THE CITY OF
Red Deer

AGENDA

FOR THE *REGULAR MEETING OF RED DEER CITY COUNCIL*

TO BE HELD IN THE COUNCIL CHAMBERS, CITY HALL

MONDAY, MARCH 14, 2005

COMMENCING AT *4:30 P.M.*

(1) Confirmation of the Regular Meeting of Monday, February 28, 2005

(2) **UNFINISHED BUSINESS**

1. Legislative & Administrative Services Manager – Re: ***2004 Growth Study*** . . 1

(3) **PUBLIC HEARINGS**

1. Parkland Community Planning Services – Re: ***West Park Extension / Neighbourhood Area Structure Plan Amendment 3217/F-2004 / Trademark Western Properties***
(Consideration of 2nd & 3rd Readings of the Bylaw) . . 11

2. Land & Economic Development Manager – Re: ***Johnstone Crossing, Phases 4 & 5:***

(a) ***Road Closure Bylaw 3342/2005 – Road Plan 822 0501***
(Consideration of 2nd & 3rd Readings of the Bylaw) . . 20

(b) ***Parkland Community Planning Services – Re: Land Use Bylaw Amendment 3156/A-2005 / Rezoning of Portion of Road from Road to A1 Future Urban Development District / Johnstone Crossing***
(Consideration of 2nd & 3rd Readings of the Bylaw) . .24

(4) REPORTS

1. Community Services Director – Re: ***Request to Amend the Committees Bylaw / Appointment of Youth Member to the Policing Committee*** . .26

2. Recreation, Parks & Culture Manager – Re: ***Alexander Way Proposed Public Art Locations*** . .33

3. Recreation, Parks & Culture Manager – Re: ***Kinsmen Community Arenas ' "B" Dressing Room Project*** . .41

4. Assessment and Taxation Services Manager – Re: ***Intervener Status – Calgary's 2005 Equalized Assessment Appeal*** . .44

5. Parkland Community Planning Services – Re: ***Land Use Bylaw Amendment 3156/D-2005 / Rezoning of Land From A1 Future Urban Development District to R1 Residential Low Density District and P1 Parks and Recreation District / Inglewood East – Phase 2 / Melcor Developments Ltd.***
(Consideration of 1st Reading of the Bylaw) . .47

(5) CORRESPONDENCE

(6) PETITIONS AND DELEGATIONS

(7) **NOTICES OF MOTION**

(8) **WRITTEN INQUIRIES**

(9) **BYLAWS**

1. ***3217/F-2004*** – West Park Extension Neighbourhood Area Structure Plan Amendment/ Trademark Western Properties Inc.
   (2nd & 3rd Readings) . .50
   . .11

2. ***3342/2005*** – Road Closure Bylaw - Road Plan 822 0501 / Johnstone Crossing
   (2nd & 3rd Readings) . .65
   . .20

3. ***3156/A-2005*** – Land Use Bylaw Amendment / Rezoning of Closed Portion of Road to A1 Future Urban Development District / Johnstone Crossing
   (2nd & 3rd Readings) . .66
   . .24

4. ***3156/D-2005*** – Land Use Bylaw Amendment / Rezoning of Land From A1 Future Urban Development District to R1 Residential Low Density District and P1 Parks and Recreation District / Inglewood East – Phase 2 / Melcor Developments Ltd.
   (1st Reading) . .68
   . .47

THE CITY OF
Red Deer

Legislative & Administrative Services

DATE: **March 7, 2005**

TO: **City Council**

FROM: **Legislative & Administrative Services Manager**

SUBJECT: **2004 Growth Study**

At the Monday, February 28, 2005 Red Deer City Council Meeting, Council tabled consideration of the 2004 Growth Study to the March 14, 2005 Council Meeting to allow additional time to review the Study.

The 2004 Growth Study is being brought back to the March 14, 2005 Council meeting for further consideration and a copy of the February 18, 2005 report from the Growth Study Task Force is attached.

Please bring the copy of the 2004 Growth Study provided to you at the February 28, 2005 Council Meeting to the March 14, 2005 Council Meeting.

Kelly Kloss
Manager

/attach.

LAND
COMMUNITY
PLANNING
SERVICES

Report Submitted Previously to the February 28, 2005 Council Meeting

FAX: (403) 346-1570
e-mail: pcps@pcps.ab.ca

DATE: February 18, 2005

TO: Kelly Kloss, Legislative and Administrative Services

FROM: Growth Study Task Force

RE: 2004 Growth Study

Introduction

Attached for the review and information of Council is the 2004 City of Red Deer Growth Study. The purpose of this project is to update the City's previous growth study completed in February 2000. The Study is a technical document used to assist in long range growth planning. The study focuses on land absorption rates and future land inventory requirements for industrial, residential and commercial land uses within the city for the next 50 years. It also considers future need for open space, environmental preservation areas, and public service uses. The 2004 Growth Study reflects changes in development trends, environmental management initiatives, existing land use, population forecasts, servicing, and transportation which have occurred since the 2000 Growth Study. The Study uses this information along with land absorption rates and anticipated land requirements to identify potential growth areas and to generate future short, medium, and longer term growth strategies for the city.

Background

As growth continues at a strong rate in the Red Deer Region, The City of Red Deer is continuing to work to maintain a viable supply of land for residential, commercial and industrial purposes. The 2004 Growth Study will help provide direction as to where, when and for what uses the city should develop land over the next 50 years. This study was completed based on a terms of reference approved by the Intermunicipal Affairs Committee in January 2004. The Study has been prepared by a task force consisting of Bryon Jeffers, Development Services, Tom Warder, Engineering Services, Howard Thompson, Land and Economic Development, and Nancy Hackett, Parkland Community Planning Services working with Harry Harker, Red Deer County.

In addition to the 2000 Growth Study, previous Red Deer growth studies were completed in 1969, 1983, 1984, and 1991. It should be noted that the Growth Study recommendations are based on current information, current population and economic forecasts, current technologies, and today's understanding of the factors driving growth and development. Therefore, while every effort is made to produce accurate growth predictions for up to 50 years into the future, longer term forecasts for growth can be a

challenge. For this reason, the city has typically updated their growth study on a regular basis (approximately every 7 to 14 years).

Rationale

The City's most recent Growth Study was compiled in 2000 by UMA Engineering Ltd. and PriceWaterhouseCoopers, based on 1998-99 data. Although it has only been five years since this work was completed, there are several reasons why an update was considered important at this time. Firstly, the City of Red Deer has experienced exceptionally strong growth since 2000. So much so, the inventory of land available for future development has been quickly depleting. While the city has a policy under its Intermunicipal Development Plan to maintain a 20-30 year supply of developable land, Red Deer's supply of residential, industrial, and commercial lands have been absorbed by the market much faster than previous growth studies predicted. Most pressing is the shortage of industrial land. Therefore, in order to best plan for future residential, commercial, and industrial development an updated Growth Study is needed.

Secondly, it is recognized that the pace of development can place pressure on natural and environmentally sensitive areas within and surrounding the city. The 2000 Growth Study did not elaborate on future natural area preservation or park area expansion. But given the high priority placed on protecting the quality of the environment by both the City of Red Deer and Red Deer County as well as the value placed by many residents on the management of natural assets, this Growth Study update provided the opportunity to further consider existing environmental features, environmental management trends, and the potential preservation of natural areas.

Thirdly, since 2000 several new growth related policies have been adopted by the City of Red Deer to deal with and manage development. These strategies include a sustainable development study, new housing density requirements, neighbourhood design guidelines and standards, area redevelopment planning work to revitalize and infill older sectors of the community, and research work around future industrial city growth areas. As well, new federal and municipal census data has become available since 2000 and population projections for Red Deer's future have been revised. Updating the Growth Study provided the opportunity to incorporate and reflect these new policies and information in the document.

Fourthly, updating the City's Growth Study at the present time can assist in providing important base information for other city and regional planning work. In particular, Red Deer's Municipal Development Plan is currently being updated. As the Municipal Development Plan will be looking at future growth direction for the city, an up to date growth study would be an asset. In addition, Red Deer County has undertaken a Growth Study which is currently in progress. Updating the City's Growth Study at this time presents an opportunity for the City of Red Deer and Red Deer County to work in tandem to accommodate and manage future growth in a careful and well thought out manner.

Study Area

The study area considered by the 2004 Growth Study consists of approximately 257 km^2 of land, encompassing all sides of the present City boundary. In general, the study area stretches from the Blindman River on the north, Range Road 265 on the east, the Red Deer River/Range Roads 282 and 281 to the west, and to areas in proximity of Township Road 374 to the south. All of the lands currently within the City of Red Deer boundary were also included in the study. It is recognized that this study area far exceeds the urban land needs of the city over the next 50 years, however, through study of this wider area, specific feasible growth areas have been identified which will best meet the 50 year growth needs of the City of Red Deer.

Timeframe

The timeframe considered by the 2004 Growth Study looked at various future population thresholds. The three thresholds were the 90,000 population, the 115,000 and the 160,000 population threshold. These population thresholds generally correspond to the 10 year (2014-2015), 25 year (2029-2030) and 50 (2052-2054) year time frames.

