

McKAY RIDGE

Blackfalds, AB



AREA STRUCTURE PLAN

Blackfalds Communities Ltd.
Town of Blackfalds

February 2010
Bylaw XXXX

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1.0 Introduction

1.1 PURPOSE

The purpose of the McKay Ridge Area Structure Plan (MRASP) is to describe the land use framework and development objectives for lands SW ¼ Sec. 25-39-27-4 and encompasses an area of approximately 66.40 ha (164.00 ac). The Plan area is located within the Town of Blackfalds as shown on Figure 1.0 – Location Plan.

The intent of the McKay Ridge development is to develop a balanced community of residential, commercial and recreational opportunities with complimentary land uses. In order to achieve this, the developer intends to integrate the Plan with open space linkage connections and the development of high-quality residential opportunities. Together, these aspects will provide the Town of Blackfalds with a unique area for community development.

This document will describe the land use patterns and the development objectives for the Plan area. The MRASP will implement the land use framework and development objectives by identifying the following:

- the size and location of land uses;
- the alignment of roadways and lanes;
- the open space and park system;
- the proposed development density;
- servicing concepts for deep utility servicing; and
- the development staging sequence.

This McKay Ridge Area Structure Plan has been prepared on behalf of Blackfalds Communities Ltd.

1.2 PLAN AREA AND SURROUNDING DEVELOPMENTS

Figure 1.0 – Location Plan shows that the Plan area is located in east Blackfalds. The MRASP is defined by the following boundaries:

North Boundary – Agricultural Land

East Boundary – Agricultural Land

West Boundary – Panorama Estates ASP

FIGURE 1.0



LEGEND

- ASP BOUNDARY
- EXISTING ROADWAY
- PROJECT SITE

South Boundary – TWP RD 39-4 and agricultural land

The property is legally described as SW ¼ Sec. 25-39-27-4.

The main access to the site is via Twp Rd 39-4 (South Street). The site can also be accessed from Panorama Estates.

1.3 LANDOWNERSHIP

The Plan area consists of two titles as shown in Table 1.0 - ASP Ownership Reference and Figure 2.0 – Site Context and Ownership Plan

Table 1.0 - ASP Ownership Reference

Parcel	Ownership	Legal Description	Area Ha (ac)
1	Robert A Graves and Heather D Graves	SW1/4 SEC 25-39-27-4	62.17 (153.61)
2	Robert Arthur Graves and Heather Dianne Graves	SW1/4 SEC 25-39-27-4	2.60 (6.39)
3	Town of Blackfalds	Roadway Allowance	1.62 (4.00)

1.4 THE APPROVAL PROCESS

This Plan will be submitted to the Town of Blackfalds for review and comment. Upon receipt of the Town of Blackfalds comments, revisions to the document will be made and resubmitted to the Town for staff review and recommendation for approval.

The ASP will be presented to council for 1st reading. Upon following the required advertisement schedules and referral process, the MRASP will be presented by the Town of Blackfalds administration at a Public Hearing with council in attendance, with the expectation of 2nd and 3rd hearings. The MRASP will then be adopted via bylaw, by Town Council.

1.5 AUTHORITY

This Plan is prepared pursuant to provincial legislation outlined in s.633 of the *Municipal Government Act* (MGA) (*Revised Statutes of Alberta, 2000, Chapter M-26*) which authorizes a council to adopt an area structure plan as follows:

FIGURE 2.0



LEGEND

- ASP BOUNDARY
- PARCEL 1
- PARCEL 2
- PARCEL 3



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

- (2) An area structure plan
 - (a) must describe
 - (i) the sequence of development proposed for the area,
 - (ii) the land uses proposed for the area, either generally or with respect to specific parts of the area,
 - (iii) the density of population proposed for the area either generally or with respect to specific parts of the area, and
 - (iv) the general location of major transportation routes and public utilities, and
 - (b) may contain any other matters the council considers necessary.

The McKay Ridge Area Structure Plan has been prepared as a Statutory Plan. It adheres to Section 633 of the Municipal Government Act of Alberta and follows the guidelines and policies set forth by the Town of Blackfalds for the development of new areas.

1.6 POLICIES AND RELEVANT PLANNING DOCUMENTS

The following relevant documents have been reviewed and referenced in preparation of the MRASP report:

- Town of Blackfalds Master Plan, Update for Annexation Application, May 2008.
- Town of Blackfalds Land Use By-Law No, 1081/09
- Town of Blackfalds Parks and Open Space Plan, January 2003
- Town of Blackfalds Needs Assessment & Trails Plan, 2008
- Town of Blackfalds Minimum Design Standards for Development, September 2001
- Town of Blackfalds Transportation, 2003
- Town of Blackfalds Master Plan Updated, 2008

These documents provide information related to Development Concept, land use for the area, density of population, infrastructure servicing requirements, and staging.

1.7 INTERPRETATIONS

Maps, Plan and Figures: Unless specifically identified within this Plan, all boundaries and location of any land use district boundaries and/or symbols shown are approximate and shall be interpreted as such. Unless identified as absolute locations, the enclosed maps and figures are not intended to define exact locations.

Development Application: Any request by a landowner/developer for approval of site specific changes shall be considered as a Development Application. A development application may include town specific ASP's or outline plan, subdivision, and land use re-designation applications.

2.0 Site Context & Development Consideration

2.1 TOPOGRAPHY, SOILS AND VEGETATION

As shown on Figure 3.0 – Existing Conditions, a ridge extends east/west through the site creating a high point of 882.0m. From this ridge the terrain falls north towards a series of wet areas to a low point of 867.0m. The majority of watershed from this site drains to the northwest corner. At this point the water collects and ultimately drains west into Blackfalds Lake. Water on the south side of the ridge will drain into the TWP RD 394 ditch, eventually ending up in Blackfalds Lake.

Significant slopes occur on the south side of the Plan area. There is up to 15m of elevation drop from the top of the ridge to the low/wet area. Slopes along the north side of the ridge are as much as 10 percent in some locations.

As shown on Figure 3.0 – Existing Conditions, there is a significant amount of land used for agricultural purposes. A small portion of this land contains vegetation, the majority of it is concentrated in the northwest corner of this property adjacent to the wetland area.

2.2 NATURAL FEATURES

The most significant natural feature within the Plan area is the wetland area located in the northwest corner. This area is a low point and collects the majority of the watershed. It remains wet or swampy throughout most of the year and is surrounded by trees. Other low areas exist on the northern portion of the Plan area. These areas collect water seasonally, usually during the spring or during heavy rain falls.

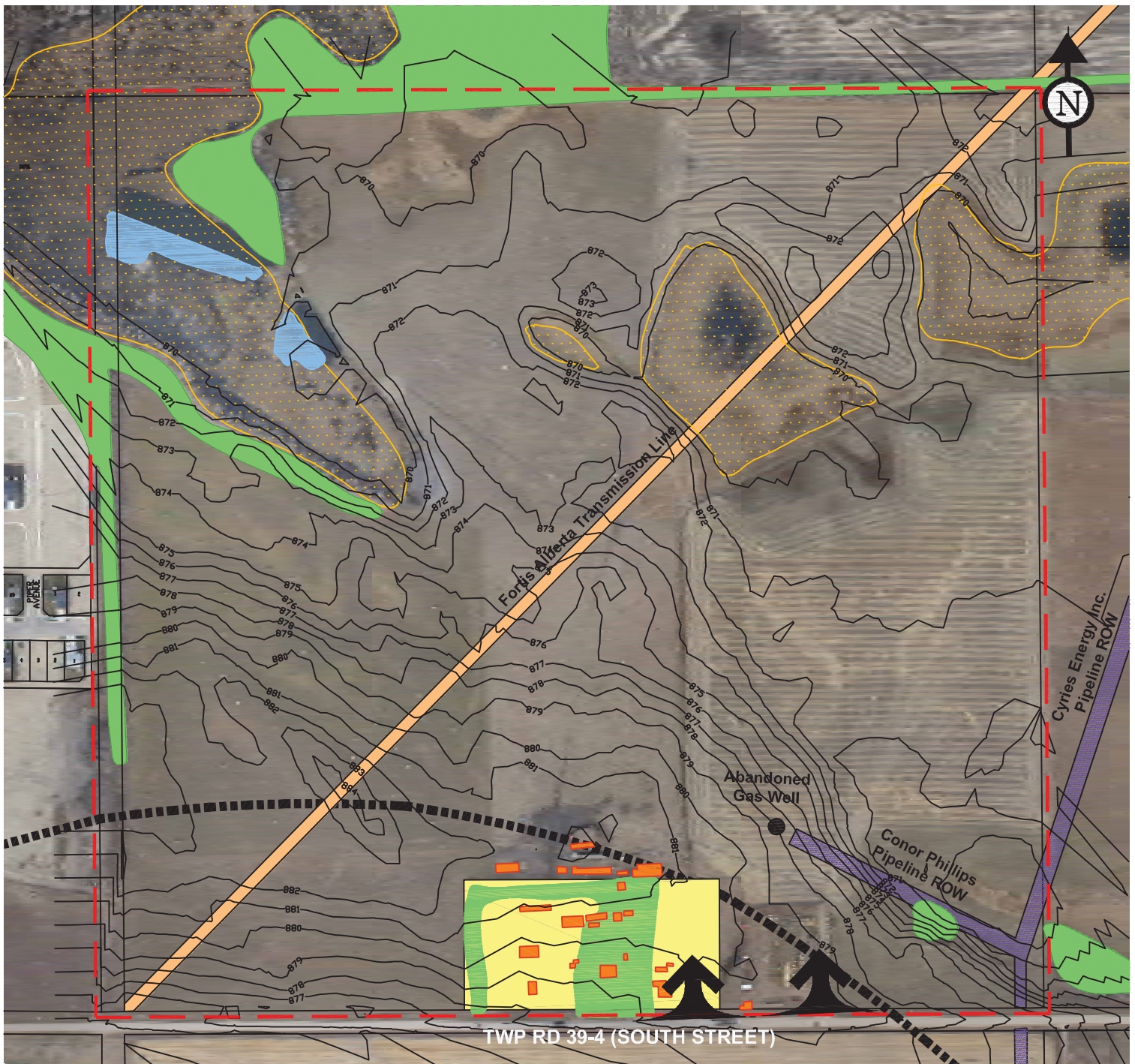
As mentioned previously, the vegetation within the Plan area is located mainly around the low area in the northwest corner. They extend from the northwest corner in a thin row parallel to the northern area boundary. These trees are located primary on the adjacent property to the north and will therefore be retained for now.

