and presents a renewed vision and desired outcomes for recreation, culture, and parks that reflect a growing and evolving community.

### 1.3.11 AREA STRUCTURE PLANS

A number of Area Structure Plans (ASP) relate to Aspen Lakes West. Each ASP at minimum, provides direction for land use, servicing, roadway alignments, and the open space network. Aspen Lakes West recognizes the direction and policy of each ASP and has developed a vision that is consistent and cohesive.

## 1.4 AMENDMENTS

The Aspen Lakes West ASP was approved in 2014, as an update to the original Plan, Maclab Area Structure Plan, to support changing market conditions due to the significant growth of the Town. The amendments reflected current trends in land uses and desired product types seen throughout the region.

In the updated concept, land uses were changed to reflect different housing product types, the roadway network was realigned to provide better connectivity to surrounding areas, and the size of the manufactured home area was reduced. Stormwater management was reviewed, and a storm pond was added to the Plan Area.

In 2021, the need for a school within the Town of Blackfalds was identified. The Town explored multiple sites and discussed options with local developers to identify an ideal location that would be appropriate for a school. Aspen Lakes West was selected as the ideal site based on its location within the Town, connectivity to a collector roadway, and size of the parcel. To support the future school site, the Aspen Lakes West ASP needed to be updated in 2023.

Additional Concept Plan revisions were made based on more recent and accurate information related to the top of the slope, environmental reserve requirements, and wetland limits along the eastern boundary.

The complete 2023 amendment includes:

- Concept Plan adjustment
- Addition of a school site
- Conformation of the crest and developable area
- Reduction of the Manufacture Home Park
- Review of required infrastructure

Since 2014, Phase 1, located within the south portion of Plan Area has been developed. Phase 1 consists of 184 lots, through a combination of single-family, duplex, and townhome options.

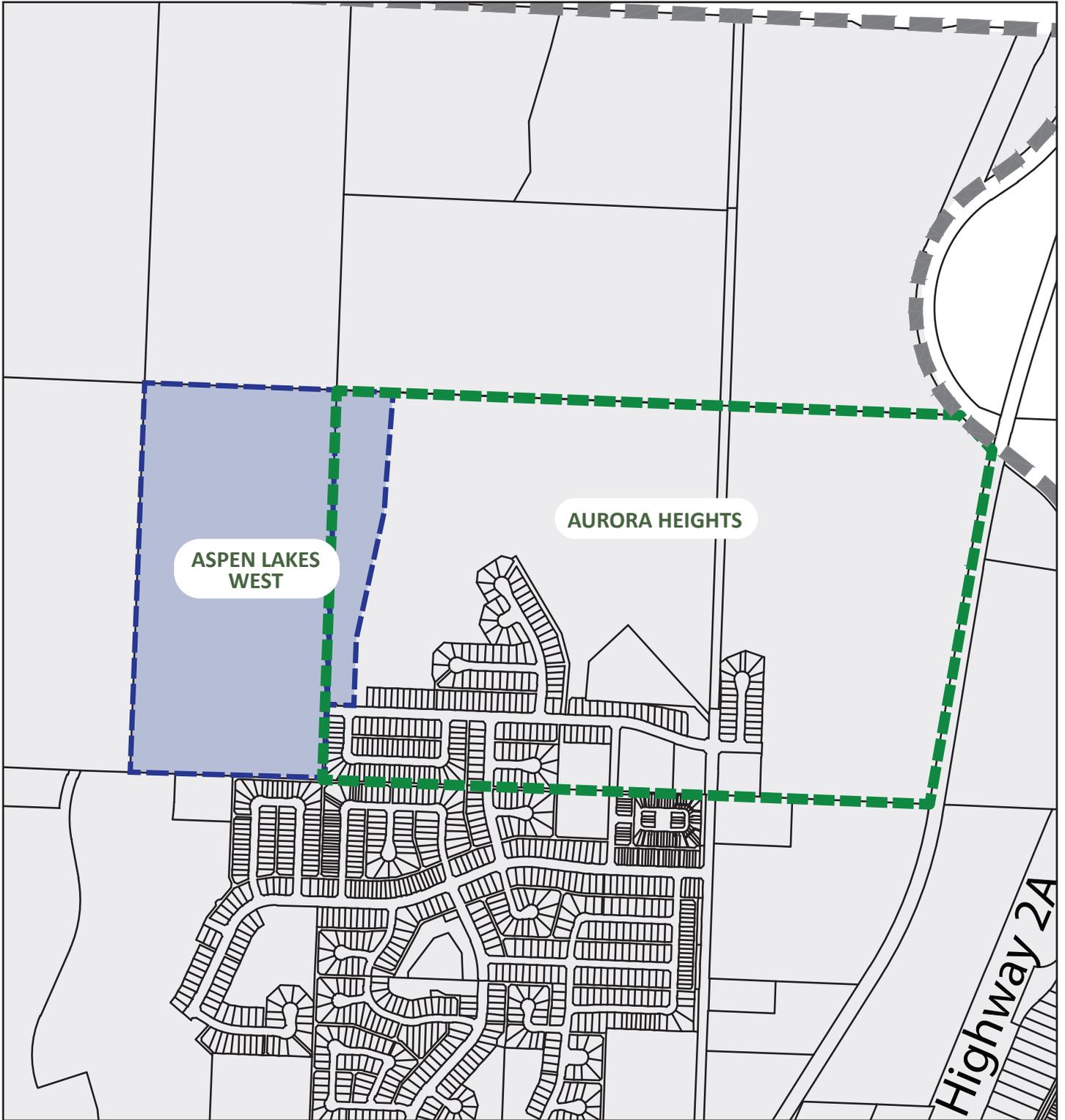


figure 3 - planning boundary

# background

## 2.1 EXISTING CONDITIONS

### 2.1.1 TOPOGRAPHY

As shown on **Figure 4 - Existing Conditions**, the Aspen Lakes West Plan Area is characterized as having gently rolling hills and is currently fenced off into pasture sections. Generally, the Plan Area drains from west to east with the ground surface elevation ranging from approximately 870.0m to 878.0m. There are significant slopes in the southern portion of the Plan Area, the most considerable of which surround the low point.

Areas in the northeast portion of the Plan Area also have low depressions sloping towards the wetland to the east.

To determine the developable boundary along the east of the Plan Area, a Slope Stability Assessment was completed to define the necessary setbacks. Stability analyses assess the risk to development near crest areas, and to determine suitable buffer distances required to protect against potential slope movements. Through the Slope Stability Assessment, the Plan Area is determined to be suitable for residential development based on three setback considerations:

- The crest is defined as the line where there is a distinct break in the grade at the top of the slope as

determined by the intersection of the slope angle with the extension of upland surface grade.

- A development setback line (DSBL) for property lines backing on to natural area should be at least 10 m from the crest.
- The building setback line (BSBL) for proposed permanent residential structures on any lots backing onto the slopes, should be at least 10 m back from the DSBL.

### 2.1.2 VEGETATION

With the exception of lightly treed areas along the east boundary of the Plan Area, the land is mostly cleared.

### 2.1.3 SOILS

As indicated in the Preliminary Geotechnical Site Investigation, prepared by Parkland Geotechnical Consulting Ltd. attached in Appendix B, the soil profile encountered in the Plan Area included topsoil and extensive deposits of fine grained sand and sandy silt with occasional zones of interbedded silt and clay. This is considered to be the typical soil profile in this area. Based on the investigation, the Plan Area is suitable for residential development.

## 2.2 HISTORIC AND CURRENT LAND USE

The Plan Area is undeveloped land currently used for agricultural purposes.

The Alberta Listing of Historic Resources (September 2013) does not identify the Plan Area for historical resources; as such, the Developer has obtained clearance for the development of the site, dated November 23, 2014.

## 2.3 ENVIRONMENTAL SITE ASSESSMENT

A Phase 1 Environmental Site Assessment for the subject site was completed by Parkland Geotechnical Consulting Ltd. in 2006. Based on this Phase 1 ESA, the Plan Area was given a rating of “low” in terms of environmental risk.



