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**Bylaw 247-2015**  
**Woking**  
**Area Structure Plan**

**PURPOSE:**

A bylaw of Saddle Hills County, in the Province of Alberta, to adopt the Woking Area Structure Plan.

**WHEREAS:** Pursuant to Section 633 of the Municipal Government Act, R.S.A. 2000 Chapter M-26 as amended, allows a municipality to adopt an Area Structure Plan.

**NOW THEREFORE:** The Council of Saddle Hills County, in the Province of Alberta, enacts as follows:

1. That this bylaw may be cited as the Woking Area Structure Plan
2. That the Woking Area Structure Plan, attached hereto, forms part of this bylaw
3. That Bylaw 152-2006 is hereby rescinded

FIRST READING 22 DAY OF Sept, 2015

REEVE: Alvin Hubert Alv Hubert

CHIEF ADMINISTRATIVE OFFICER: R.E. (Bob) Cardwell Bob Cardwell

PUBLIC HEARING 20 DAY OF Oct, 2015

SECOND READING 27 DAY OF Oct, 2015

REEVE: Alvin Hubert Alv Hubert

CHIEF ADMINISTRATIVE OFFICER: R.E. (Bob) Cardwell Bob Cardwell

THIRD READING 27 DAY OF Oct, 2015

REEVE: Alvin Hubert Alv Hubert

CHIEF ADMINISTRATIVE OFFICER: R.E. (Bob) Cardwell Bob Cardwell

This bylaw shall come into effect on the date and time of final passing. Signed and sealed at this time 4:30pm.





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## 1.0 Introduction

The purpose of the Woking Area Structure Plan (ASP) is to provide a detailed framework for the future development of lands within the Hamlet of Woking in Saddle Hills County for residential, commercial, institutional, recreational and industrial land use.

The ASP was prepared in collaboration with a Planning Advisory Committee, which is comprised of County staff and a member of Council. The ASP is also based on community consultation with residents and property owners in the Hamlet.

This ASP provides a land use concept and associated policies to direct Council, administration, residents and property owners on future development decisions within the Hamlet.

### 1.1 Background

Woking owes its origins to the first homesteaders who came to the area in the late 1880s.<sup>1</sup> By the early 1920s and arrival of the Edmonton, Dunvegan and British Columbia Railway (EDBC), whose right-of-way ran through Woking and connected Edmonton to Grande Prairie and the Peace Country, the Hamlet began to grow.<sup>2</sup> By 1928 Woking became a frequent stop for homesteaders, a railroad outlet for the EDBC and eventually the Northern Alberta Railway (the Canadian National Railway and the Canadian Pacific Railway) and a regional centre for mail, groceries, grain, pulp and livestock. Today, CN operates the right-of-way, which serves the region, a CO<sup>2</sup> Transload Facility, and provides opportunities for future growth of the Hamlet.

In 1930 the first store was constructed near the present Woking town site. By 1935 and 1947 the United Grain Growers and Alberta Wheat Pool constructed grain elevators within the Hamlet, respectively. In 1936 the Grande Prairie Co-operative Livestock Marketing Association built stockyards in Woking.

While the Hamlet owes its history to the railway, agriculture and forestry, its immediate growth is based on the growing oil and gas industry in the area, and opportunities related to the shipment of agricultural products. In addition the County intends to work with private industry to facilitate the development of residential neighbourhoods to meet anticipated future needs.

### 1.2 Location

The Hamlet of Woking is located on Highway 677 approximately 5 km west of Highway 2 in Saddle Hills County, 55 km north of the City of Grande Prairie. The Hamlet is 265.25 hectares (ha) in area within SE 24-76-6-W6, SW 19-76-5-W6, NE 13-76-6-W6, NW 18-76-5-W6, and also includes a sewage lagoon located east of SW 19-76-5-W6, as shown in Figure 1.

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<sup>1</sup> The Hamlet is named after Woking in Surrey, near London England (Larry Donovan & Tom Monto (2006). Alberta Place Names: The Fascinating People & Stories Behind the Naming of Alberta. Dragon Hill Publishing Ltd. p. 233. ISBN 1-896124-11-9).

<sup>2</sup> Burnt Embers: A History of Woking and District in the Burnt River Valley, Woking and Area Historical Society, Woking Alberta, 1985.

### 1.3 Topography

The land in Woking is predominately flat and slopes generally south to north and west to east. The highest elevation within the Hamlet is located along its southern boundary (680 m), and the lowest portion is located along its eastern boundary (665 m), as shown in Figure 2.

### 1.4 Population

The earliest federal census information for the Hamlet dates back to 1951 and was most recently completed in 2011. In 1951, the total population was 87 residents and the most recent account of Woking’s population is 106 residents, as shown in Table 1. From census year to census year the Hamlet has experienced an average annual growth rate of 0.33% over 60 years, as shown in Table 2.

Table 1: Woking Population History, 1951-2011

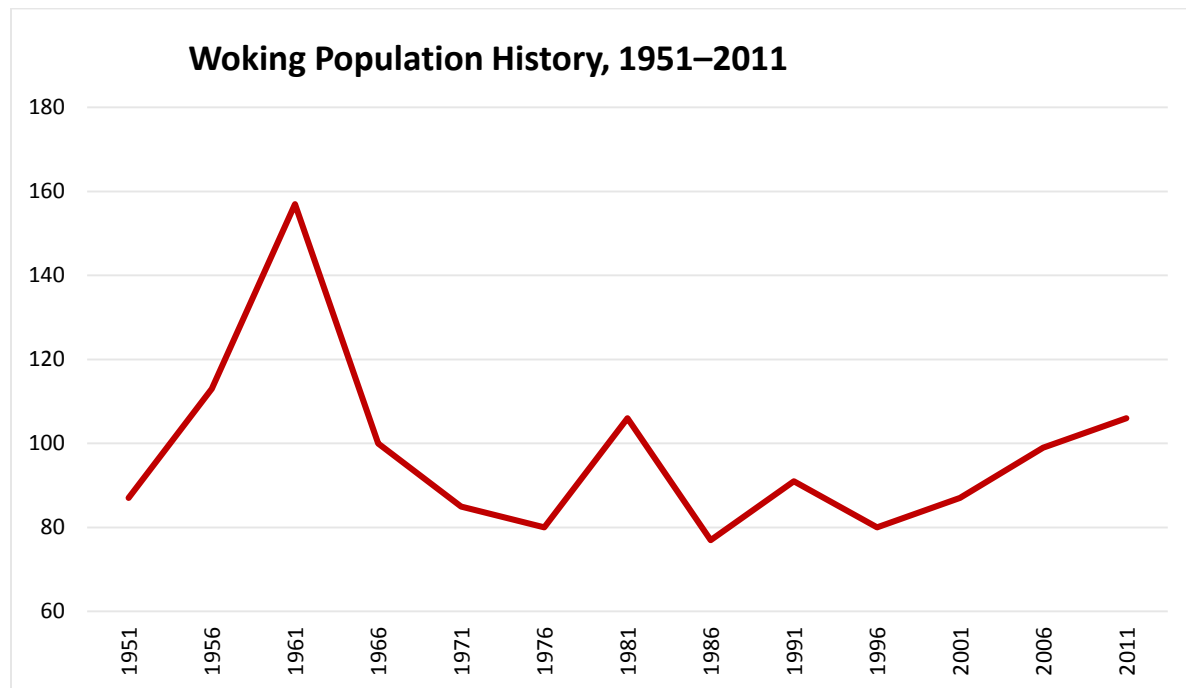
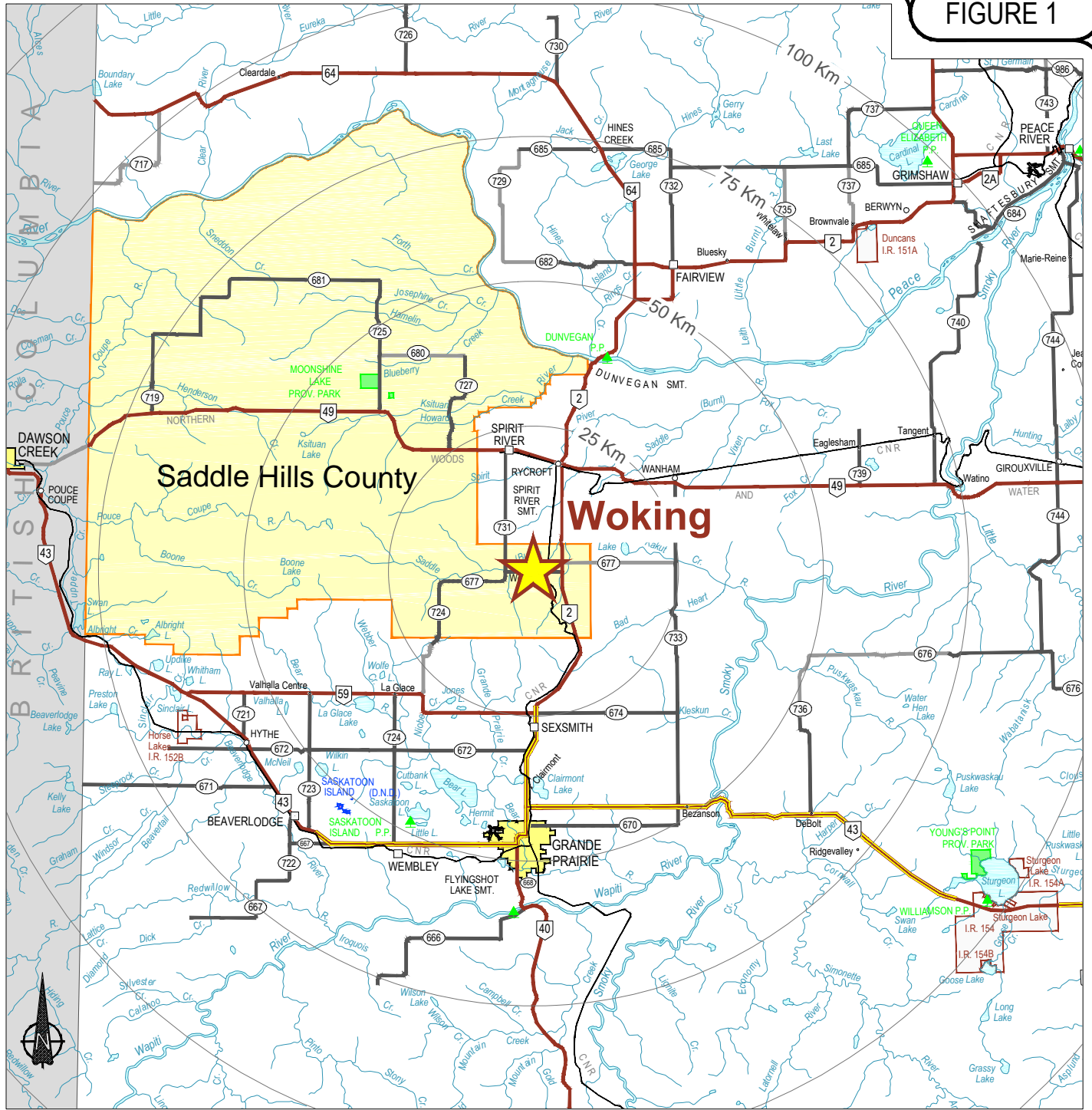
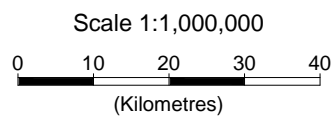


