




# Discovery Plains

## AREA STRUCTURE PLAN



NE 5-33-1 W5M

Adopted by Council  
September 27, 2010  
Bylaw 2010-14



**LEE MAHER**  
ENGINEERING ASSOCIATES LTD.



**LONGVIEW**  
Planning + Design



**TOWN OF OLDS  
BYLAW NO. 2010-14  
A BYLAW TO ADOPT THE DISCOVERY PLAINS AREA STRUCTURE PLAN**

**NOW, THEREFORE, THE MUNICIPAL COUNCIL OF THE TOWN OF OLDS, IN THE PROVINCE OF ALBERTA, DULY ASSEMBLED, ENACTS AS FOLLOWS:**

WHEREAS: Section 633(1) of the *Municipal Government Act*, as amended, allows the Council of a Municipality to adopt an area structure plan; and

WHEREAS: the Discovery Plains Area Structure Plan has been prepared in accordance with the requirements of Part 17 of the *Municipal Government Act*, as amended; and

WHEREAS: Council deems it desirable to adopt the Discovery Plains Area Structure Plan to guide the future growth and development of lands within the NE ¼ Sec 5-33-1 W5M;

NOW THEREFORE, the Council of the Town of Olds duly assembled enacts as follows:

1. The adoption of the Plan, to be known as the Discovery Plains Area Structure Plan, being the document attached hereto.
2. That Figure 6 of the attached Discovery Plains Area Structure Plan be amended so that the boundary between Phase 1 and Phase 4 follows the north side of the collector road entering off 50 Avenue.
3. That the following text be added as Policy 5.1.5 of the attached Discovery Plains Area Structure Plan: New roads and driveways connecting onto Range Road 14 shall not be constructed until suitable arrangements have been made in writing with Mountain View County and/or arrangements have been made between the Town and County to transfer management responsibilities and control over the affected segment of Range Road 14.
4. That the following text be added as Policy 5.1.6 of the attached Discovery Plains Area Structure Plan: Noise attenuation features shall be provided along the length of the major road shown on Figure 8.0 to the satisfaction of the Town.
5. That the following text be added as Policy 5.1.7 of the attached Discovery Plains Area Structure Plan: No definitive alignment has been chosen, however, potential Functional Alignments for the extension of Highway 27 to the north of the Town of Olds may impact the Plan Area, particularly in identified development phases four (4), five (5), and six (6). The Developer shall protect right-of-way for future alignments for the benefit of Alberta Transportation within Phases four (4), five (5), and six (6) in the event that the preferred Highway 27 re-alignment is directed toward and within the Plan Area. Should a definitive alignment be chosen by Alberta Transportation that impacts the Plan Area, subsequent review and amendment to this area structure plan shall be required.



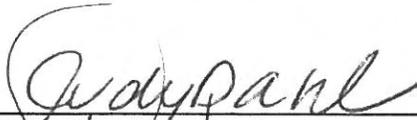
6. Citation:  
This bylaw may be cited as "Discovery Plains Area Structure Plan Bylaw No. 2010-14".

READ A FIRST TIME ON THE 23<sup>rd</sup> DAY OF August, 2010

PUBLIC HEARING HELD ON 27<sup>th</sup> DAY OF September 2010

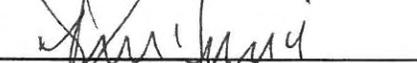
READ A SECOND TIME ON THE 27<sup>TH</sup> DAY OF September 2010, as amended.

READ A THIRD AND FINAL TIME ON THE 27<sup>th</sup> DAY OF September 2010, as amended.



---

Judy Dahl, Mayor



---

Norm McInnis, Chief Administrative Officer

SIGNED by the Chief Elected Officer and the Chief Administrative Officer this 28<sup>th</sup> day of September 2010.



## CONTENTS

1.0 Introduction .....	3
1.1 Purpose .....	3
1.2 Objectives .....	3
1.3 Discovery Plains Community Vision .....	3
1.3.1 Goals .....	4
1.4 Conformity with Approved Policies .....	4
1.4.1 Provincial Land Use Policies .....	5
1.4.2 Town of Olds Municipal Development Plan .....	5
1.4.3 Town of Olds Land Use Bylaw .....	6
1.4.4 Northwest Area Structure Plan .....	6
1.4.5 Olds Strategic Sustainability Plan .....	6
2.0 Development Area .....	7
2.1 Location .....	7
2.2 Legal Description & Land Ownership .....	7
2.3 Plan Area & Adjacent Land Uses .....	7
2.4 Physical Site Features .....	7
2.4.1 Topography & Drainage .....	7
2.4.2 Site Assessments .....	8
3.0 Land Use and Subdivision .....	8
3.1 Overview/Vision .....	8
3.2 Land Use Concept .....	9
3.2.1 Population Projections and Densities .....	9
3.2.2 Land Use Concept .....	9
3.2.3 Residential Development .....	10
3.2.4 Neighbourhood Commercial Development [CN] .....	11
3.2.5 Pedestrian Connections .....	11
3.3 Subdivision & Phasing .....	11
4.0 Open Space and Pedestrian Connections .....	12
4.1 Open Space and Municipal Reserve [MR] .....	12
5.0 Transportation .....	13
5.1 Road Network .....	13

6.0	Utilities and Servicing .....	15
6.1	Water Supply and Conservation .....	15
6.2	Sanitary Wastewater.....	15
6.3	Stormwater Management.....	15
6.4	Shallow Utilities .....	16
7.0	Development Standards .....	16
7.1	Architectural Controls.....	16
8.0	Public Consultation.....	17
9.0	Implementation, Review, and Amendment .....	17
9.1	ASP Implementation .....	17
9.2	Plan Review and Amendment.....	17

## LIST OF FIGURES

Figure 1.0	General Municipal Location
Figure 2.0	Current Land Use Designations
Figure 3.0	Air Photo
Figure 4.0	Topography
Figure 5.0	Land Use Concept
Figure 6.0	Phasing Strategy
Figure 7.0A	Open Space Plan
Figure 7.0B	Parks and Trails System
Figure 8.0	Transportation Network
Figure 9.0	Traffic Calming Measures
Figure 10.0A	Road Cross Sections
Figure 10.0B	Road Cross Sections
Figure 11.0	Preliminary Water Design
Figure 12.0	Preliminary Wastewater Design
Figure 13.0	Preliminary Stormwater Design

## LIST OF TABLES

Table 1	Plan Area Land Uses
---------	---------------------

## 1.0 INTRODUCTION

### 1.1 Purpose

The purpose of the Discovery Plains Area Structure Plan (ASP) is to establish a framework for the orderly and economic, subdivision and development of a new community in the Town of Olds to be known as Discovery Plains. This plan has been prepared in accordance with:

- Part 17 of the Municipal Government Act;
- The Town of Olds Municipal Development Plan Bylaw 2007-22;
- The Town of Olds Northwest Area Structure Plan;
- Olds Strategic Sustainability Plan; and,
- Town of Olds Land Use Bylaw #01-23.

### 1.2 Objectives

The Discovery Plains ASP is intended to provide clear and concise policy direction for development of the Plan Area (**Figure 1.0 General Municipal Location**). Through a combination of comprehensive planning and design, combined with consistency with guiding documents such as the Municipal Development Plan, the Land Use Bylaw, and the Northwest Area Structure Plan, both comprehensive planning and cohesive development can proceed in the area. The objectives of the Discovery Plains ASP are:

- a) To provide a policy background from which to evaluate the development by describing and analyzing the physical characteristics and uses of the site and surrounding area;
- b) To establish design guidelines, which are in conformity with existing statutory plans, and create a built form that is in keeping with and enhances the character of the Town of Olds; and,
- c) To initiate a servicing plan that meets applicable standards and the needs of the community.

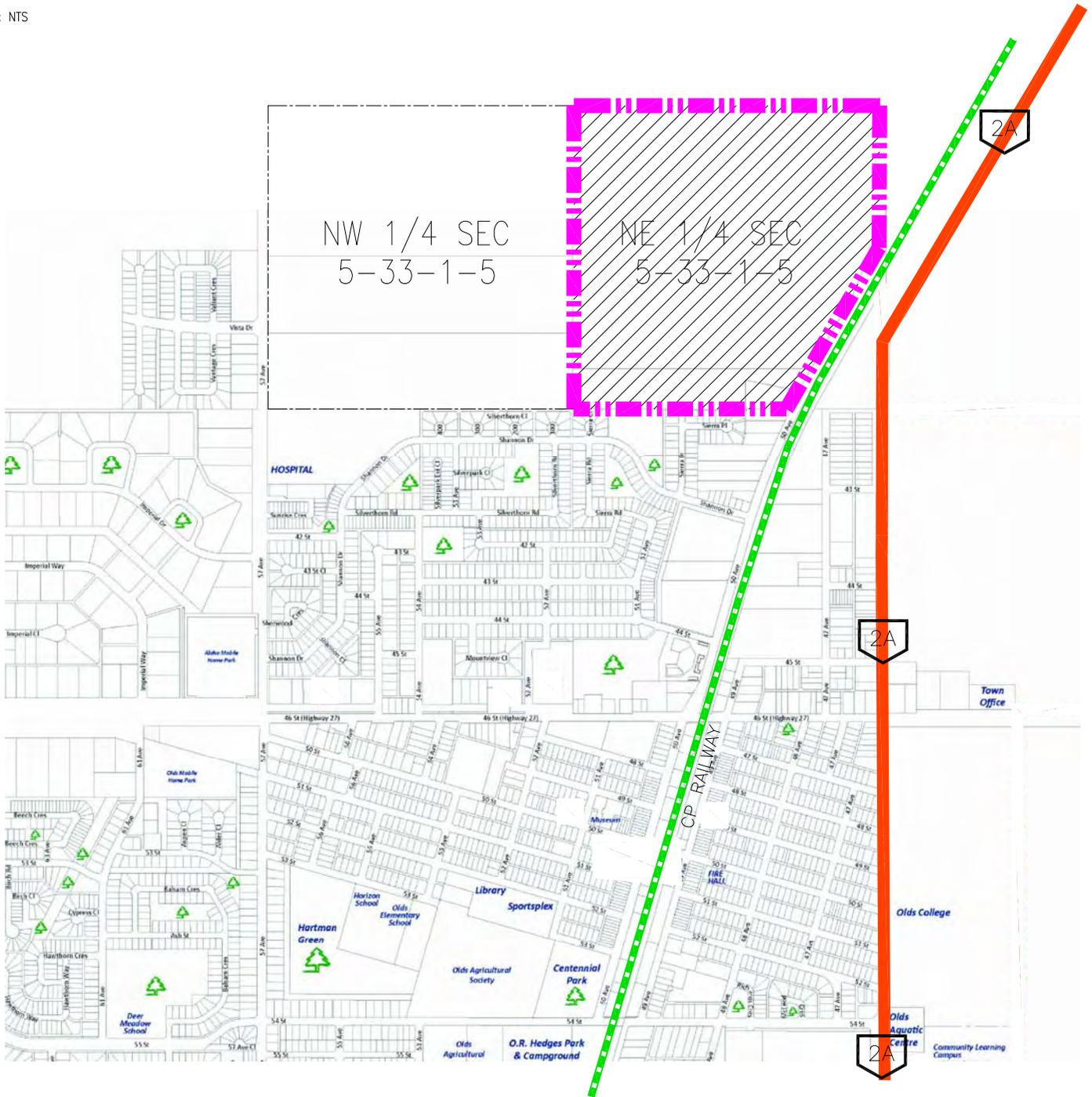
### 1.3 Discovery Plains Community Vision

