

## **Green Wood Outline Plan**

Part of NE 14-63-2-W4

**September 17, 2012**

**File # 1019-02**

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## **1 INTRODUCTION**

### **1.1 Purpose of the Plan**

This Outline Plan has been prepared on behalf of the owners of the subject land to provide a detailed framework for the future development of the lands described as part of NE 14-63-2-W4 in Cold Lake for residential purposes. The plan has been prepared according to available municipal standards and as per commonly used best practices.

### **1.2 Plan Area Location and Ownership**

The Plan area encompasses 4.05 hectares (10.0 acres) of land, and is under private ownership. The subject land, herein known as Green Wood community, is located southwest of the 16th Avenue and 16<sup>th</sup> Street intersection as illustrated in Figure 1.

## **2 Background**

### **2.1 Policy and Regulatory Context**

#### **2.1.1 Municipal Development Plan**

The City of Cold Lake Municipal Development Plan (MDP) 2007 – 2037, Bylaw 291-LU-07, designates the plan area as low density residential which is characterized by single family detached housing of various types. See Figure 2.

#### **2.1.2 Land Use Bylaw**

The plan area is currently designated as R1A - Residential District (Single Detached) in the Cold Lake Land Use Bylaw 382-LU-10. The purpose of this district is to provide for single detached dwellings on lots with a minimum width of 14.5 metres. See Figure 3.

### **2.2 Site Characteristics**

The landowner currently resides on the southern portion of the site adjacent to 16<sup>th</sup> Street. The subject lands are partially cleared with approximately 50% of the site remaining in what appears to be a naturally vegetated state. The site contains a mixture of shrubbery, deciduous and coniferous trees.

The topography of the site has a relief of 13 metres, varying from a high point of 565 metres in the northern portion of the site to 553 metres in the southern portion of the site. There is a noticeable change in elevation along a ridge in the southeast corner of the site. For detailed information pertaining to the topography of the site, please see Figure 4.

The low lying area in the south-western portion of the site is understood, anecdotally, to be a slough. Confirmation of such will be required, prior the development of the subject site.