FIGURE 1



# Woking Area Structure Plan

LOCATION

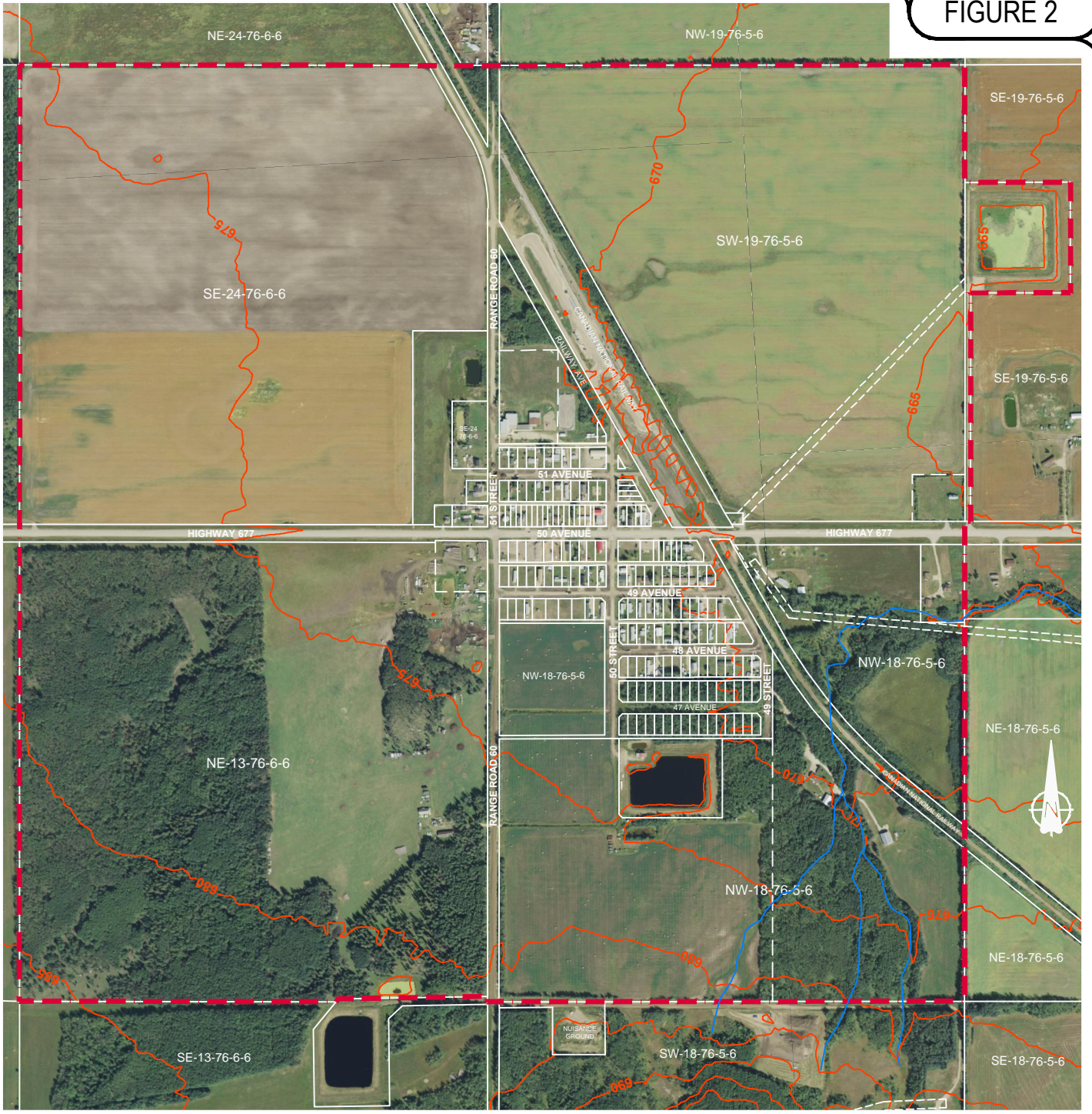


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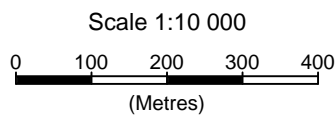


FIGURE 2



LEGEND

-  Hamlet Boundary
-  Contour (with elevation value in metres above sea level)
-  Watercourse