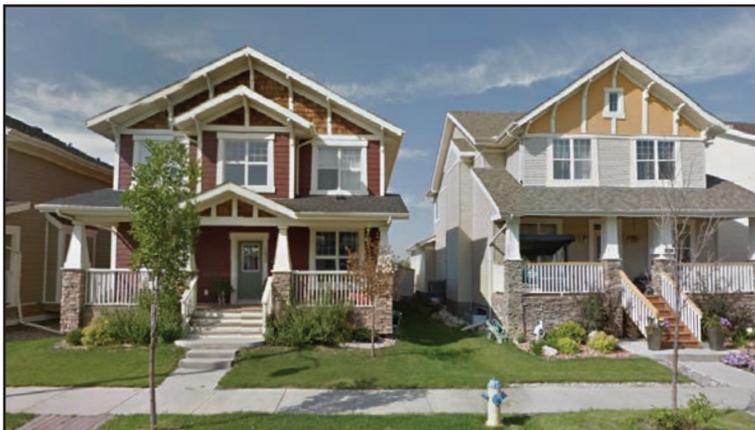
figure 4 - existing conditions

# development concept

## 3.1 OBJECTIVES

Aspen Lakes West has been designed to be consistent with the policies and design principles as identified in the *Town of Blackfalds's Municipal Development Plan*. In addition, the following objectives have been used.

- Create the framework to deliver a high quality, comprehensively planned residential area.
- Ensure uses are complementary by considering those existing located adjacent to the Plan Area.
- Accommodate the Plan Area's natural features.
- Identify development stages to allow for logical construction progression.



## 3.2 RESIDENTIAL

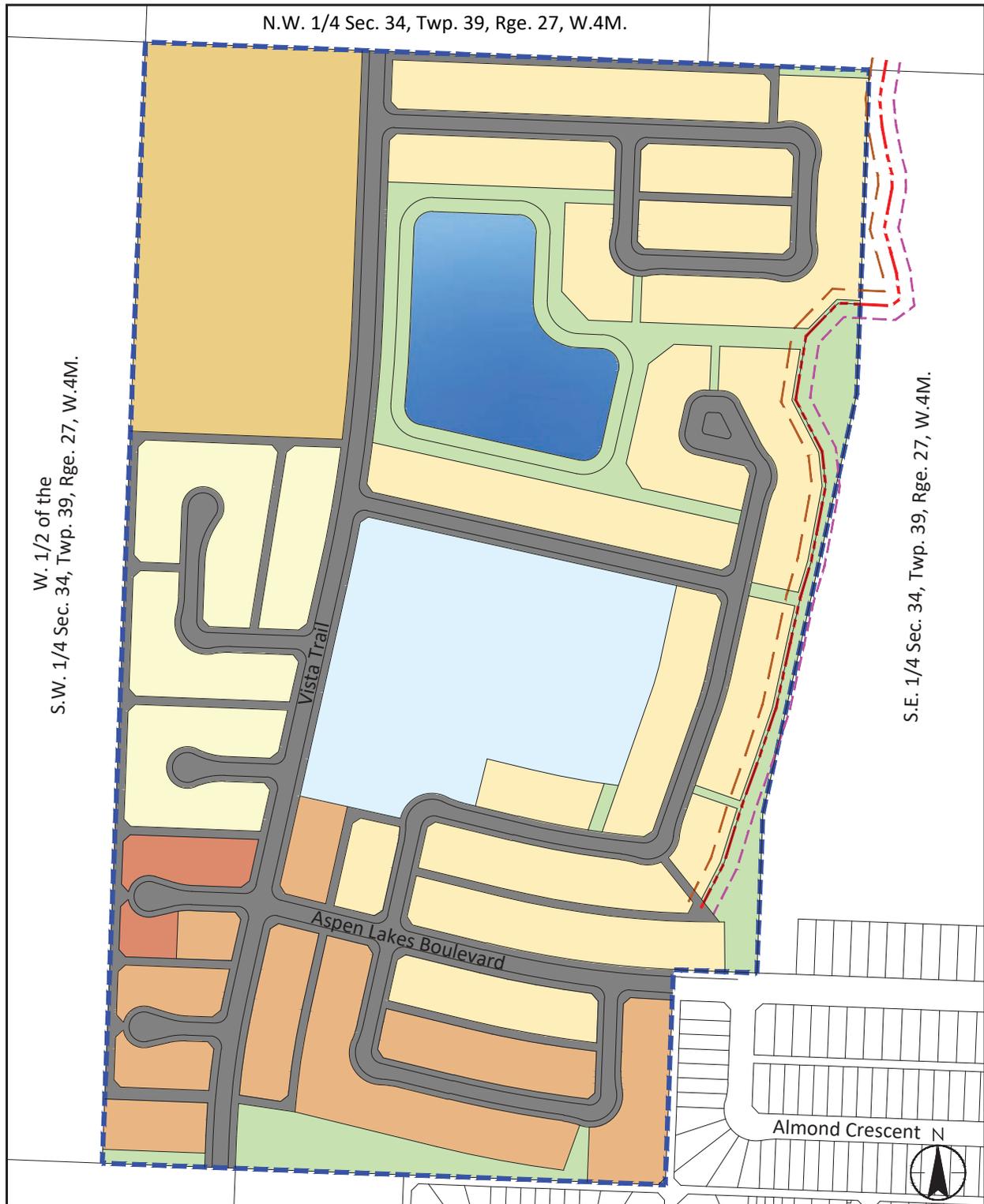
*Provide a mix of housing types and forms. Ensure residential density is a minimum of 10 residential units per gross developable hectare. Ensure all multi-family sites are a maximum of 1.75ha. Utilize master planning to incorporate manufactured home areas.*

As described below and shown on **Figure 5 - Concept Plan** and **Figure 6 - Concept Plan with Aerial**, a wide range of housing types and styles are proposed within Aspen Lakes West to provide housing choices for a range of income levels, age groups, and family types.

In addition to accommodating a broad spectrum of Blackfalds's population, the Aspen Lakes West community will showcase the style of Central Alberta through the use of Craftsman architecture. Characterized by wood detailing, low-pitched side gable roofs, wide overhangs, and exposed roof-rafter ends; Craftsman homes were popular in Alberta between 1905-1945 with a more recent resurgence. This style has also been

used throughout Blackfalds's downtown revitalization projects.

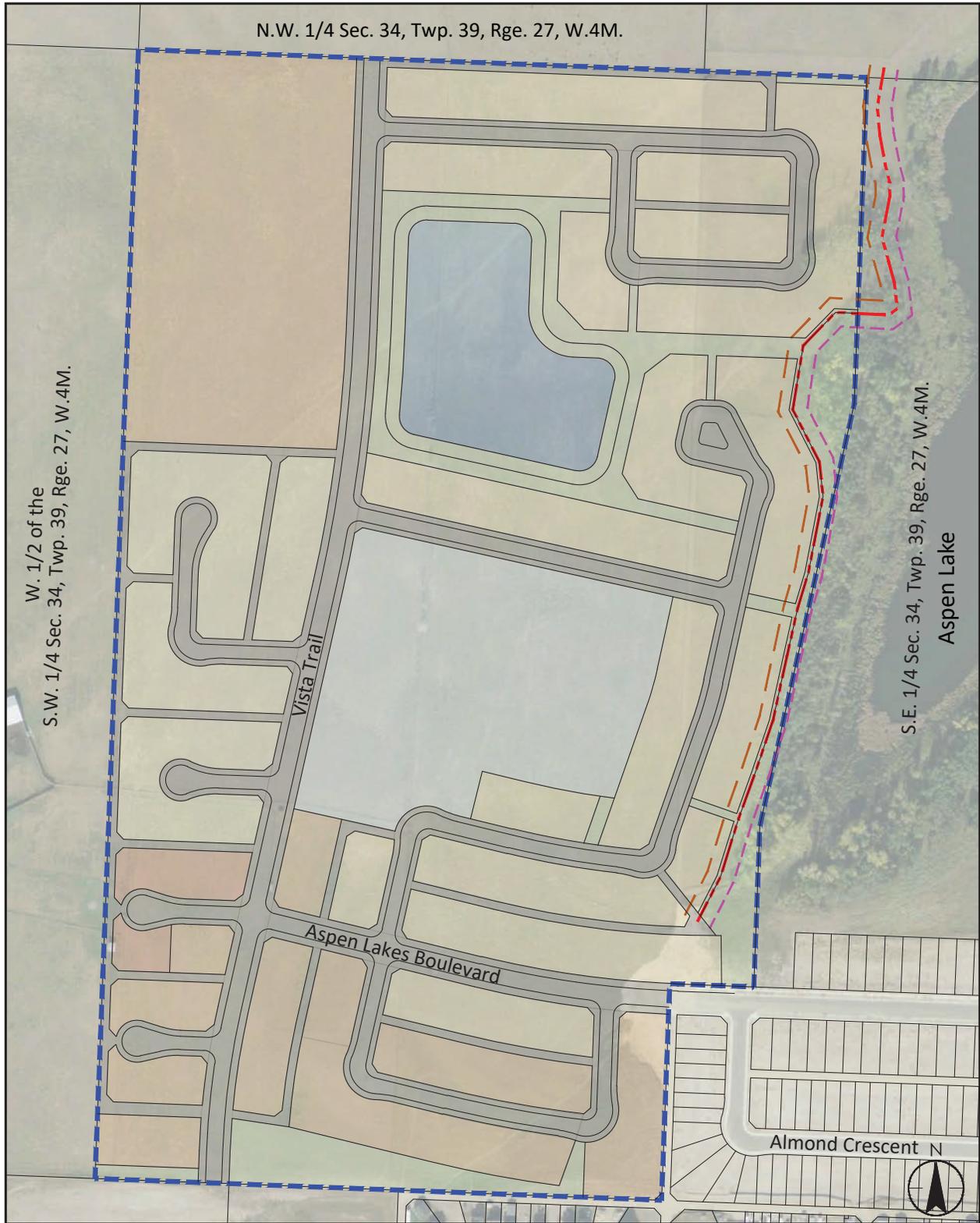
The overall housing density for Aspen Lakes West is envisioned to be 13.63 du/ha (5.52 du/ac). A full breakdown of land use calculations is shown in Appendix A.