2.3 HISTORICAL LAND USE

The Plan area is undeveloped agricultural land and has been previously used for agricultural purposes. There are some uncultivated areas where ponding has occurred due to natural surface drainage patterns.

One house and several ancillary buildings currently exist on the land and will be removed at the time of development.

FIGURE 3.0



LEGEND

	ASP BOUNDARY		EXISTING TREES		EXISTING ACCESS		PIPELINE
	RIDGELINE		WATER AREA		CONTOURS		LOW AREA
	PRIVATE PARCEL		EXISTING BUILDING		TRANSMISSION LINE		

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EXISTING CONDITIONS McKAY RIDGE - AREA STRUCTURE PLAN



2.4 WESTERN ROAD ALLOWANCE

There is 4.00 ac parcel of land that is in the title of the Town of Blackfalds. This parcel was for a 20m wide roadway allowance that is no longer required for road access.

Blackfalds Communities Ltd. will purchase a portion of the parcel at raw land market value, and this will be incorporated into the overall development.

Of the 20m wide road allowance, a 5m strip will be retained by the Town as Municipal Reserve and incorporated into the future trail system. At the north end of the road allowance will be retained by the Town as open space.

2.5 CONSTRAINTS TO DEVELOPMENT

A power line runs from the southwest corner to the northeast corner. Through preliminary conversations with Fortis Alberta, this overhead power line is proposed to be removed as development proceeds and incorporated in a new under power system within the McKay Ridge development.

There are two existing pipeline right of way located in the south east corner of the Plan. The first which extends northwest into the Plan area is owned by Conner Phillips. This R.O.W can now be discharged since it serviced a gas well which was abandoned in 1995.

Prior to subdivision of the Plan area, the precise location of the well will be confirmed in the field. The Plan may have to be modified to ensure that the well is setback least 5m from any permanent structures, 3m from any underground utilities and that there is sufficient working space in the unlikely event that a drilling rig requires access to the well, as per EUB policy regarding abandoned sweet gas wells.

The second gas line R.O.W belongs to Cyries Energy Inc. This line services an active gas well on the adjacent quarter section to the east and will need to be maintained. Development above this right of way will need to conform to the development restrictor imposed by this right of way.

3.0 Development Objectives and Principles

3.1 DEVELOPMENT OBJECTIVES

The intent of Blackfalds Communities Ltd.'s through the MRASP is to develop a comprehensively planned, balanced community of residential and recreational opportunities, taking advantage of the existing natural features and topography. In order to achieve this, Blackfalds Communities Ltd. intends to develop a high-quality residential neighbourhood that complements the existing landscape and surrounding countryside, incorporates interconnected parks and open space linkages, and establishes natural areas preserving environmentally significant land. This will provide the Town of Blackfalds with a unique area for community development. The main objectives of the MRASP are:

- ensure a high standard of subdivision design in order to promote the efficient use of land, roads and utilities, compatibility between housing types and other land uses and an aesthetically pleasing residential environment.
- developing a plan consistent with the general intent and purpose of the Town of Blackfalds Municipal Development Plan;
- incorporating existing site features (i.e. the wetland) into the Plan; and
- ensure that the implementation of the Plan takes place in an orderly, phased basis.

3.2 DEVELOPMENT PRINCIPLES

Development within the MRASP is defined through the following general principles:

3.2.1 Residential

- Encourage a variety of housing types, including single detached housing, manufactured housing and multi family. All housing forms and options will recognize consumer preferences and be in conformance with municipal standards and policies as set forth by the Town of Blackfalds.
- Encourage pedestrian friendly streetscapes.
- Provide direct and safe pedestrian linkages to the community nodes such as the open space areas and residential developments.

- Locate residential development to take advantage of existing natural features like the existing wetland area, parks / open spaces, stormwater management facilities and utility corridors.
- Provide transition between lower density housing to higher density housing types.
- Create residential development that compliments and provides continuity to adjacent existing residential development.
- Provide a variety of lot types.

3.2.2 Open Spaces and Recreational Facilities

- Allow for the provision of park space within the neighborhood to provide open space and opportunities for recreation for residents
- Provide pedestrian linkages.
- Preserve and enhance the existing wetland areas to provide an active and passive recreational amenity, complete with pedestrian linkage, for the entire community to enjoy.

3.2.3 Transportation

- Provide a logical, safe and efficient transportation system within the plan area to address pedestrian, bicycle and other multi-use modes of transportation, and the transit / vehicular transportation needs of residents moving to, from and within the east Blackfalds area as well as to the adjacent areas.
- Provide non-vehicular circulation options throughout the Plan area with special attention to linkages to the recreational parks site and existing wetland areas.
- Minimize walking distances by creating an interconnected street network and providing walkways where roadway connections are not feasible.

3.2.4 Ecological Stewardship

- Develop land in an efficient manner and encourage intensive urban development.
- Preserve and enhance the existing wetland in order to protect this important natural feature.
- Encourage naturalized landscaping on public and private lands to minimize environmental and economic costs associated with maintenance.

- Promote the development of open spaces and walkway linkages for pedestrian, bicycle and other multi-use travel, and connect them to the surrounding areas.
- Encourage energy efficient construction and other innovative building and infrastructure techniques.

4.0 Development Strategy

The MRASP is based upon a response to current and anticipated market trends within Blackfalds and the Central Alberta region. An analysis of these trends and an assessment of their implications assist in shaping the plan with respect to the type, shape, size, and locations of various land uses.

The Development Concept is shown on Figure 4.0 –Concept Plan. The land use statistics, number of residential units and population are represented in Table 2.0 – Land Use Statistics following the Development Concept.

The primary factors considered in the evolution of this development are the natural area in the northwest, the township road boundary to the south and the connection to the Panorama Estates ASP to the west.

4.1 RESIDENTIAL

As shown on Figure 4.0 - Development Concept and Figure 5.0 - Development Concept with Aerial, most of the land within the Plan area is intended for single family residential development. Consideration has been given to areas in proximity to the amenities offered by the existing wetland, park sites and utility corridors. Within the Low Density Residential areas identified in the plan, housing forms will consist of single detached housing catering to a variety of lot and home sizes. These lots will have a minimum lot depth of 35m with the exception around bulbs and closes.