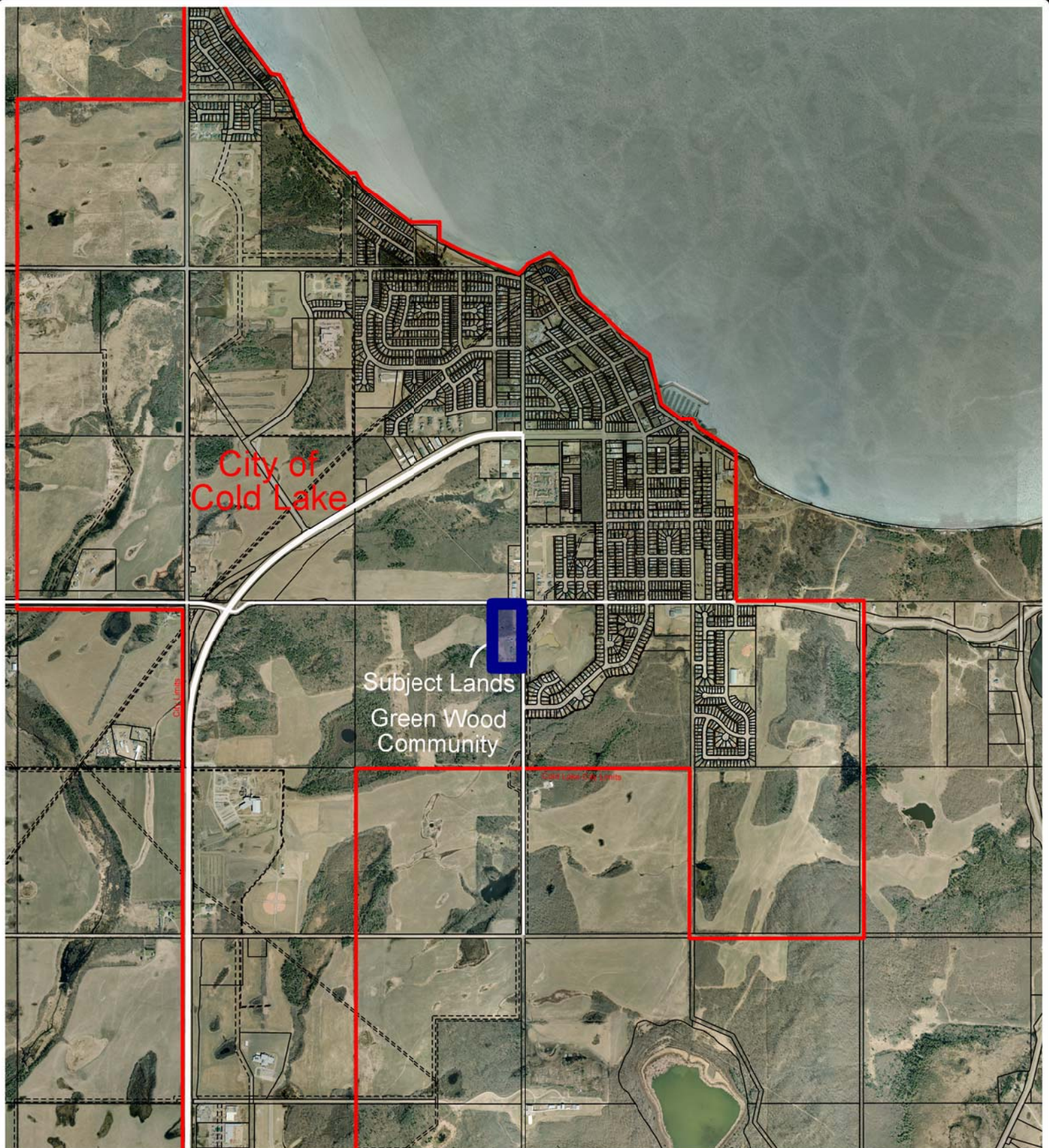
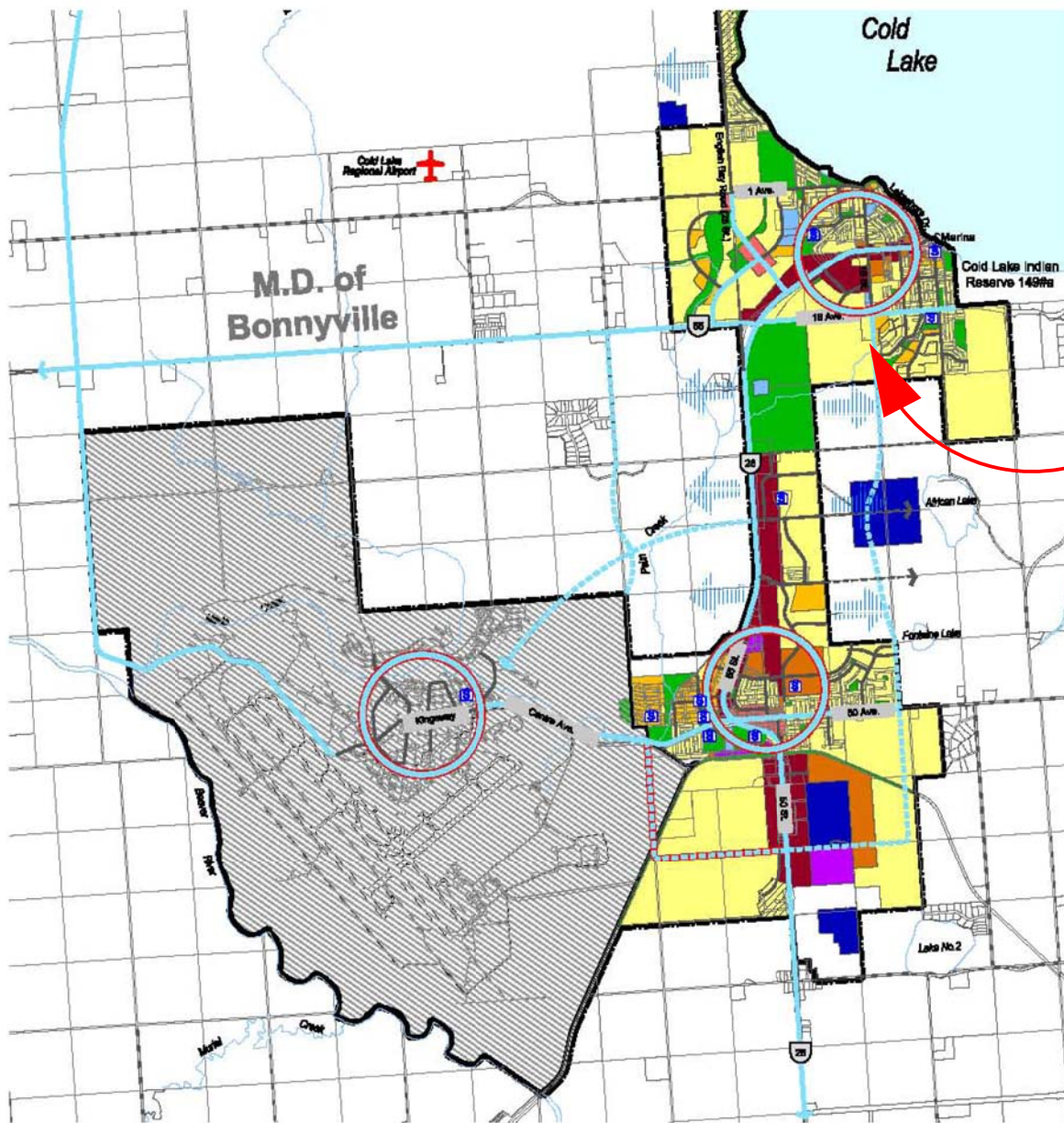


FIGURE 1  
**LOCATION PLAN**  
GREEN WOOD  
AREA STRUCTURE PLAN





**Subject  
Lands**

#### Legend

- Residential Estate
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Arterial Commercial
- Lakeshore Commercial
- Institutional
- Public Services
- Industrial
- Parks and Open Space
- Buffer
- 4 Wing Cold Lake
- School

- Potential Future Urban Expansion Area
- Mixed Use Urban Village
- Provincial Highway / Arterial Roadway
- Proposed Arterial Roadway
- Collector Roadway
- Proposed Collector Roadway
- Future Dangerous Goods Route
- City of Cold Lake

#### Note

1. This map is not intended to be interpreted on a site specific basis. Rather, it is a conceptual framework meant to guide future land use. Areas have been generalized and are approximate. The City of Cold Lake does not guarantee the map's accuracy. All information should be verified.
2. Provincial Highways are listed as Urban Arterials in the Cold Lake Transportation Study (December 2000).

**Map 2**  
**Future Land Use Concept**



**Municipal  
Development  
Plan 2007-2037**

0 0.5 1 2 km



ARMIN A. PREIKSAITIS  
& ASSOCIATES LTD.