**Legend**

	R-1M Medium Lot Residential		Direct Control District		Crest
	R-1S Small Lot Residential		Parks and Recreation (PR)		Development Setback Line (DSBL)
	R-2 Multi-Dwelling		Storm Pond (PUL)		Building Setback Line (BSBL)
	R-MHP Manufacture Home Park		Public Facility (PF)		Area Structure Plan Boundary

figure 5 - concept plan



**Legend**

- |   |   |   |
|---|---|---|
|  R-1M Medium Lot Residential |  Direct Control District   |  Crest                           |
|  R-1S Small Lot Residential  |  Parks and Recreation (PR) |  Development Setback Line (DSBL) |
|  R-2 Multi-Dwelling          |  Storm Pond (PUL)          |  Building Setback Line (BSBL)    |
|  R-MHP Manufacture Home Park |  Public Facility (PF)      |  Area Structure Plan Boundary    |

figure 6 - concept plan with aerial

### 3.2.1 R-1M RESIDENTIAL SINGLE DWELLING MEDIUM LOT

Approximately 9.70 ha (23.96 ac) of the Plan Area will be developed for medium lot residential homes using the Residential Single Dwelling Medium Lot District (R-1M). These lots are located along the east portion of the Plan Area.

Typical housing styles in the R-1M district include bungalow, bi-level, and 2-storey homes with or without front attached garages. Should homes not include front attached garages, on-site parking spaces will be provided at the rear of the lot via a parking pad or detached garage.



### 3.2.2 R-1S RESIDENTIAL SINGLE DWELLING SMALL LOT

An area consisting of 2.72 ha (6.73 ac) has been added to the Plan Area for Residential Single Dwelling Small Lot District (R-1S). These lots are located along the west boundary of the Plan Area to utilize a small pocket between Vista Trail and the west boundary.

Typical housing styles in the R-1S district include bungalow, bi-level, and 2-storey homes with or without front attached garages. Should homes not include front attached garages, on-site parking spaces will be provided at the rear of the lot via a parking pad or detached garage.



### 3.2.3 R2 MULTI-DWELLING RESIDENTIAL

Approximately 4.17 ha (10.31 ac) of the Plan Area is planned for medium density residential uses using the Residential Multi-Dwelling District (R-2).

The R2 district has been used to accommodate a growing demand for multi-dwelling housing. Housing types envisioned for location in this area include duplex homes, although the majority will be row housing. These styles of multi-family housing provide a more affordable housing option while offering residents private amenity space and often attached garages.

As per the Town of Blackfalds’s Land Use Bylaw, on-site parking will be provided via either front attached garage, rear parking pads, or rear detached garages.

#### 3.2.4.1 DIRECT CONTROL ROW HOME SECONDARY SUITES

To support additional housing options and price points, secondary suites for row homes have been identified within one cul-de-sac. These secondary suites will be restricted to end or corner units and must provide one additional parking stall.

Secondary suites are ideal to provide more affordable housing choices, utilize land in a more efficient manner, and introduce new housing options to the Town.



### 3.2.4 R-MHP RESIDENTIAL MANUFACTURED HOME PARK

Approximately 4.36ha (10.77ac) of the Plan Area, located within the northeast corner of the site, will be developed for a manufactured home community using the Residential Manufactured Home Park District (R-MHP).

Manufactured homes are single dwelling unit buildings that are manufactured off-site and can be transported to a suitable site where it becomes part of a surface foundation. This style of housing provides a more affordable housing opportunity to residents as it enables homeowners to purchase their home while leasing their lot. The manufactured home area will be privately owned with internal roadways, snow clearing, garbage pick-up, and professionally managed by a land lease community. With the average age of the population increasing, this type of housing is becoming more popular for those looking to downsize or snowbirds who spend part of the year abroad.

As per the Town of Blackfalds’s Land Use Bylaw, all manufactured homes must have a size, form, and external appearance that is acceptable to the Development Authority in order to establish a superior standard of quality in the community. Some of the guidelines identified by the Town of Blackfalds regarding this review include the following:

- all homes must be of new construction
- homes must have a minimum roof pitch of 4:12
- homes must have a roof surface of wood or asphalt shingles, clay or concrete tiles, slate or wood shakes

- homes must have a minimum roof overhang or eaves of 0.4m from each external wall
- homes must have a length to width ratio of 3:1

In addition to all regulations set by the Town of Blackfalds, all manufactured homes will be subject to strict architectural controls, maintenance requirements, age restrictions, and landscape requirements. To complement the surrounding Aspen Lakes West community, manufactured homes will include architectural styles and facade treatments similar and reflective of homes found elsewhere in the community.

As per the municipal regulations, a local recreation area totaling a minimum 5% of the land use area will be located within the manufactured home park. This area will be programmed with play equipment or other recreational items determined in coordination with the Town of Blackfalds. In addition, a common storage area will be provided to house seasonal or recreational equipment not capable of being stored on individual parcels. A common fence will also be placed surrounding the park to ensure a consistent screening between this and other uses. This fence will be constructed of high quality materials and be the responsibility of the park operator to maintain.

All roadways in the manufactured home park will be private in nature with the condo association taking responsibility for maintenance, replacement, snow clearing, and garbage removal.



### 3.3 OPEN SPACES

*Integrate a variety of parks, including tot lots and playgrounds. Centrally-locate neighbourhood parks. Incorporate non-motorized trails, picnic areas, and children’s playgrounds. Connect trails to the TransCanada trail located east of the Plan Area.*

As shown on **Figure 7 - Open Space Network**, three main park spaces have been located in Aspen Lakes West. These parks have been distributed throughout the neighbourhood to ensure convenient access by all residents and supplement park spaces in adjacent neighbourhoods to provide larger and more usable areas.

A primary neighbourhood park has been located in the north central portion of the Plan Area which will accommodate a stormwater management facility, children’s play structure, passive recreation space, and pedestrian trail connections. This park is also envisioned as a local destination for residents to engage in passive recreational uses such as dog walking, playing catch, picnics, etc.

There are also two parks that have been identified along the south and east boundaries of the Plan Area. These parks are intended to supplement those located in adjacent neighbourhoods to provide larger and more usable open spaces. These park spaces will be developed with pedestrian trail connections and periodic rest and refuse areas.

All park spaces will be developed with the inclusion of trails to accommodate passive recreation for residents. As per the Town’s Facilities and Needs Assessment, picnic spaces and children’s play structures may be included in these areas; however, such programming will be done during the time of detailed design based on the requirements and preferences of the Town of Blackfalds.

As per the Land Use Bylaw, Municipal and Environmental Reserves will be zoned Parks and Recreation District (PR), the school site and Public Utility Lots will need to be zoned as Public Facility District (PF).

### 3.3.1 SCHOOL SITE

A school site has been included in the central portion of the Plan Area. This 4.05 ha (10.01 ac) site is sized to accommodate the school, playgrounds, fields, and associated parking. Aspen Lakes West is an ideal location for the school as it will support various neighborhoods in north-west Blackfalds, provide recreation opportunities to both community residents and school users, and utilize an extensive network of trails and linkages for access. Development and detailed programming of this site will be undertaken by the school board in consultation with the Town.