4.1.1 Residential Single Dwelling Large Lot (R-1L)

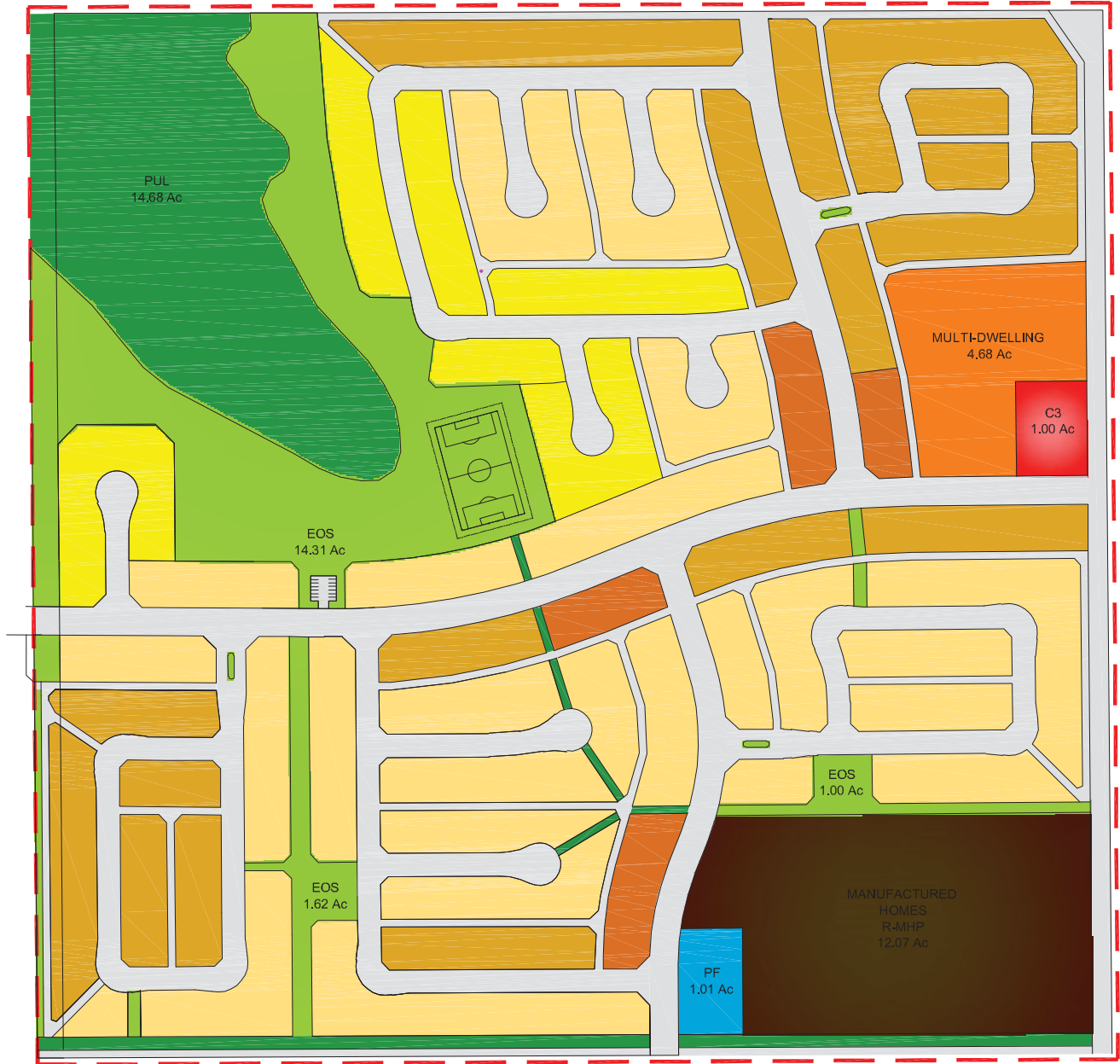
Two sites within the Plan area are proposed to be developed as R-1L single family lots. The first area is located southwest of the wetland area with the second area, backing onto the east side of the wetland. The majority of these lots are adjacent to green space and will not include lanes.

Within the R-1L areas, housing forms will consist of single detached housing catering to a larger lots and home sizes. These lots will typically be between 15-17m wide with corner lots being a minimum of 16.5m wide. R-1L will create lots that have a minimum parcel area of 550m² with a depth of 35m.

4.1.2 Residential Single Dwelling Medium Lot (R-1M)

Within the MRASP, areas have been identified as Residential Single Dwelling Medium Lots. These areas are located throughout the Plan area. These lots will be developed as single family dwellings and range in width from 12.5m interior to 13m wide. R-1M will create lots that have a minimum parcel area 460m² with a depth of 35m.

FIGURE 4.0



LEGEND

- ASP BOUNDARY
- SINGLE DWELLING (R1-L)
- SINGLE DWELLING (R1-M)
- SINGLE DWELLING (R1-S)
- RESIDENTIAL MULTI-DWELLING (R-2)
- MULTI-DWELLING RESIDENTIAL (R-3)
- MANUFACTURE HOME PARK (R-MHP)

- COMMERCIAL LOCAL (C-3)
- PUBLIC FACILITY (PF)
- ENVIRONMENTAL OPEN SPACE (EOS)
- PUBLIC UTILITY LOT
- ROADS AND LANES



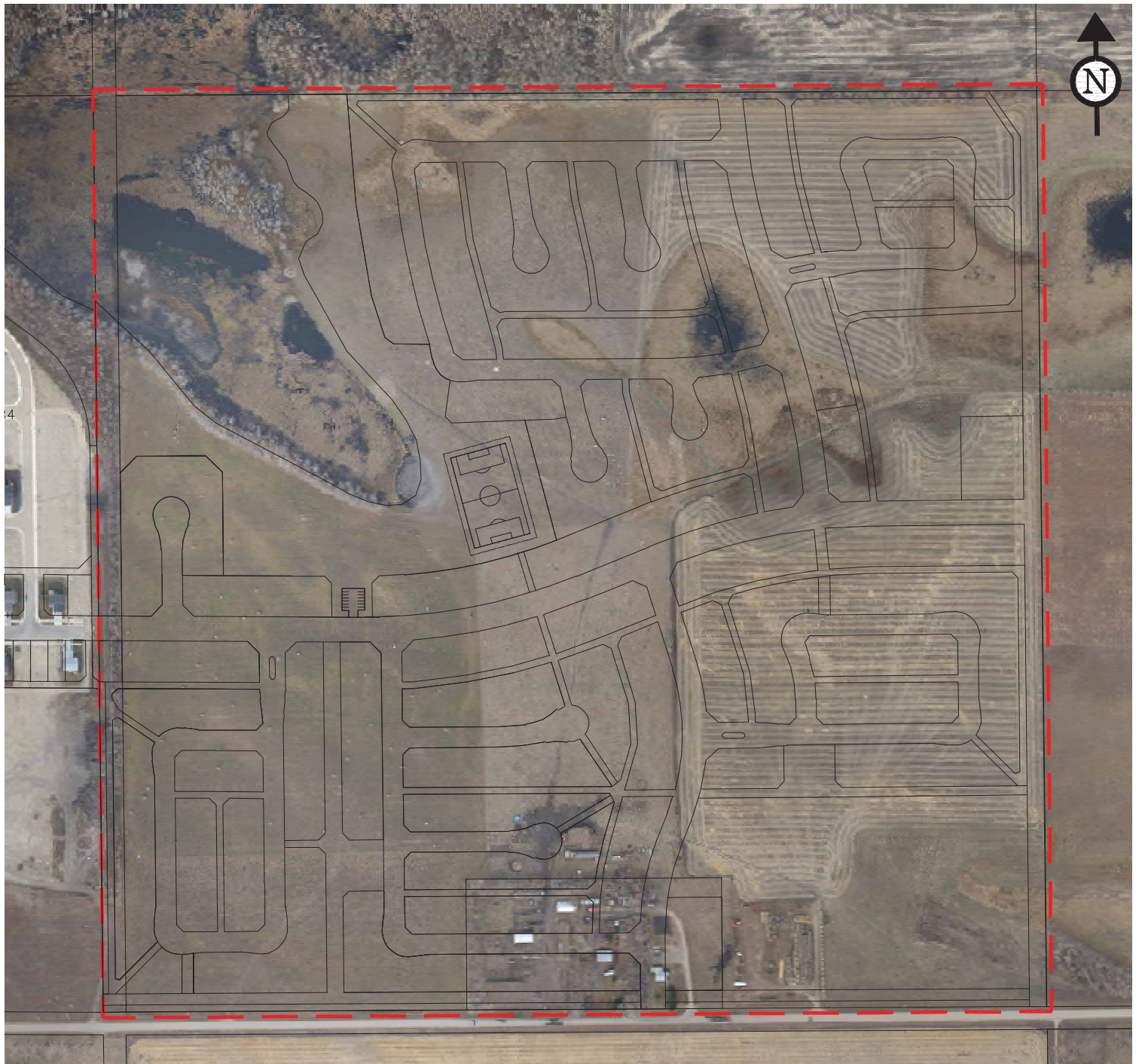
JANUARY 2010

CONCEPT PLAN

McKAY RIDGE - AREA STRUCTURE PLAN



FIGURE 5.0



LEGEND

■ ■ ■ ASP BOUNDARY



OCTOBER 2009

CONCEPT PLAN
McKAY RIDGE - AREA STRUCTURE PLAN



4.1.3 Residential Single Dwelling Small Lot (R-1S)

With the continued demand and need for lots and housing options, this Plan has made provision for R1-S development. These lots are proposed in the northeast and southwest corner of the Plan as well as along southside of the Collector Road. They will have widths ranging from 10.5m to 12m. R-1S will create lots that have a minimum parcel area 360m² with a depth of 35m.

4.1.4 Multi-Family Residential (R-2/R-3)

Within the MRASP, one area has been designated for R-3 multi-family development while several locations will accommodate R-2 multi-family development. These sites are located near amenities, major roadways and provide easy access throughout the Plan area.

It is anticipated that these sites may be developed with either duplexes, four-plexes, apartments or row housing. This site may also incorporate other development types such as a social care facility.

The R-3 Multi-family site, is larger then allowed by the Municipal Development Plan. The Municipal Development Plan states that no multi-family site shall be developed on a site larger then 4.32 ac unless special site characteristics or design features will reasonably accommodate larger sites within the context of the characteristics of the neighbourhood and surrounding land uses.

The Multi-family site is envisioned to be developed in a manner which minimizes impact to the surrounding developments. They may be comprehensively designed with larger green spaces, providing a greater buffer between this site and the single family residential development to the north.

4.1.5 Manufactured Home Site (R-MHP)

Located in the southeast corner of the Plan area, a 12.07 ac site has been identified for a Manufactured Home Park. This park will be accessed internally and will accommodate approximately 84 units.

The overall design and intent of the site is to develop a safe and attractive community within McKay Ridge. Based upon the LUB, the site may accommodate a total of approximately 84 units, for a density of approximately 17 units per hectare. A combination of cluster and traditional layouts may be used to increase efficiency and maximize land use.

Within each cluster and lot, green space will be provided for as well as adequate parking. Each unit may also include single individual garages and additional guest parking.