Discovery Plains is a community that seeks to add to the quality and vitality of life in Olds by incorporating urban fabric that is sensitive to and will contribute to the overall vision expressed in the Municipal Development Plan. Discovery Plains offers a variety of housing types and enhances pedestrian connections to open space and local community amenities. In addition, Discovery Plains offers:

- Housing options which are abundant and diverse to meet the needs of young families, older families, single person households, students, seniors, and renters;
- Amenities are available for youth and the physically active in the form of playfields and more;
- It is consistent with the Town of Olds existing neighbourhoods, meeting the needs of many types of households and families and providing facilities and services near people's homes;



SCALE: NTS



LEGEND:  
DISCOVERY PLAINS AREA STRUCTURE PLAN BOUNDARY

FIGURE 1.0 GENERAL MUNICIPAL LOCATION

JULY 2010

- Efficient use of land and mixing of compatible land uses supports pedestrians and cyclists;
- Extends park spaces throughout the Town as a well used and treasured part of the urban landscape;
- Environmental stewardship as a source of pride for the community utilizing water conservation, composting, recycling and energy conservation as common practices in everyday life;
- A major open space and integrated trail system and proximity of housing, jobs and services encourages walking and bicycling;
- A good roadway system providing connections within and through Olds and links to other communities; and,
- Well kept landscaped boulevards and private yards add to the sense of open space and greenery within the community. Streets are multi-functional and used for sidewalks, benches, and landscaping to create attractive streetscapes throughout Olds.

### 1.3.1 Goals

The goals of the Discovery Plains ASP are to create:

- a) A distinctive and attractive community with a strong sense of place.
- b) A sense of neighbourliness and linkage to the Town of Olds.
- c) A range of housing forms to meet various needs and lifecycle requirements.
- d) A transportation and pathway system that is efficient and interconnected.
- e) A servicing program that supports sustainability objectives.

## 1.4 CONFORMITY WITH APPROVED POLICIES

The Discovery Plains ASP was prepared in accordance with the provincial requirements outlined in s.633 of the Municipal Government Act (MGA) (*Statutes of Alberta, 1994, Chapter M-26.1*), specifically:

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

(2) *An area structure plan*  
(a) *Must describe*

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

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

Additionally, the ASP was prepared in accordance with the Town of Olds *Municipal Development Plan*, the *Land Use Bylaw*, and the *Northwest ASP* as well as the *Provincial Land Use Policies*.

### 1.4.1 Provincial Land Use Policies

The Town of Olds is located within the Red Deer Regional Plan area which is a planning region yet to be addressed by the Province. The intent of the Regional Plan is to provide overarching guidelines regarding development in the area while ensuring the protection and sustainability of the environment.

### 1.4.2 Town of Olds Municipal Development Plan

The Municipal Development Plan (MDP) (2007) for the Town of Olds outlines the growth and development objectives for the municipality. This document promotes the goals, objectives, and policies in the MDP including:

- Growth management – assist in providing a mix of land use and socio economic activities;
- Urban form and design – creating a sense of place and belonging while connecting with existing urban fabric;
- Economic development and tourism – potential partnership with Olds College to study and record storm water management;
- Environmental management – ensure the community will contribute to the open space network within the Town and County;
- Housing and neighbourhood design – providing a range of four different housing styles, while mixing both passive and active recreation space and a local commercial;
- Commercial development – provide local commercial development to service Discovery Plains and surrounding neighbours;
- Parks, recreation and culture – connecting and providing places to go within the neighbourhood and to the community at large;



- Community and protective services – create connected pedestrian friendly environments to assist with social interaction and awareness among neighbours; and,
- Transportation – create a network of transportation both for vehicles and pedestrians while enhancing the connectivity of the Town.

#### 1.4.3 Town of Olds Land Use Bylaw

The Town of Olds Land Use Bylaw (LUB) (Bylaw 01-23) regulates land uses within the municipality. Discovery Plains is currently designated as Urban Reserve (UR) (**Figure 2.0 Current Land Use Designations**) under the Bylaw and as such requires land use redesignation to the various land uses described in this Plan to permit development in phases over time.

#### 1.4.4 Northwest Area Structure Plan

The Town of Olds adopted the Northwest ASP in 2002 (consolidated in August 2007). This Plan is to provide guidance for various quarter sections on the north and west sides of Olds. This Plan at the time made reference to the NE 5-33-1 W5M, stating that,

*“a portion of the Plan Area (part of NE ¼ Sec 5, 33-1-W5) is situated in Mountain View County and has been included in the Plan Area because this quarter section is likely to impact and be impacted by existing and future development to the south and west. It is acknowledged that any policies contained within this plan apply only to the lands within the Town’s boundaries. Any policies or concepts related to lands outside the Town’s boundaries are only statements of future intent or preference.”*

As a result, there is no statutory policy within the Northwest ASP that directs growth and development in the NE 5-33-1 W5M. There is only preferences and commentary with respect to big picture connections. The Discovery Plains ASP would be a standalone ASP bylaw for those lands within the NE 5-33-1 W5M, and would not replace, rescind, or repeal the Northwest ASP.

#### 1.4.5 Olds Strategic Sustainability Plan

The Olds Strategic Sustainability Plan was adopted by Resolution of Council on February 25, 2008. The Plan sets out fifteen strategic areas for the Town to focus their efforts. The Discovery Plains ASP considers this Plan an important tool in the design and focus of the neighbourhood being proposed. In terms of the strategic areas, the Discovery Plains ASP provides the following assistance to the Town in meeting their collective goals:

- Affordability and housing – the Discovery Plains neighbourhood has been designed to accommodate a variety of housing styles to ensure price point variation in Olds;