in association with



**FIGURE 2**  
**MUNICIPAL DEVELOPMENT PLAN**  
**GREEN WOOD**  
**AREA STRUCTURE PLAN**





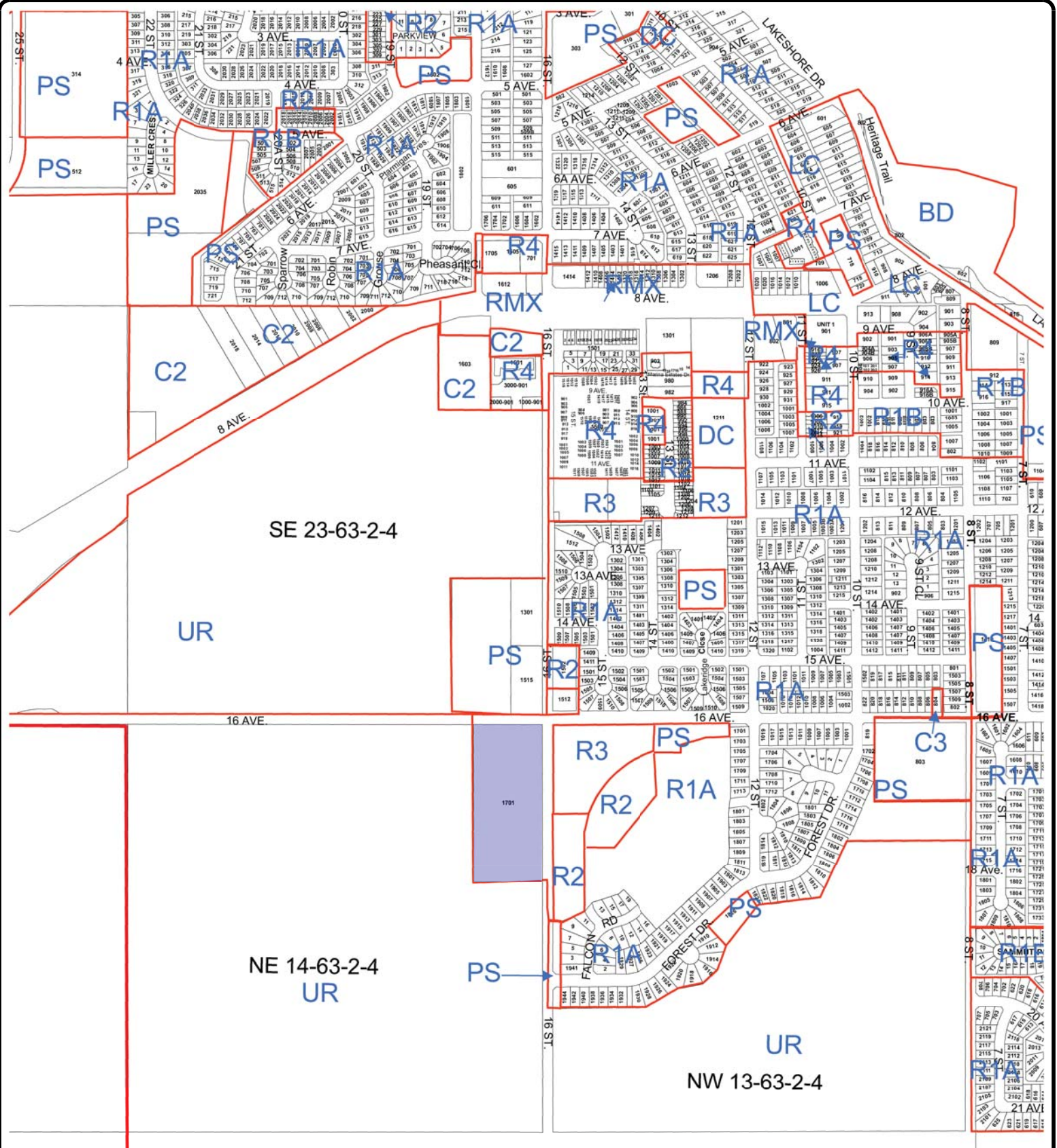
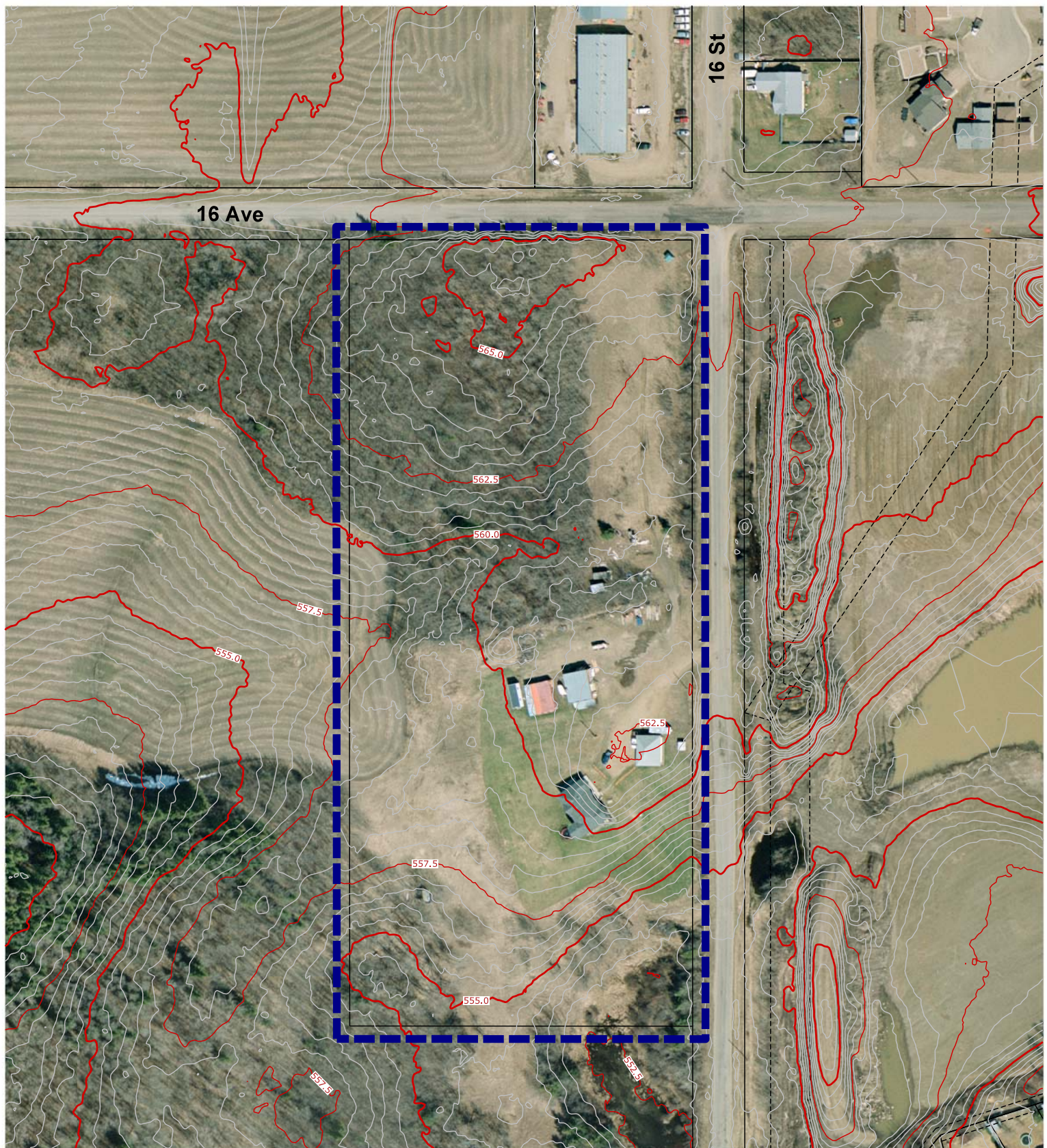