This Manufactured Home Park is envisioned to be a gated community for 55 and over senior residents. A number of amenities and features will be part for this site including parks, green space, a club house, storage compounds and paved roads complete with sidewalk, curbs, and gutters. All open space areas will be landscaped to include a variety of planting, paved walkways and play equipment. A club house is intended to provide the park residents with a common gathering space.

The Developer will establish architectural controls that define the style of homes and lot conditions within this park. These controls will ensure a high level of standards for the age of units, materials, colors, landscaping and layout.



Table 1.0 - Land Use Statistics

Land Use	Area Hectare (Acre)	% of GDA
Gross Area (Including Existing	66.4 (164.08)	
Arterial Road	1.76 (4.35)	
Net Developable Area	64.64 (159.73)	100%
Single Family Residential		
Single Dwelling Large Lot (R1-L)	4.13 (10.21)	6.40%
Medium Lot Residential (R1-M)	15.03 (37.15)	23.25%
Small Lot Residential (R1-S)	9.45 (23.35)	14.62%
Multi-Family Residential		
Multi-Dwelling Residential (R2)	1.55 (3.84)	2.4%
Multi-Dwelling Residential (R3)	1.89 (4.67)	2.9%
Manufacture Home Park (R-MHP)	4.89 (12.08)	7.6%
Commercial Local (C-3)	0.40 (0.99)	0.6%
Public Facility (PF)	0.41 (1.01)	0.6%
Environmental Open Space (EOS)	7.06 (17.44)	10.9%
Public Utility Lot	6.90 (17.05)	10.7%
Roads and Lanes	12.95 (32.02)	20.1%
Total	64.65 (159.75)	100%

Table 2.0 - Residential Units and Population

Land Use	Area ha (ac)	Density Units(ha)	Units	Person/Units	Population
Single Family Residential					
Single Dwelling Large Lot (R1-L)	4.13 (10.21)	17.29	71	2.5	177
Medium Lot Residential (R1-M)	15.03 (37.15)	20.50	308	2.5	770
Small Lot Residential (R1-S)	9.45 (23.35)	25.93	245	2.5	612
Multi-Family Residential					
Multi-Dwelling Residential (R2)	1.55 (3.84)	32.78	50	2	100
Multi-Dwelling Residential (R3)	1.89 (4.67)	44.46	84	2	168
Manufacture Home Park (R-MHP)	4.89 (12.08)	17.29	85	2	170
Total			843		1997
Average (Net)		26.37			

4.2 PUBLIC FACILITY

The 1.00 Ac site in the south of the Plan area has been designate as Public Facility for the intended use of Place of Worship. Upon approval of this ASP, the site will be marketed for a period of 1 year. In the event that there is no formally expressed interest in this site for a suitable development of these uses, the site will be used for a local commercial districts (C-3).

4.3 COMMERCIAL

One Commercial Local District (C-3) has been designated at the intersection of the major east west roadway and the future east arterial roadway. This site will act as an important focal point for the neighbourhood and surrounding communities.

The site is of sufficient size to support a local convenience centre accommodating a range of retail businesses and medical and professional office uses. In the event that this is not marketable as a commercial use it could be developed as a multi-family site.

4.4 PARKS AND OPEN SPACES

4.4.1 Recreational Park Site

As shown in Figure 6.0 – Parks and Trails Plan, the Plan area contains a central open space. The northwest portion of the Plan area contains a large wet land area that will be protected due to its environmental sensitivity. This large park area will be developed to minimize human impact by preserving the shore line and restricting access to the wetland.

To incorporate this area into the overall park concept, a trail system has been shown around the wetland area. Several additional trails connect to this park, allowing for connections throughout the entire Plan area. A tot-lot/play structure has also been planned within this park area. This open space may allow for sports fields as required by the Town of Blackfalds.

Additional park sites are strategically located throughout the Plan area to provide all residents in the area convenient access to Open Space. These parks create a network of open spaces which ensure that a park is within 200m to 300m of all residential lots. The parks will be designed as smaller local parks and will include amenities such as play structures, tot lots, etc.

4.4.2 Linear Park Sites and Walkways

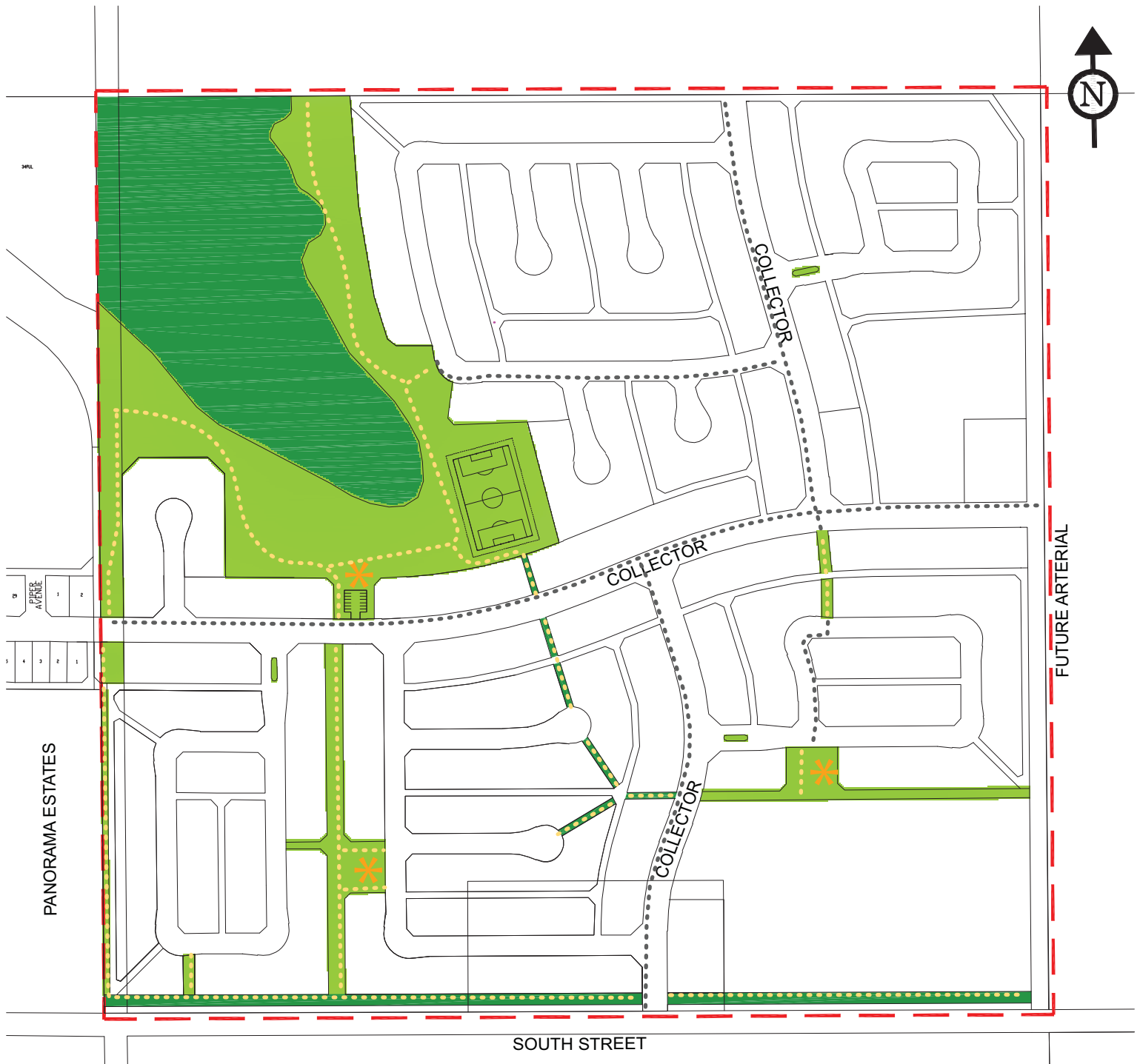
Several linear parks areas, which create a passive recreational network throughout this community as well as access to adjacent neighborhoods are planned for within this neighborhood. These linear parks will have a minimum width of 10m and will be designed as per the Town of Blackfalds Design Guidelines.

The trails network is envisioned to be mixture 3.0 m wide asphalt trails and conventional street sidewalks. Figure 6.0 – Open Space and Trails Plan, shows the location of the parks and pathways throughout the Plan area.

4.4.3 Existing Wetland

The existing wetlands in the northwest corner of the plan will be reconstructed and will function as a passive and active recreational amenity for the residents of Cottonwood Meadows, Panorama Estates and McKay Ridge.

FIGURE 6.0



LEGEND

- ASP BOUNDARY
- TRAILS
- CONNECTING SIDEWALK
- ✱ PLAY STRUCTURE/TOT LOT



JANUARY 2010

PARKS AND TRAILS

McKAY RIDGE - AREA STRUCTURE PLAN



5.0 Transportation

The system of roads proposed for the MRASP provides its residents and the traveling public with safe and efficient access to and this area as shown on Figure 8.0 – Transportation Network.

Primary access to the Plan area will be provided from Twp. Rd 394 (South Street). The secondary access to the subdivision will be via Eastpointe Drive in Panorama Estates to the west. A collector roadway will also provide access to future residential development north of the McKay Ridge ASP boundary.