# Woking Area Structure Plan

TOPOGRAPHY







Table 2: Woking Average Annual Growth, 1951-2011

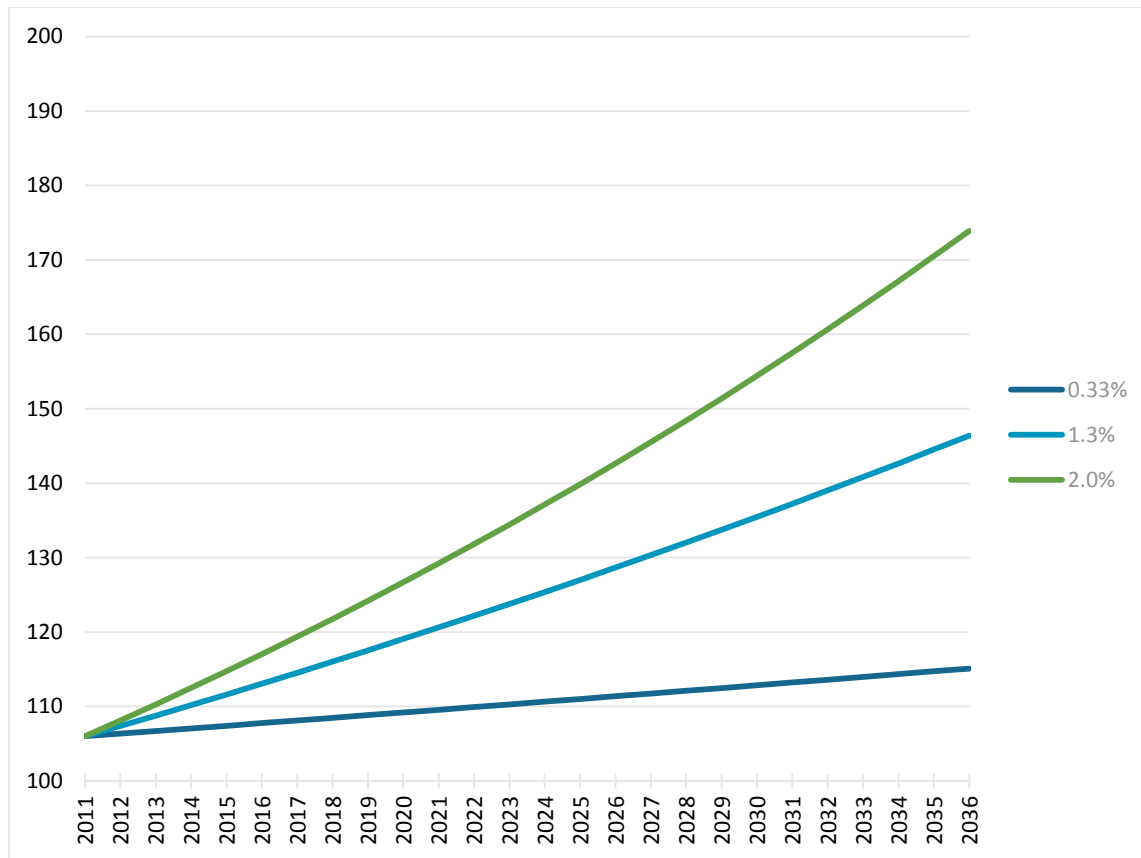
Census Year	Population	Change		Average Annual Growth (%)
		Absolute	Percent (%)	
1951	87	—	—	—
1956	113	26	29.9	5.4
1961	157	44	38.9	6.8
1966	100	-57	-36.3	-8.6
1971	85	-15	-15.0	-3.2
1976	80	-5	-5.9	-1.2
1981	106	26	32.5	5.8
1986	77	-29	-27.4	-6.2
1991	91	14	18.2	3.4
1996	80	-11	-12.1	-2.5
2001	87	7	8.8	1.7
2006	99	12	13.8	2.6
2011	106	7	7.1	1.4
<b>Total</b>				<b>0.33</b>

Sources: Statistics Canada federal censuses, 1951–2011

## 1.5 Population Forecast

Based on three average annual population growth rate scenarios (0.33%, 1.3% and 2.0%) Woking’s future population growth is projected to be relatively low over the next 25 years, as shown in Table 3. Based on the three scenarios Woking will have a maximum population of 175 residents by 2036.

Table 3: Population Forecast, 2011-2036



## 1.6 Existing Land Use

Woking currently contains a mix of land use developments including agricultural, commercial, industrial, public utilities, institutional and residential, as shown on Figure 3.

Residential development, consisting of single detached dwellings and mobile homes, is located in the central and south east portion of the Plan area.

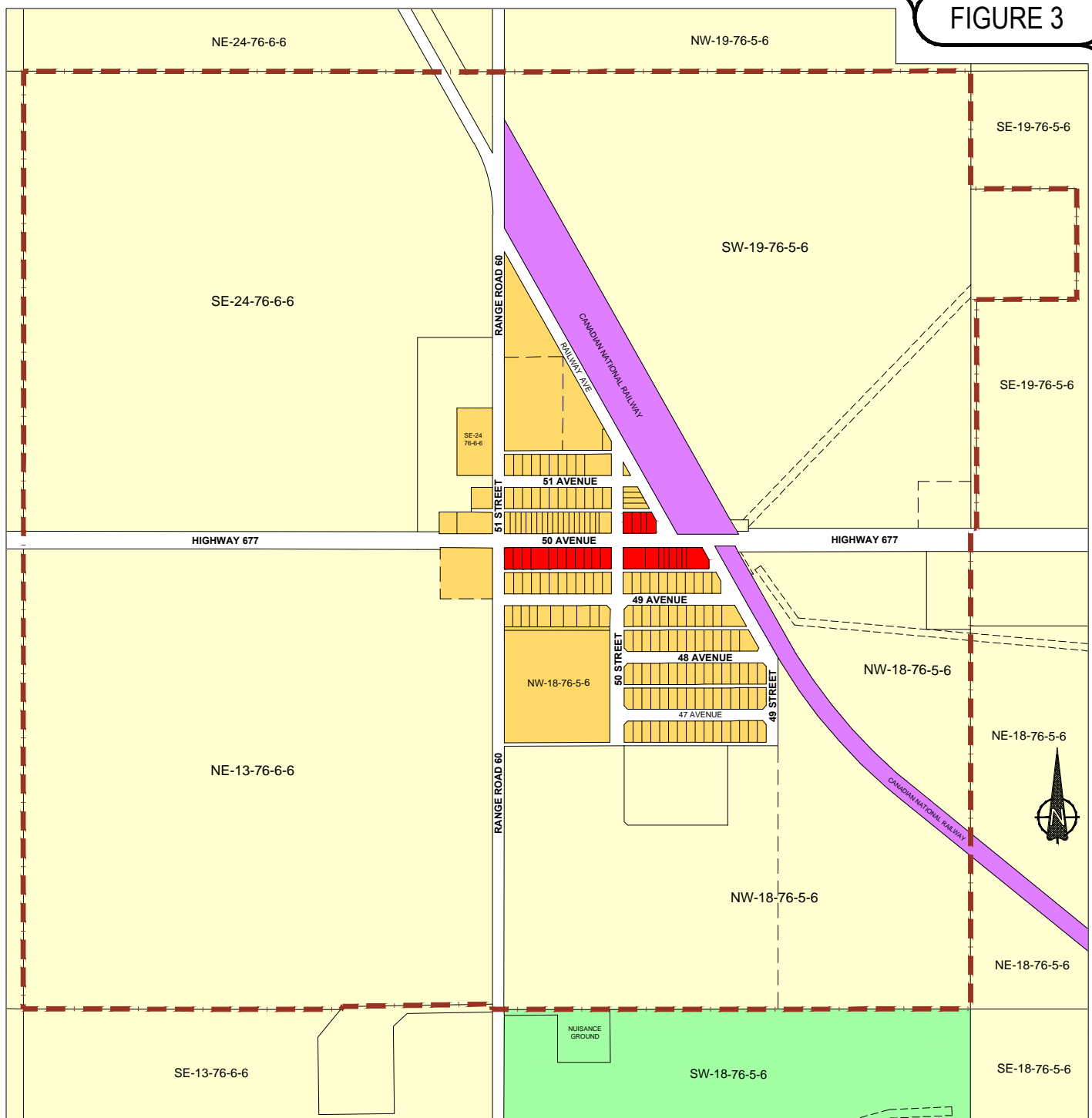
A commercial core located on the north and south side of 50 Avenue/Highway 677 includes a general store and a mix of private residences.

Industrial land uses, consisting of the Canadian National Railway right of way and a CO<sup>2</sup> Transload facility are located in the northeast portion of the Hamlet.







Institutional land use including a fire hall, playground, community hall, outdoor hockey rink and Woking School is located north of 50 Avenue/Highway 677. Woking School is a Kindergarten to Grade Eight public school and with a capacity for 116 students. High school aged students attend school in the Town of Spirit River.

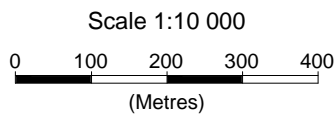


FIGURE 3



**LEGEND**

-  Hamlet Boundary
-  **A** Agriculture District
-  **CL** Crown Land District
-  **HC** Hamlet Commercial District
-  **HI** Hamlet Industrial District
-  **HR1** Hamlet Residential One District



**Woking  
Area Structure Plan**

LAND USE DISTRICTS







The Hamlet also contains numerous public utilities, including:

1. A water treatment plant and reservoir located in the southeast portion of the Plan area;
2. A second reservoir is located outside the southwest boundary of the Hamlet;
3. A sewage lagoon is located along the northeast Hamlet boundary;
  1. two abandoned non-hazardous Class 2 landfills are located outside the Hamlet and adjacent to its south boundary; and an existing waste transfer station is located between the landfills.