SCALE: NTS

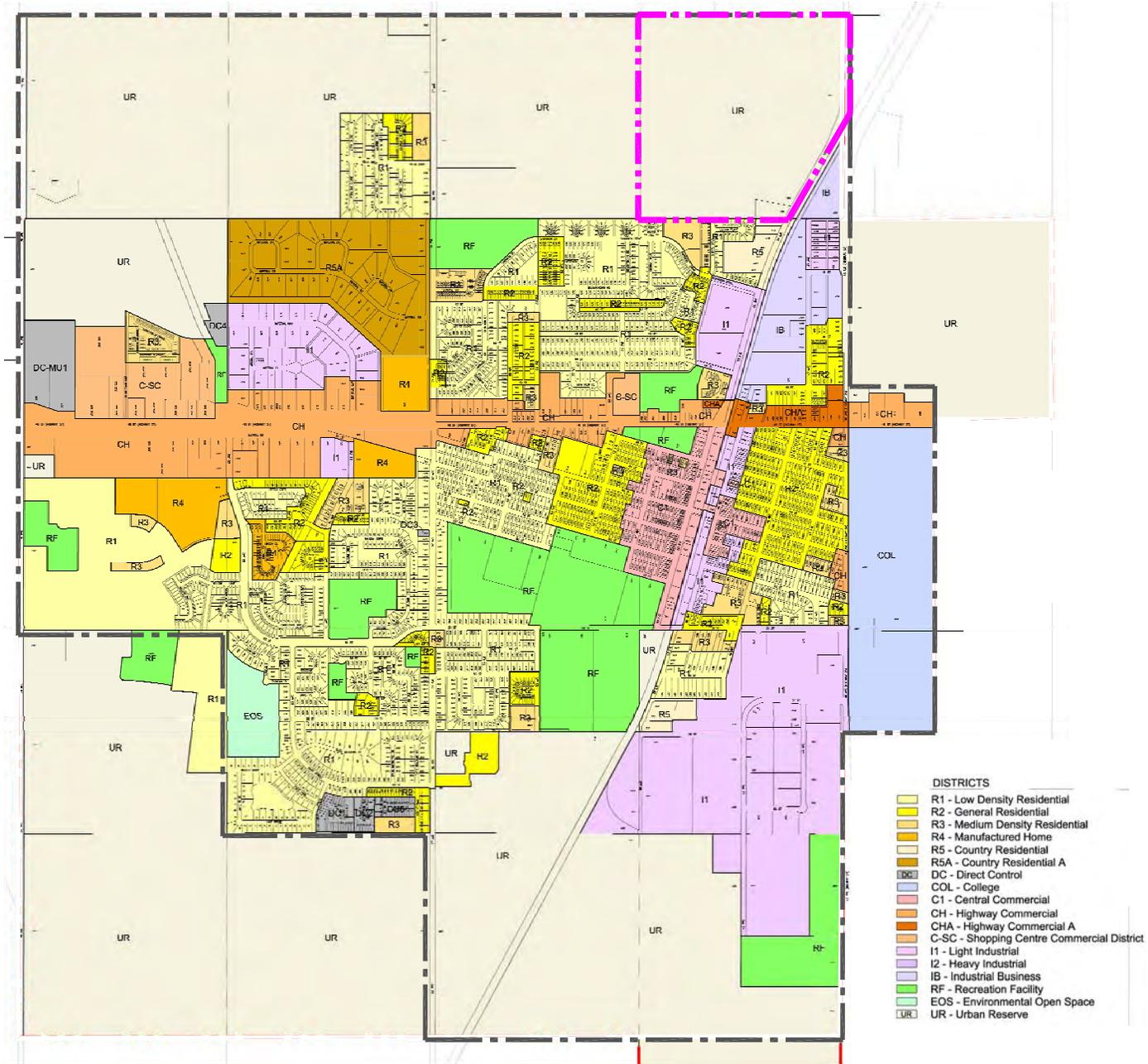


FIGURE 2.0 CURRENT LAND USE DESIGNATIONS

JULY 2010

- Built environment – the Plan Area promotes adjacent development to existing neighbourhoods and provides access consideration to ensure connectivity when additional development in the area occurs; and,
- Natural areas – the Plan Area contains a variety of open spaces that also promote connectivity via the regional and local pathways.

## 2.0 DEVELOPMENT AREA

### 2.1 Location

The Discovery Plains Area Structure Plan Area is located on the north east boundary of the Town of Olds. It is bound on the east by 50<sup>th</sup> Avenue and a paralleling CP Rail line (**Figure 3.0 Air Photo**). It is anticipated that connections to the site will be made at the existing Sierra Drive access point (to the south) and new access points created at 50<sup>th</sup> Avenue and, in the long term, to a new arterial road along the north boundary of the Plan Area.

### 2.2 Legal Description & Land Ownership

The Discovery Plains Area Structure Plan includes **+/-147.34 ac (+/- 59.63 ha)** of land within one (1) quarter section: NE 5-33-1 W5M. The following table describes existing parcels within the ASP Plan Area and the landowners at the time of plan preparation.

Legal Description	Acres	Hectares	Landowner
Ptn. NE 5-33-1 W5M	+/- 131.5	+/- 53.22	La Terra Ventures et al
Ptn. NE 5-33-1 W5M	+/- 13.85	+/- 5.60	Neil & Nola Godwin
Plan 9311714, Block 1	+/- 1.99	+/- 0.81	David & Doreen Smith

Currently, smaller parcels (Ptn. NE 5-33-1 W5M and Plan 9311714, Block 1) are privately held and would remain as Urban Reserve. The Discovery Plains ASP plans for these lands, to provide for a comprehensive and seamless urban transition to the site, but timing of development for the smaller parcels shall be left to the discretion of the individual landowners.

### 2.3 Plan Area & Adjacent Land Uses

The Discovery Plains Area Structure Plan land holdings are currently designated as Urban Reserve District; the land is vacant as it was historically used to support agricultural uses (**Figure 2.0 Current Land Use Designations** and **Figure 3.0 Air Photo**). Surrounding land uses within the Town boundary include Urban Reserve lands and a mixture of residential land uses. Agricultural uses still remain on lands to the north within Mountain View County.

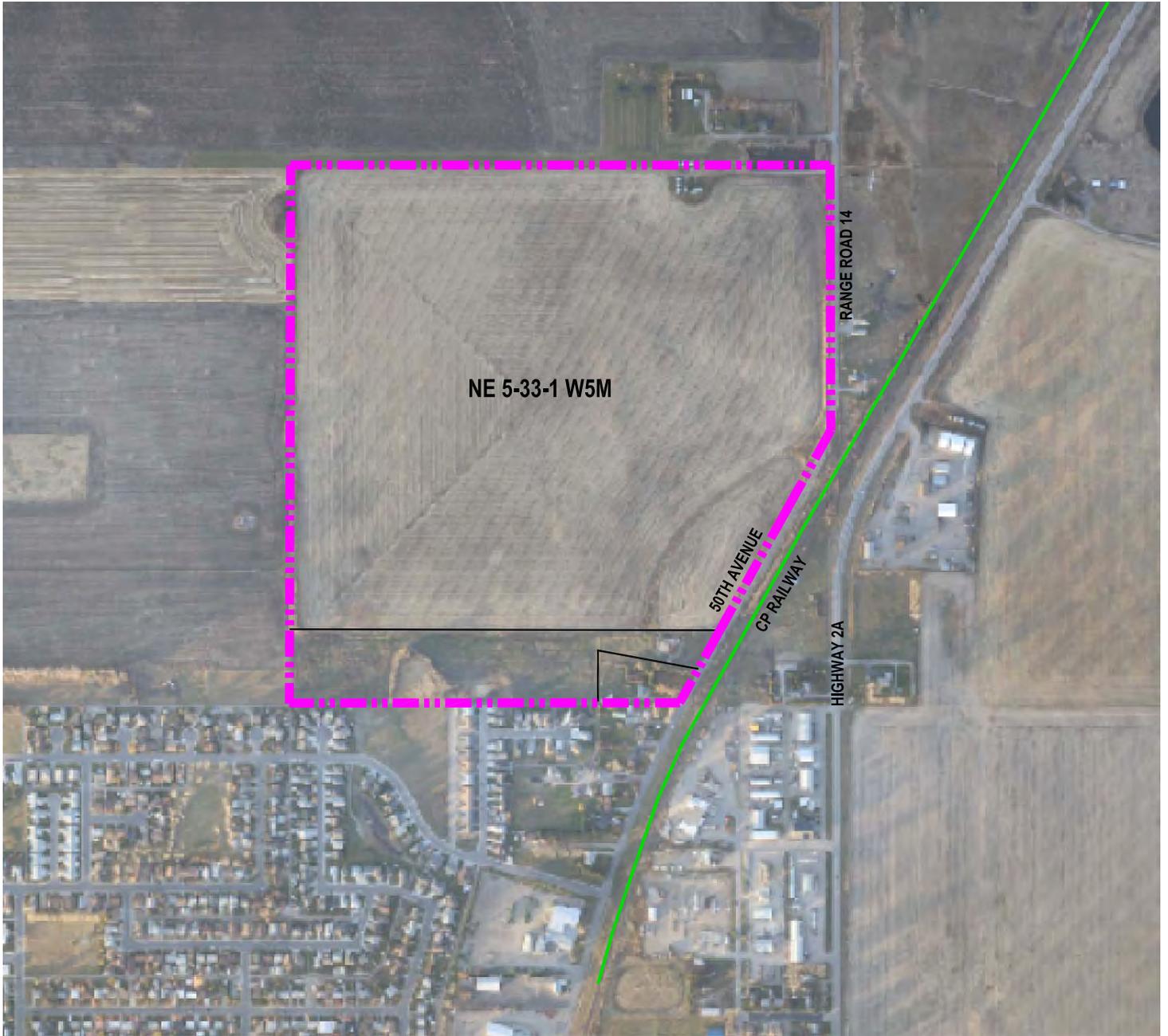
### 2.4 Physical Site Features

#### 2.4.1 Topography & Drainage

The subject property is currently cultivated. The Plan Area is gently rolling landscape sloping downward toward the NE (**Figure 4.0 Topography**). The site generally slopes