The proposed future roadways to the lands north of McKay Ridge have been conceptually shown on Figure 7.0 – Future Arterial Roadways. This plan has been developed to show the conceptual layout of the roadways and the relation to the existing wetlands in the quarter section to the north.

5.1 ARTERIAL ROADWAYS

An undivided arterial is proposed along the east boundary of the Plan area which will require a 30m right-of-way as shown on Figure 9.0 – Transportation Details. Arterials roadways will be developed as per the Town of Blackfalds Design Guidelines. The Plan identifies a dedication of a 15m wide strip of land along the east boundary to accommodate this roadway with the additional 15m to be provided by the quarter section to the east.

In order to avoid for the arterial roadway alignment to avoid the two existing wetlands in the quarter section to the north, the roadway starts to curve to at the north limits of McKay Ridge. In order to accommodate this roadway curve the residential node in the northeast corner of the Plan may have to be modified/shifted slightly to ensure this roadway right-of-way can be accommodated.

5.2 COLLECTOR ROADWAYS

The Area Structure Plan provides three collector roadways. The major east/west collector will extend from East Pointe Drive in Panorama Estates. The two additional collector roads will be extended north from Twp. Rd. 394 (South Street) and connect to the east/west collector roadway with the second collector for future connections. Both of these collector roads will have a 12.0m wide carriageway and a 22.0m wide right-of-way as shown on Figure 9.0 – Transportation Details. Collector roadways will be developed as per the Town of Blackfalds Design Guidelines.

5.3 LOCAL ROADWAYS

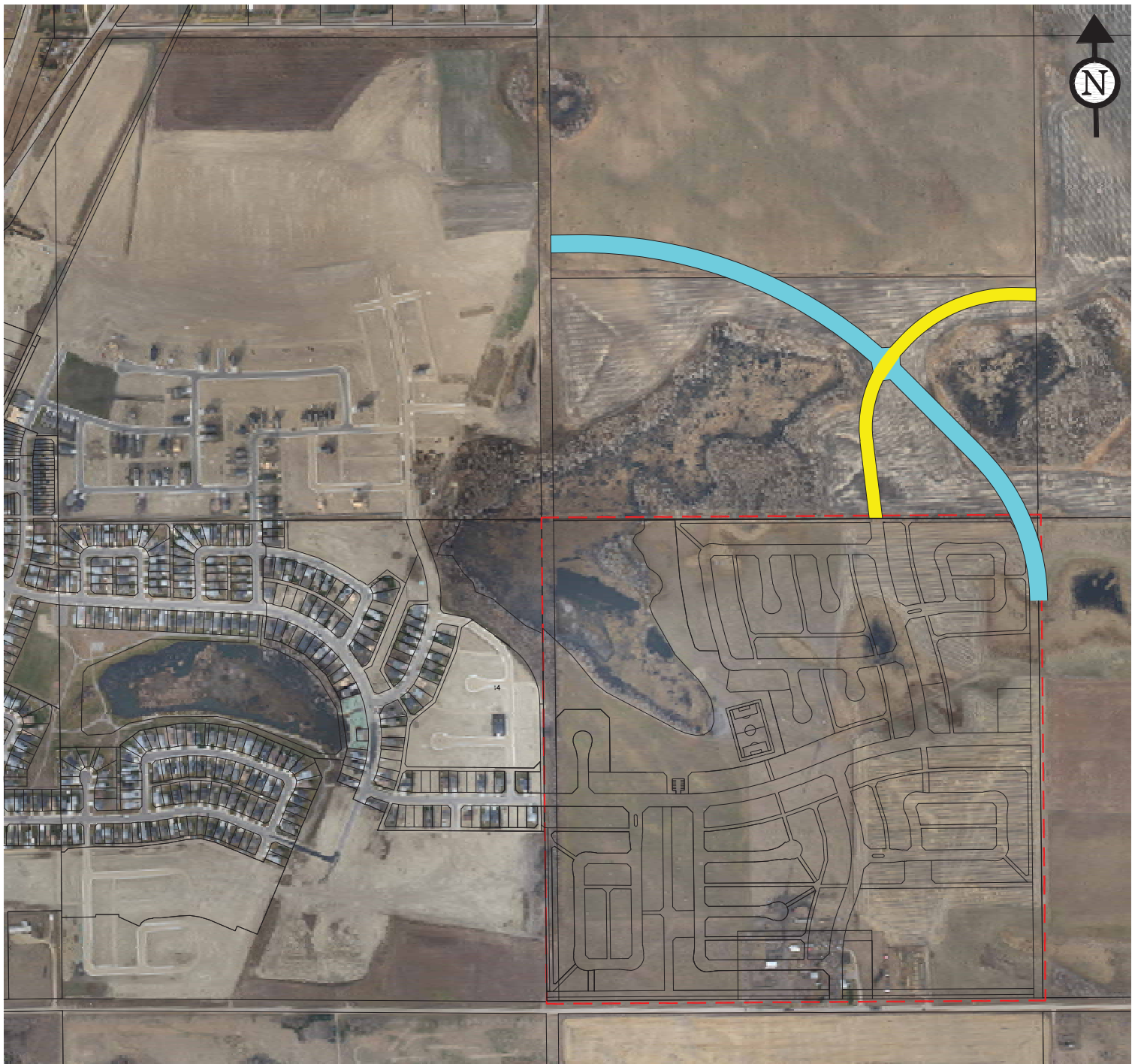
The system of local roads has been planned to provide access to individual development cells while discouraging outside traffic from short cutting through local roads. Local roads will have a 10.0m wide carriageway and an 18.0m wide right-of-way as shown on Figure 9.0 –

Transportation Details. All local roads will have rolled monolithic curb and gutter sidewalks on each side of the roadway.

5.4 LANEWAYS

The MRASP has been designed with the majority of lots backing on to laneways. Development backing onto the SWMF or Open Space will not have laneways. Any lanes adjacent to Municipal Reserves will have bollards installed to prevent shortcutting. Laneways will be 6.0m wide and developed as per the Town of Blackfalds Design Standards as shown on Figure 9.0 – Transportation Details.

FIGURE 7.0



LEGEND

- ASP BOUNDARY
- FUTURE ROADWAY/EXPANSION
- COLLECTOR ROADWAYS

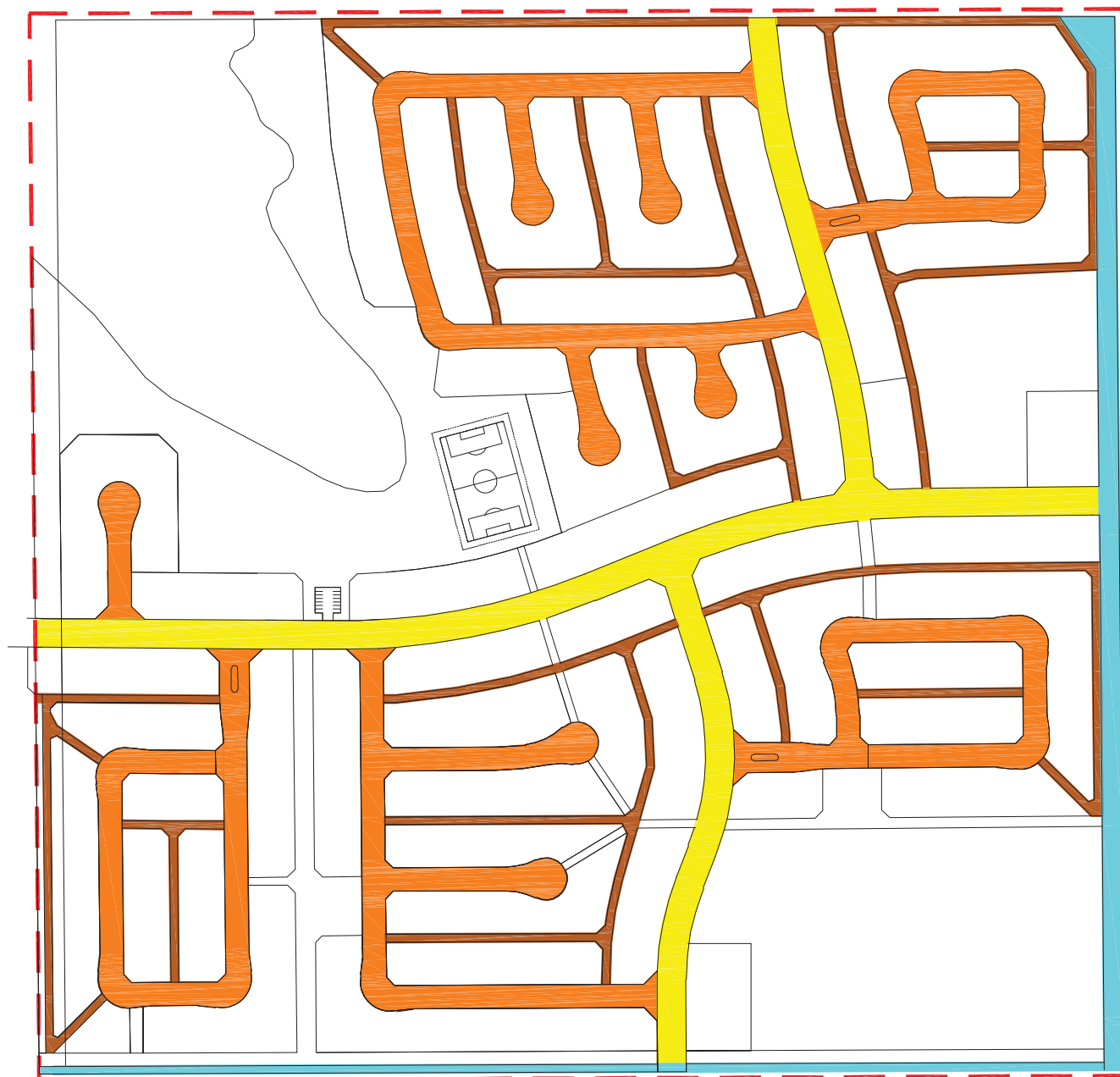
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OCTOBER 2009