Public Consultation

Although the Growth Study is primarily a technical document considering population forecasts, projected land demands, and servicing requirements to meet city growth, we did want to provide an opportunity for public feedback on the study and to receive the input from key stakeholder groups such as: the development and building community, the health region, the business community, and area residents.

A public open house was held on the afternoon of November 25, 2004 at the Red Deer Library to present the growth study findings to the public and to gather input on the draft study. The open house was advertised in the Red Deer Advocate. Approximately 90 people signed in at the open house. Written comments sheets and email comments were returned after the meeting. These comments are summarized in the table below:

Comment Summary

COMMENT	NO.	RESPONSE
Environmental Areas and Open Space		
Include more environmental information and background in the plan (e.g. Regional Conservation Plan, sustainable cities information, pollution reduction)	2	Environmental information, background, and trends have been reviewed and are now incorporated to a greater degree within the study including an ecospace areas map (Figure 5-1).
The study should specifically address the need for open space growth beyond that which is normally included in each residential subdivision. The maps show green areas as "Park /Environmental /Recreational" but do not identify the	1	The Growth Study has not typically dealt with the ownership of lands or means to acquire future park lands.

status of each area – whether they are publicly or privately owned, whether they are part of the city's open space growth or not.		
We should be planning to "grow" open space rather than assuming that some pieces of land will be left over for this use in the future. Need site criteria for growth of open space to guide planning at the 90,000, 115,000 and 160,000 population thresholds. These could include need for both large and small green spaces, natural significance of features and plant/animal populations, interconnected rather than isolated.	1	The study does provide forecasts for expansion of the city's open space/environmental areas. This forecast is linked to the amount of residential, commercial, and industrial growth in the community and uses the maximum allowable 10% municipal reserve dedication. The study also identified more than 160 hectares of important environmental areas for consideration of preservation over the base 10% figure.
Hazlett Lake Area		
Pleased to see Hazlett lake area as a proposed future residential district. Hazlett Lake and natural features are unique and should be preserved. A park in this area and golf course should be considered.	1	
Mapping		
Large air photo with overlay colours may help the public identify areas more easily.	1	This is a good suggestion that we will try to incorporate into future updates.
Industrial Land		
Concerned with industrial development south of Linn Valley. Fear the impact of large heavy equipment, oil patch servicing, loud businesses near residential development.	1	The Growth Study does recommend industrial development in Sector E, south of Linn Valley. Should future urban industrial development occur in this area, the City will work with land owners to prevent impacts on surrounding residential areas through zoning and development standards. It should be noted that this area is already identified for/districted for industrial development as part of the County's Burnt Lake Area Structure Plan.
Industrial development in Sector D will be a money loser.	1	Sector D is shown for long term future industrial development (115,000 to 160,00 thresholds) based on substantial research

		relating to marketing, access, servicing, demand projections, and costs.
Industrial development will be most successful when focused along major highways such #2, 11, 11A, 2A.	1	Because it is the City's policy to balance all types of land uses, and to ensure all land uses (existing and future) are planned to be compatible, the Growth Study does show a mix of land uses along the highways.
Need for large industrial sites of 20+ acres. Otherwise businesses will leave the city. The City should phase out of being the developer of industrial land, to 25% and out.	1	The purpose of the Growth Study is to determine the types of future land uses needed in Red Deer, the amount of land required for each one, and the best location. The Growth Study does not address nor direct who should develop future lands (e.g. private developers or the City land bank).
Oil Wells		
One well marked in Section 35 as a flowing gas well is a flowing oil well.	1	All oil and gas well information has been reviewed and this correction has been made.
Future Development		
The commercial land is being shifted from quarter section to quarter section arbitrarily. Its financial impact is significant. There is potential for conflict of interest to arise.	1	
Retain the district commercial site currently proposed for the NE quarter of Section 22 and consider enhancing it to a C4 site.	1	Based on additional commercial analysis, the Growth Study has been amended to retain the commercial site in Section 22 and to provide for a larger site.
Given the specialized expertise in planning, locating and sizing commercial sites, we would encourage the contracting of a professional planner with commercial specialization to fully investigate the commercial requirements of the city.	1	Based on additional commercial research undertaken for the Growth Study, the commercial sites have been amended. Details relating to the exact size, location, access, design, and phasing are to provided at the area structure plan level.
The City should phase out of being a residential developer.	1	The purpose of the Growth Study is to determine the types of future land uses needed in Red Deer, the amount of land required for each one, and the best location. The

		Growth Study does not address nor direct who should develop future lands (e.g. private developers or the City land bank).
Phasing		
Does the topography dictate the build out of Sector C prior to finishing development of B for residential?	1	Development in Sectors B and C will likely occur simultaneously. The topography will likely not dictate build out of Sector C prior to finishing development of Sector B.
Could the Growth Study indicate that The City would give consideration to including lands in the NE & SE quarters of 2-38-27-4 in an earlier development phase (90,000) if servicing requirements are met?	2	The Growth Study shows development in these quarters occurring in the 115,000 to 160,000 population threshold, however, it has been amended to indicate that should the servicing requirements be met to the satisfaction of the City, development within these quarters could occur at an earlier phase (such as the 90,000 or 115,000).
Growth Strategy		
Growth Study proposal/strategy looks good for the whole area.	1	
Agree with the residential and commercial land shown north of Highway 11A. Would recommend that the commercial land be shown in the 90,000 threshold.	1	The lands north of Highway 11A continue to be shown as residential and commercial. Commercial development is shown across all population thresholds based on expected development patterns.
The City is not maintaining the inventory of lands as mandated in the Intermunicipal Development Plan.	1	The Growth Study does indicate that the city currently falls short of the Intermunicipal Development Plan target of maintaining a 20-30 year inventory of future land within the city boundary.
The growth formula used needs to be based on the constructive trends for more sustainable land use, such as walkable communities, higher density, environmental conscious development.	1	The Growth Study has been amended to provide more information on these trends and their expected impact/implementation.

In reviewing these comments and collecting additional information since November, the task force committee believes that the identified concerns have been addressed. Task force committee members have also met with representatives of Red Deer County on several occasions over the past year to receive input and revise the study as appropriate.

In addition, the draft study was circulated to City Departments in November 2004 for review and comment. Comments received were incorporated into the plan.

Findings

Information contained in the 2004 Growth Study includes:

- Descriptions of potential growth areas with regard to soils, topography, natural features and oil and gas information
- Demographic, environmental, and development trends,
- Population and growth forecasts for the 90,000, 115,000 and 160,000 thresholds,
- Current and expected residential, industrial, and commercial land absorption rates,
- Expected future residential, industrial, commercial, public service and open space land needs for the next 50 years,
- Servicing and transportation information
- Assessment of the growth sectors around the city for residential, commercial and industrial use including land currently outside the city boundary
- A growth strategy identifying the appropriate sectors for future short, medium, and long term residential, public service, industrial, commercial, and open space use

Growth Strategy

In summary, the Growth Study presents the following growth strategy based on expected future land demands:

Between now and the **90,000-population** threshold:

- Current city inventory of residential land is expected to accommodate projected demand for over 7,900 new housing units
- Current city inventory is also expected to accommodate the associated municipal reserve, environmental reserve, and public service lands.
- Projected commercial demands are expected to slightly exceed designated land available within the present city boundaries. Therefore, redesignation of land within city boundaries for commercial development near Highway 11 and 30 Avenue will be required. As well, preparation of the identified future site on Highway 11A, **Sector A,** is recommended.
- An additional 250 hectares of industrial land will be needed. It is recommended that this demand be met through the development of lands within **Sector E**.

Between now and the **90,000-population** threshold:

- It is assumed that the downtown core and the lands within the current city boundary will be fully redeveloped or built out.
- Therefore, there will be demand for an additional 785 hectares of new residential land as well as 135 hectares of public service and reserve lands. To meet this demand, the development of land within **Sectors A** and **B** is recommended for residential land use.
- Commercial requirements are recommended to be accommodated in **Sector A** adjacent to Highway 11A. As well, designation of commercial land in the vicinity of

Highway 11 and 30 Avenue west of **Sector B** is recommended for major new commercial growth.

- The additional industrial demand equals 224 hectares (on top of the land needed up to 90,000-population) which can be accommodated in **Sector E**.

Between the 115,000 and **160,000-population** threshold:

- It is projected that 1,956 hectares of new residential land as well as 285 hectares of public service and reserve lands will be required between the horizons. Some development in **Sector B** is recommended as well as complete development of **Sector C**. The feasibility of further residential growth in **Sector B** will require further investigation relative to oil and gas wells and pipelines in this sector.
- This population threshold will demand additional hectares of commercial land, which can be accommodated jointly in **Sectors A** and **C**. By this threshold, the build out of the proposed commercial village west of **Sector B** is expected.
- New industrial development will require 258 additional hectares of land between the 115,000 and 160,000-population thresholds. As **Sector E** will be built out, development of **Sector D** is recommended.