Based on information from the Alberta Energy Regulator (AER), Woking also contains:

1. An active, small diameter, low pressure co-op natural gas pipeline located along the northern boundary of the Hamlet; and
2. An abandoned well located within SW19. A 5 m development setback is required from the well. Wells outside the Plan area are, at minimum, 170 m from the boundaries of the Hamlet.

The setback requirements for these utilities are shown in Table 4 and illustrated on Figure 4.

**Table 4: Development Setbacks**

Facility	Setback
Water Treatment Plant	None Required
Water Reservoir	None Required
Sewage Lagoon	300 m (S. 12, Subdivision and Development Regulation)
Abandoned Landfill	300 m (S. 13, Subdivision and Development Regulation)
Waste Transfer Station	300 m (Waste Control Regulation AR 192/96)
Natural Gas Pipeline	Pipeline Right- of- Way
Abandoned Well	5 m radius around the well (AER Directive 079)

A description of the general land use types, their land area, and percentage of the Hamlet’s total land area is shown in Table 5.

**Table 5: Existing Land Use**

Land Use	Area (ha)	Percentage of Total Area
Institutional	1.94	0.73
Commercial	2.96	1.12
Public Utility	6.25	2.36
Industrial	9.86	3.72
Residential	20.58	7.76
Urban Reserve	223.66	84.32
<b>Total</b>	<b>265.25</b>	<b>100.0</b>

### 1.6.1 Emergency Services

Fire service is provided by the Woking Volunteer Fire Department from the Woking Fire Hall, located on 50 Avenue/Highway 677. Upgrades to the fire suppression system may be necessary.

The Spirit River and Grande Prairie detachments of the RCMP provide police service to Woking. Municipal enforcement of the County's Land Use Bylaw is provided by County staff. Saddle Hills County partners with the County of Grande Prairie to provide animal care and control services.

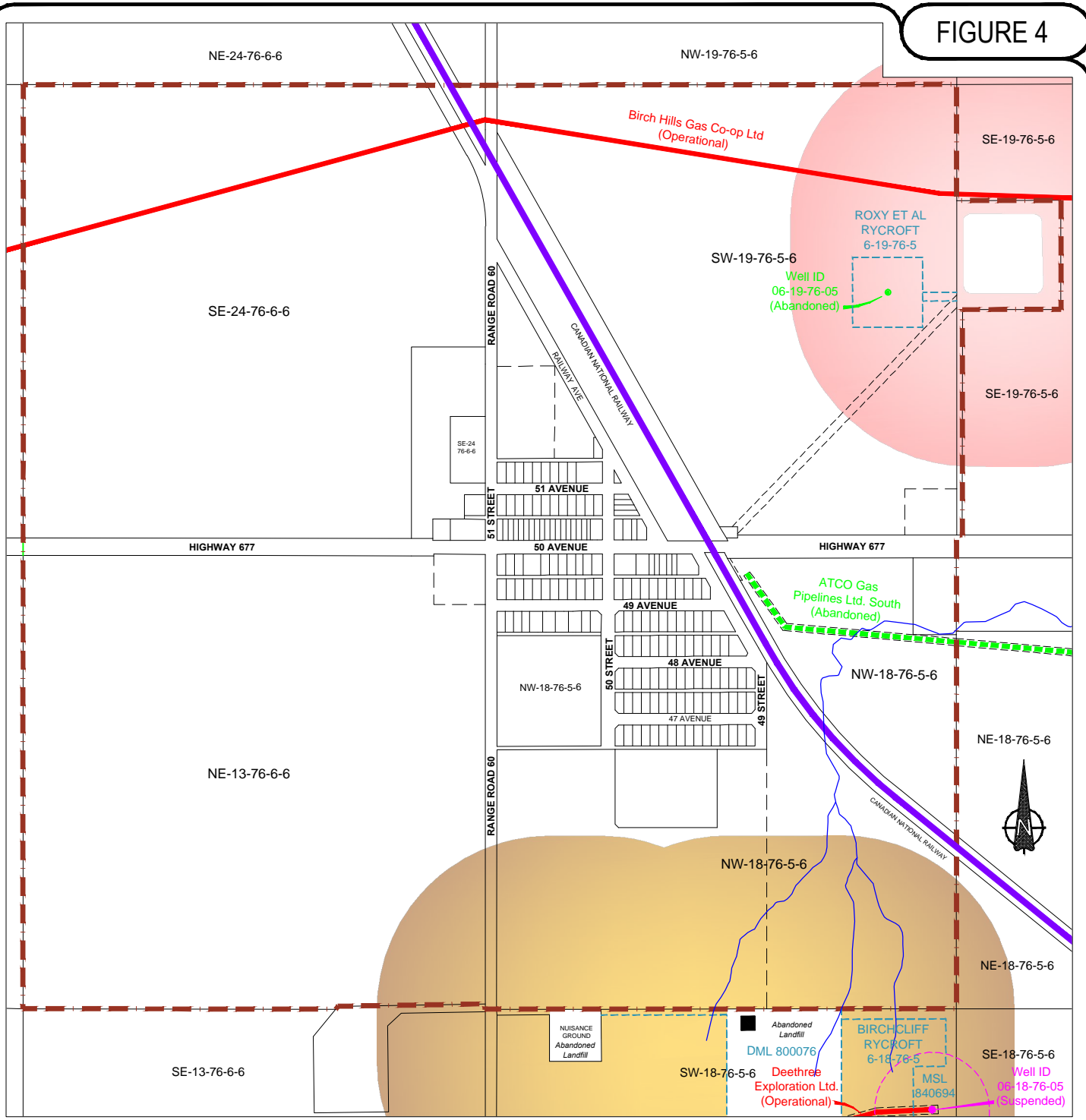
Ambulance service is provided by Alberta Health Services.

### 1.6.2 Solid Waste Disposal

Solid waste curb side service in Woking is provided by Saddle Hills County and is supported by the Central Peace Regional Waste Management Services Commission. Waste is currently hauled to the Tervita Landfill. Beginning in September 2015 waste will be hauled to the Blueberry Landfill, which is located 40 km west of the Town of Spirit River.

The County also manages a waste transfer station located outside the south boundary of the Hamlet. The capacity of the waste transfer station is not expected to constrain future growth in the Hamlet.

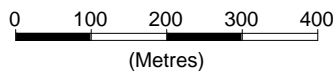
FIGURE 4



LEGEND

- Active Natural Gas Pipeline
- Abandoned Natural Gas Pipeline
- Suspended Gas Well with 100m Setback
- Abandoned Gas Well with 5m Setback
- Lagoon Setback (300m)
- Landfill Setback (300m)
- Hamlet Boundary
- Lease Boundary
- Waste Transfer Station
- Railway

Scale 1:10 000



**Woking Area Structure Plan**

LAND USE CONSTRAINTS







## 2.0 Legislative Framework

### 2.1 Municipal Government Act

This ASP has been prepared in accordance with Section 633 of the Municipal Government Act, SA 2000 (MGA). The MGA enables municipalities to adopt ASPs to provide a framework for future development of an area. Section 633 stipulates the following:

1. An ASP must describe the sequence of development, land uses, population density, and location of transportation routes and utilities proposed for the area;
2. Property owners, businesses, interested members of the community, and school boards must be given the opportunity to provide input in the planning process;
3. An ASP must be adopted by bylaw, which requires a public hearing to be held on the proposed plan; and
4. An ASP must conform to a municipality's Municipal Development Plan.

### 2.2 Municipal Development Plan

The Municipal Development Plan (MDP) is the primary policy document for use at the municipal level and provides a framework for the ongoing development of Saddle Hills County. The MDP guides the future by describing the County's development vision, goals and objectives, is intended to minimize the occurrence of incompatible land uses, and provide support for the administration of the Land Use Bylaw and the preparation of other statutory planning documents.