FUTURE ROADWAY
McKAY RIDGE - AREA STRUCTURE PLAN



FIGURE 8.0

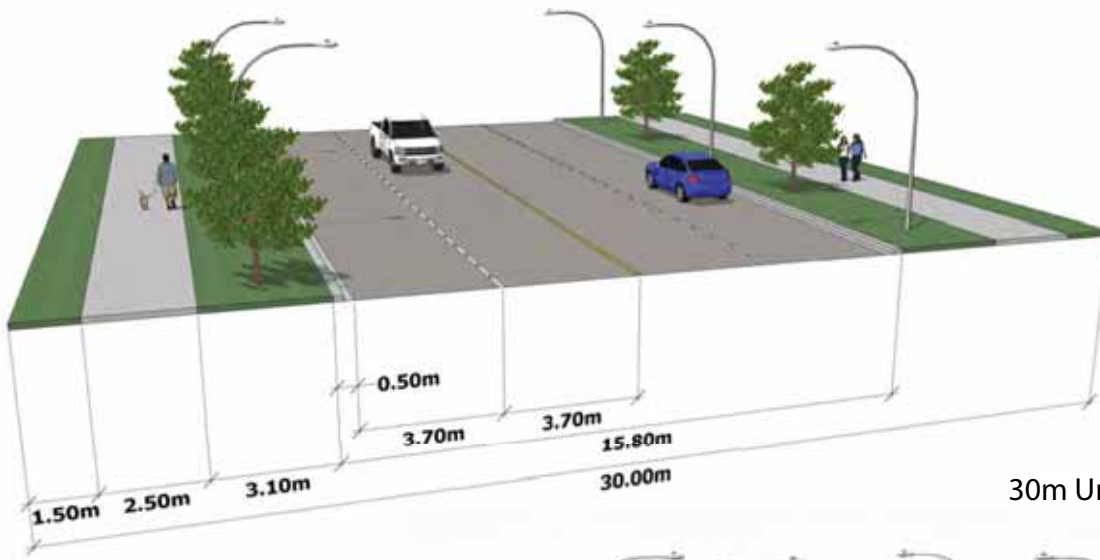


LEGEND

- - - ASP BOUNDARY
- FUTURE ROADWAY/EXPANSION
- COLLECTOR ROADWAYS
- LOCAL ROADWAYS
- LANEWAYS

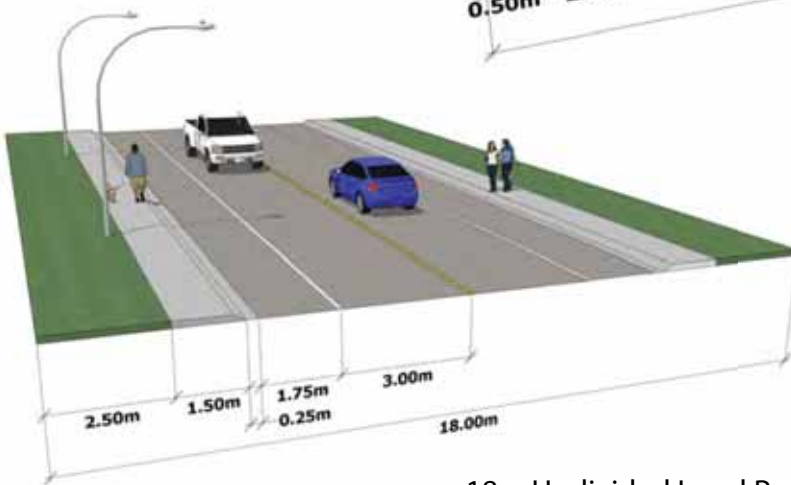
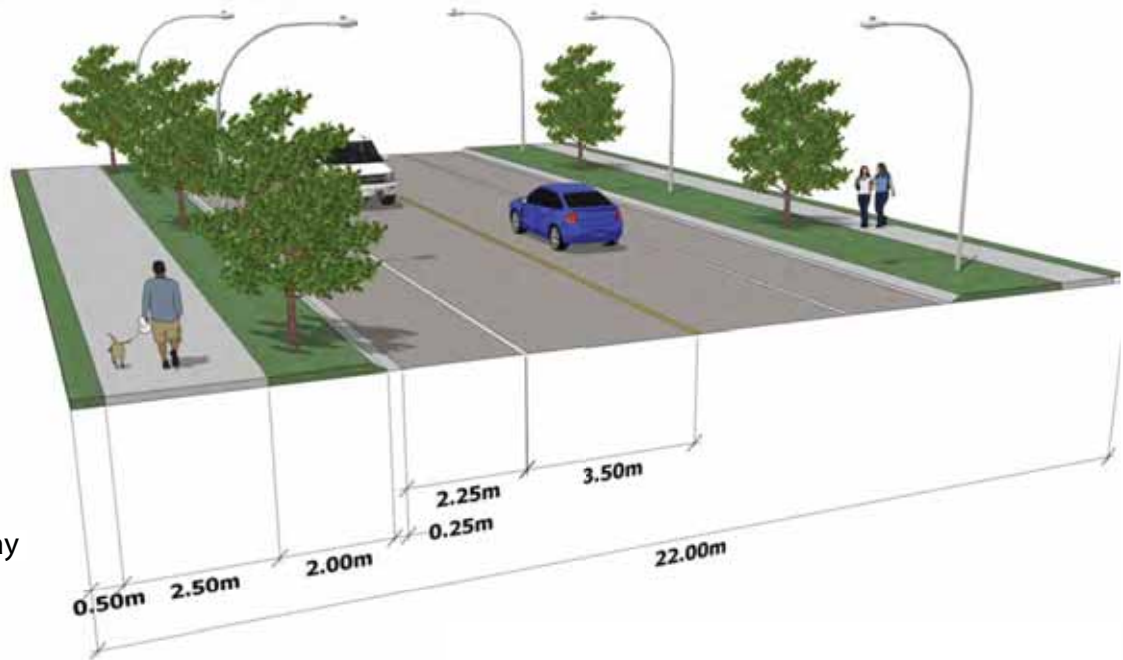


FIGURE 9.0

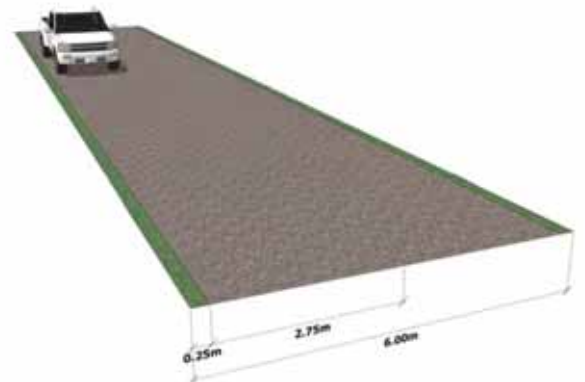


30m Undivided Arterial Roadway

22m Undivided Collector Roadway with 2.5m Walkway



18m Undivided Local Roadway



6m Gravel Lane

6.0 Conceptual Servicing

6.1 STORMWATER MANAGEMENT

Internal stormwater systems will consist of an overland (major) system and an underground (minor) system, these systems will be designed as per the Town of Blackfalds Minimum Design Standards and Alberta Environment standards. Figure 10.0 – Stormwater Management Plan illustrates the proposed stormwater management system.

Most of the stormwater from this development will be directed to the existing wetland, located in the northwest corner of the Plan, which will be utilized as the stormwater management facility for this community. Currently, this wetland is also being utilized for stormwater management by portions of the two existing residential developments to the west. Based on our preliminary research it appears that this wetland has an undefined natural drainage course to Blackfalds Lake to the west.

Despite the fact that this wetland is very large and can accommodate a significant volume of water, a master drainage study should be undertaken to better define how stormwater will be managed from the Plan area and surrounding development area that impacts the drainage catchment area for this wetland. This is to ensure that no damage is done to the existing vegetation that surrounds this important natural feature. It is likely that eventually a more defined outlet may need to be constructed to Blackfalds Lake.