It is necessary to recognize that the land demand calculations at each threshold do not reflect annexation requirements which are determined as a separate process to meet policies of the Intermunicipal Development Plan (i.e. the growth strategy totals reflect the amount of land that we predict will be required to meet building/growth demands up to the noted population threshold. The totals do not include the amount of land required to maintain a 20-30 inventory of future vacant land as directed by the Intermunicipal Development Plan).

Summary

In conclusion, the City of Red Deer is poised to experience strong growth well into the next five decades. Updating the Growth Study at this time provides the opportunity to address the impacts of recent growth on the city, to incorporate new city policies, to coordinate new environmental information, and to provide direction to current statutory plan updates being undertaken. The 2004 Study considers current development, demographic, and environmental trends, servicing and transportation information, and future growth demands. To accommodate these growth demands, it is recommended that the City's residential and commercial growth be focused in the east and industrial growth should take place along the west side of the City. Limited residential and commercial growth would also occur to the north.

Recommendation

It is recommended that City of Red Deer Council accept the 2004 Growth Study as submitted for information and for use in future growth planning for the City of Red Deer.

Based on the findings of the 2004 Growth Study pertaining to the pronounced need for industrial land, it is recommended that City of Red Deer Council initiate an annexation process with Red Deer County for the lands identified west of Highway 2 for industrial land use. The annexation process would conform to the requirements of the Intermunicipal Development Plan and the Municipal Government Act. The first step in this process would be to prepare a draft annexation proposal to be shared with/referred to the Intermunicipal Affairs Committee and Red Deer County. This document would contain proposed land to be annexed, proposed phasing, provision of services, the rationale for annexation, and the proposed process for annexation and consultation.

Respectfully Submitted,

Bryon Jeffers
Director of Development Services

Howard Thompson, Manager
Land and Economic Development

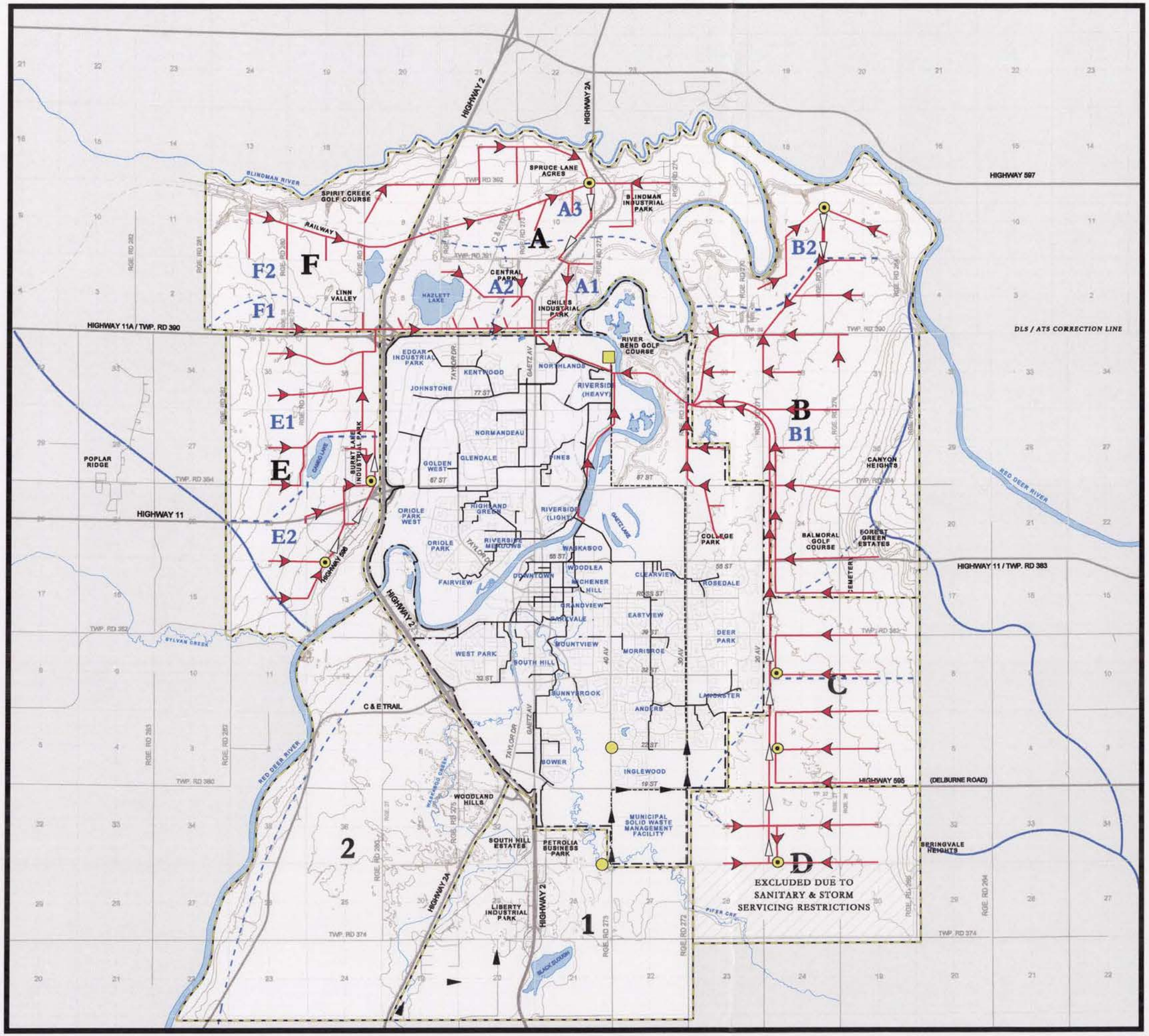
Nancy C. Hackett, Planner
Parkland Community Planning Services

Tom Warder, Manager
Engineering Services

c. Colleen Jensen, Director of Community Services
Colleen Hunter, Hunter Communications

SANITARY SERVICING CONCEPT

4.2



LEGEND

- *EXISTING CITY BOUNDARY*
- *PROPOSED GROWTH STUDY SECTORS*
- **A & 1** *SECTOR LABELS*

EXISTING SANITARY SYSTEM

- *EXISTING SANITARY SYSTEM (PIPE >300mm)*
- *EXISTING SANITARY FORCE MAIN SYSTEM*
- *EXISTING WASKASOO REGIONAL TRUNK SYSTEM*
- *WASTE WATER TREATMENT PLANT*
- *LIFT STATION*

PROPOSED SANITARY SYSTEM

- *PROPOSED GRAVITY TRUNK MAIN*
- *PROPOSED FORCE MAIN*
- *PROPOSED LIFT STATION*

NOTE: TRUNK SANITARY SYSTEM REQUIREMENTS IN SECTORS 1&2 TO BE DETERMINED BY RED DEER COUNTY

TOPOGRAPHY

- *MAJOR DRAINAGE BOUNDARIES*
- *MINOR DRAINAGE BOUNDARY*
- **A1** *MAJOR DRAINAGE BOUNDARY LABEL*

CITY OF RED DEER
2004 GROWTH STUDY

MARCH 2005

SCALE 1:85,000

THE CITY OF Red Deer

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THE CITY OF Red Deer

Council Decision – March 14, 2005 E

Legislative & Administrative Services

DATE: **March 15, 2005**

TO: **Nancy Hackett, Parkland Community Planning Services**

FROM: **Kelly Kloss, Legislative & Administrative Services Manager**

SUBJECT: **2004 Growth Study**

Reference Report:
Growth Study Task Force, dated February 18, 2005

Resolutions:

> *"Resolved* that Council of the City of Red Deer having considered the report from the Growth Study Task Force, dated February 18, 2005, re: 2004 Growth Study, hereby accepts the 2004 Growth Study as a planning tool for future growth strategies with the inclusion of the updated Figure 4.2, dated March, 2005 as circulated at the March 14, 2005 Council meeting."