SCALE: NTS



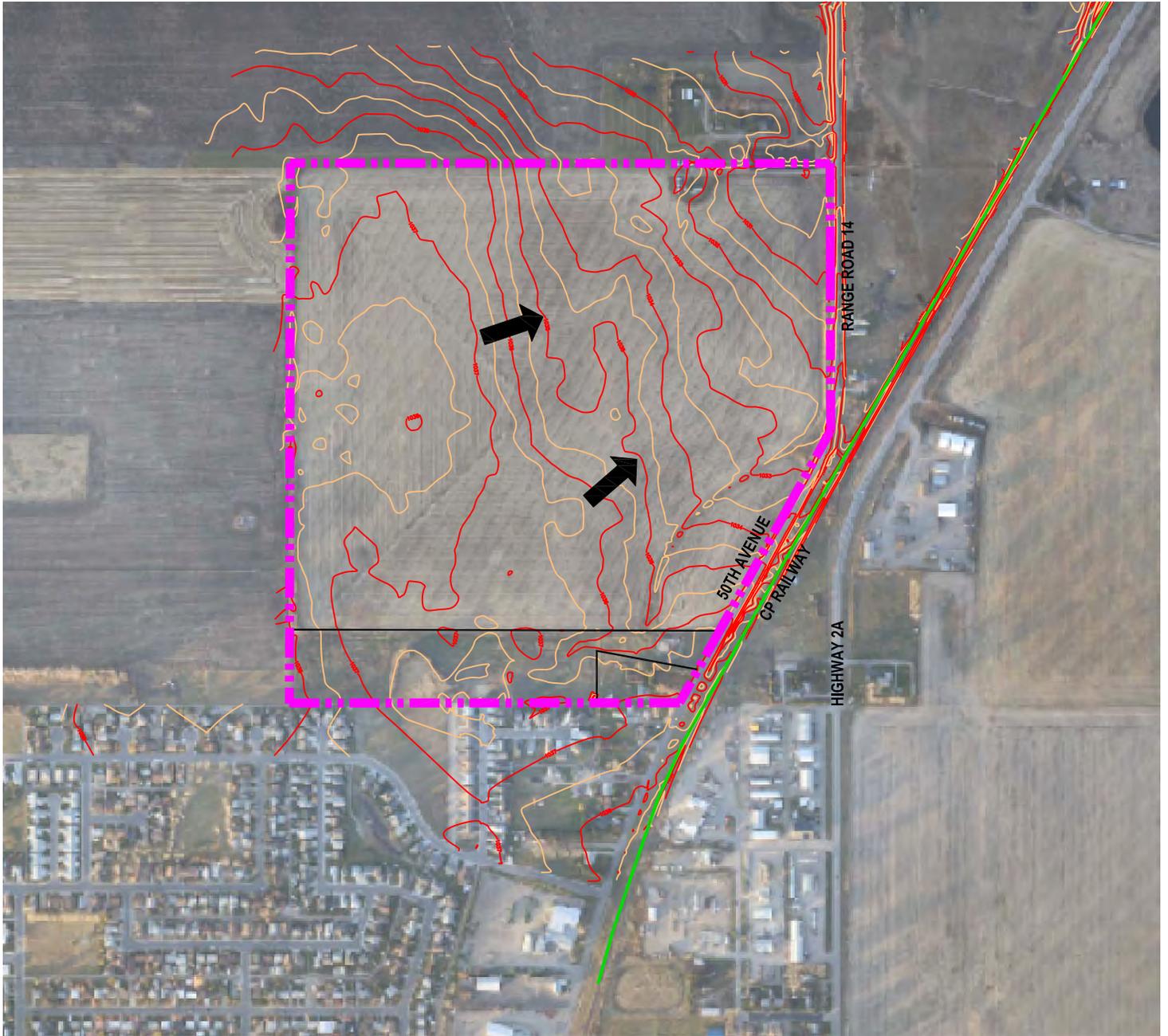
LEGEND:  
PLAN AREA BOUNDARY

FIGURE 3.0 AIR PHOTO

JULY 2010



SCALE: NTS



- LEGEND:
-  PLAN AREA BOUNDARY
  -  EXISTING CONTOURS
  -  SURFACE WATER FLOW / SLOPE OF LAND

FIGURE 4.0 TOPOGRAPHY

JULY 2010

towards the northeast at an average slope of about 0.6%. The elevations vary from 37.70 on the southwest to 31.10 on the northeast boundary.

## 2.4.2 Site Assessments

Three site assessments have been completed prior to site development. Below is a summary of the assessments and their status.

### 2.4.2.1 Geotechnical

A geotechnical investigation report was completed by Almor Testing Services Ltd in December, 2008. The findings from the report state prevailing soils are silty clay with a trace of sand and gravel under the topsoil thickness varying from 0.1m to 0.5m. Groundwater monitoring occurred and groundwater was found in two northeast testholes at depths between 2.5m and 3.5m. The Report concludes that there are no significant constraints to urban development.

### 2.4.2.2 Environmental Site Assessment

A Phase 1 Environmental Site Assessment of the Plan Area was completed by Base Property Consultants Ltd in September, 2008. A Phase One Environmental Site Assessment (ESA) conducted by Base Property Consultants Ltd. in September of 2008 determined that there were no significant environmental impairments on the site that would preclude its development to urban densities. In addition, there was no contaminate or other forms of nuisance that required mitigation prior to the conversion of these lands for urban residential purposes. A Phase Two ESA was not recommended or considered required. This Report was provided to municipal planning staff under separate cover.

### 2.4.2.3 Historical Resources Assessment

The Discovery Plains Plan Area has received Historical Resources Act clearance by the Historic Resources Management Branch of Alberta Environment. A letter indicating this clearance has been provided to the Town under separate cover.

## 3.0 LAND USE AND SUBDIVISION

### 3.1 Overview/Vision

Discovery Plains is a comprehensively planned community that is to be developed in systematic stages. The initial development phases (Phase One and Two) incorporate a mixture of low density to medium density residential uses, inclusion of the first park space and establishes an important connection to 50<sup>th</sup> Avenue. As the property develops over time it will contain a mix of single family and duplex housing on various lot sizes. The proposed mix of land use and housing types allows for the possibility of aging in place, to grow and change the housing types lived in based on one's age and family requirements. There is also a neighbourhood commercial area located alongside 50<sup>th</sup> Avenue. This neighbourhood

commercial area is intended to provide convenience and small scale local retail opportunities, within walking distance, to the community (**Figure 5.0 Land Use Concept** and **Figure 6.0 Phasing Strategy**).

### 3.2 Land Use Concept

The land use concept took into consideration the existing development to the east and south as those land uses support a school and mixed industrial/commercial developments and aimed to accommodate current connections to the transportation network. Discovery Plains will create a mixed use village, supportive of the policy direction found in the MDP, allowing for a range of age groups, housing types, and various levels of affordability. Sustainable design and servicing techniques will be implemented wherever possible and practical. Architectural controls will help provide a sense of unity, place, and pride within the neighbourhood.

#### 3.2.1 Population Projections and Densities

According to Statistics Canada, the Town of Olds experienced a 9.7% population increased from 2001 to 2006. While the number of persons per dwelling is not available for the Town, the Provincial average for the number of persons per dwelling is 2.6. The population projection for Discovery Plains is approximately 2,127 people (avg. 2.6 persons per dwelling x 818 units = 2,127).

The Discovery Plains development proposes +/- 818 dwelling units on +/- 147.3 gross acres thereby achieving the goal of close to 5.5 units per gross developable acre.

#### 3.2.2 Land Use Concept

The land use districts and housing mix, supported within them, are reflective of the comprehensive nature of the community. The implementation of land use will offer a choice of housing types and price points that provide a variety of entry levels. It is anticipated that the community will support a wide range of ages and income levels. The land use also takes into consideration the interface with the CP rail line and impacts that noise and vibration from the trains could have on residential land uses. The proposed land uses for the ASP include: R1, R2, R2N, R3, CN, PUL, and MR. **Table 1 Plan Area Land Uses** provides a breakdown of the proposed land uses.

**Table 1 Plan Area Land Uses**

Land	Acres	Hectares	% of Total
Residential			
Low density residential	+/- 50.41	+/- 20.40	34.2
General Residential	+/- 17.45	+/- 7.06	11.8
General Residential Narrow Lot	+/- 5.57	+/- 2.25	3.8
Medium Residential	+/- 11.44	+/- 4.63	7.8
Commercial	+/- 5.41	+/- 2.19	3.7
Open Space (MR)	+/- 14.79	+/- 5.99	10.0
Public Utility incl. Stormwater Pond	+/- 5.79	+/- 2.34	3.9
Roads	+/- 36.48	+/- 14.76	24.8
<b>Gross Developable Area</b>	<b>+/- 147.34</b>	<b>+/- 59.63</b>	<b>100%</b>



SCALE: NTS



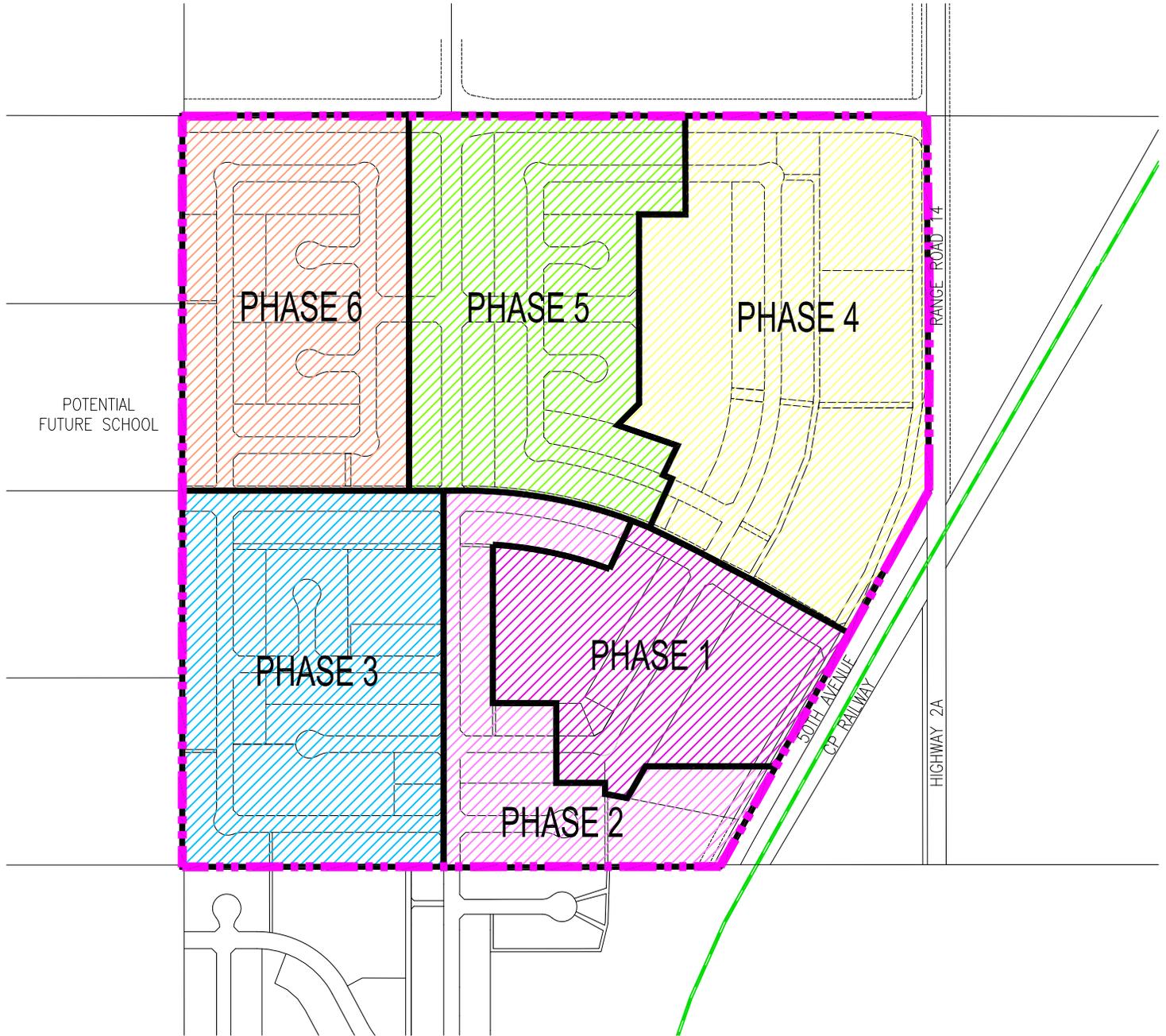
- LEGEND:
- PLAN AREA BOUNDARY
  - R1 - LOW DENSITY RESIDENTIAL
  - MUNICIPAL RESERVE
  - ROADS AND PATHWAYS
  - REGIONAL PATHWAY
  - R2 - GENERAL RESIDENTIAL
  - PUL (STORMWATER MANAGEMENT)
  - R2N - GENERAL RESIDENTIAL NARROW LOT
  - PUL
  - R3 - MEDIUM DENSITY RESIDENTIAL
  - CN - NEIGHBOURHOOD COMMERCIAL