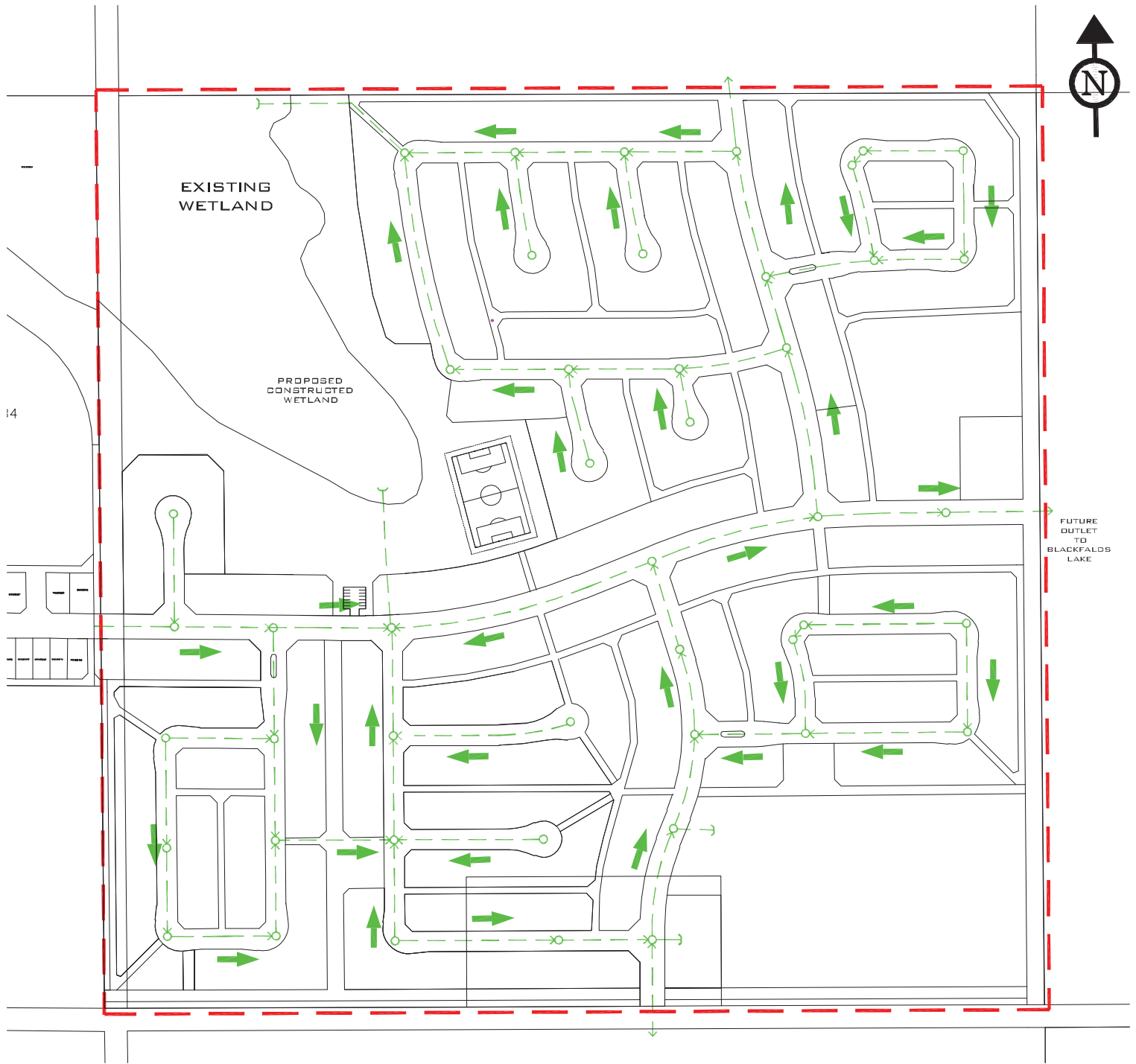
The grade of the existing land in the northeast and east portions of the MRASP, as well as future development lands to the north and east are very low lying in relation to the existing wetlands to which they drain. This may present some challenges in designing a sewer system with sufficient depth to drain towards these wetlands. In order to provide the required depth, a new outfall to the east may be required. This will be reviewed in more detail during preparation of the stormwater management report and servicing study for this property.

The existing wetland will be reconstructed in order to facilitate additional depth and stormwater storage. This will be achieved by salvaging the existing organic material on top of the existing wetland area and then lowering the elevation of the wetland. In so doing the wetland will then function as an integral part of the McKay Ridge storm sewer and open spaces system. In order to re-establish some of the biological features of the original wetland area, the organic material, which was salvaged, will be replaced on the reconstructed wetland.

6.2 SANITARY SEWER SERVICING

The internal sanitary collection system will be designed and constructed as a conventional gravity system. Topography dictates the sewer mains for the lands north of the ridge to drain to a lift station. A lift station will be constructed to pump the sewage uphill which then pushes the sewage south, back to the top of the ridge. At this point the force main connects back to the gravity system and ultimately connects to a proposed sanitary trunk to be constructed on South

FIGURE 10.0



LEGEND

- ASP BOUNDARY
- STORM MAIN
- X MANHOLE AND FLOW DIRECTION
- FLOW DIRECTION



STORMWATER PLAN

McKAY RIDGE - AREA STRUCTURE PLAN

JANUARY 2010



Street. This lift station is at a location that can also facilitate sanitary flows from future development lands to the north.

A small portion of the sewer system along the major east/west collector will connect to the existing Panorama Estates sanitary system at Eastpointe Drive. It may be possible to discharge additional sanitary waste into the Panorama Estates system but this will need to be investigated further at the Servicing Study phase to ensure there is sufficient capacity in the Panorama lift station.

The proposed sanitary sewer system is shown in Figure 11.0 - Sanitary Plan.

6.3 WATER DISTRIBUTION

Figure 12.0 – Water System Plan provides the proposed water distribution system layout. McKay Ridge will connect to the existing water distribution system along Eastpointe Drive. The internal distribution system will be looped as required with provisions to loop to future development areas. Water mains will be sized to accommodate peak domestic use as well as fire flow requirements.

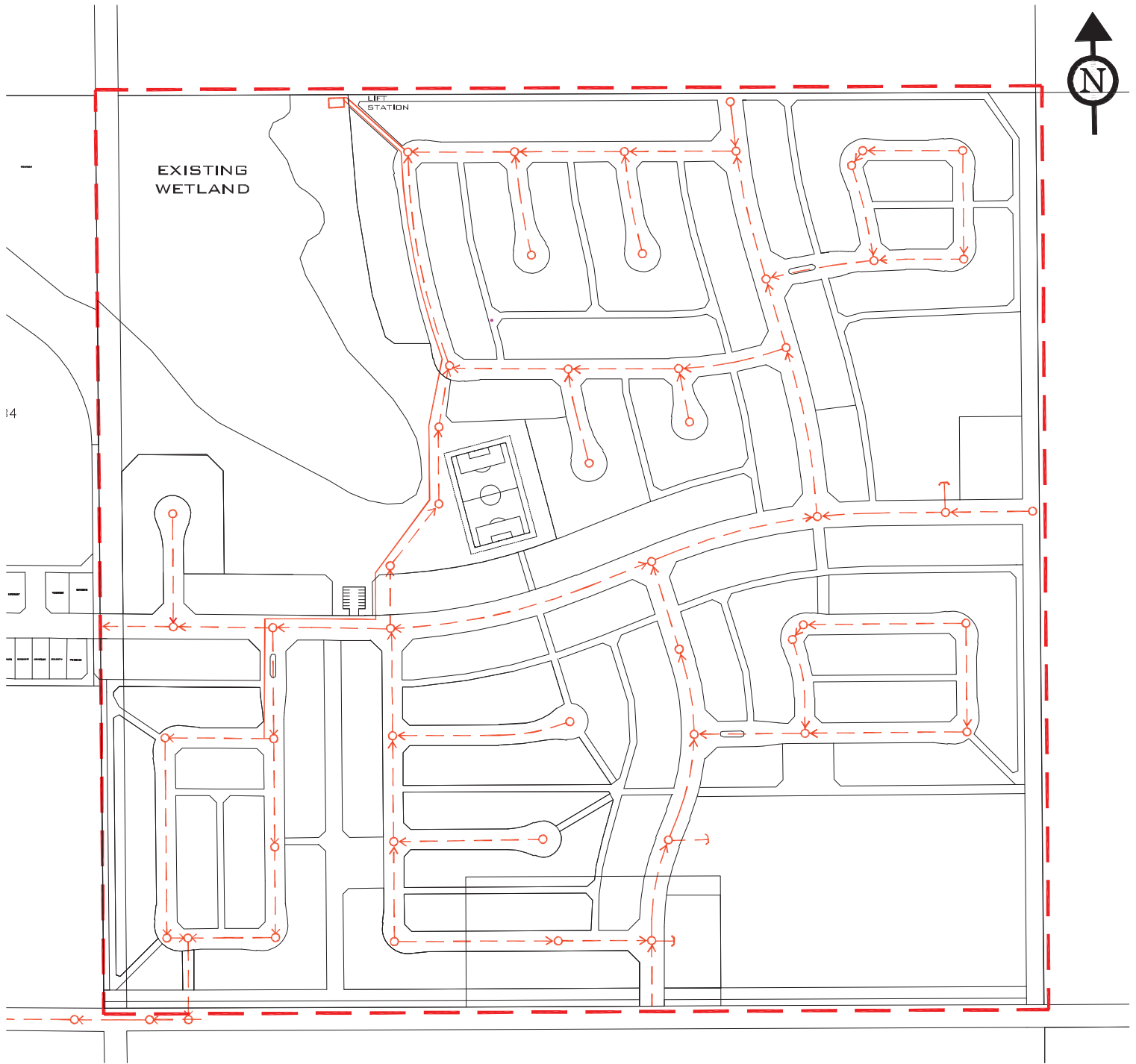
6.4 SHALLOW UTILITIES

There are no major servicing concerns regarding shallow utilities (gas, power, telephone and cable). All shallow utilities will be extensions of those already in place in the adjacent developments to the south.