Report Back to Council: No

Kelly Kloss
Manager

/chk

c Director of Development Services
Community Services Director
Engineering Services Manager
Land & Economic Development Manager

THE CITY OF Red Deer

COUNCIL MEETING OF FEBRUARY 28TH , 2005

ATTACHMENT

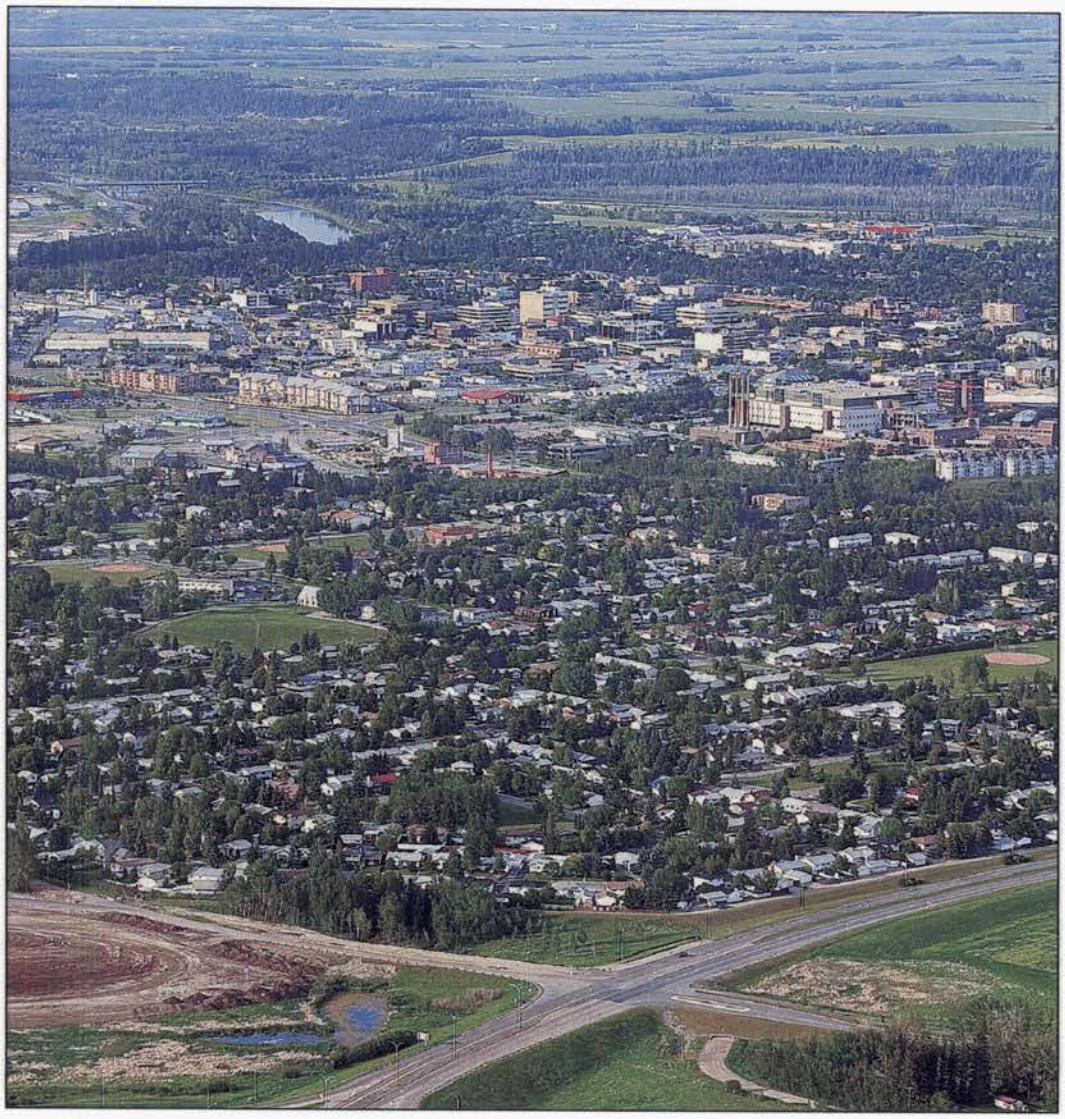
DOCUMENT STATUS: PUBLIC

REFERS TO: 2004 GROWTH STUDY
FEBRUARY, 2005

THE CITY OF
Red Deer

2004 Growth Study

February 2005



PARKLAND
COMMUNITY
PLANNING
SERVICES

Executive Summary

Executive Summary

Introduction

The purpose of this project is to update the City of Red Deer's February 2000 Growth Study. The study focuses on land absorption rates and future land inventory requirements for industrial, residential and commercial land uses within the city for the next 50 years. It also considers future need for open space, environmental preservation areas, and public service uses. The update reflects changes in development trends, existing land use, population forecasts, servicing, and transportation which have occurred since the 2000 Growth Study. The updated information, along with land absorption rates and anticipated land requirements will then be used to identify potential growth areas and generate future short, medium, and longer term growth strategies for the city.

The scope of this study includes an area around Red Deer, which far exceeds the urban land needs of the city over the next 50 years. However, through study of this wider area, specific feasible growth areas are identified which will best meet the 50 year growth needs. This work is being completed in cooperation with Red Deer County and in compliance with the current City of Red Deer Strategic Plan, City of Red Deer planning policies, and the joint City-County Intermunicipal Development Plan.

Study Area

The study area consists of approximately 257 km^2, encompassing land on all sides of the present City boundary, including approximately 62 km^2 currently within City boundaries. The area was broken into six main study sectors lettered A through F and two Special Study Areas numbered 1 and 2. The Special Areas in the southwest were not studied in great detail recognizing the County's interest in attracting development to these areas and the current work being undertaken by the County on its Growth Study.

Future Trends

Building on the base geological, topographical, and environmental data, the study examined expected trends such as economic strength, employment, recreational and leisure preferences, and demographics.

Populations are growing older and family size is decreasing. The downward trend in household size in Red Deer is forecasted to continue, however, residential development is moving towards higher density. Other related trends include inner city redevelopment, mixed-use communities, concentration of housing near amenities, environmentally conscious development, walkable communities, and home-based business.

Red Deer is expected to face positive economic growth trends and strong business growth. Red Deer's traditional industrial composition is not anticipated to change significantly and the levels of demand for oil and gas related land uses are anticipated to remain a strong proportion of overall land demand.

Red Deer faces high demand to accommodate new industrial businesses. The overall 25-year average gross land demand in Red Deer is 33.5 hectares per year. A 2004 industrial inventory indicates that raw land stock has been significantly depleted in Red Deer, with a one to two year supply remaining. Identification and development of new industrial lands is warranted and required immediately.

The shift away from the traditional mall has led to new retail alternatives such as the factory outlet, big box stores, warehouse club retailers, and the power centre. Red Deer has evolved into a dynamic urban centre serving a large region within an exploding Highway 2 development corridor. The Gaetz Avenue corridor is unable to provide large single site development opportunities and is pushing new major commercial developments to the edge of the City boundary and into the County's Gasoline Alley and Burnt Lake commercial development areas.

Utility servicing and transportation plays a dominant role in defining feasible growth patterns for most municipalities. When growth is robust, the demand for new infrastructure can outpace the ability of municipalities to fund the required expansion to these systems. As a goal of sustainable development, using infrastructure most efficiently is recognized as a critical component. The study considers future needs for water, wastewater, drainage, solid waste, power, telecom, gas, emergency services, and transportation for each of the potential development sectors. In addition, emerging environmental management trends will impact the style and form of all future city growth.

In general, many communities seek to balance the types and mixture of land uses within their municipal boundaries. Red Deer has traditionally tried to ensure such a balance by incorporating opportunities for a range of land uses. As of January 2004, Red Deer's land use composition included: 71% residential, 17% industrial, and 12% commercial (when parks, public service, and environmental areas are excluded from the calculation). These figures indicate a shift has occurred towards a higher proportion of residential land uses compared with 2000 calculations.

Future Land Use Demands

Five land use categories have been identified for future growth, including residential, industrial, commercial, public service, and open space. For each development horizon, the Study considers future population growth, land demand for each land use category, and the land uses most suitable to each Sector. Growth directions and opportunities for future urban growth are then determined.

Population thresholds have been updated from the 2000 Growth Study to reflect the increase in Red Deer's current population level, and to respond to the more robust population forecasts. The population thresholds being considered within the Growth Study are 90,000, 115,000, and 160,000. Based on the 2003 population projections and the 2004 projections, these thresholds generally correspond to the years 2014/2015, 2029/2030, and 2052/2054.

The study allows for provision of 10% open space based on the provincially legislated municipal reserve dedication.

Residential Land Demand

The municipality has approximately 940 hectares of vacant residential land available for development within its boundaries, including lands recently annexed. Based on a minimum residential development density of 12.35 units per hectare, there is currently enough land to accommodate residential growth to the 90,000 threshold. However, an additional 785 hectares beyond current city limits will be required at the 115,000 threshold and a cumulative amount of 2741 hectares will be required by the 160,000 threshold to meet residential growth demands.

As in the 2000 Growth Study, a rate of 2.5 percent of residential development was used for future public service land demand (e.g. churches, schools, public facilities). Based on the residential demand noted above, the City will need to incorporate 17 hectares of public service land at the 90,000 population, 43 hectares at the 115,000 population, and 92 hectares at the 160,000 population threshold (cumulative totals). Planning for future major public service uses such as major medical, educational, and public works uses are reviewed by this study.

Industrial Land Demand

At the beginning of 2004, Red Deer had approximately 60 hectares of undeveloped industrial land within the city limits; which began diminishing quickly throughout the year. Forecasts suggest that the city will be out of industrial land supply as early as 2005. The benefits of maintaining industrial land as part of the city's mixture of land uses is well presented in research completed by the City of Red Deer in 2003[1], including: diversified tax base, employment generation, regional economic spin-offs ,and community corporate partnership opportunities.