FIGURE 3  
**CURRENT ZONING**  
 GREEN WOOD  
 AREA STRUCTURE PLAN





**FIGURE 4**  
**SITE CHARACTERISTICS**

**GREEN WOOD  
AREA STRUCTURE PLAN**

BOUNDARY CONTAINING  
APPROX. 4.0 ha

1:2000  
September 5, 2012  
10190200b12.dgn



### **3 DEVELOPMENT CONCEPT**

#### **3.1 Plan Objectives**

The purpose of this Outline Plan is to provide guidance for future land use redistricting, subdivision and development of the lands within the plan area. The development objectives upon which this plan is based are as follows:

- To create an attractive and safe neighbourhood that provides a variety of housing options, and links to the existing community;
- To promote higher density development for the effective use of land, sustainable urban form, and better use of surrounding amenities, services and infrastructure;
- To create a community designed for easy access to the broader community;
- To develop a neighbourhood which will provide for a variety of housing opportunities that will accommodate a mix of age and income groups; and
- To foster a high standard of urban design and crime prevention through environmental design (CPTED).

#### **3.2 Land Use Concept**

The plan area is intended to provide a variety of medium density residential uses, while limiting the amount of vehicular traffic within the neighbourhood itself.

In developing the layout of the community, the focus was upon ensuring accessibility and connectivity with the broader community, while limiting the amount of vehicular traffic within the Green Wood community itself.

The development concept is illustrated in Figure 5.

##### **3.2.1 Medium-Density Residential**

The entire site has been identified for medium density housing, which could include row houses, townhouses, semi-detached houses and stacked town houses. The variety of housing forms to be developed within this neighbourhood will provide residential options to residents in various stages of their lives.

##### **3.2.2 Open Space**

The Green Wood Outline Plan does not contemplate the provision of open space at this time, due to the size and location of the site, the configuration of the development concept and the proximity to existing parks and open space to the east and future parks and open space areas to the west.

Linkages to the east and west will be established through the development of appropriate pedestrian paths around the storm water management pond. There is the potential that either a small parkette can be developed above the stormwater management facility at the east or west ends, or that the stormwater management facility may be used for informal recreation activities.