FIGURE 5.0 LAND USE CONCEPT

JULY 2010



SCALE: NTS



LEGEND:  
PLAN AREA BOUNDARY

FIGURE 6.0 PHASING STRATEGY

JULY 2010

### 3.2.3 Residential Development

Discovery Plains intends to incorporate the following residential land use districts:

- R1 Low Density Residential;
- R2 General Residential;
- R2N General Residential Narrow Lot; and,
- R3 Medium Residential.

The consistency of the streetscape is considered in the land use choices. Streets are intended to have unified themes and consistent patterns of development. Transition from one housing type to another will generally occur by means of flankage lots, rear yard to rear yard interface, or a separation strip of some type in a side yard. The average lot depth proposed is 35m.

#### 3.2.3a Low Density Residential (R1)

Single family homes form the core and major land use of Discovery Plains. They are located for the most part toward the interior of the site and toward the west away from the noise and activity associated with the rail line and 50<sup>th</sup> Avenue traffic. The homes are also proximate to the majority of the transportation routes through the community and the amenity spaces provided. Lot sizes will vary depending on location related to the key open space amenities and market demands while being compliant with the minimum 445m<sup>2</sup> requirement of the R1 Land Use Bylaw #01-23.

#### 3.2.3b General Residential (R2)

This land use allows for single family homes on lots smaller (375m<sup>2</sup>) than the R1 district and for duplex dwellings on lots 275m<sup>2</sup> in size. For the most part this land use has been situated around the periphery of the community to form a buffer and transition to the major future transportation route to the north, future development to the west, and to the commercial and higher density forms of housing to the east. It is proposing that the homes in these locations be detached allowing for a little more affordability while offering a prime location.

#### 3.2.3c Narrow Lot Residential (R2N)

This land use allows for single detached homes on smaller lots of 285m<sup>2</sup> and for duplex on lots 250m<sup>2</sup> in size. These housing forms have been situated as transitional between the R2 lots and the higher density multifamily and commercial development to the east. Due to density, more stringent architectural controls will be required with the housing style and rear yard access is provided.

#### 3.2.3d Medium Density Residential (R3)

Three sites have been designated R3 and they are all adjacent to 50<sup>th</sup> Avenue. The two sites to the north are intended for apartment style dwellings in order to

maximize the density allowable under this district and provide a diverse housing choice in the community. There is the opportunity to provide student rental housing for Olds College and other seasonal employees. Primary access to these sites will be directly from 50<sup>th</sup> Avenue/Range Road 14 thereby reducing traffic pressures on the internal streets. Densities for these two parcels are projected at seventy-five (75) units per site. The parcel to the south is envisaged as a “villa” site geared more toward the upper end and retirement segment of the market. Access to the third site will be from the collector. A density of fifty (50) units for the third site is anticipated.

### 3.2.4 Neighbourhood Commercial Development [CN]

The local commercial site will be capable of providing a broad range of services within walkable reach of the residents thus reducing the amount of vehicular travel.

A neighbourhood commercial site is supported in the Plan Area as the closest existing retail outlet is over half a mile away. The commercial site has been located along 50<sup>th</sup> Avenue, north of the internal collector, and will take advantage of the permitted and discretionary uses listed in the Land Use Bylaw. It is proposed that access to the site will be from the collector road only and that it will be developed with sensitivity to the surrounding residential area though the use of architectural controls established at the development permit stage. Living quarters above the retail space will be encouraged as another form of housing.

### 3.2.5 Pedestrian Connections

The Discovery Plains community has been designed to include both regional and local pathway connections. The regional pathway connection is 2.5m wide and is east to west at the north end of the Plan Area as well as the middle of the quarter, and north to south along the eastern boundary/50<sup>th</sup> Avenue (**Figure 7.0A Open Space Plan**). The local pathways are shown mixing both east west and north south connections including paths around the storm water management ponds and pocket parks. Local pathways are 2.0m wide on average and serve the neighbourhood. These connections will assist in pedestrian and cyclist movement within Discovery Plains as well as connect to the rest of the Town. Sidewalks and pathways are intentionally connected to the west to facilitate safe pedestrian and bicycle movements to a proposed future school site.

## 3.3 Subdivision & Phasing

The anticipated build out of the lands will take seven (7) to fifteen (15) years based on the MDP’s projection of an average 2.7% future growth rate requiring approximately 10ha (24.7ac) of land per year for residential construction. Assuming that there will be on average four communities offering new homes, the annual absorption of land for Discovery Plains will be in the order of 2.5ha (6.1ac) per year. Development will start in the southeast, south of the collector off 50<sup>th</sup> Avenue and move westerly in phases typically of thirty (30) lots depending on market conditions (**Figure 6.0 Phasing Strategy**). Subsequent



SCALE: NTS



FIGURE 7.0A OPEN SPACE PLAN

JULY 2010

phasing as illustrated in Figure 6.0 would occur as economic conditions and the phasing strategy warranted. Phases could occur simultaneously without amendment to this plan.

*Policy 3.3.1 The Plan Area shall be developed comprehensively in accordance with a phasing strategy. The timing of development in any phase shall be at discretion of the landowner and may include breaking phases down further or, conversely, simultaneous development of phases based on current economic conditions. This may occur without further amendment to this Plan.*

## 4.0 OPEN SPACE AND PEDESTRIAN CONNECTIONS

The stormwater management system including two aerated ponds extends the opportunity to provide open space amenity which includes natural landscapes into an urban environment as part of the overall green space and linear park system (**Figure 7.0A Open Space Plan** and **Figure 7.0B Parks and Trails System**).

### 4.1 Open Space and Municipal Reserve [MR]

In accordance with the Town's Municipal Development Plan and vision for Discovery Plains, the Plan provides pocket parks, linear parks, pathways, and passive recreational opportunities for residents. Park space shall be designated as Municipal Reserve (MR).

The *Municipal Government Act* (MGA) requires the municipality to ensure landowners/developers allocate and dedicate up to 10% of land being subdivided for the purposes of providing public parks, school, or recreational facilities. The parks and linear parks are to be considered part of the physical land dedication and are to be credited toward overall MR dedication (**Figure 7.0A Open Space Plan**). It is anticipated that a total of +/- 14.79ac (+/- 5.99ha) of MR will be dedicated which is approximately 10.0% of the gross area, deductions to gross area, such as roads, may lower this total.

*Policy 4.1.1 Municipal Reserve dedication is to be provided to the Town of Olds in accordance with Section 666 of the Municipal Government Act.*

The MR parcels vary in size, as do the linear pathways and storm retention areas which all contribute to the overall open space design of Discovery Plains (**Figure 7.0A Open Space Plan**). In total, these areas account for some 10% of the gross land area. They are connected to the local street network and the regional pathway system situated along 50<sup>th</sup> Avenue, the future thoroughfare along the north boundary and the east/west collector which transverses the community. This hierarchy of open space creates a network that invites residents to walk or bike when going to the store or transporting kids to school. It encourages recreational pursuits from short walking circuits to regional marathons while linking passive to active, and structured to natural elements of the system within the community. Tot lots can be spaced throughout the system as required.



SCALE: NTS



**DETAIL A**  
SCALE: NTS



**DETAIL B**  
SCALE: NTS

- LEGEND:
- PLAN AREA BOUNDARY
  - REGIONAL PATHWAY
  - LOCAL PATHWAY
  - SIDEWALK
  - ROADS AND PATHWAYS
  - TREES
  - MUNICIPAL RESERVE
  - PUL (STORMWATER MANAGEMENT)
  - PUL
  - ☼ AERATION FOUNTAINS

FIGURE 7.0B PARKS AND TRAILS SYSTEM

JULY 2010

In order to accommodate the Regional Pathway which runs through the community, an additional 5m has been added to the cross section of the east/west collector to provide a landscaped boulevard with a 2.5m paved asphalt pathway that can accommodate both pedestrian and bicycle traffic separated from vehicular movement. The MR dedicated provides:

- Two larger parcels of sufficient size to provide playground and sports facilities in the southern portion of the Plan;
- Two rectangular spaces that provide a view through the residential area to the aerated ponds to the east and toward the mountains to the west, in the northern portion of the Plan, creating an inviting entry into the community cells as well as a pleasant open linear pathway space;
- Open space around the stormwater ponds to create a natural landscaped area for walking, observing, and experiencing nature; and,
- Smaller linear spaces strategically located to provide linkages to the commercial and future school site as well as to provide visual access from the roadway system.