### 3.3.2 MUNICIPAL RESERVES

As identified in **Table 1 - Aspen Lakes West Municipal Reserve Dedication**, a total of 6.18 ha (15.27 ac) has been dedicated as Municipal Reserve as shown in **Table 1 - Aspen Lakes West Municipal Reserve Dedication**. With the school site, Aspen Lakes West will over dedicate MR by 2.39 ha (5.92 ac), 6.3% of the developable area. Through the Development Agreement for the impacted phase, the Town and Developer will negotiate fair and acceptable terms for Municipal Reserves that are deemed to be over dedicated. Compensation for the MR over dedications may take the form of reduced off-site levies, reduced developer landscape requirements, or required conditions of the school site.

Table 1- Aspen Lakes West Municipal Reserve Dedication.

Municipal Reserve Dedication	Area (ha)	Area (ac)	% of MR Developable Area
<b>Gross Plan Area</b>	<b>38.75</b>	<b>95.75</b>	
<i>Environmental Reserve</i>	0.90	2.23	
<b>MR Developable Area</b>	<b>37.85</b>	<b>93.52</b>	<b>100.00%</b>
Required MR Dedication	3.79	9.35	10.0%
Actual MR Dedication	6.18	15.27	16.3%
<b>MR Over Dedication</b>	<b>2.39</b>	<b>5.92</b>	<b>6.3%</b>

### 3.3.2 TRAILS

As previously noted, a network of interconnected trails and sidewalks will form the pedestrian network for this community. The trail network is intended to provide off-street mobility options for residents that are active, safe, and connect to adjacent neighbourhoods.

#### *TransCanada Trail*

The TransCanada Trail spans east to west from Newfoundland to Vancouver Island and from Edmonton north to Inuvik in the Northwest Territories. Once completed, the TransCanada will connect nearly 1,000 communities across Canada. Since it's start in 1992, the TransCanada Trail is now 75% complete and Blackfalds is proud to include a portion of the Trail in their community. The TransCanada Trail runs through Town from north to south connecting Blackfalds with Red





figure 7 - open space network

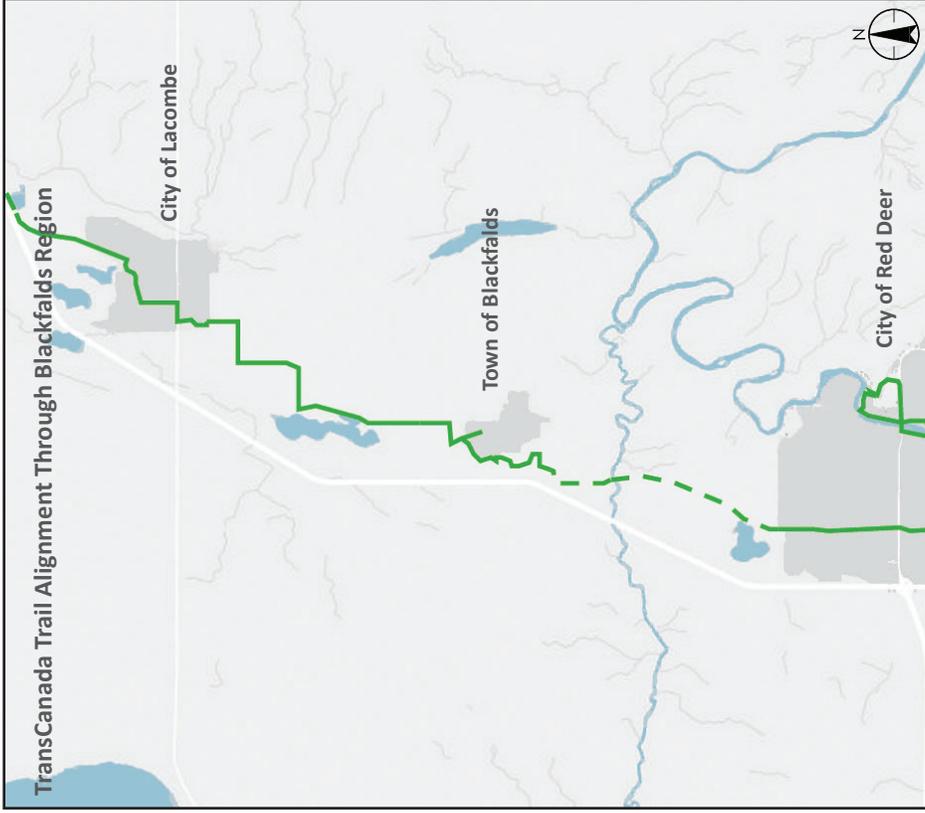


figure 9 - trans canada trail alignment

Deer and Lacombe and includes the only indoor portion of the trail in all of Canada.

As a portion of Blackfalds's TransCanada Trail connection, Aspen Lakes West will include a 3.0m paved multi-purpose trail near the east boundary of the development. This trail will continue into Aurora Heights to the east and Valley Ridge Estates to the south.

To identify the significance of this particular trail in the community, and provide directional identification for trail users, a unique wayfinding element will be included as shown on **Figure 9 - TransCanada Trail Alignment**.

To facilitate the continuation of this trail through residential areas, a 2.5m sidewalk will be provided. This connection will be separated from the roadway with boulevard landscape to increase user safety and trail durability.

Traffic calming will be used where the TransCanada Trail crosses the roadway in Aspen Lakes West to maximize pedestrian user safety. Methods of traffic calming will be determined in consultation with the Town of Blackfalds at the time of detailed design.

### 3.3.3 STORMWATER MANAGEMENT FACILITY

A stormwater management facility has been located in the north central portion of the Plan Area. While providing a functional purpose, the storm pond will also create a recreational amenity for the neighbourhood. Passive recreation elements surrounding the facility will include pedestrian trail connections, seating nodes, and refuse containers.

### 3.4 ROADWAYS

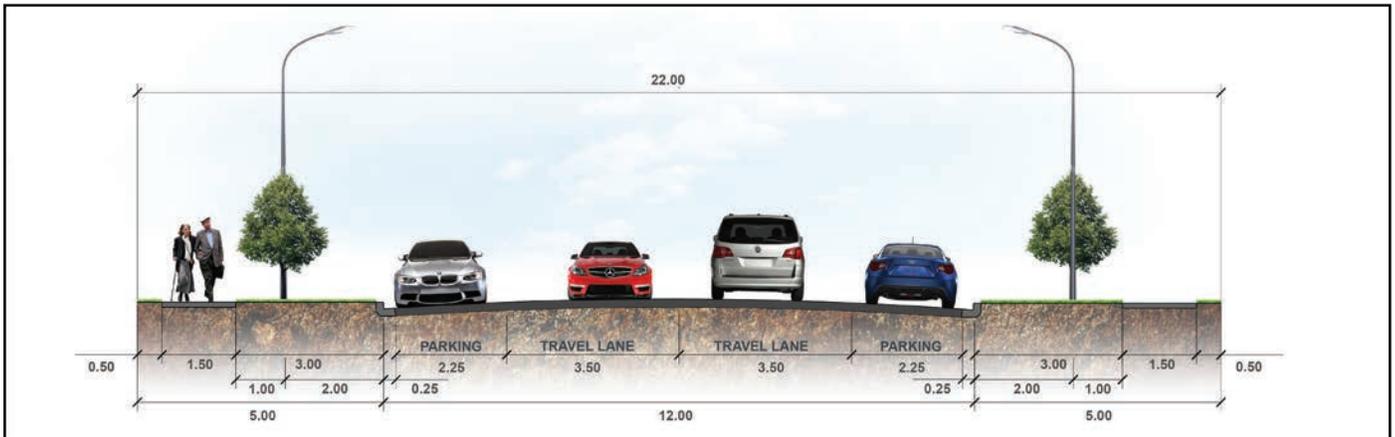
Provide rear lanes except in areas adjacent to parks and natural open spaces.

#### 3.4.1 COLLECTOR ROADWAYS

As shown on **Figure 10 - Roadway Network**, a main collector roadway runs north/south through the Plan Area. This roadway will be designed using a 22.0m wide right-of-way, 12.0m wide carriage way, and 1.5m separated sidewalks and a 3.0m boulevard on either side of the roadway.

A secondary collector roadway runs west/east along the south portion of the Plan Area. This roadway will be designed using the same standard as that listed above.