The MDP identifies that Woking is primarily residential in nature and provides commercial and institutional facilities for local and regional populations. It is the County's intent to ensure that future Hamlet development occurs in an orderly and efficient manner and retain the Hamlet as a viable community. To ensure that these objectives are met, several MDP policies have been put into place:

1. Policies 6.1 and 6.2 permit the County to encourage a variety of developments to be located within Hamlets. These include encouraging commercial, institutional, light industrial and recreational uses.
2. Policy 6.3 requires that future industrial development is compatible with existing uses by ensuring adequate buffers or distance are provided between uses.
3. Policy 6.4 identifies Woking as a primary growth Hamlet which permits the County to encourage infill development and new development areas.

### 2.3 Land Use Bylaw

The purpose of the Saddle Hills County Land Use Bylaw 173-2009 (LUB), as amended, is to regulate the use and development of land and buildings within the County, and implement the policies of statutory plans, such as an MDP or ASP.

The LUB includes a Hamlet Residential One (HR1) District, Hamlet Residential Two (HR2) District, Hamlet Commercial (HC) District and Hamlet Industrial (HI) District. These Districts provide for a variety of compatible residential, commercial and light industrial uses.

Lands within the ASP boundary are currently zoned Agriculture (A) District, Hamlet Commercial (HC) District, Hamlet Industrial (HI) District and the Hamlet Residential One (HR1) District.

## 3.0 Public Consultation

The public was consulted during the planning process to provide input into the preparation of this Plan. The consultation process involved:

- A project launch was advertised on the County website and in the Signal in December 2014;
- A public meeting, held on January 28, 2015, to provide residents with an opportunity to learn about the ASP project, and to provide input on issues, concerns and opportunities respecting the future development of the Hamlet. The key themes were:
  - Increase business recruitment (i.e. gas station/car wash and grocery store);
  - Provide parking on 50 Avenue/Highway 677;
  - Access on and off the highway;
  - Provide highway signage that promotes the Hamlet available land and homes;
  - Provide walking trails and/or quad/snowmobile trails in the Hamlet;
  - Provide a park on the south side of the Hamlet; and
  - Monitor overland drainage.





## 4.0 Land Use Concept

### 4.1 Introduction

The proposed land use concept for Woking is illustrated in Figure 6. The intent is to provide a generalized land use plan that will be subject to further refinement through the zoning and subdivision processes. The land use concept is based on technical review and input obtained from the public and is intended to achieve the following goals:

1. Growth and development will be accommodated in an orderly, efficient and compatible manner;
2. Setbacks, landscaping and screening between residential and non-residential land uses will be provided;
3. Create a logical and functional extension of the existing Hamlet;
4. Neighborhoods are connected with a parks and open space network. Entrances to the network are located on a prominent site;
5. Provide a range of lot sizes and housing types to ensure housing options are diverse, affordable, and accessible for residents through all life stages;
6. Compatible commercial and light industrial developments are accommodated in the Hamlet, and attract and sustain a diverse workforce;
7. Environmentally sensitive areas are protected from development and biodiversity is maintained;
8. The transportation system is efficient, convenient and allows people to move around using a variety of transit modes; and
9. The municipal servicing concept is efficient and is implemented in a logical phased approach.

### 4.2 Land Use and Population Statistics

A summary of the land uses illustrated in Figure 5 is provided in Table 6.

Table 6: Future Land Use and Population Statistics

Land Use	Area (ha)	Percent of Area	Units	Population
<b>Gross Area</b>	<b>265.3</b>	<b>100.0</b>	<b>242</b>	<b>709</b>
<b>Infrastructure and Public Services</b>	<b>29.2</b>	<b>11.0</b>		
Roads	14.3	5.4		
Public Utilities	6.3	2.4		
Parks	8.7	3.3		
<b>Commercial/Industrial</b>	<b>80.2</b>	<b>30.2</b>		
Commercial	14.3	5.4		
Commercial Mixed	1.4	0.5		
Industrial	53.2	20.0		
Industrial Mixed	11.3	4.3		
<b>Institutional</b>	<b>3.3</b>	<b>1.2</b>		
<b>Residential</b>	<b>64.1</b>	<b>24.2</b>		
Hamlet Residential	13.5	5.1	130	382
Hamlet Estate Residential	50.6	19.1	112	327
<b>Future Study Area</b>	<b>88.5</b>	<b>33.4</b>		
Future Urban Development 1	63.4	23.9		
Future Urban Development 2	25.1	9.5		

### 4.3 Residential

Almost one quarter, or 24% of the Hamlet is proposed to be developed for housing. This area will consist of two types of residential development in three distinct sub-areas.

The first sub-area is located in the northwest portion of the Hamlet (SE24) and between the CNR right-of-way and the water treatment plant in the eastern half of NW18. These areas are intended for fully serviced lots of approximately 0.4 ha (1.0 ac) in size. To accommodate this form of residential development a new Hamlet Estate Residential (HER) District will need to be prepared for inclusion in the County's Land Use Bylaw. The re-subdivision of these properties into smaller residential lots may be considered by the County provided that the proposed lots are connected to municipal water and sewer services at the developers' expense.

The second sub-area is located south of Woking School (on SW19) and continues into the lands located south of 50 Avenue (on the northern half of NW18). These lands accommodate existing single family residential uses, and future residential development on vacant or underutilized parcels. Development in this area is a priority in order to maximize the use of existing roads, utilities, parks and other community services.

The third sub-area is located to the west of the water treatment plant in the southern half of NW18. This area is intended for large and small lots, with future development continuing the existing grid and lane street pattern.

The sub-areas will be developed under the Hamlet Residential One (HR1), Hamlet Residential Two (HR2) and a new Hamlet Estate Residential (HER) Land Use Districts.

The County requires the submission of a land use concept and servicing report for SE 24 in advance of development to confirm conformance with the ASP.

### 4.4 Commercial

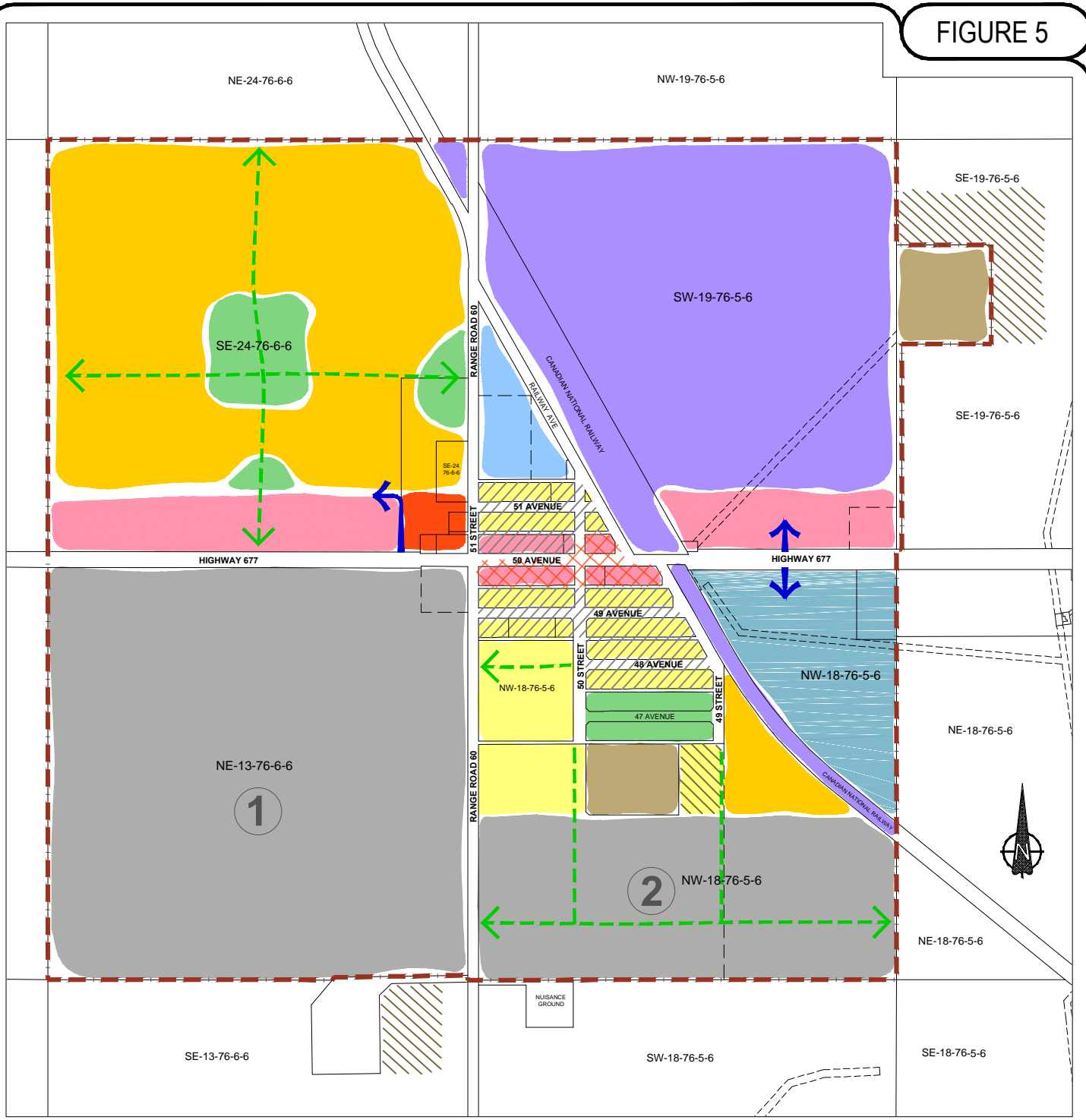
Commercial development will occupy three sub-areas in the Hamlet. These sites total 14.3 ha or 5% of the developable area and are characterized by their proximity to 50 Avenue/Highway 677, which will allow for the effective capture of the regional and local retail consumer.