Based on a recent study done by PriceWaterhouseCoopers, annual industrial land demand is forecast to be 33.5 gross hectares over the next 5 years then diminish incrementally over the next 25 years to 11.2 hectares between 2016 and 2020. It is assumed that the 11.2-hectare annual demand will continue from 2021 to 2054. Based on these trends, the demand for industrial land will require 250 hectares beyond current city boundaries by

[1] *Future Industrial Land Development Options*, 2003, the City of Red Deer

the 90,000-population threshold, 474 hectares (cumulative and including the land total to the 90,000 threshold) by the 115,000-population mark, and 732 hectares (cumulative including the 115,000 threshold land demand) by the 160,000-population level. The majority of this land is expected to be for light industrial uses.

Commercial Land Demand

The trade area for Red Deer has been defined as roughly half the distance to Edmonton and Calgary, west to Rocky Mountain House and east to the Castor/Coronation area and includes over 200,000 residents, with 75,923 of these residing in the City of Red Deer. The study projects that three new major commercial development nodes, each approximately 30 to 50 hectares in size, will be established to meet future commercial land demands. These nodes will take the form of large commercial villages, commercial main street centres and/or commercial/residential mixed use developments. These sites could be any combination of the City of Red Deer Land Use Bylaw's C2, C3, and C4 Commercial Districts. In addition to these major commercial nodes individual C3 neighbourhood plazas and C2 District Commercial sites will still be required throughout new residential neighbourhoods.

The Downtown and the Riverlands areas will continue to evolve as the commercial service and civic centre as well as provide continued opportunities for specialty and niche market commercial developments.

Site Selection Criteria

Having determined the amount of future land required for each of the five land uses, this study turned to identifying appropriate site selection criteria to assist in determining best locations for various types of urban growth. Future industrial, residential, commercial, and public uses will require land where hard (e.g. water, sewer, roads) and soft (e.g. fire, ambulance, police, parks, recreation) services can most feasibly be made available. In addition, specific criteria were reviewed as appropriate to each land use, such as environmental constraints, existing uses, setbacks, visibility, access, and proximity to like-development, dwellings or employment as well as consistency with statutory plans.

Growth Strategy

Based on expected future growth demands and the results of site selection criteria the Growth Study recommends that City growth take place in the areas noted below. This proposed growth strategy is illustrated on the attached Figure ES.

Between now and the **90,000-population** threshold, over 7,935 new housing units will be built and the remaining residential inventory (i.e. green field areas or redevelopment areas) within the current city boundaries is expected to be exhausted. Current city inventory is also

expected to accommodate the associated municipal reserve, environmental reserve, and public service lands. Projected commercial demands are expected to slightly exceed designated land available within the present boundaries. Therefore, redesignation of land within city boundaries for commercial development near Highway 11 and 30 Avenue as well as identification of a future site on Highway 11A, **Sector A,** is recommended to meet the 90,000-population threshold commercial land need. Projections indicate that an additional 250 hectares of industrial land will be needed by the 90,000-population. It is recommended that this demand be met through the development of lands within **Sector E.**

Between the 90,000 and the **115,000-population** mark it is assumed that the downtown core and the lands within the current city boundary will be fully redeveloped or built out. Therefore, there will be demand for an additional 785 hectares of new residential land as well as 135 hectares of public service and reserve lands. To meet this demand, the development of land within **Sectors A** and **B** is recommended for residential land use. Commercial requirements are recommended to be accommodated in **Sector A** adjacent to Highway 11A. As well, designation of commercial land in the vicinity of Highway 11 and 30 Avenue west of **Sector B** is recommended for major new commercial growth. The additional industrial demand equals 224 hectares in addition to the 90,000-population demand; which can be accommodated in **Sector E.**

It is projected that 1,956 hectares of new residential land as well as 285 hectares of public service and reserve lands will be required between the 115,000 and **160,000-population** horizons. Some development in **Sector B** is recommended as well as complete development of **Sector C.** The feasibility of further residential growth in **Sector B** will require further investigation relative to oil and gas wells and pipelines in this sector. This population threshold will demand additional hectares of commercial land, which can be accommodated jointly in **Sectors A** and **C.** By this threshold, the build out of the proposed commercial village west of **Sector B** is expected. New industrial development will require 258 additional hectares of land between the 115,000 and 160,000-population thresholds. As **Sector E** will be built out, development of **Sector D** is recommended. Development of industrial land to the south of the present City boundaries is consistent with long range City goals and policies relating to balanced growth between north and south sectors.

As both the City and County have expressed interest in preservation and expansion of the Red Deer River park system, some consideration should be given to how this could be accomplished prior to reaching to the 160,000-population threshold. Consideration should also be given to the permanent preservation of irreplaceable, highly significant, natural features of the region such as Hazlett Lake, Cameo Lake, the river valleys and escarpment areas.

Conclusion

In conclusion, the City of Red Deer is poised to experience strong ongoing growth well into the next five decades. To accommodate these growth demands, it is recommended that the City's residential and commercial growth be focused in the east and industrial growth should take place along the west side of the City. Limited residential and commercial growth would also occur to the north.

PROPOSED GROWTH STRATEGY

FIGURE ES

LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- PROPOSED EXPRESSWAY
- PROPOSED ARTERIAL
- A & 1 SECTOR LABELS
- PARK / ENVIRONMENTAL / RECREATIONAL
- **The NE 1/4 and SE 1/4 of 2-38-27-W4 may be able to be developed at an earlier stage (subject to sanitary servicing issues being resolved to the satisfaction of the City of Red Deer).*

LAND USE CONCEPTS

RESIDENTIAL

- 75,000 - 90,000
- 90,000 - 115,000
- 115,000 - 160,000

INDUSTRIAL

- 75,000 - 90,000
- 90,000 - 115,000
- 115,000 - 160,000

COMMERCIAL

- 75,000 - 90,000
- 90,000 - 115,000
- 115,000 - 160,000

- **Approximate location of future commercial development, (exact location, size, phasing, design, access, and related issues to be determined at the Major Area Structure Plan level).* For more info See Chapter 5 & 6

CITY OF RED DEER 2004 GROWTH STUDY

DECEMBER 2004 SCALE 1:85,000

THE CITY OF Red Deer

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section

1

Introduction

section 1

Introduction

1.1 Purpose of the Study

The purpose of this project is to update the City of Red Deer's February 2000 Growth Study. The focus of this updated City of Red Deer Growth Study will be on land absorption rates and future land inventory requirements for industrial, residential and commercial land uses within the city for the next 50 years. The study also considers land needs for public service and municipal or environmental reserve. The update will reflect changes in development trends, existing land use, population forecasts, servicing, and transportation which have occurred since the 2000 Growth Study. The updated information, along with land absorption rates and anticipated land requirements will then be used to identify potential growth areas and generate future short, medium, and longer term growth strategies for the city.

It is important to identify growth areas and future land uses in advance to ensure compatibility with adjacent land uses over the long term, to plan for proper hard and soft servicing, to protect environmental resources, to achieve long range objectives relating to quality of life of the city, and to provide an adequate inventory of land to meet anticipated residential, industrial, and commercial land needs.

The scope of this study includes a wide area around the city which far exceeds the urban land needs over the next 50 years. However, through study of the wider area, specific feasible growth areas will be identified which will best meet the 50 year growth needs.

1.2 Study Background

Earlier growth management plans for the City of Red Deer were completed in 1969[1], 1983, 1984, and 1991 by the Red Deer Regional Planning Commission. The City's most recent Growth Study was compiled in 2000 by UMA Engineering Ltd. and PriceWaterhouseCoopers, under the direction of a City of Red Deer steering committee. The 2000 Growth Strategy was prepared over the course of one and a half years to look at the possibilities for future growth of the city and considered growth thresholds of 75,000, 90,000, and 115,000 populations.

1.3 Study Timeline

The introduction to the 2000 Growth Study states that a city's growth strategy "as with all long range planning studies...is reviewed and adjusted accordingly at regular intervals." Regular updates are necessary to ensure that emerging trends, current demographics and forecasts, and policy

[1] Red Deer Regional Planning Commission, *General Plan Statement and Urban Renewal Study*, City of Red Deer, 1969. p. 49

changes are accurately reflected in planning documents. Such reviews characteristically factor in new information and formulate revised growth strategies. In the case of the City of Red Deer, these reviews have typically been conducted every seven to nine years since 1983. While the 2004 update was undertaken only four years after the previous study, this is directly linked to the city's strong growth over recent years. Between 1999 and 2004 the City of Red Deer experienced exceptionally strong growth (average annual growth rate of 4.37%) and with at or near record breaking numbers of housing starts, industrial land sales, building permit values, and subdivisions. The 2000 Growth Study was completed at the outset of this growth surge and while the Growth Study was published at the beginning of 2000, the data collection and analysis were actually completed in 1998/99. Therefore, due to the extraordinary level of recent growth, it is seen to be crucial to update the city's Growth Study at this time to best reflect the current situation and to ensure future land is available for development.

The 2004 Growth Study was carried out between January 2004 to January 2005 by a task force comprised of staff of the City of Red Deer, Parkland Community Planning Services, and Red Deer County.