## 5.0 TRANSPORTATION

Each phase is serviced with roadways that form cul-de-sacs and relatively short crescents providing ease of access, emergency egress/ingress, quiet streets, reduced vehicular speeds, and a sense of security.

### 5.1 Road Network

The road system has been designed to create a safe and efficient movement of vehicles and non vehicular traffic through the community (**Figure 8.0 Transportation Network**). A hierarchy of roads from arterial, collector, and residential standards has been utilized in community design. Collector standard roads have been used to direct traffic to a potential future major thoroughfare along the north boundary and as a connector from 50<sup>th</sup> Avenue to future residential development to the west. A median divides the primary entrance collector road at 50<sup>th</sup> Avenue as an entry feature and for emergency vehicle access. Refer to **Figures 9.0, 10.0A, and 10.0B** regarding the proposed road cross sections.

The collector roads effectively divide the community into four neighbourhood cells, each of which has two points of entry or egress. Within each cell the internal system forms closed circuit crescents and cul-de-sacs which provide a sense of scale relative to the adjacent residential use as well as helping to reduce speed.

Land has been dedicated along the north boundary for the future construction of a major standard road. Sidewalks are provided on both sides of the collectors and on one side of the residential standard roads as part of the regional and local pathway systems.

As a result of an active rail line to the east of the property, special attention will be given to the interface of development adjacent to 50<sup>th</sup> Avenue within 100m of the centerline of the railway. This will include vibration analysis and suppression if required along with sound attenuation through various methods such as distance and/or fencing.



SCALE: NTS



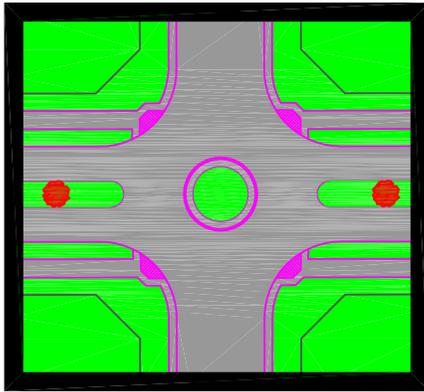
- LEGEND:
- - - PLAN AREA BOUNDARY
  - █ COLLECTOR ROAD
  - █ RESIDENTIAL ROAD
  - █ LANES
  - █ MAJOR ROAD
  - █ EXISTING ROAD UPGRADED TO UNDIVIDED ARTERIAL

FIGURE 8.0 TRANSPORTATION NETWORK

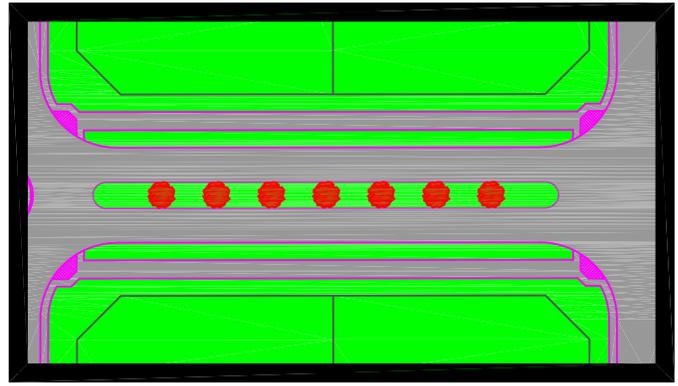
JULY 2010



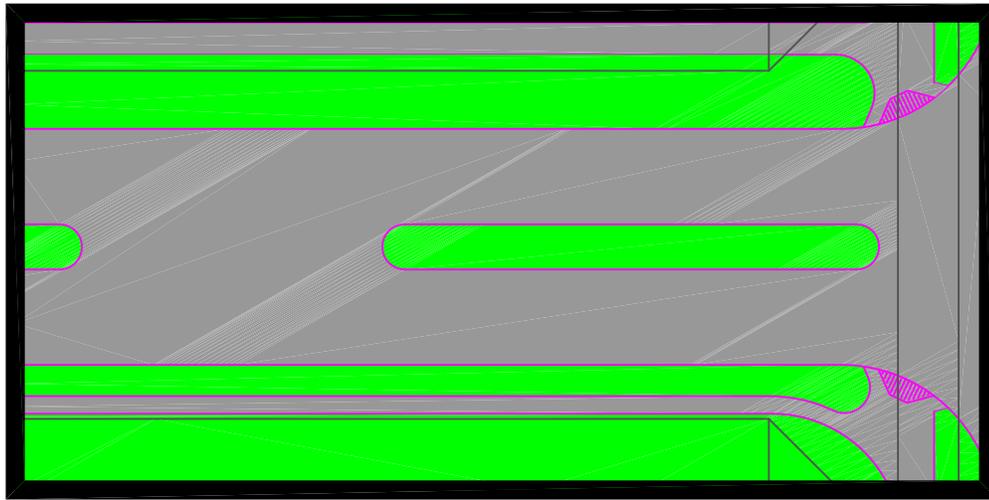
SCALE: NTS



ROUNDABOUT (A)



CENTRAL MEDIANS (B)



ENTRANCE MEDIANS (C)

LEGEND:

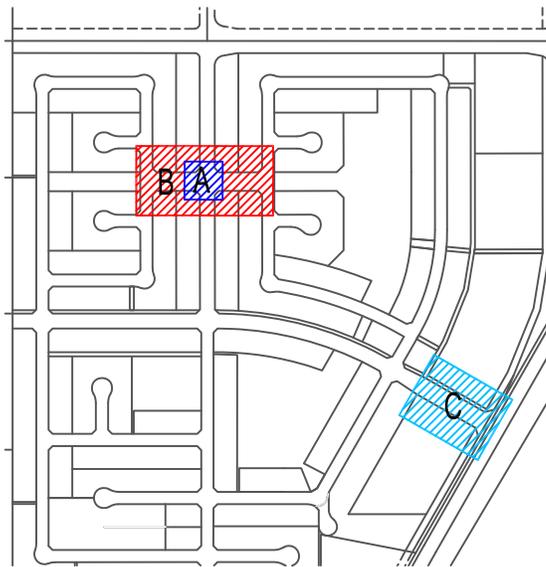
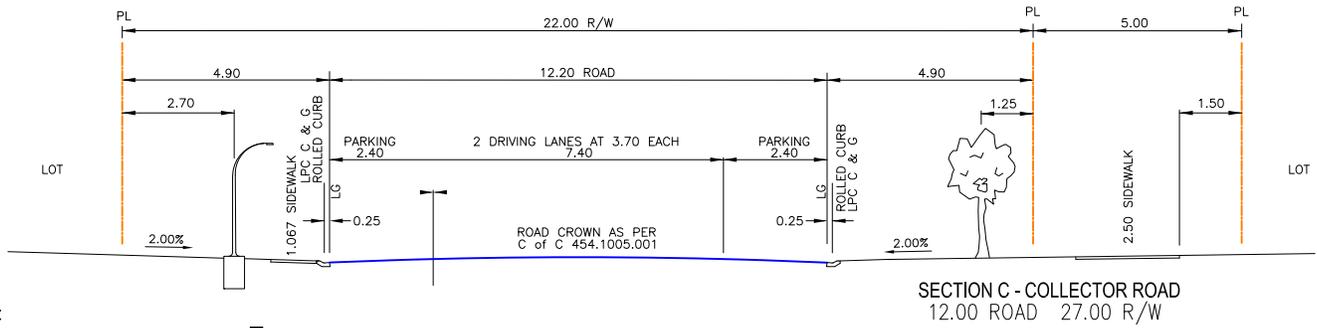
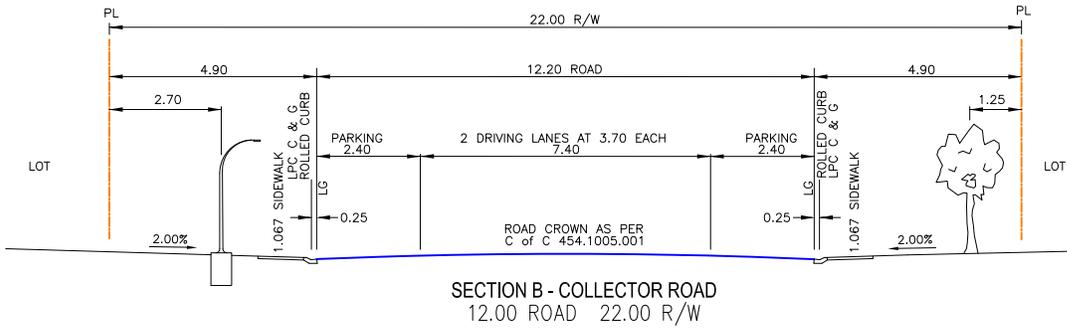
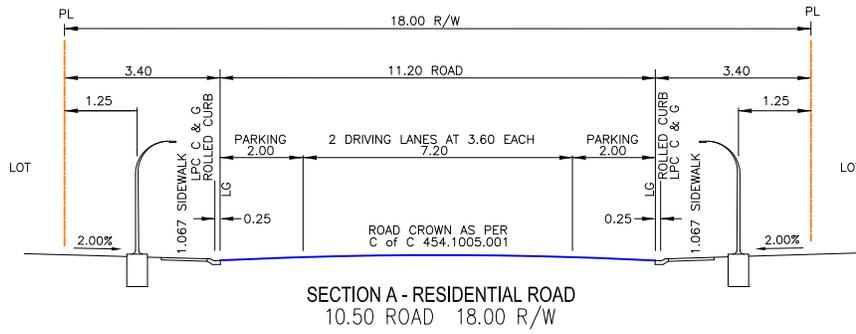