The first sub-area is located in the western portion of the Hamlet (on SE24). This area is intended for large commercial lots and will require the development of a service road for access from 50 Avenue/Highway 677. Development on these sites will include a sidewalk, landscaped boulevard and buildings oriented to 50 Avenue/Highway 677. Commercial buildings shall be designed with 360° architecture, and where necessary shall be screened with landscaping and fencing from the adjacent residential development.

















The second sub-area is located on the north and south side of 50 Avenue/Highway 677. These lands accommodate existing commercial and residential development. Development in this area is a priority in order to maximize the use of existing infrastructure. Accesses to site, where possible, will be consolidated and a sidewalk and landscaped boulevard provided.

The third sub-area is located east of the Canadian National Railway right-of-way on the north side of 50 Avenue/Highway 677. These lands will provide a commercial market for the industrial development to the north. Sites fronting 50 Avenue/Highway 677 will provide a sidewalk and landscaped boulevard, and buildings will be oriented towards 50 Avenue/Highway 677. Water and sanitary sewer services for this site shall be provided on-site or will require extension of services from the west to east via trenching. On-site fire protection services shall be provided on-site in the event that emergency services cannot cross the CN right-of-way.

FIGURE 5

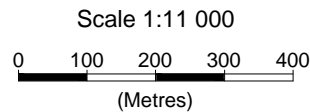


LEGEND

- |   |                           |   |                      |
|---|---------------------------|---|----------------------|
|  | Commercial                |  | Existing Commercial  |
|  | Commercial Mixed Use      |  | Existing Residential |
|  | Industrial                |  | Utility Expansion    |
|  | Industrial Mixed Use      |  | Trail                |
|  | Institutional             |  | Hamlet Boundary      |
|  | Potential Park            |  | Access Road          |
|  | Public Utility            |   |                      |
|  | Hamlet Residential        |   |                      |
|  | Hamlet Estate Residential |   |                      |
|  | Future Study Area         |   |                      |

# Woking Area Structure Plan

LAND USE CONCEPT







These sites will be developed under the Hamlet Commercial (HC) Land Use District.

#### **4.5 Commercial Mixed Use**

A 1.4 ha commercial mixed use area, representing 1% of the Hamlet's developable area, may be located at the northwest corner of 50 Avenue/Highway 677 and 51 Street. This site is in an optimal location for commercial uses and may include higher residential densities. The site lies adjacent to two major roadways, existing residential development, municipal reserve parcels and Woking School. The site has nearby recreational amenities to offset the increase in residential density. The site will serve as a focal point for the Hamlet and encourage residents to walk, bike or drive to the local services.

A Direct Control District or a Commercial/Residential Mixed Use District may be prepared for the site that will address the distribution of land uses, the building orientation, the internal transportation system, the density of the site, parking requirements, the location of open space, and the interface with surrounding areas.

#### **4.6 Industrial**

A 53.2 ha industrial parcel, representing 20% of the Hamlet's developable area, is located in the northeast on SW19. This site is in an optimal location for industrial development given its relative isolation from the balance of the Hamlet, proximity to the Canadian National Railway (CN) right-of-way, the Transload Facility and the sewage treatment facility.

Although subject to the provisions of the Land Use Bylaw, this area is intended for the development of industrial uses that are compatible with adjacent commercial development and allow for business-related industrial uses. Development shall incorporate landscaping, screening and/or setbacks to mitigate any noise and/or visual impact and land use conflict on the surrounding areas and to ensure the attractiveness of the industrial areas.

Existing industrial development on SW19 is accessed via a private road. The road may be upgraded to County Standards in the future. Future access to SW19 may be provided by 50 Avenue/Highway 677 and/or Range Road 60, and/or the road providing access to the sewage lagoon. The latter will require an upgrade to County Standards.

Water and sanitary sewer services for this area shall be provided on-site or will require extension of services from the west to east via trenching.

On-site fire protection services shall be provided in the event that emergency services cannot cross the CN right-of-way.

These lands will be zoned Hamlet Industrial (HI) Land Use District.

The County requires the submission of a land use concept and servicing report for SW 19 in advance of development to confirm conformance with the ASP.

#### 4.7 Industrial Mixed Use

An 11.33 ha industrial mixed use site, representing 4% of the Hamlet’s developable area, is located on the southside of 50 Avenue/Highway 677 at the eastern entrance of the Hamlet on NW18.

This area is intended for the development of business-related industrial uses that are compatible with adjacent residential development. Development shall incorporate landscaping, screening and/or setbacks to mitigate any noise and/or visual impact or an Industrial/Commercial Mixed Use District.

A Direct Control District or an Industrial/Commercial Mixed Use District may be prepared for the site that will address the distribution of land uses, the location of buildings, the internal transportation system, and the interface with surrounding areas. These lands shall provide an aesthetically pleasing frontage containing landscaping for the purpose of screening on-site development and contributing to the Communities in Bloom project.

Water and sanitary sewer services for this site shall be provided on-site or will require extension of services from the west to east via trenching.

On-site fire protection services shall be provided in the event that emergency services cannot cross the CN right-of-way.

#### 4.8 Institutional

Institutional uses, such as the library, Woking School, playground, playing fields and hockey rink, and community hall are located in close proximity to one another. These uses provide residents with amenities that can be used to bring the community together. The County shall encourage new institutional development to locate, where possible, in close proximity to the existing institutional facilities to help reinforce and create a strong civic center. The school currently has a capacity for 116 students.

Based on Table 7 a second school may be required at full build out of the community. The school will be located in the northwest portion of the Hamlet (in the central portion of SE 24. The site is connected to the balance of the Hamlet by the local road network and neighbourhood trail system. The school site will be zoned Hamlet Residential One (HR1), Hamlet Residential Two (HR2) and Hamlet Estate Residential (HER) Land Use Districts.

Table 7: Future Student Population

Age	% of 2011 Census	Grades	Total Hamlet Population	Student Generation by Age Group
5-9	9.4	K-4		67
10-14	4.7	5-9		33
15-19	4.7	10-12		33
Total	18.8		709	133

#### 4.9 Parks and Open Space

In accordance with the MGA, a maximum of 10% of the developable area may be provided for parks and open space in the community. Accordingly these lands shall be allocated towards Hamlet parks and trails and will serve as an amenity for residents and to encourage an active lifestyle. A variety of parks of different sizes and functions shall be integrated into the Plan area. This will foster the creation of outdoor areas of interest within the Hamlet and provide for active and passive spaces.



Municipal reserve is proposed to be provided in five distinct areas, three of which are located in the northwest portion of the Hamlet (on SE24). This area includes: Parks in SE 24 are conceptually located, and subject to relocation and consist of:

1. One large central park (approximately 4.0 ha) which includes sufficient land for a school, and is located at the junction of two neighbourhood trails;
2. One medium sized park (approximately 1.6 ha) located to the west of Woking School and is intended to augment the recreation fields. This park will also serve as an amenity to adjacent residential properties, provide a vista into the neighbourhood, and as a trailhead that is connected to the neighbourhood trail system; and
3. A small park (approximately 0.8 ha) is located to the north of the Hamlet's commercial lands. This park will be configured to provide an amenity to adjacent residents, and aesthetic appeal as an entrance to the neighbourhood.