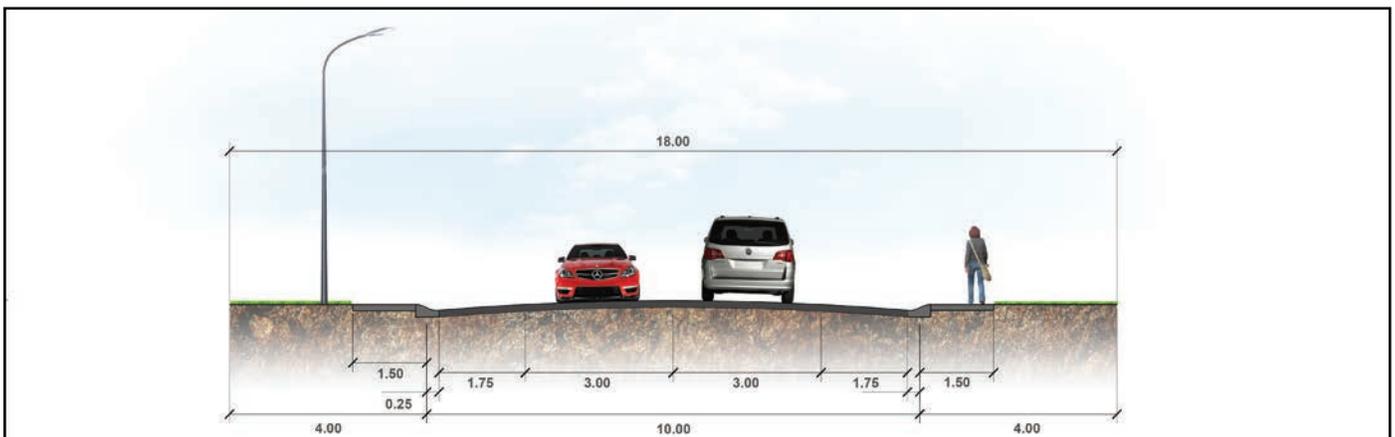
Both roadways have been designed to efficiently transport motorists through the neighbourhood while minimizing traffic on local roadways.



#### 3.4.2 LOCAL ROADWAYS

##### Standard Local

The system of local roads has been planned to provide access to individual development clusters while discouraging outside traffic from short-cutting. These roadways will have an 18.0m wide right-of-way with a 10.0m wide carriage way and 1.5m monolithic sidewalks on both sides of the roadway.



##### Modified Local

This roadways will have an 18.0m wide right-of-way with a 10.0m wide carriage way and 1.5m monolithic sidewalk on one side of the roadway. On the other side, a 2.5m separated sidewalk will be provided as part of the Trans Canada Trail.

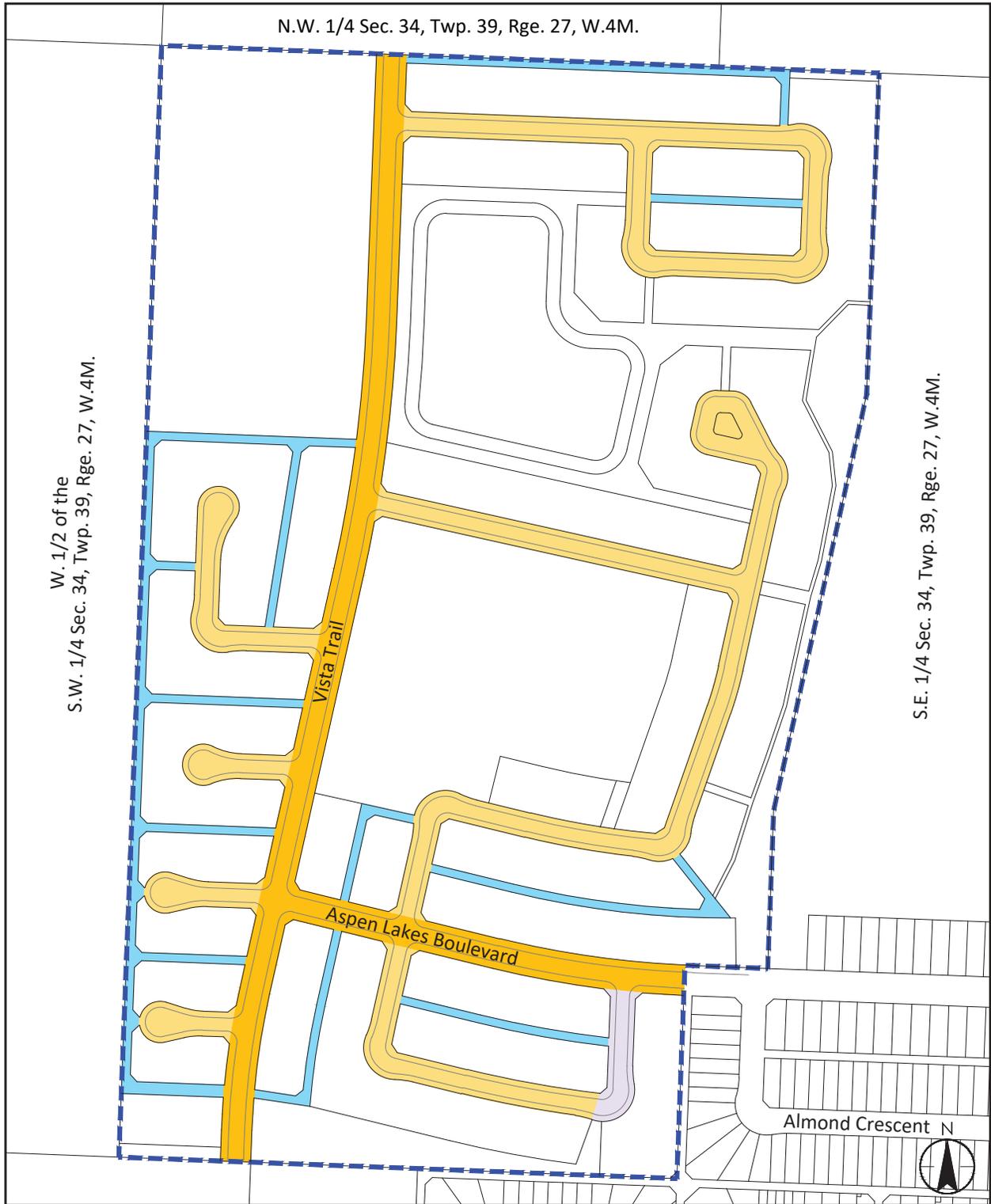


figure 10 - roadway network

# servicing and implementation

## 4.1 SANITARY SEWER SYSTEM

The proposed sanitary sewer system for the Aspen Lakes West Plan Area will link into the Town's existing 250mm diameter system along the Aspen Lakes Boulevard as shown on **Figure 11 - Sanitary Sewer Servicing**. The existing 250mm diameter sewer has capacity to handle the projected discharge flows generated from the full build-out of Aspen Lakes West.

The southern portion of the lands will gravity feed towards the existing sanitary sewer tie-in on Aspen Lakes Boulevard. This will include phase 1 in its entirety. The remainder of the land, phases 2 through 5, will gravity drain towards the low point in the north portion of the Plan Area. An interim lift station is required in the north end to pump the discharge to a south gravity sewer as required. Ultimately, the lift station will be abandoned when a regional lift station is constructed on the lands to the north with Aspen Lakes West connecting in to it. From this ultimate lift station, effluent will be pumped west and then south through the industrial lands to connect with the regional sanitary system. The location of the interim lift station is conceptual in nature, the final location and details will be determined in the Servicing Study.

All sanitary sewer facilities will be designed in accordance with the Town of Blackfalds Design Guidelines and will

become the responsibility of the Town to maintain after a two year maintenance period.

## 4.2 STORMWATER SYSTEM

### 4.2.1 MINOR DRAINAGE SYSTEM

The minor system will consist of underground piping and catch basins to capture and convey stormwater flows, up to and including the 1:5 year storm event, towards the proposed SWMF. In general, the storm system will follow the proposed road grades.

A small portion of the Plan Area located in the southeast portion of the site will discharge into the existing system within Aspen Lakes Boulevard and utilize the existing storm outfall located at the south end of the Aspen Lake. The remainder of the lands will drain into the minor storm piping system and discharge into the proposed SWMF which also outlets to Aspen Lake. Phase 1 will require storage infiltration ditches as an interim solution.

Infiltration ditches will be removed in future phases of development as the stormwater management pond will be required.

As highlighted in the Preliminary Geotechnical Investigation prepared by Parkland Geotechnical Consulting Ltd. in October 2006 for Aspen Lakes West Plan Area, groundwater was not encountered upon completion of the four boreholes that were drilled. A more detailed geotechnical investigation will be completed in the near future to determine if groundwater is present and determine if storm sewer service connections are required. At the very least foundation weeping tile and a sump pump will be utilized in the absence of a storm service connection. The sump pump will discharge water either to the surface or to a storm sewer service if one is provided.