FIGURE 9.0 TRAFFIC CALMING MEASURES

JULY 2010



SCALE: NTS



LEGEND:

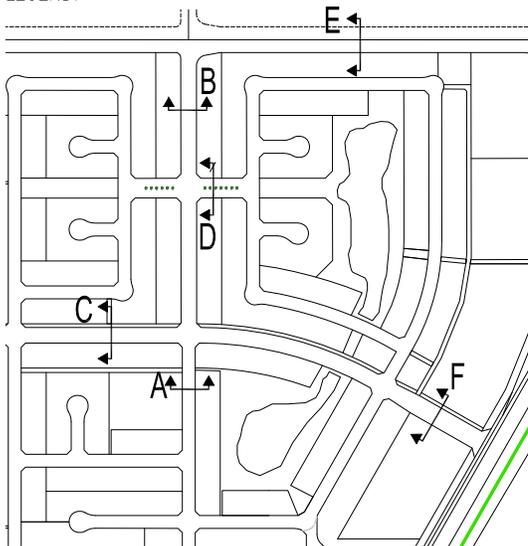
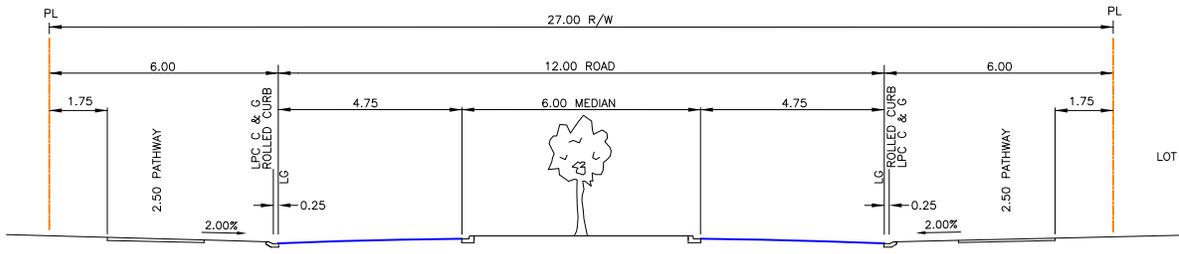


FIGURE 10.0A ROAD CROSS SECTIONS

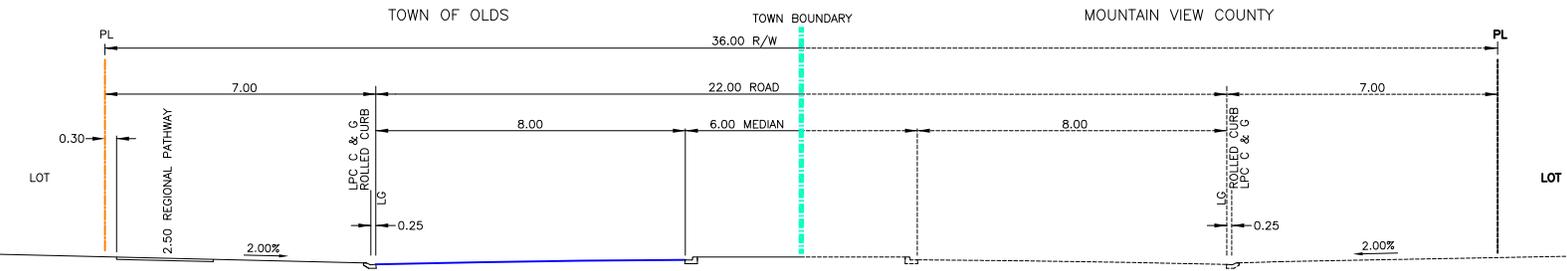
JULY 2010



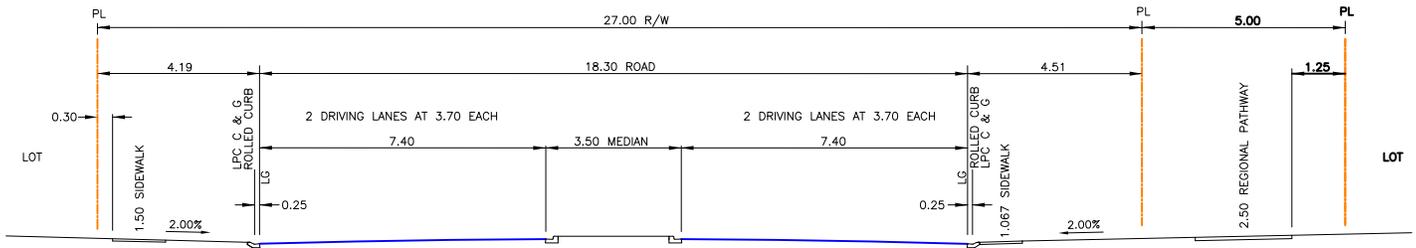
SCALE: NTS



SECTION D - COLLECTOR ROAD  
4.75 ROADS /w MEDIAN 27.50 R/W



SECTION E - MAJOR ROAD  
8.00 ROADS /w MEDIAN 36.00 R/W



SECTION F - COLLECTOR ROAD  
7.40 ROADS /w MEDIAN 27.00 R/W

LEGEND:

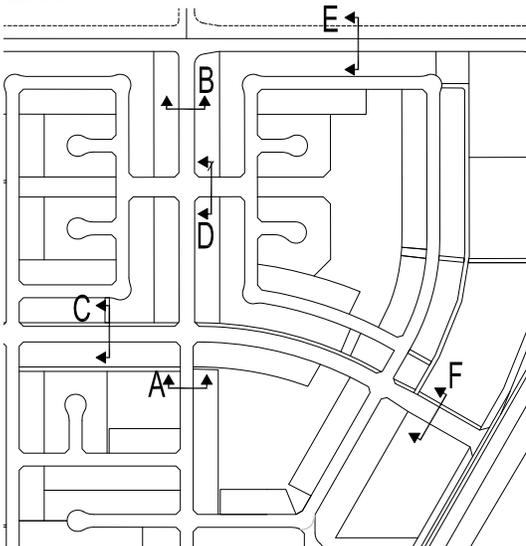


FIGURE 10.0B ROAD CROSS SECTIONS

JULY 2010

Several methods of traffic calming measures are being introduced (**Figure 9.0 Traffic Calming**), these include divided roadways with medians and a roundabout. Due to the length of the straight, centrally located, north/south (Collector) street, a roundabout is proposed for the first intersection south of the arterial road along the north boundary of the site as a traffic calming device while acting as an entry feature to the neighbourhood. In addition, a temporary four way stop is proposed at the following intersection (further south) on the north/south (Collector) street to further assist in traffic calming.

- Policy 5.1.1 Access to the subdivision shall be generally in accordance with **Figure 8.0 Transportation Network**.*
- Policy 5.1.2 The site both during and after full development will provide and maintain appropriate emergency vehicle access, to the satisfaction of the Town of Olds.*
- Policy 5.1.3 Complete road systems shall be constructed by the Developer to the satisfaction of the Town of Olds.*
- Policy 5.1.4 Cost sharing and/or Endeavours to Assist will be considered where oversized infrastructure is provided beyond what is required for the development, at the sole discretion of Council to assign.*
- Policy 5.1.5 New roads and driveways connecting onto Range Road 14 shall not be constructed until suitable arrangements have been made in writing with Mountain View County and/or arrangements have been made between the Town and County to transfer management responsibilities and control over the affected segment of Range Road 14.*
- Policy 5.1.6 Noise attenuation features shall be provided along the length of the major road shown on **Figure 8.0 Transportation Network** to the satisfaction of the Town.*
- Policy 5.1.7 No definitive alignment has been chosen, however, potential Functional Alignments for the extension of Highway 27 to the north of the Town of Olds may impact the Plan Area, particularly in identified development phases four (4), five (5), and six (6). The Developer shall protect right-of-way for future alignments for the benefit of Alberta Transportation within Phases four (4), five (5), and six (6) in the event that the preferred Highway 27 re-alignment is directed toward and within the Plan Area. Should a definitive alignment be chosen by Alberta Transportation that impacts the Plan Area, subsequent review and amendment to this area structure plan shall be required.*

## 6.0 UTILITIES AND SERVICING

### 6.1 Water Supply and Conservation

Water servicing for the area is currently under review and analysis. In discussions with Town staff, there is both an interim plan and an ultimate solution (**Figure 11.0 Preliminary Water Design**). On a short term basis, water servicing is available from 50<sup>th</sup> Avenue; the ultimate tie-in will be to the 300mm water main currently underway on the east side of the railway.

### 6.2 Sanitary Wastewater

To accommodate the development of this Plan Area, a sanitary lift station is required where it is intended to connect to the regional forcemain proposed approximately one mile to the north. This lift station is proposed to be located in the northeast corner of the site (**Figure 12.0 Preliminary Wastewater Design**). However, in the event that the regional forcemain has not been installed at the time of design, the Developer is prepared to install a temporary holding tank where the sewage will be transported to a licensed receiving location. During the initial stages of development a temporary holding tank is a feasible interim solution as the amount of contribution to sewage volumes is relatively low as occupancies within the development do not occur immediately but rather a minimum of eight (8) months after construction of the infrastructure is completed.