The remaining two parks are conceptually located in the central and southern portion of NW18. This area includes:

1. A park (approximately 0.8 ha) directly north of the water treatment plant. This park shall be kept in its natural state and may be provided as environmental or municipal reserve. The landowner may develop these lands for residential uses and locate municipal reserve elsewhere on NW 18.
2. A municipal reserve area will be located in the southeast portion of the Hamlet. The park will provide residents with an active and passive amenity area, as well as the required separation from the adjacent abandoned non-hazardous Class 2 landfills and an existing waste transfer station.

A neighbourhood trail system links the parks, school sites and all other land uses to one another.

In order to develop the new park and trail system the developer shall, at the time of subdivision approval, dedicate a minimum 10% of developable lands for municipal reserve purposes. This shall be provided in the form of land for parks, open space and/or walking trails, unless the County determines otherwise. Specific locations will be determined based on Figure 6 of this ASP and a proposed tentative plan of subdivision.

Tree stands, low lying or wetland areas shall be provided as environmental reserve. This land may be augmented with municipal reserve to ensure the natural area is functional and/or minimizes the obstruction of wildlife through the Plan area.

The municipal reserve areas will be developed under the Hamlet Residential One (HR1), Hamlet Residential Two (HR2) and Hamlet Estate Residential (HER) Land Use Districts.

#### **4.10 Public Utility**

Currently 2% of the developable area of the Hamlet is developed for public utilities. This area consists of two types of utilities: a water treatment plant and reservoir and a sewage lagoon.

The Hamlet's water treatment plant and reservoir is located in the south east portion of Woking. An additional reservoir is located outside the southwest boundary of the Hamlet. A sewage lagoon is located along the northeast Hamlet boundary. Two abandoned non-hazardous Class 2 landfills are located outside the southern Hamlet boundary. An existing waste transfer station is located between the landfills.

In order to accommodate the full build out population of 709 residents (identified in Table 6) the water treatment plant and reservoir and sewage lagoon will require expansion, as shown on Figure 6. Once expansion is deemed necessary studies shall be undertaken to consider the most efficient and effective location for expansion.

It should be noted that based on current growth rates the maximum population in 2036 shall be 175 residents, and as a result the expansion of these utilities will not be required during the 25 year planning horizon described in this plan.

#### **4.11 Future Study Area**

Approximately 88.5 ha of the developable area of the Hamlet has been designated as a Future Study Area. This area will consist of two sub-areas.

The first sub-area is located in the southwest portion of the Hamlet (on NE13). This area consists of 63.4 ha and is intended for a range of land uses including residential, commercial, institutional and recreational. It is also anticipated that these lands will include both municipal reserve and environmental reserve to accommodate a school, if necessary, and tree stands, respectively.

The second sub-area consists of 25.1 ha and is located in the southeast portion of the Hamlet (on the southern half of NW18). In accordance with the MGA these lands, which are located within 300m of a waste transfer site, shall not be developed with residential, hospital or school uses.

In order to consider future development on these lands the landowner shall first prepare an ASP amendment application and host a public meeting to advise residents and property owners of the proposed changes. The application and public meeting summary information shall be contained within a submission to County administration for review and Council's consideration.





## 5.0 Transportation

The Hamlet has an internal road network consisting of 50 Avenue/Highway 677, three avenues which run east and west through the Hamlet, and two numbered streets which run in a north/south alignment. A railway right-of-way, which has a north/south alignment, bisects the Hamlet into east and west.

The function, safety and construction standards of the provincial and municipal road system shall not be compromised by any rezoning, subdivision and development.

In order to ensure safety of the road network the County will work with the Province to:

1. Create a speed transition zone entering the Town from either side. A gradual reduction in speed from 100 to 70 to 50 km/h is recommended;
2. Consolidate accesses along 50 Avenue/Highway 677 where possible;
3. Improve Highway intersections with municipal roads; and
4. Explore opportunities to develop sidewalks separate from the Highway, and widen the highway to allow shoulders, designating pedestrians to walk against traffic as per the Traffic Safety Act.
5. With any new development, the existing road network adjacent to the affected site will be upgraded to County Standards by the landowner or County, or the landowner and County.

The County requires that all roadways in the Hamlet are constructed to municipal engineering standards.

During the review of any rezoning, subdivision, development or access proposal the County will consider the following: the provisions of this Plan; the future expansion and/or upgrading of existing roadways; input from the appropriate provincial department and/or agency; and existing or new roadway construction.

In addition, the County may identify improvements to the existing roadway network, including trails and/or sidewalks that connect to existing and future development.

The County will collect municipal reserve at the time of subdivision to complete the trail network in accordance with the alignment identified on Figure 6. Where it is not possible to collect municipal reserve the County may designate road rights-of-way as shared space between cars and pedestrians. In such cases the roads shall have a posted speed of no more than 30 km/h along with signage indicating the sharing space.

## 6.0 Servicing

A future servicing network for the Hamlet is illustrated on Figure 6, and is based on our review and the findings of existing potable water, wastewater and stormwater reports<sup>3</sup>

### 6.1 Water System

#### 6.1.1 Water Supply

The Woking water system supplies and distributes treated potable water in the Hamlet. Surface water is collected from two intermittent watercourses and treated and stored at the Hamlet's water treatment plant and two reservoirs.

The main reservoir is located adjacent to the water treatment plant at the south end of the Hamlet on the NW18. This reservoir holds 53,000 m<sup>3</sup>. The second reservoir is located outside the southwest boundary of the Hamlet on SE13 and holds 26,500 m<sup>3</sup>. The reservoirs have a total storage of 79,500 m<sup>3</sup>.

Assuming that evaporative losses account for 30% of the total volume and that the reservoirs should not be drawn down past 20%, the "working" volume of the cells is approximately 50% or 40,000 m<sup>3</sup>. With an average consumption rate of 360L/cap/day the population equivalent capacity is around 300, which is close to three times the current population.

#### 6.1.2 Water Treatment

Woking's water treatment plant is located in the southeast portion of the Hamlet, southeast of 47 Avenue and 50 Street. Raw water is treated in a package plant with a design capacity of 199,000L/day.

The capacity of the plant is designed on the basis of various peaking factors. The peaking factor allows for short-term higher demands throughout the year. Assuming a peak demand factor of 2.5, the consumption rate then climbs from 360L/capita to 900L/capita and the population equivalent for the peak day is 199,000/900 or 222, or twice the current population. There are no impediments to improve storage capacity as either the main or secondary reservoir may be expanded.

#### 6.1.3 Water Storage

Treated water is stored in two concrete reservoirs, the original 1979 cell has 117,000L of volume and the newer east cell (2001) holds 83,000L, for a total of 200,000L. The cells can hold a little over two days of water for a design population of 222 and a peaking factor of 2.5 (this represents a dry summer period where people are using large volumes of water to water lawns and gardens and wash vehicles).

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<sup>3</sup> Hamlet of Woking Area Structure Plan (Schaeffer Andrew, 2006), Hamlet of Woking, Water and Sewer Assessment (Stantec, February 2012) and Saddle Hills County Rural Water Master Plan (Associated Engineering, March 2014)



### 6.1.4 Water Distribution

The distribution system consists of 220 m of 75 mm PVC piping and 1080 m of 150 mm PVC piping.

The water distribution network is well constructed with quality piping materials with long service life. The system is adequate for non-fire flow conditions with normal consumptive uses.

### 6.1.5 Fire Protection

Providing fire protection through a water distribution system is complex and expensive for small systems. Calculations start at the fire hose end and work upstream to the source. The Stantec Report states that a demand of 50L/s for a two-hour duration fire requires 360,000L of water.

This is a conservative estimate and serves only to highlight the scale of the conditions. Distribution systems that can supply fire flow rates tend to be 150mm diameter and up with looping.

The water system is clearly not designed to support any type of fire flow, has insufficient storage and piping capacity, and the duty pumps are not likely able to provide the high flow rates required.

The Stantec Report provides options for consideration. We concur with their recommendations.

## 6.2 Wastewater System

The collection system and a treatment lagoon were constructed in 1980.

### 6.2.1 Sewer Collection System

The Hamlet is serviced with a network of 200mm PVC sewers and manholes with regular service connections to housing units. The gravity system discharges to a main lift station east of the railway along 50 Avenue/Highway 677. The gravity system also has an inverted siphon to cross the CNR right-of-way.

The gravity sewers are sized by provincial minimum standards and are more than adequate for the life cycle of the community. The main lift station has sufficient hydraulic capacity to continue to serve the existing developed portions of the Hamlet and accommodate future development.