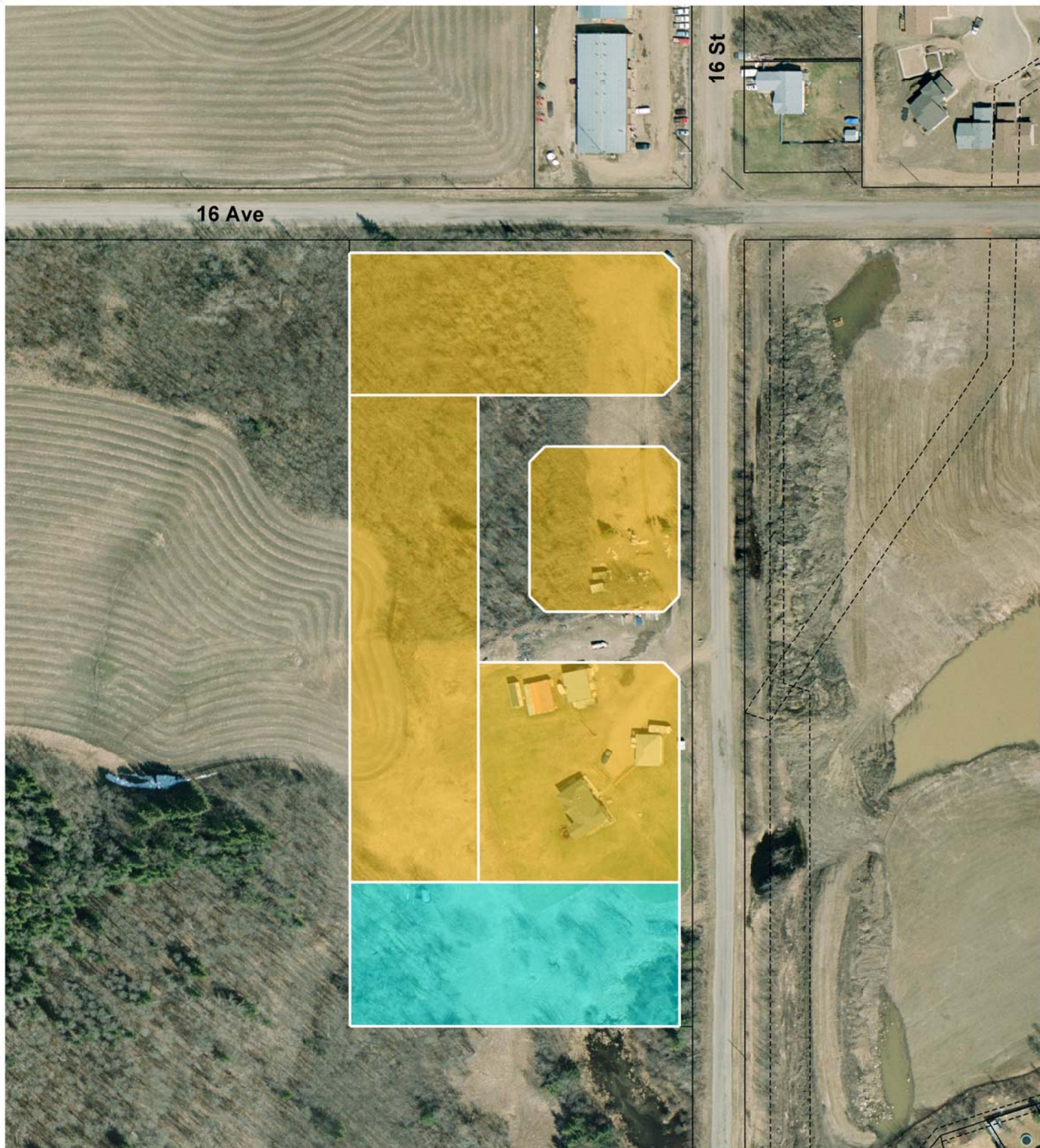


FIGURE 5  
**DEVELOPMENT CONCEPT**  
 GREEN WOOD  
 AREA STRUCTURE PLAN

- Proposed Stormwater Management Facility
- Proposed Medium Density Blocks



Details regarding pedestrian connectivity to adjacent lands, the potential placement of a parkette and the utilization of the stormwater management facility for informal recreation activities will need to be resolved at the detailed subdivision and design stage, and shall be done to the satisfaction of the City of Cold Lake.

### **3.3 Public Consultation**

A public open house was held on April 18, 2012 at the Cold Lake North Fire Hall, with notifications being sent out to adjacent landowners, City of Cold Lake Council and Administration, as well as being advertised in the Cold Lake Sun for a two week period prior to the open house date. Four (4) members of the community including City representatives attended the open house.

The open house included a series of presentation boards which displayed information about the initial vision, development concept, storm water management, water servicing, wastewater servicing and staging. An exit survey was also provided which the participants were encouraged to complete. A total of two (2) exit surveys were submitted.

The participants showed strong support for the initial development concept and overarching plan principles of the Green Wood community both through verbal and written exit survey responses.

A public hearing was also held to garner input from the City of Cold Lake Council and the population at large. Council was supportive of the initial vision and development concept.

Since the public open house and the non-statutory public hearing, the Green Wood development concept was changed in order to address concerns from the City of Cold Lake Engineering Department.

### **3.4 Demography**

Upon completion of the development, the Outline Plan could create approximately 114 residential units (assuming development of row housing) and creative layouts. Based on an average household size of 2.8 people within Cold Lake (2006 Census), the projected population for the plan area is 320 people. The overall plan area will have an average density of 28 units, and 79 persons per net developable hectare.

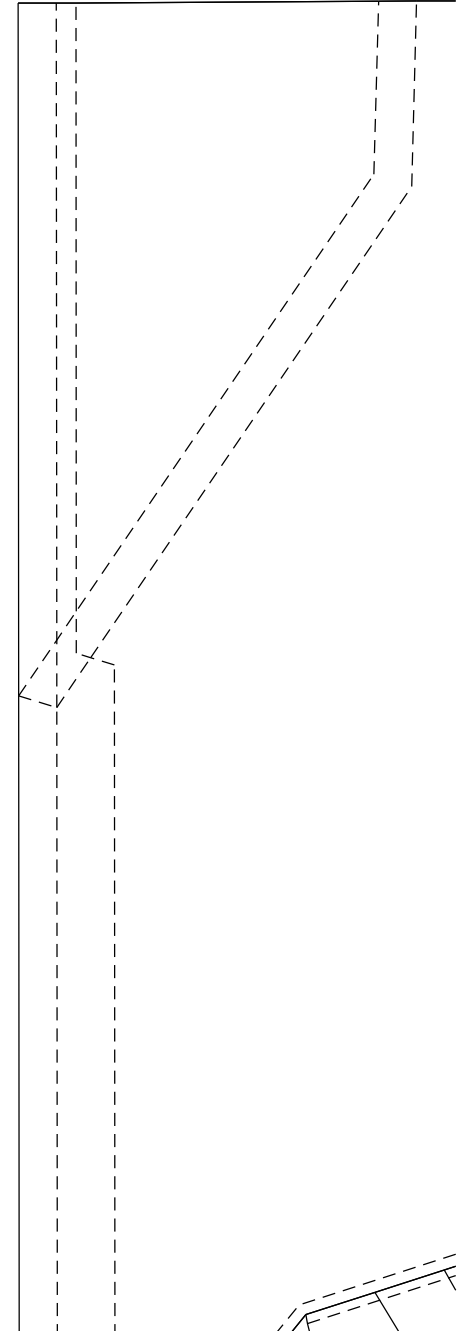
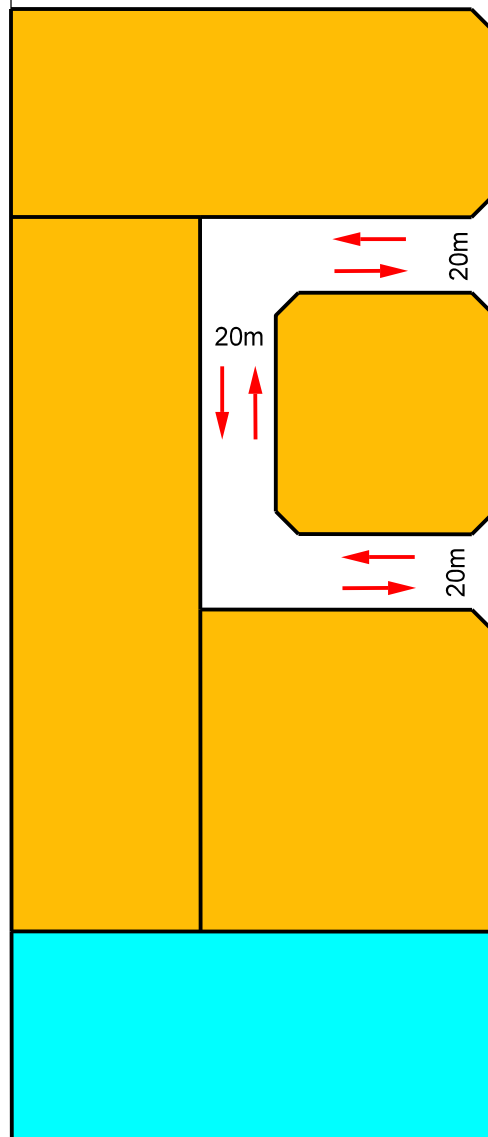
## **4 INFRASTRUCTURE**