A Slope Setback document was prepared in 2023 by ParklandGEO to consider development setback along the east boundary slope. It is recommended that all discharge from lots adjacent to the slope; downspouts and weeping tile/sump systems must be directed to the front of the lot away from the slope. Storm discharge requirements for impacted lots will be determined during detailed design of the associated phase and may be identified on title to ensure home owners are informed of general slope

development guidelines.

#### 4.2.2 MAJOR DRAINAGE SYSTEM

The major storm drainage system will consist of a network of surface drainage paths, generally along roads, lanes and pathways, which will convey water, typically in excess of the 1:5 year event, overland towards the permanent SWMF. The SWMF will be designed to detain storm events up to and including the 1:100 year storm event and treat the water prior to discharging at a pre-development controlled release rate into the existing infiltration pond to the east. The release rate of 2 L/s/ha for the 1:100 year storm event will be utilized.

In the event where a storm is greater than the 1:100 year event or some other unforeseen incident occurs that prevents the SWMF from discharging as per the design, an overland emergency overflow will be incorporated into the design of the SWMF to convey water safely towards the existing infiltration pond to prevent property damage within the community.

The stormwater facility is envisioned be designed as a hybrid wet and infiltration pond, and will provide stormwater retention and passive recreation opportunities for neighbourhood. All stormwater management facilities will be designed in accordance with the Water Act approval 00387959-00-00 and will become the responsibility of the Town to maintain after a two year maintenance period.

The pond will also be constructed to accommodate discharge from a stormpond in the industrial development to the southwest. Stormwater will be pumped out of the industrial stormpond and into Aspen West's gravity system at a point along the west boundary.

The pond will include an outlet that will discharge into Aspen Lake to the east and eventually drain to the north and into Lacombe Lake. It is our understanding that this outlet and control is currently under review with the Town of Blackfalds and Alberta Environment.

**Figure 12 – Stormwater Servicing Plan** shows the principal elements of both the minor and major drainage systems in the Plan Area.

#### 4.3 WATER DISTRIBUTION SYSTEM

The water distribution network within the Plan Area will in general follow the transportation network throughout the site as this will create an ideal grid network system.

Services within the community will be an extension of the Town of Blackfalds' existing watermain system.

In order to provide water servicing to Aspen Lakes West, the existing distribution main in Aspen Lakes Boulevard will be extended into the development from the current stub location. As shown on **Figure 13 - Water Servicing Plan**, this existing 250mm diameter watermain will continue to the proposed north south collector Vista Trail. From there a proposed 250mm diameter main will continue north and south and will be stubbed at property line to provide future connections to the development to the north and to the proposed development Valley Ridge Estates to the south. Since neither of these communities are developed to the property line the only available connection would be along Aspen Lakes Boulevard. This connection will be utilized until such time the Town of Blackfalds requires a second connection. It is anticipated that the second distribution connection will be with Valley Ridge Estates to the south. There may also be an opportunity to provide connections to the proposed industrial development to the west however exact locations will be determined in the future during the development of those lands.

The water system for the Plan Area will be modeled to determine the peak domestic and fire flow demands. From this the watermains will be sized to accommodate these demands at full build out of the Plan Area. As per the Town of Blackfalds Design Standards, the minimum residual line pressure under maximum day plus fire flow conditions shall be 150 KPa at ground level of any point in the system and a minimum 300 KPa residual line pressure during peak hour flow conditions. (Design Guidelines, May 2011).

The internal distribution network will comprise of a series of 150mm to 200mm water mains that will be installed along the local roadways, lanes and public utility lots where required to create internal looping.

The proposed alignment of the water lines within Aspen Lakes West is illustrated on **Figure 13.0 - Water Servicing Plan**.

All water mains in this development will be designed in accordance with the Town of Blackfalds Design Guidelines and will become the responsibility of The Town of Blackfalds to maintain after a two year maintenance period.