1.4 Study Rationale

As alluded to above, Red Deer's strong growth has made it necessary to update the city's Growth Study. In fact, Red Deer's strong growth is quickly depleting the inventory of land available for future development. While the city has a policy under its Intermunicipal Development Plan to maintain a 20-30 year supply of developable land, Red Deer's supply of residential, industrial, and commercial lands have been absorbed by the market much faster than previous growth studies predicted. For the purposes of this study, developable land has been defined as an area that is feasible to service and access using appropriate development standards and means for urban development purposes (e.g. residential, commercial, industrial). Some lands that are not generally considered "developable" for these urban land uses could in fact be available for restricted development, such as recreational or park uses. Constraints such as flood plains, resource wells, landfills, wetlands, and escarpments may also affect the developability of land.

Based on these definitions, at present there is less than approximately 13 to 15 years supply of ***residential*** land within city boundaries. Even with the addition of 420 hectares of future developable residential land brought in by annexation, Red Deer may quickly fall short of the necessary land supply based on the vigour of new population projections and housing demand forecasts.

Over and above residential land demand, ***industrial*** land is in critically short supply. Based on the projected industrial consumption rate of 33.5 gross hectares per year, the city's industrial land will last less than a year. New industrial lands needs to be identified immediately.

Considering the steady pace of new commercial development throughout Red Deer, the city also wishes to identify additional ***commercial*** lands to meet the 20-30 year target. At an expected absorption rate of 5.57 square metres of commercial space per city resident per year, existing commercial lands will last less than10 years.

Therefore, in order to best plan for future residential, industrial, and commercial development an updated Growth Study is needed.

The pace of development can place pressure on natural and environmentally sensitive areas within and surrounding the city. The 2000 Growth Study did not elaborate on future natural area preservation or park area expansion. But given the high priority placed on protecting the quality of the environment by both the City of Red Deer and Red Deer County as well as the value placed by many residents on the management of natural assets, this Growth Study update will consider existing environmental features and potential preservation of natural areas.

This update will also draw some preliminary attention to new civic or public service facility needs potentially required over the next 50 years, such as school sites, churches, possible new or expanded waste management facilities, water treatment facilities, regional education or health facilities, and major recreation facilities.

In addition to the strong development and growth experienced in the years since 2000, several new growth related policies have been adopted by the City of Red Deer to deal with and manage development. These strategies include a sustainable development study, new housing density requirements, neighbourhood design guidelines and standards, area redevelopment planning work to revitalize and infill older sectors of the community, and research work around future industrial city growth areas. As well, new federal and municipal census data is available and population projections for Red Deer's future have been revised. These new policies and information will be reflected in this Growth Study.

As well, Red Deer's Municipal Development Plan sets out a framework for city growth with the objective of ensuring "economically serviced and orderly growth". In order to continue to achieve this, the City of Red Deer is undertaking this Growth Study update to reassess and define potential growth areas and strategies for future development both in the short and long term. It is expected that the City's Municipal Development Plan, which is currently being updated, will reflect the information contained in this new Growth Study.

In addition, updating the Growth Study at this time presents an opportunity for the City of Red Deer and Red Deer County to work in tandem to accommodate and manage future growth in a careful and well thought out manner. Red Deer County has undertaken a Growth Study which their consultants are expected to have competed within a year. Advancing this opportunity will be to the benefit of all residents in Central Alberta.

1.5 General Assumptions

For this Growth Study, a number of assumptions have been made at the outset. First among these assumptions is the understanding that this study is to be long-range in perspective involving not only engineering based analysis but also economic development objectives, community goals, and broader land use and community planning principles.

Second, previous studies contained some information that can be considered to be constant, for instance the soils analysis data. Therefore, such information received only limited review and updating during the completion of this study.

Third, it is further assumed that the city continues to place high importance on the retention and protection of significant natural environments. Of particular importance are the extension of the Waskasoo Park system and the interconnectedness of regional trail systems. These park and open space systems are seen as integral to the "quality of life" of the community and it is well acknowledged that they act as one of the key features/ desired amenities which attract people to the Red Deer region.

Fourth, as expressed in the City's current Municipal Development Plan, the city seeks to depolarize the industrial-residential concentrations on the north and south ends of the City, respectively. The conscious effort to encourage industrial development south of the river while supporting expansion of residential development in the north will balance land use and assist in reducing the one way peak demands on the transportation network, as well as provide additional choice as to where to work and live. It should be noted that with the amount of development occurring south of the City in the urban fringe area (Gasoline Alley, South Hills), this balance is occurring to some extent already. Red Deer has evolved as a metropolitan (regional) centre and as such can be viewed from a broader perspective rather than just the lands within its boundary. Meaning that the area south of the City is becoming an increasing large employment area for many who live within the City's boundaries this will help to achieve some balance as envisioned within the Municipal Development Plan, however additional future industrial development within the city boundaries to the south would also create a greater north-south balance phased in over time.

Fifth, a wide variety of stakeholders have continued to invest much effort in revitalizing Red Deer's downtown. This update assumes that the downtown is to be maintained as a central hub and that it will continue to function as the commercial and office centre of the city. However, the resiliency of the downtown must be balanced against the demand for and benefits of commercial services located nearer to expanding residential areas, the vision of revitalizing other older or "inner-city" neighbourhoods through blended commercial-residential development, the emergence and expansion of "big box" retailing at the south end of the City and along Gaetz Avenue, and the momentum of commercial development of lands just outside the City boundaries. It is anticipated that future major commercial development will need to be balanced across all or several quadrants of the city.

Sixth, the desire for balanced growth remains a significant catalyst for this study. Balanced growth as defined by the City of Red Deer Strategic Plan 2002-2005 focuses on planning for an appropriate mix of parks, natural areas, residential, commercial, industrial and institutional land uses. Such a balance is seen to be essential in providing viable economic growth opportunities but also in striving for the preservation of environmental and heritage resources throughout the city.

1.6 Summary

In summary, this Growth Study will consider land absorption rates and future land inventory requirements for industrial, residential and commercial land uses within the city over the next 50 years. This information will be used to set the course for future city growth opportunities and to generate future short, medium, and long term growth strategies for the city. This work is being completed in cooperation with Red Deer County and to be consistent with the current City of Red Deer Strategic Plan, City of Red Deer planning policies, and the joint City-County Intermunicipal Development Plan.

section 2

Study Area

section 2

Study Area

2.1 Study Area

The study area for this project is shown in Figure 2.1. It includes approximately 62 km^2 of land currently contained within the City of Red Deer boundaries, as well as approximately 195 km^2 of land within the urban fringe area surrounding the city. In total, the study area consists of approximately 257 km^2, encompassing land on all 4 sides of the present City boundary. The study area, as noted in Chapter 1.0, is quite large to allow for consideration of a full range of growth options and opportunities. The actual amount of land required to meet the 50 year urban growth needs will be much less than the full 257 km^2 study area. Appropriate specific locations for growth will be identified in this study based on areas that are most feasible for servicing, transportation, land use and planning criteria.

As in the 2000 study, the northern limits for the Growth Study were drawn along the Blindman and Red Deer Rivers given that these two natural features represent both a physical and recognizable barrier to growth. However, for this study update, the eastern limit was set predominantly along Range Road 265 (located 3.2 kilometres east of the present City boundary) to parallel the east boundary of the City. The western study boundary was set 3.2 kilometres west of the present City boundaries, falling along Range Road 282 south of Highway 11A and along Range Road 281 north of Highway 11A[2]. The southern study boundary was set 1.6 kilometres south of Township Road 374 between the Red Deer River and Range Road 272 and along Township Road 374 between Range Road 272 and Range Road 265.

Areas to the north, east, and west of the current city boundary form the core focus of this Growth Study. Lands situated south and southwest of the City have been identified as special study areas 1 and 2 based on the amount of existing and planned County development concentrated within these areas. In recognition of the County's interest in attracting development to these areas and given the momentum of urban growth to the north, east, and west of the City boundaries, the southern sectors have been distinguished as special study areas. These areas are unlikely to develop for city residential, industrial, or commercial growth within the timeframe of this study (2004-2054). Additionally, it should be noted that Red Deer County is proceeding with their own growth study which will encompass these sectors and determine appropriate future growth patterns and land uses.

[2] The offset between Range Roads north and south of Highway 11A is a result of the Alberta Township System (ATS) variant of the Dominion Land Survey (DLS) system as implemented in Canada. Highway 11A, including the extension of the Government Road Allowance east of Gaetz Avenue/Highway 2A, is a designated Correction Line where the width of each Section on the south side of the Correction Line is less than 1.61 kilometres (1 mile) and the width of each Section on the north side of the Correction Line is corrected to be 1.61 kilometres (1 mile) wide.

2.2 Defining Growth Sector Boundaries

For the purposes of analysis, the core study area located to the north, east, and west of the city was segmented into growth sectors based upon logical divisions, similar in approach to the earlier growth study. Each sector was assigned an alphabetical letter in a clockwise direction starting in the north. These study sectors were created in order to better assess the development capability of each area and evaluate servicing requirements. The alphabetical division of potential growth sectors is noted on Figure 2.1.