It is anticipated that sanitary sewer trunk lines will, for the most part, be accommodated within the rights-of way of major roads. Similarly, the sanitary servicing proposal will be presented to the Town as part of the overall discussions related to providing services to the Plan Area.

### 6.3 Stormwater Management

Existing site drainage occurs from the entire Plan Area along the roadside ditch along 50<sup>th</sup> Avenue. This ditch also collects post-development runoff from a portion of the Town of Olds. The ditch drainage boundary includes the land north of the main road (Highway 27) west of 50<sup>th</sup> Avenue and the discharge from the dry pond constructed for the Sierra development. The 100 year pre-development peak flow from the study area was determined as 468L/s/ha using the SWMHYMO model.

The storm water management system is intended to:

- Contain the 1:100 storm event;
- Provide a method to deal with the drainage to the south and along 50<sup>th</sup> Avenue;
- Improve water quality prior to discharge; and,
- Discharge at or below predevelopment flow rates.

The proposed Discovery Plains development will discharge its post-development runoff to the existing ditch (along 50<sup>th</sup> Avenue) in the NE corner of the Plan Area. The maximum allowable rate of discharge during a 100 year storm was assumed at 220L/s, or 3.7L/s/ha, less than 50% of the calculated pre-development peak flow. The runoff generated in the majority of the Plan Area (and offsite to the north and west) for a total area of 58.88ha (145.49ac) will be collected



SCALE: NTS



- LEGEND:
- - - - - PLAN AREA BOUNDARY
  - — — — — WATER MAIN
  - FIRE HYDRANT

FIGURE 11.0 PRELIMINARY WATER DESIGN

JULY 2010



SCALE: NTS



- LEGEND:
- - - - - PLAN AREA BOUNDARY
  - — — — — SANITARY SEWER
  - SANITARY MANHOLE

FIGURE 12.0 PRELIMINARY WASTEWATER DESIGN

JULY 2010

in two interconnected stormwater ponds. The upstream, South Pond, will collect the runoff from 28.36ha (57.72ac) and its maximum discharge rate has been determined at 132L/s or 4.7L/S/ha. The discharge from the South Pond will be controlled and will enter the Main Pond through a 600mm connecting pipe. The Main Pond will receive runoff from the north catchment area of 30.52ha (75.41ac), and the inflow from the South Pond, reducing the total discharge to 220L/s (**Figure 13.0 Preliminary Stormwater Design**). The proposed ponds consist of permanent section 2.5m deep which provide the water quality control and active storage sections where runoff in excess of the pre-development rate is temporarily stored. The permanent pond volume in the proposed ponds is about 22,700m<sup>3</sup> significantly exceeding the volume of 14,845m<sup>3</sup> which is based on the 250m<sup>3</sup>/ha requirement.

The site will be modeled to meet the standards of both the Town of Olds and Alberta Environment. An alliance is in process with the Olds College to potentially expand their curriculum to include ideas for nutrient treatment and sediment control with regards to the storm ponds as well as introducing some innovative ideas when it comes to landscaping within a storm water area.

It is intended that these ponds will provide a valuable amenity in the form of open space and a natural setting that attracts birds and wildlife. They will be enhanced through the use of fountains that will aerate the water reducing the amount of algae and in turn any odour that might occur from its presence.

## 6.4 Shallow Utilities

Private utility companies will supply, install and operate the following services: gas, power, telephone, and cable. These facilities will be installed pursuant to the Town of Olds Engineering Standards and Specifications.

## 7.0 DEVELOPMENT STANDARDS

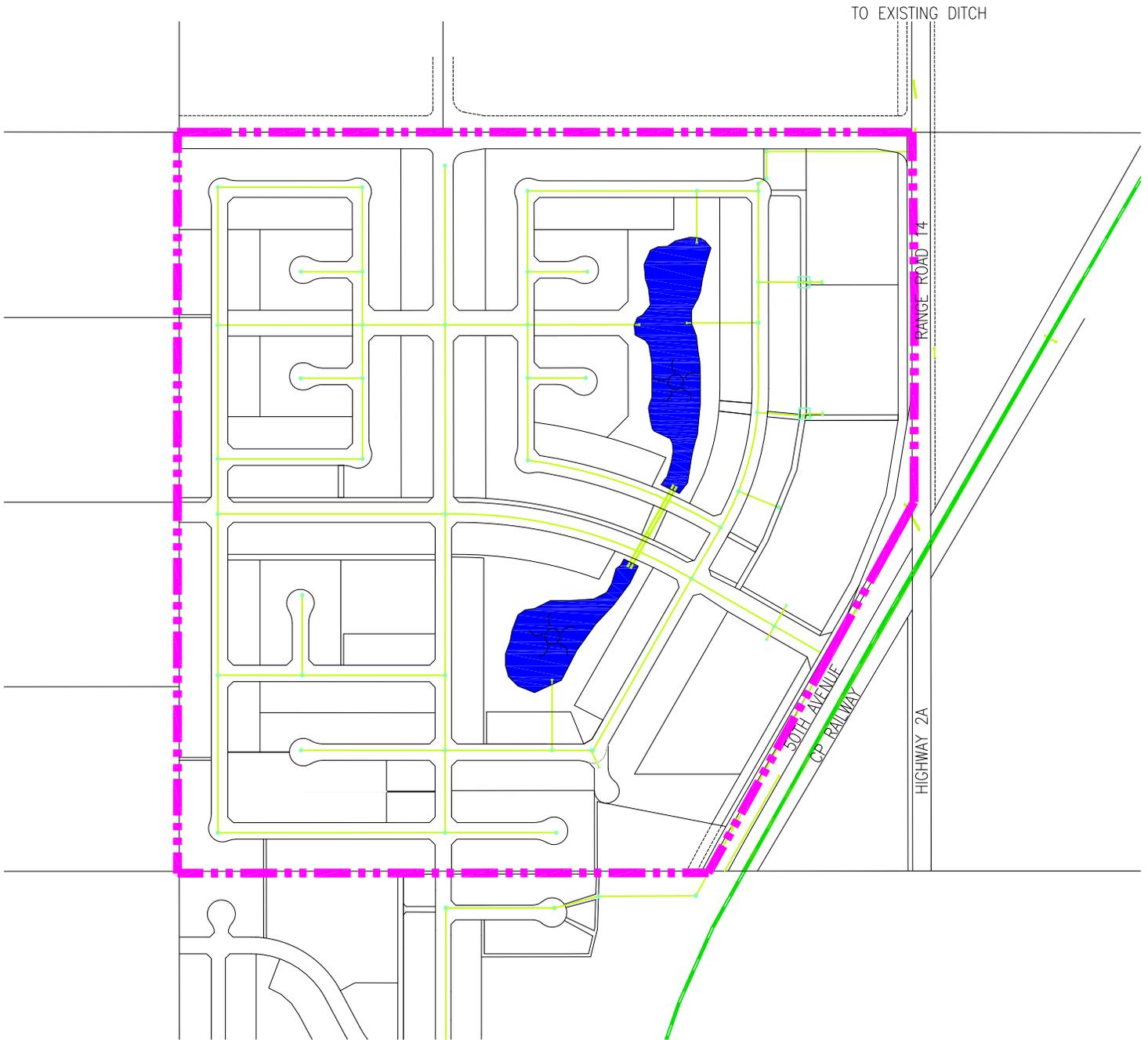
Development standards and architectural controls will be utilized at the Development Permit stage to ensure that all new site development will be compatible with adjacent land uses.

### 7.1 Architectural Controls

The Developer will establish architectural controls for the area in general and for the different land use designations in particular. A general theme will be established for the area and then specifically for the neighbourhood cells and particular land uses as required. Specific attention will be paid to materials, colors, and architectural detailing that enhances the elevation treatment of the home and the streetscape. It is a foundation of community planning that producing an aesthetically pleasing housing form creates a sense of pride in ownership that in turn results in care and attention being paid to the maintenance of the home by the owner. Home elevations will be approved by the Developer's Architectural Control agent before a development permit application is permitted to be submitted to the Town.



SCALE: NTS



- LEGEND:
- - - - - PLAN AREA BOUNDARY
  - STORM SEWER
  - STORM MANHOLE
  - > CULVERT
  - AERATION FOUNTAIN
  - CATCH BASIN

FIGURE 13.0 PRELIMINARY STORMWATER DESIGN

JULY 2010

*Policy 7.1.1 The Discovery Plains Plan Area Architectural Controls shall inform quality in the built environment and include but not be limited to materials, colors, and architectural detailing.*

## 8.0 PUBLIC CONSULTATION

A public Open House in support of the Discovery Plains Area Structure Plan process was held on June 29, 2010. A Public Open House Summary Report was submitted under a separate cover to the Town. The report summarizes comments provided during the question and answer period following the presentation, the one-on-one discussions with Project Team members, and the feedback forms received from residents.

## 9.0 IMPLEMENTATION, REVIEW, AND AMENDMENT

### 9.1 ASP Implementation

The Discovery Plains Area Structure Plan falls within a hierarchy of applicable plans. The Town of Olds *Municipal Development Plan* (MDP) is the guiding document for all development within the municipality. The *Land Use Bylaw* (LUB) establishes the land use rules and regulations. The Discovery Plains ASP presents a greater level of planning detail within the specific Plan Area and is required to be consistent with both the MDP and LUB. Development in the ASP should be acceptable to community and consistent with policy contained within this document. The Discovery Plains Area Structure Plan does not supersede, repeal, replace or otherwise diminish any other statutory plan in effect in the Plan Area.

*Policy 9.1.1 The policies contained within this document shall be reviewed and implemented by the Town of Olds at their discretion.*

### 9.2 Plan Review and Amendment

As the Discovery Plains Area Structure Plan is adopted by bylaw of the Municipality, a formal process as outlined in the *Municipal Government Act* is required to amend the Plan.