### 6.2.2 Wastewater Treatment and Disposal

The treatment lagoon, located along the northeast Hamlet boundary, is a single cell arrangement. The cell lagoon has a capacity of 34,000 m<sup>3</sup>, or an equivalent of 93,000L/day, which represents a design population of 258 people assuming 360 L/cap and no infiltration from stormwater. With a current population of 106 residents the unused capacity is available for future development. As such, the wastewater system capacity is not a constraint to future development.

Once expansion is deemed necessary the lagoon should expand to the north and east, as shown on Figure 6. Expansion of the collection pipes or adding a lift station, if needed, is also feasible.

## 6.3 Stormwater Management

Woking has a stormwater drainage system that includes a well-defined water course located in the southeast corner of the Hamlet, as shown on Figure 2, and surface drainage with open ditches and culvert crossings on both sides of all roads. In some locations, outlets may require upgrading to minimize erosion, and on-site retention may be warranted to minimize environmental impacts.

Stormwater flows are directed to Bremner Creek, located to the east of the Hamlet, and eventually flows into the Saddle/Burnt River.

Based on existing and the development of future roadways with a rural cross-section and ditch conveyance there are no hindrances to future growth related to the management of stormwater.

Woking's future growth can be accommodated by expanding this conveyance system and by:

1. providing minimum culvert sizes of 300 mm for development adjacent to 50 Avenue/Highway 677; and
2. developing stormwater management facilities (dry or wet ponds) wherever they are required by the County.

In all cases developers shall prepare a stormwater management plan, prepared by a qualified professional, at the time of subdivision or development, receive the appropriate approvals prior to construction, and incorporate natural drainage patterns into their plans for stormwater management. Stormwater management plans shall ensure that the post-development rate of runoff meets AESRD standards for the region.

#### 6.4 Expansion of the Servicing Network

The most efficient and economical way to expand the servicing network is to grow outward from the existing serviced areas. New subdivisions will be serviced by tying into existing water and sewer mains. Stormwater is currently managed by surface runoff and will carry through new subdivisions.

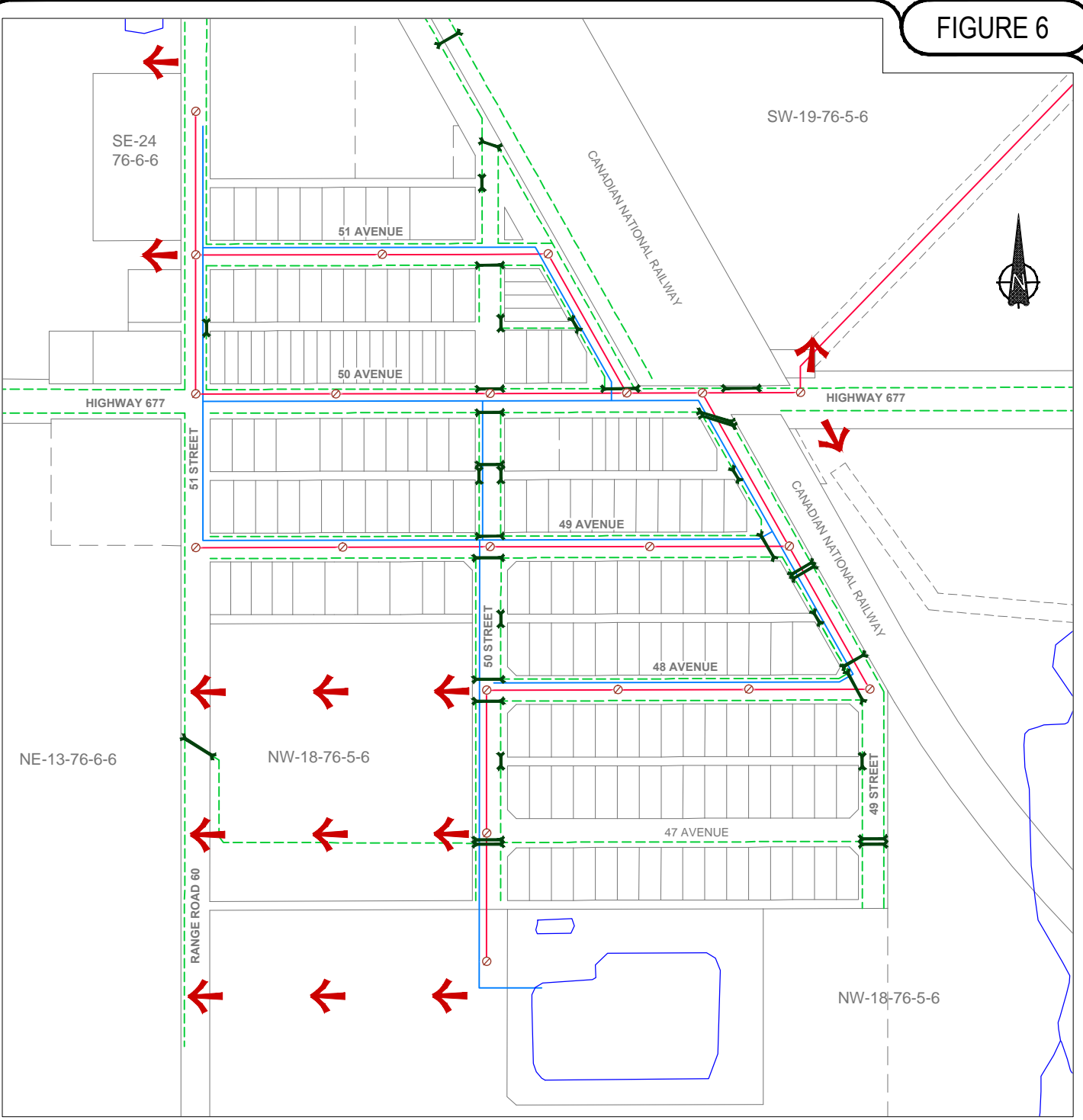
The first area to develop are those lands located west of 50 Street along 48 Avenue and 47 Avenue and may provide approximately 48 serviced lots. 46 Avenue may be created between the water treatment plant and reservoir and Range Road 60 to create a further 24 serviced lots. This development would accommodate a population of 144 to 175 residents.

The next stage of development would rationally extend to SE24, which has services located at its east boundary. Development may extend from the southeast corner of this quarter section, first to the west, then northward.

Services may also extend into SW19, NW18 and NE 13 in accordance with Figure 6.

In cases where development is not located adjacent to existing services the landowner/developer shall submit an ASP amendment in accordance with Section 7.2, and through a servicing agreement may be required to oversize mains to accommodate future growth, and if in place, pay an offsite levy.

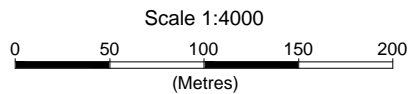
FIGURE 6



LEGEND

- Existing Water Line
- Existing Sanitary Sewer Line
- - - Storm Water Ditch
- Sanitary Sewer Manhole
- Storm Water Culvert
- - - - - Hamlet Boundary
- ← Future Extension of Roadways and/or Utilities

Note: Data from Stantec Engineering Report and Streetview Imagery. Utility data placement schematic only.



# Woking Area Structure Plan

FUTURE SERVICING CONCEPT



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## 7.0 Implementation

This section outlines the frequency of ASP review, the amendment process and development phasing.

### 7.1 Monitoring and Review

The policies and mapping information contained within this ASP may be amended from time to time, by Council, in order to respond to and remain current with planning and development issues and trends affecting development and reflects the priorities of residents.

The Plan will be reviewed once every five (5) years to ensure the goals, objectives and policies contained within this document are relevant.

### 7.2 Amending the Plan

An amendment to this ASP shall be required if, in the opinion of the County, a zoning, subdivision plan or development is proposed that varies significantly from the land use concept, transportation network, or servicing concept of this ASP.

If amendments are required, they shall be carried out by the County in a manner that includes notification of the amendment and an appropriate public engagement process.

### 7.3 Phasing

In general, the County encourages new development to locate in existing areas and in proximity to existing municipal water and wastewater services, as described in Section 6.5, to allow for the logical extension of servicing to the newly developed areas. New zones as needed, and DC as appropriate.

### 7.4 Land Use Bylaw

A new Hamlet Estate residential (HER) District, any new mixed use districts, or direct control districts will be prepared at the time of submission of a Land Use Bylaw amendment application for the subject property.