### **4.1 Transportation Network**

The plan area is served by 16<sup>th</sup> Avenue and 16<sup>th</sup> Street. The City of Cold Lake “Cold Lake Transportation Study Traffic Volume Forecast and Analysis” completed in 2011, identifies 16<sup>th</sup> Avenue as a 4 lane arterial roadway over the 20 year time horizon. The same study identifies 16<sup>th</sup> Street as a collector roadway over the 15 year time horizon and as a 2 lane arterial at the 20 year time horizon. In order to facilitate the future improvements to each roadway, a widening of 5m has been identified at this time for the future expansion of the respective municipal road right-of-way’s as per municipal requirements.

16 Ave

16 St



→ Two Way Traffic  
← Local Roadway

**FIGURE 6**  
**ROAD NETWORK**  
GREEN WOOD  
AREA STRUCTURE PLAN



Based upon the available information, the existing and future transportation networks can adequately support the projected transportation volumes from the development area. It is expected that the development area will generate approximately 1200 Annual Average Daily Trips (AADT) based upon a medium density use consisting of row housing. The distribution between the trips entering and exiting the Green Wood community will be equal.

The primary access points for the Green Wood community will be from 16<sup>th</sup> Street via a local road in the form of a crescent. Both access/egress points from the community will support both left and right hand turning movements. At this time the proposed location of the road network is conceptual, however; prior to development the exact location of the road must be determined with the centreline of the proposed roadway being no less than 60 m from centre line of 16<sup>th</sup> Avenue. See Figure 6 for a representation.

#### **4.2 Water Servicing**

The Green Wood community will be serviced by a looped municipal water distribution system. A system of 200mm water mains will service the interior of the development and will connect to a 300mm watermain which will tie into and extend from the existing water main running along 16<sup>th</sup> Avenue. See Figure 7 for details and layout of the proposed water supply system.

#### **4.3 Wastewater Servicing**

The Green Wood community will be serviced by a traditional municipal wastewater system, using a 200 mm sanitary sewer pipe. The sanitary system servicing the Green Wood community is intended extend to and tie into the future Forest Heights sanitary sewer trunk line that runs south within the 16<sup>th</sup> Street road right-of-way. See Figure 8 for the proposed layout. Should a connection to the Forest Heights sanitary trunk line not be possible for whatever reason at some future point in order to accommodate the development, it may be necessary to investigate connecting the Green Wood sanitary system to the existing City of Cold Lake sanitary system to the north. Details regarding the connection of the proposed Green Wood shall need to be resolved at the subdivision and detailed design stage.