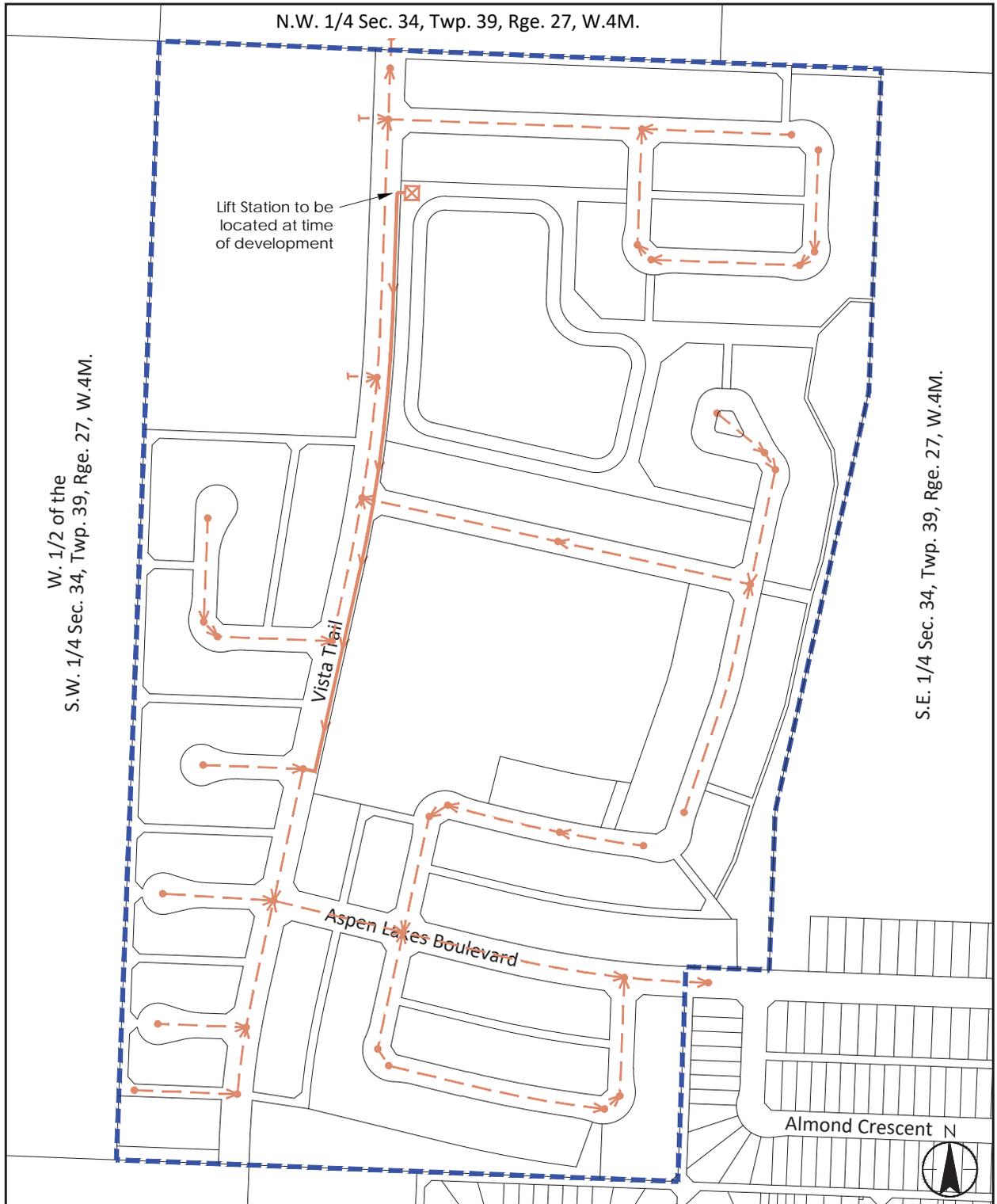


figure 11 - sanitary servicing plan

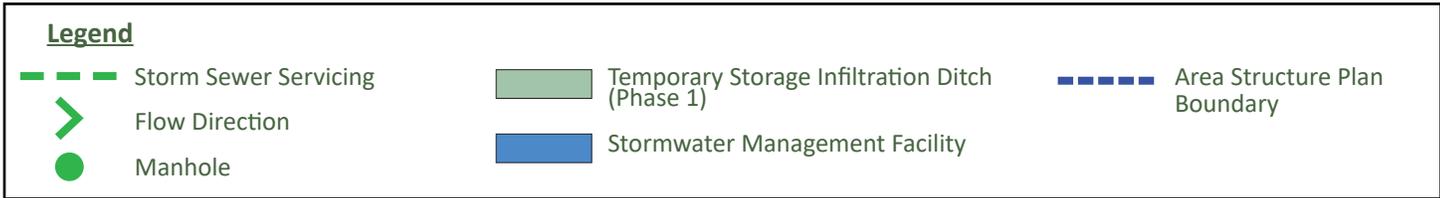
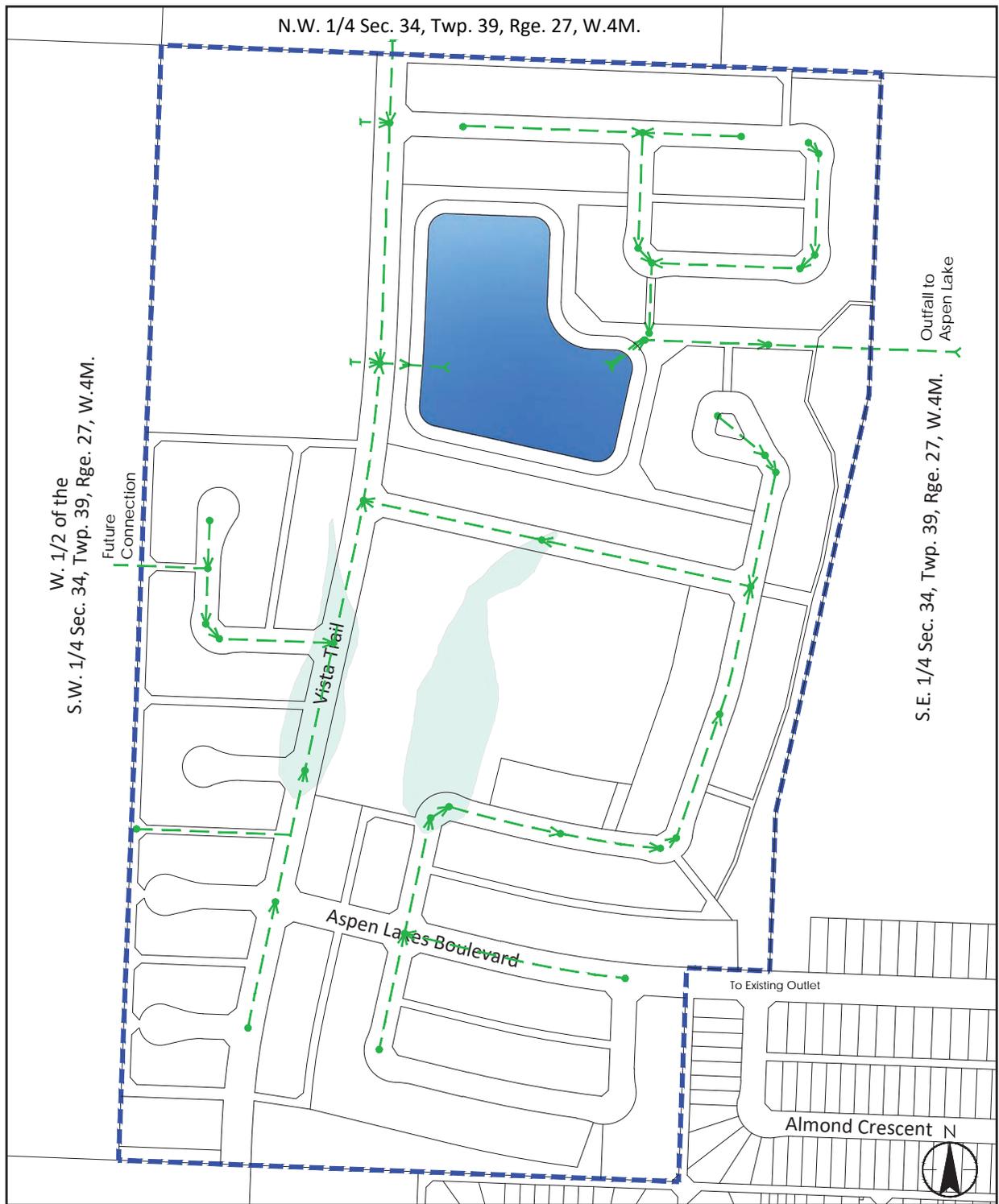


figure 12 - stormwater servicing plan

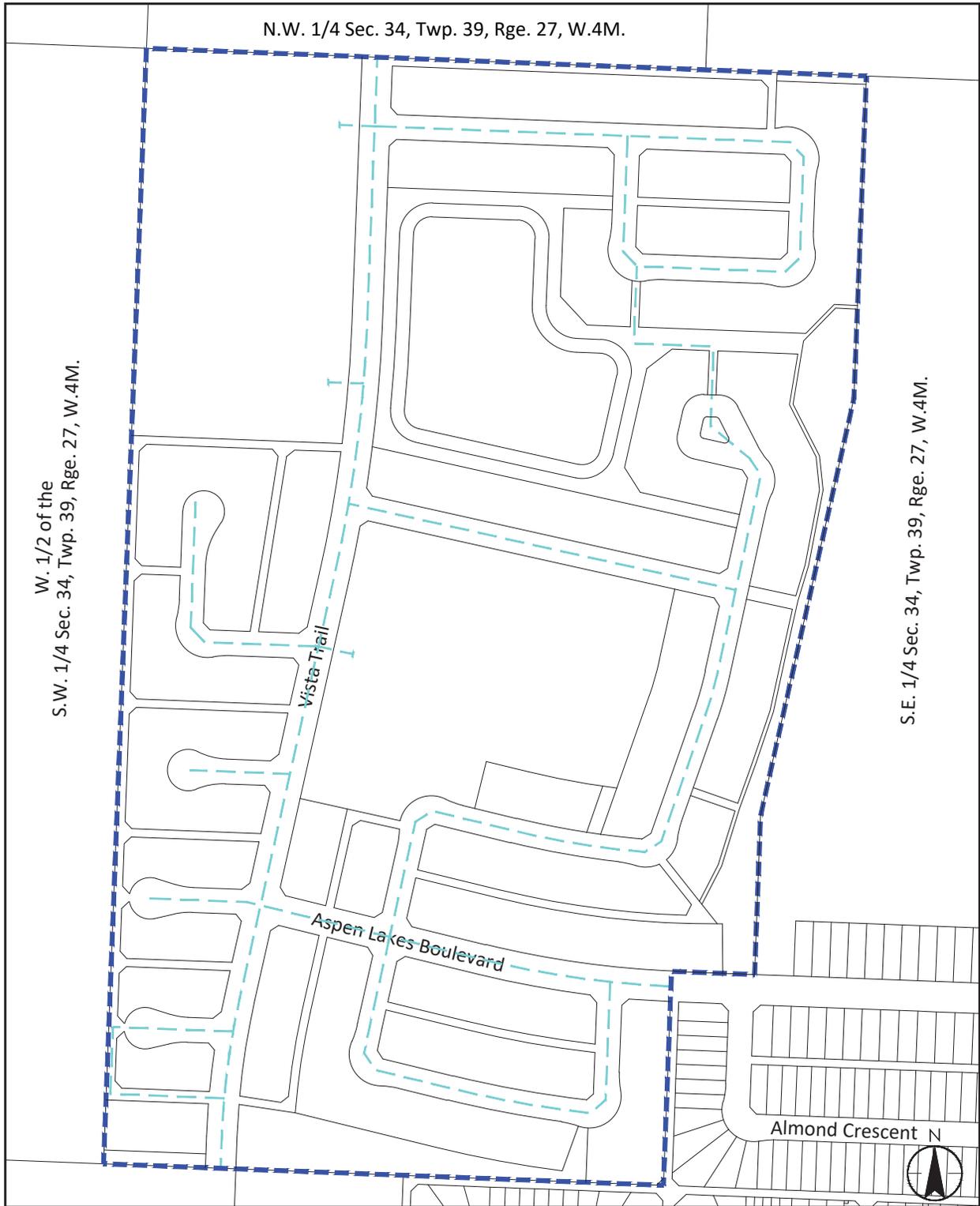


figure 13 - water servicing plan

## 4.4 FRANCHISE UTILITIES

Shallow utilities will be required for this development. These utilities include power (Fortis), telephone (Telus), cable (Shaw), and gas (ATCO) and will be extended from the existing community to the east, Aurora Heights.

## 4.5 PHASING

As shown on **Figure 14 - Phasing Plan**, development of Aspen Lakes West is proposed to be undertaken in five phases.

### 4.5.1 PHASING CONSIDERATIONS

Staging of development is dependent upon many factors one of which includes servicing. Infrastructure services to this development will be extended into the Plan Area from the existing neighborhood to the east. As this development will require a lift station and a stormwater management facility, it will also be advantageous to determine the phasing boundaries around the servicing capacity available.