Based on the offset distance from the 4th Meridian, the east west offset between Range Roads with the same designation is approximately 2.0 kilometres in the Red Deer area.

2.3 Growth Sector Descriptions

A review of the relevant geographical, geological, topographic, ecological, soils, gas and oil extraction, and land use data available for each sector follows. The general topography and the major drainage patterns for the entire study area are illustrated on Figure 2.2. Overall soil classification for agricultural purposes is reported as identified in *A Background Study for the City Growth Management Strategy* completed by the Red Deer Planning Commission in April of 1991 as well as in the *Agricultural Profile of Red Deer County* prepared for Red Deer County in 2003. City of Red Deer Major Area Structure Plan and Red Deer County Area Structure Plan information as pertains to the study area is shown on Figure 2.3.

With regard to resource extraction data, the city undertook to acquire current information on well type and location from the Alberta Energy and Utilities Board (EUB) and from Abacus Datagraphics Ltd. The well and pipeline locations within the Growth Areas are shown on Figure 2.4. The Alberta Energy and Utilities Board (EUB) has established minimum setbacks for the wells and pipelines. These setbacks or buffer widths are based on the type of well or pipeline (e.g. hydrogen sulphide (sour gas) content of the well or of the material being conveyed in the pipeline). The specific buffer widths are determined by EUB following discussions with the well and/or pipeline licensee at the time of development. Based on the well or pipeline content, these setbacks may range from strictly the pipeline right-of-way to over 100, 400 or 800 metres.

For abandoned wells, setbacks ranging from 5 metres to 15 metres are applicable. The minimum setback for abandoned pipelines is the edge of the pipeline right-of-way. A 100 metre development setback is required from all active oil wells and all active sweet or level 1 sour gas wells. No setback, other than the right-of-way (usually about 15 metres wide) is required for pipelines carrying oil or sweet or level 1 sour gas. Any wells or pipelines approved at higher than level 1 may be required to have larger setbacks such as 100, 400, or 800 metres. Additional information regarding development setbacks in the vicinity of wells and/or pipelines can be found in EUB General Bulletin GB 99-4, a copy of which is appended at the end of this document (Appendix A). Each sector is reviewed as follows:

GROWTH SECTORS

FIGURE 2.1

LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- **A & 1** SECTOR LABELS

NOTE: SECTORS 1 & 2 ARE CITY/COUNTY JOINT STUDY AREA

CITY OF RED DEER
2004 GROWTH STUDY

DECEMBER 2004 SCALE 1:85,000

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TOPOGRAPHY

FIGURE 2.2

LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- A & 1 SECTOR LABELS

TOPOGRAPHIC FEATURES

- CONTOUR LINES @ 10m INTERVALS
- MAJOR DRAINAGE BOUNDARIES
- MINOR DRAINAGE BOUNDARIES
- INTERMITTENT STREAM
- PERMANENT CREEK
- DRAINAGE FLOW DIRECTION

CITY OF RED DEER
2004 GROWTH STUDY

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2.3.1 Sector A

Location

Sector A, containing approximately 2,520 gross hectares, is located north of the city, bound by Highway 2, the Blindman and Red Deer Rivers and by Highway 11A. In studying the sector, the City of Red Deer Engineering Services Department estimates that approximately 1,222 hectares is considered developable area[3].

Geology and Topography

Previous bedrock analysis identified overburden in excess of 12 metres for most of the sector, declining to between 9 and 12 metres depth as the sector moves west towards Highway 2. Most of the surficial geology is a gravel, sand and silt mix (pitted outwash plain), with concentrations varying between lacustrine[4] and alluvium across the sector. This sector, excluding the Red Deer River and the Blindman River escarpment, is relatively flat. The land slopes from an elevation of ±891 metres in the southwest along Highway 2 to an elevation of ±876 in the northeast at the top of the Red Deer River and the Blindman River escarpment.

Natural Features

Natural areas within this sector have been previously identified to include the river valley, floodplain, and adjacent slopes. This sector contains one of Red Deer County's more significant environmental areas, namely portions of the *North Red Deer Wetlands* which includes Hazlett Lake, a significant and environmentally sensitive water body, located north of Highway 11A. It is approximately 80 hectares (197 acres) in size. Also of note, there are scattered areas of vegetative cover throughout the sector. Both the river valley and Hazlett Lake are regionally environmentally significant areas[5].

The Environmentally Significant Areas of the County of Red Deer profile of environmentally significant areas[6] recognizes The *North Red Deer Wetlands* as among the twenty two most regionally significant sites found in the County. The profile, completed in 1990, noted features such as Hazlett Lake as well as significant wetlands/marshes and treed areas as contributing to the significance of the area. These features make it an important waterfowl and marsh bird habitat district. The profile indicates that vegetation such as extensive yellow pond lily, sedge, and bulrush marsh ringed by willow shrubbery are found in the area east of Highway 2. It is a highly productive location for a variety of marsh birds and waterfowl including diving ducks.

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[3] Developable land has been defined as an area that is feasible to service and access using appropriate development standards and means for urban development purposes (e.g. residential, commercial, industrial). Some lands that are not generally considered "developable" for these urban land uses could be available for restricted development, such as recreational or park uses.

[4] BD Walker, RL McNeil, and PE Smith, *Agricultural Profile of Red Deer County*. Prepared for Red Deer County by BeauTerre Soilscapes Consulting Inc, Landwise Inc, and Meridian GIS. 2003.

[5] Sweetgrass Consultants Ltd. for Red Deer Regional Planning Commission and Alberta Forestry, Lands, and Wildlife, *Environmentally Significant Areas of the County of Red Deer*. March 1990.

[6] Ibid.

The area was accorded regional significance because of the role productive wetlands play in the environment of the Parkland Region. The management recommendations contained in the report suggest that the maintenance of undisturbed vegetative cover on the shorelines and backshore will keep the area attractive for a variety of wildlife[7].

Soils and Land Use

Agriculture remains one of the primary land uses within Sector A. Overall soil classification for agricultural purposes is 'moderate limitations'. In addition to agricultural land uses, the sector contains both country residential and industrial development, neither of which has urban standard servicing. Highway 2A bisects the sector and acts as the main transportation corridor for industrial development. The area does contain some agricultural based businesses and home based businesses as well as two industrial business parks located east of Highway 2A. Major industries situated in the sector include IPSCO, a large steel pipe manufacturer with plans for site expansion over the next several years. Land use and noise conflicts between existing residential land uses and industrial operations have been an issue of concern among area residents. Although the area is presently subject to two county area structure plans, namely the Blindman Area Structure Plan and the Central Park Area Structure Plan (see Figure 2.3), there is the potential for a joint city-county Major Area Structure Plan. Such a plan would incorporate the area west of Highway 2A with lands currently contained in the City's North West Major Area Structure Plan. While some preliminary work has been initiated on a joint plan exercise, it has been put on hold pending the completion of this Growth Study and the County's initiation of a revised Central Park Area Structure Plan.

A future expressway around the north and east sides of the city is planned to link Highway 11A, via Northland Drive, to 20 and 30 Avenues on the east side of the river. This would provide improved transportation access for all types of vehicles to travel to Sector A, however the development of an expressway concept to service this area would limit the number of access points to Highway 11A. In addition to major vehicular traffic routes, two rail lines cross Sector A, running north-south and east-west.

Development Restraints

Gas and Oil Extraction

Based on information obtained in May-July 2004[8], there are currently 13 active oil or gas wells with associated pipelines operating within Sector A. The location of these wells and pipelines is shown on Figure 2.4. Seven of the wells are within the Red Deer or Blindman River valleys and five are within the Blindman Industrial Park. One of the

[7] Op Cit. Figure 1.

[8] Abacus Datagraphics Ltd. *City of Red Deer Well Site and Pipeline Map* and City of Red Deer Engineering Services research. Revision June 1, 2004.

RED DEER CITY / COUNTY AREA STRUCTURE PLANS

FIGURE 2.3

LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- A & 1 SECTOR LABELS

CITY OF RED DEER

- NW NORTH WEST
- EH EAST HILL
- THOMPSON
- SPRUCE WOODS

RED DEER COUNTY

- BLINDMAN
- BURNT LAKE
- CALGARY / EDMONTON TRAIL
- CENTRAL PARK
- CROSSROADS
- DIVIDE HILLS
- MEDICINE RIVER
- SOUTH HILLS

CITY OF RED DEER 2004 GROWTH STUDY

DECEMBER 2004

SCALE 1:85,000

THE CITY OF Red Deer

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WELLS AND PIPELINES

FIGURE 2.4

LEGEND

- EXISTING CITY BOUNDARY
- GROWTH STUDY/SECTOR BOUNDARY
- OIL PIPELINE
- GAS PIPELINE
- WATER PIPELINE
- ABANDONED PIPELINE
- SOUR GAS/OIL PIPELINE
- LVP PIPE
- 400M PIPELINE SETBACK
- ABANDONDED WELL
- FLOWING GAS WELL
- SUSPENDED GAS WELL
- FLOWING OIL WELL
- SUSPENDED OIL WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- 100M WELL SETBACK
- B BATTERY STATION
- C COMPRESSOR STATION
- T CUSTOM TREATING PLANT
- G GAS PLANT
- I INJECTION FACILITY
- M METER STATION

CITY OF RED DEER
2004 GROWTH STUDY

DECEMBER 2004 SCALE 1:85,000

THE CITY OF Red Deer

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wells is located near Spruce Lane Acres in the north-central part of Sector A. There are also 15 to 20 kilometres of pipeline and a number of abandoned wells. Abandoned wells will not have a significant impact on development. It is understood that the wells and pipelines in this area contain hydrogen sulphide gas but the pipelines and wells are constructed to a Level 1, EUB standard, which limits the potential release rate. Overall, based on current information, resource extraction systems could potentially encumber approximately 50 hectares of land due to pipeline right-of-ways and well/facility setbacks. This equates to approximately 3% of the total development area of Sector A.