16 Ave

16 St

Tie into Ex. 300mm WM

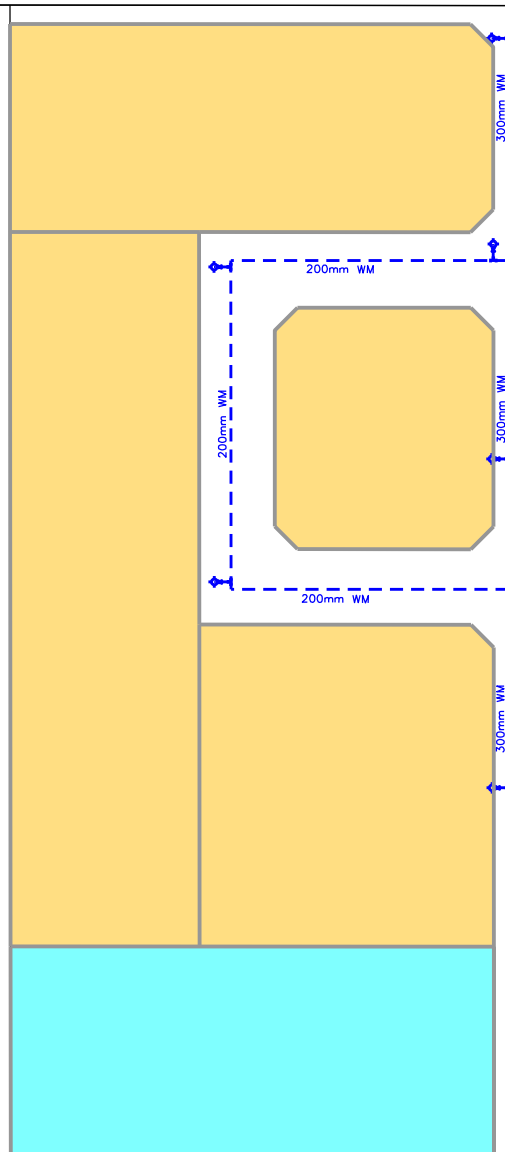


FIGURE 7

# WATER DISTRIBUTION SYSTEM

GREEN WOOD  
AREA STRUCTURE PLAN

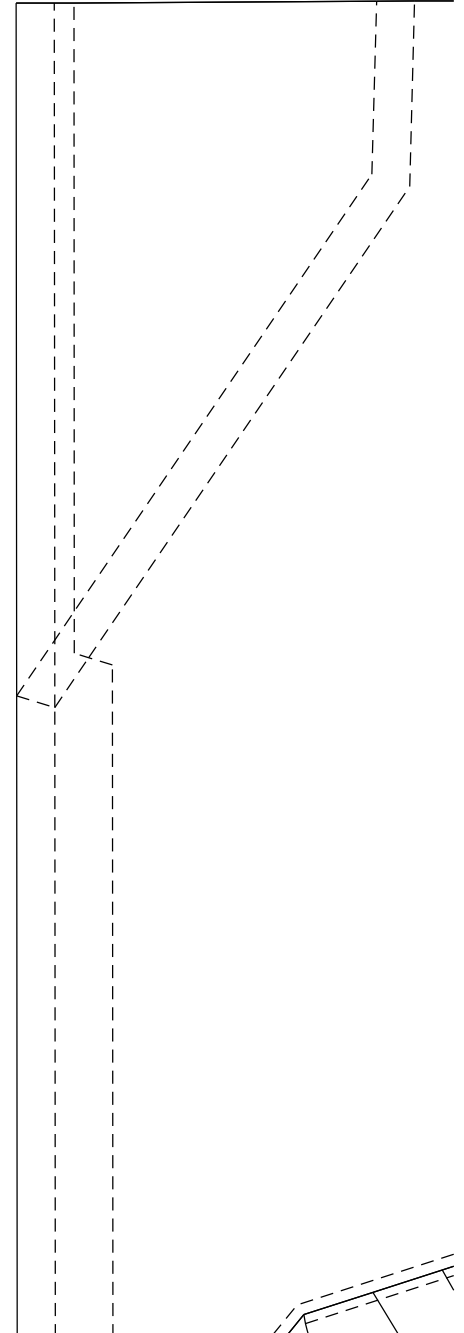
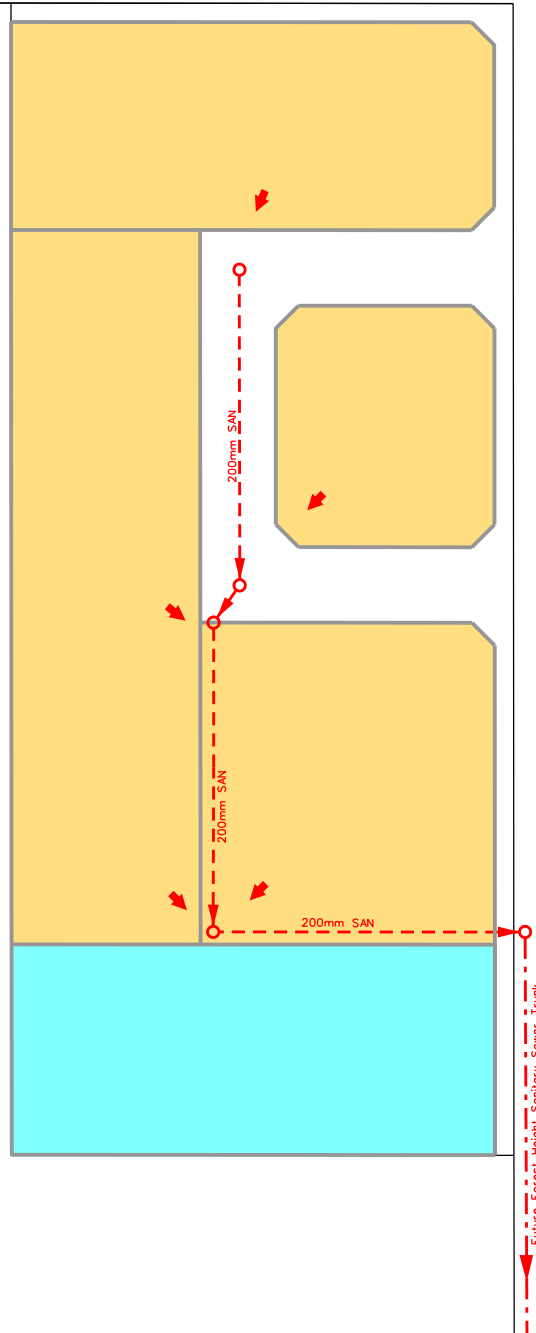
- Existing Service
- - - Proposed Service
- ⊕ Valve w Hydrant





16 Ave

16 St



- Proposed Service
- Flow Direction
- ➔ Lot Discharge Point

## FIGURE 8 WASTEWATER DISTRIBUTION SYSTEM

GREEN WOOD  
AREA STRUCTURE PLAN

#### **4.4 Stormwater Management**

A stormwater management facility will be incorporated into site servicing design to provide storm water runoff and water quality control. Major and minor storm runoff from the subject land will be diverted to the stormwater management pond located at the southern extent of the 10 acre site (See Figure 9). The stormwater management system will include underground sewer pipes and a dry pond with forebay to settle out sediments or suspended solids (TSS). Details regarding the forebay will need to be provided at the time of detailed subdivision design.

The proposed pond will discharge into the existing 16<sup>th</sup> Street ditch, and ultimately into an unnamed creek to the south of the subject site, which in turn feeds into Palm Creek.

As the stormwater management facility is to be a dry pond, it may be feasible to utilize the bottom of the pond as an informal active recreation area for such activities as an impromptu soccer or football game during appropriate conditions. Details regarding whether or not the stormwater management facility can be utilized for informal recreational purposes will need to be investigated at the subdivision and detailed design stage, and will be subject to the City of Cold Lake's approval and acceptance.