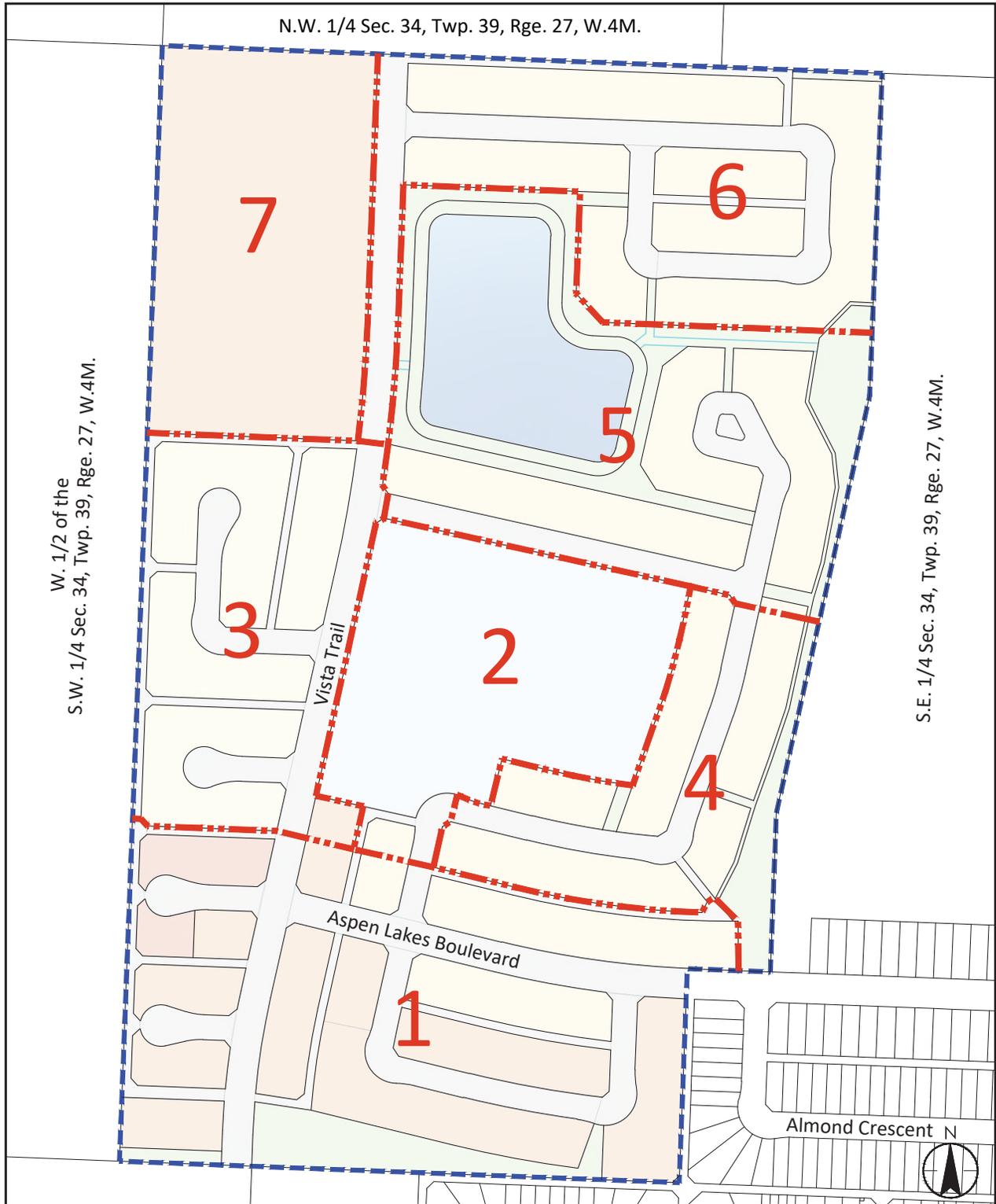
As Aspen Lakes Boulevard will be the primary entrance to this community, it is logical for Phase 1 to be located in this area of the community. Phase 1 in its entirety will be serviced with water and gravity sanitary services by extending the infrastructure from the existing development to the east. Temporary ponding storage can be utilized as an option to defer the development of the SWMF. It is proposed a small portion of Phase 1 will tie into the existing infrastructure along Aspen Lakes Boulevard which discharges into the south outfall of the existing infiltration pond.

Development beyond Phase 1 will require the commissioning of the lift station and the construction of the SWMF.

The phasing boundaries shown are conceptual in nature and may vary from those shown when redesignation and subdivision applications are made. Development phases will be completed with the logical and economical extension of municipal services with the intent of meeting the needs of the regional and local housing market. Portions of separate phases may be developed concurrently if there is sufficient demand and/or if municipal servicing is made more efficient as a result.

## 4.6 REDESIGNATION AND SUBDIVISION

Redistricting and subdivision applications to conform to the land use designations described in this Area Structure Plan will be undertaken as necessary. Guided by *The Town of Blackfalds Municipal Development Plan*, redesignation and subdivisions must conform to the uses identified in *The Town of Blackfalds Land Use Bylaw* and all applicable statutory plans in addition to the informational requirements necessary for each application.



**Legend**

- Phasing Boundary
- Area Structure Plan Boundary

figure 14 - phasing plan

# Appendix **A**

LAND USE CALCULATIONS

**Table A1 - Land Use Allocation.**

Land Use Category	Hectares	Acres	% of NDA	Dwelling Units <sup>1</sup>	% of Housing Stock
<b>Gross Plan Area</b>	<b>38.75</b>	<b>95.75</b>			
<b>Environmental Reserve</b>	<b>0.90</b>	<b>2.23</b>			
<b>Net Developable Area (NDA)</b>	<b>37.85</b>	<b>93.52</b>	<b>100.00%</b>		
<b>Residential</b>	<b>20.95</b>	<b>51.77</b>	<b>55.4%</b>	<b>516</b>	<b>100.0%</b>
<i>R-1M Residential Medium Lot</i>	9.70	23.96	25.6%	199	38.7%
<i>R-1S Residential Medium Lot</i>	2.72	6.73	7.2%	70	13.6%
<i>R-MHP Residential Manufactured Home</i>	4.36	10.77	11.5%	74	14.3%
<i>R-2 Residential Multi-Dwelling -Duplex</i>	0.81	2.00	3.9%	26	5.0%
<i>R-2 Residential Multi-Dwelling -Row Home</i>	2.91	7.19	13.9%	131	25.4%
<i>Direct Control Multi-Dwelling -Row Home</i>	0.45	1.11	2.1%	15	3.0%
<b>Open Space</b>	<b>8.70</b>	<b>21.51</b>	<b>23.0%</b>		
<i>Municipal Reserve (Open Space)</i>	2.13	5.26	5.6%		
<i>Public Facility (PF - School Site)</i>	4.05	10.01	10.7%		
<i>Public Utility Lot (PUL)</i>	0.65	1.61	1.7%		
<i>Stormwater Management Facility (PUL)</i>	1.87	4.63	5.0%		
<b>Transportation</b>	<b>8.20</b>	<b>20.24</b>	<b>21.6%</b>		
<i>Collector Roadways</i>	2.44	6.02	6.4%		
<i>Local Roadways</i>	4.34	10.72	11.5%		
<i>Lanes</i>	1.42	3.50	3.7%		

**Residential density: 13.63 du/ha** (516 u/37.85 ha)

**Table A2 - Population Projection.**

Residential Land Use Calculation	Ha	Ac	Units	Household Size	Population <sup>2</sup>
<b>Single Detached Residential</b>	<b>16.78</b>	<b>41.47</b>	<b>343</b>	-	<b>960</b>
<i>R1M Residential Medium Lot</i>	9.70	23.96	199	2.8	557
<i>R1S Residential Medium Lot</i>	2.72	6.73	70	2.8	196
<i>RMHC Residential Manufactured Home</i>	4.36	10.77	74	2.8	207
<b>Duplex and Multi-Family Residential</b>	<b>4.17</b>	<b>10.31</b>	<b>172</b>	-	<b>480</b>
<i>R2 Residential Multi-Dwelling (Duplex)</i>	0.81	2.00	26	2.8	72
<i>R2 Residential Multi-Dwelling (Townhome)</i>	3.36	8.30	146	2.8	408
<b>Total</b>	<b>20.95</b>	<b>51.77</b>	<b>516</b>	-	<b>1,440</b>

<sup>1</sup> Units are based on minimum lot size regulations in the Town of Blackfalds Land Use Bylaws.

<sup>2</sup> Population is based on an average household size of 2.8 persons, as recorded in the 2011 federal census for the Town of Blackfalds.