Shallow utility services will be provided by the following companies:

- Fortis Alberta (Electricity)
- ATCO Gas (Natural Gas)
- TELUS Communications (Telephone)
- Shaw Cable (Cable Television)

FIGURE 11.0



LEGEND

- ASP BOUNDARY
- SANITARY MAIN
- SANITARY FORCE MAIN
- ⊗ MANHOLE AND FLOW DIRECTION

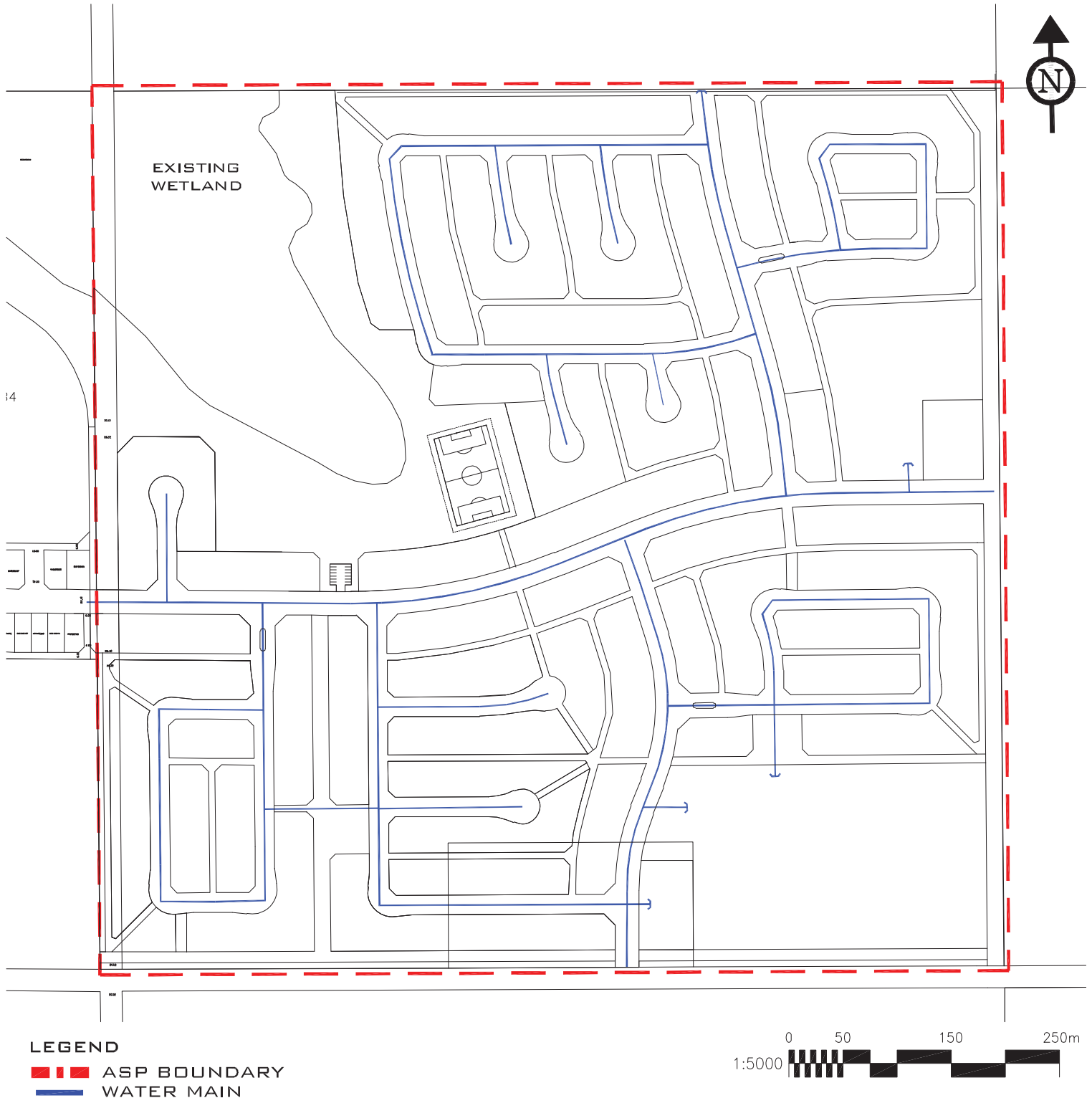
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SANITARY SYSTEM PLAN
McKAY RIDGE - AREA STRUCTURE PLAN

JANUARY 2010



FIGURE 12.0



7.0 Implementation

This MRASP will be implemented in accordance with the Town of Blackfalds redistricting and subdivision approval processes.

7.1 DEVELOPMENT STAGING

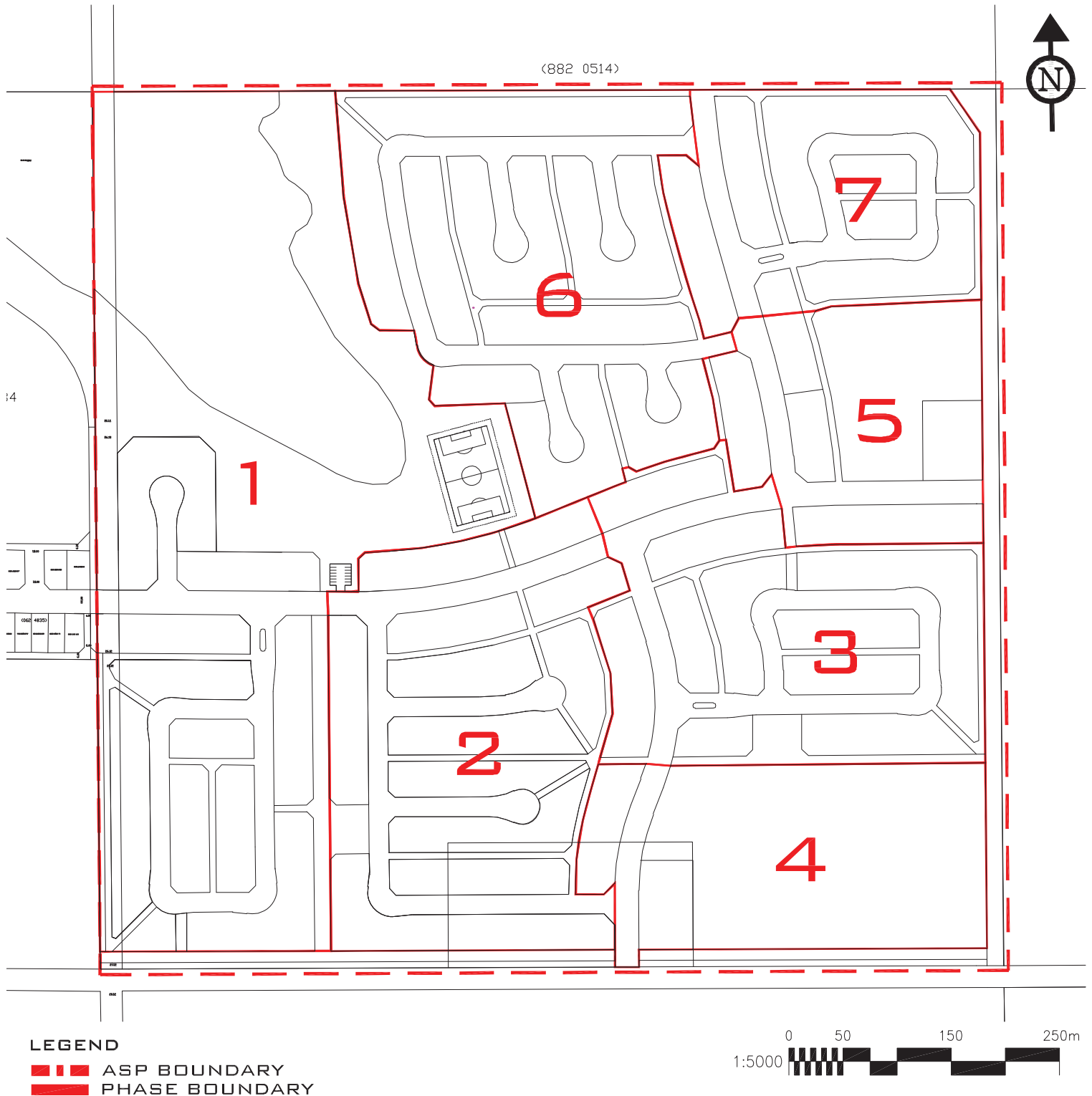
Figure 13.0 – Phasing Plan provides a proposed staging for this area. The Phasing Plan is conceptual in nature and is subject to change based on market conditions and other factors.

The central Open Space has been excluded from the Phasing Plan as it may develop in conjunction of the various stages.

7.2 REDISTRICTING AND SUBDIVISION

Redistricting and subdivision applications to conform to the land use designations described in the ASP will be undertaken as necessary. Guided by the Town of Blackfalds MDP, redistricting and subdivisions will be required to adhere to the Town of Blackfalds Land Use Bylaw and the informational requirements necessary for each application.

FIGURE 13.0



PHASING PLAN

McKAY RIDGE - AREA STRUCTURE PLAN