#### **4.5 Shallow Utilities**

Shallow utilities such as gas, electrical, telephone and cable services can be extended from existing infrastructure in the general area.

### **5 IMPLEMENTATION**

#### **5.1 Staging Plan**

Staging of the development is necessary to ensure that development occurs in an efficient and economical fashion. The development sequence of the Green Wood community is illustrated in Figure 10.

The development sequence is designed to accommodate flexibility, changes in the local market, and servicing constraints. The existing property within the site is also considered and intended to be developed within phase 3 of the plan. More detailed sub-phases will be established based on servicing and market considerations.

#### **5.2 Municipal Development Plan Amendment**

A MDP amendment to redesignate the subject site to medium density residential is necessary in order to allow for higher density uses including duplexes and townhouses. The amendment will be necessary prior to rezoning, subdivision and development approval.

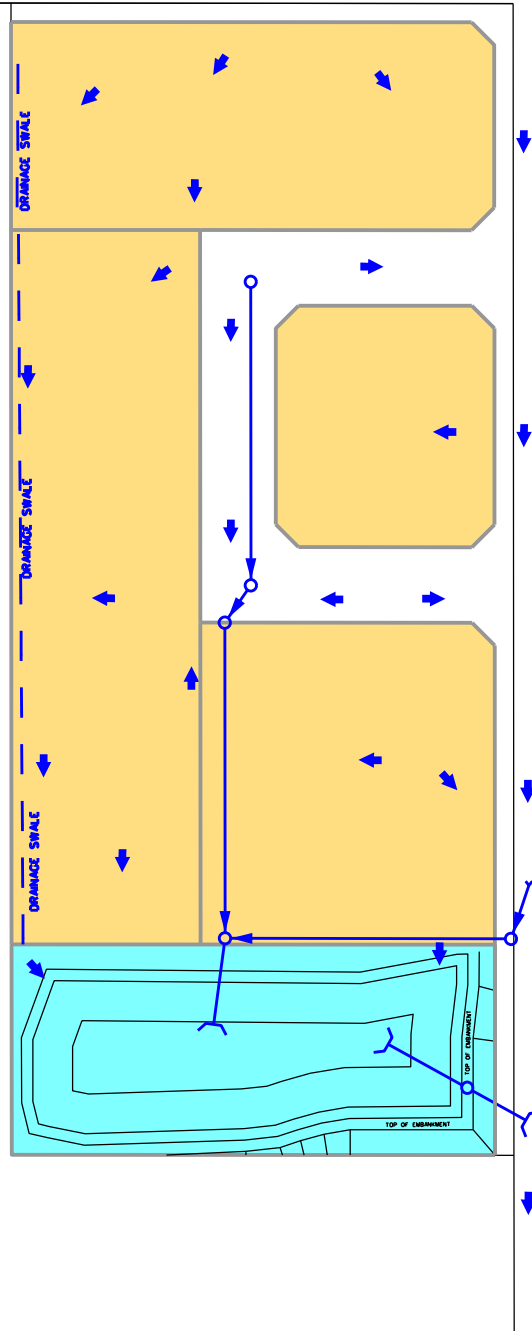
The lands are expected to be redesignated by the City of Cold Lake through the Municipal Development Plan review process being conducted by the City of Cold Lake in 2012.

#### **5.3 Land Use Redistricting**

A land use redistricting to a R3 Medium Density Residential (Row Housing) district is recommended, in order to accommodate and regulate future medium density development in the Green Wood community.

16 Ave

16 St






-  Overland Flow Direction
-  Storm Service Flow Direction
-  Inlet / Outlet

FIGURE 9  
**STORMWATER MANAGEMENT SYSTEM**  
 GREEN WOOD  
 AREA STRUCTURE PLAN



16 Ave

16 St

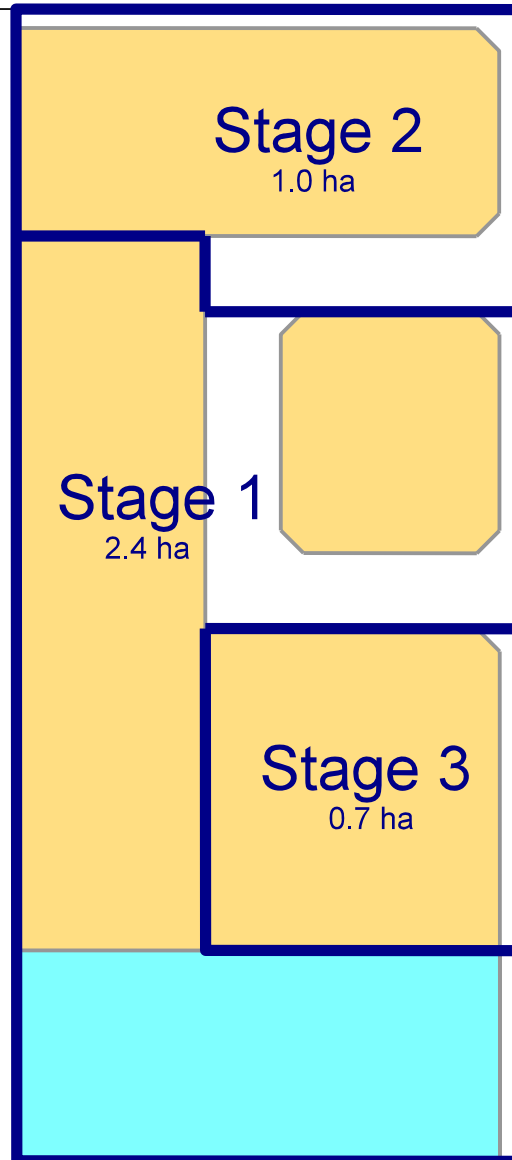


FIGURE 10  
DEVELOPMENT SEQUENCE  
GREEN WOOD  
AREA STRUCTURE PLAN