Other Development Constraints

- A large tract along the north and east boundary has been identified as open space to reflect the environmental significance of the Red Deer and Blindman River valleys. Environmentally significant natural area includes the river valley, floodplain, adjacent slopes, treed areas above the escarpment, development setback from the top of the escarpment and major wetlands.

- A significant and environmentally sensitive water body, identified as Hazlett Lake, is located north of Highway 11A and east of Highway 2. As per the Intermunicipal Development Plan, the Municipal Development Plan, and city environmental policy this water body should be protected and retained together with the surrounding natural areas.

- Highway 2A, the C & E Trail, the Canadian Pacific Railway and the Canadian National Railway cross Sector A.

- A high voltage power transmission line crosses Sector A east of Highway 2A.

2.3.2 Sector B

Location

Sector B is the largest sector with a gross area of approximately 3,910 hectares. Located northeast of the current city limits, it encompasses lands south and east of the Red Deer River. More specifically, this proposed growth area is bound on the west by 40 Avenue and the Red Deer River (existing City Limits), on the north by the Red Deer River, on the east by the Red Deer River and Range Road 265, on the south by the quarter line 800 metres south of 55 Street/Highway 11 and on the southwest boundary by 20 Avenue, 55 Street, 30 Avenue and 67 Street (existing city limits). Based on calculations from the City of Red Deer Engineering Services Department, it is estimated that approximately 2,490 hectares of Sector B is developable area.

Geology and Topography

Existing bedrock analysis has placed overburden at between 9 and 12 metres in depth for the areas closest to the current City boundaries.

The topography for this sector is relatively flat with significant slopes found along the Red Deer River Valley. Soils appear to be primarily lacustrine[9].

Natural Features

Similar to Sector A, a large tract of land along the river valleys has been identified as natural area to reflect the environmental significance of the Red Deer and Blindman River valleys. In both cases the river valleys are considered regionally environmentally significant areas[10]. Additionally, the area serves as an upland drainage basin supplying baseflows/surface run-off which supply the Gaetz Lakes and Gaetz Lakes Sanctuary within the City of Red Deer.

Soils and Land Use

Development within Sector B is limited to scattered farm buildings and farm residences as well as a few country residential homes. The land is primarily agricultural, with soils consisting of sand and silt (lacustrine) resulting in an agricultural rating of 'moderate limitations'.

Within Sector B, the Divide Hills Area Structure Plan encompasses the land uses in the vicinity of Canyon Heights and Forest Green Estates country residential areas. This Area Structure Plan is shown on Figure 2.3. The sector includes a cemetery as well as a golf course and several privately and publicly owned recreation and leisure facilities.

Development Restraints

Gas and Oil Extraction

It is estimated that there are currently 60 active oil or gas wells and 12 gas or oil facilities (e.g. compressor stations, tank batteries, etc.) operating within Sector B[11] as shown in Figure 2.4. Five of these wells are within the Red Deer River valley. There are approximately 130 kilometres of oil, gas, or water pipeline within Sector B. There are also a number of abandoned wells, although these should not have a significant impact on development. It is understood that many of the active wells and pipelines in this area contain hydrogen sulphide gas but they are constructed to a Level 1 EUB standard, which limits the potential release rate. Overall, based on current data supplied to the city, resource extraction systems could potentially encumber at a minimum, approximately 300 hectares of land due to pipeline right-of-ways and well/facility setbacks. This equates to (at a minimum) approximately 12% of the total development area of Sector B.

[9] BD Walker, RL McNeil, and PE Smith, *Agricultural Profile of Red Deer County*. Prepared for Red Deer County by BeauTerre Soilscapes Consulting Inc, Landwise Inc, and Meridian GIS. 2003.

[10] Sweetgrass Consultants Ltd. for Red Deer Regional Planning Commission and Alberta Forestry, Lands, and Wildlife, *Environmentally Significant Areas of the County of Red Deer*. March 1990.

[11] Abacus Datagraphics Ltd. *City of Red Deer Well Site and Pipeline Map* and City of Red Deer Engineering Services research. Revision June 1, 2004.

Other Development Constraints

- A large tract along the west, north and east boundary has been identified as environmentally significant which includes the river valley, floodplain, adjacent slopes, treed areas above the escarpment, development setback from the top of the escarpment and major wetlands.

- A high voltage power transmission line, running north-south, is located ±800 metres east of Range Road 271 with a major substation located in the northwest corner of NE quarter 25-38-27-W4. A second high voltage power line, running east-west, is located on the blind line midway between Township Roads 384 and 390 from the Red Deer River to the substation. A third high voltage power transmission line running east-west, located ±800 metres south of Township Road 390 from the north-south transmission line east to the Red Deer River.

- The re-alignment of Highway 11 east of Red Deer to be undertaken by the Province of Alberta (Alberta Transportation) is also expected to constrain and/or impact the amount of developable land in Sector B.

2.3.3 Sector C

Location

The gross area for Sector C is approximately 1,450 hectares. It is situated east of the current city boundary. More specifically, this growth sector is bound on the north by the quarter line 800 metres south of 55 Street/Highway 11, on the east by the Range Road 265, to the south by 19 Street (Delburne Road/Highway 595) and on the west by the existing city limits. Based on calculations from the City of Red Deer Engineering Services Department, it is estimated that approximately 1,338 hectares of Sector C is developable area.

Geology and Topography

Bedrock depths in Sector C range from 6 to 12 metres. The surficial geology remains a consistent mix of sand and silt categorized as lacustrine[12]. The land in the north half of the sector slopes steeply from east to west. The land in the south half of the sector is extremely flat.[13]

Natural Features

There are some limited environmentally sensitive areas identified within the sector.

[12] Sweetgrass Consultants Ltd. for Red Deer Regional Planning Commission and Alberta Forestry, Lands, and Wildlife, *Environmentally Significant Areas of the County of Red Deer*. March 1990.

[13] BD Walker, RL McNeil, and PE Smith, *Agricultural Profile of Red Deer County*. Prepared for Red Deer County by BeauTerre Soilscapes Consulting Inc, Landwise Inc, and Meridian GIS. 2003.

Soils and Land Use

In terms of land use, a portion along the north-east boundary of Sector C falls within Red Deer County's Divide Hills Area Structure Plan. Refer to Figure 2.3. The Divide Hills Area Structure Plan shows country residential development. The balance of land within the sector consists of Class 2 Agricultural Lands with a 'moderate to severe limitations' classification.

Development Restraints

Oil and Gas Extraction

As depicted in Figure 2.4, there are currently six active oil or gas wells and four gas or oil facilities (e.g. compressor stations, tank batteries, etc.) operating within Sector C together with approximately 15 kilometres of oil or gas pipeline[14]. There are also three abandoned wells, although these should not have a significant impact on development. None of the active wells and pipelines in this area contain hydrogen sulphide gas, although even an active sweet well will require a 100 metres development setback. Overall, resource extraction systems could potentially encumber approximately 40 hectares of land due to pipeline right-of-ways and well/facility setbacks. This equates to approximately 3% of the total development area of Sector C.

Other Development Constraints

- A high voltage power transmission line, running north-south, is located ±800 metres east of Range Road 271. A second high voltage power line, running east-west, is located 800 metres north of the Delburne Road.

2.3.4 Sector D

Location

Sector D is located south of Highway 595 (Delburne Road). It is bound on the north by 19 Street (Delburne Road/Highway 595), on the east by the Range Road 265, on the south by Township Road 374 and on the west by 30 Avenue (existing City Limits)/Range Road 272. Although the proposed growth sector has a gross area of approximately 1,580 hectares, calculations from the City of Red Deer Engineering Services Department, indicate that only 758 hectares is developable area.

Geology and Topography

The sector is very flat with less than 10 metres in elevation change from north to south and east to west. The surficial geology is a sand and silt mix (lacustrine) resulting in a 'moderate' to 'moderate severe' agricultural soil classification. Bedrock depths are between 9 and 12 metres for the majority of the sector.

[14] Abacus Datagraphics Ltd. *City of Red Deer Well Site and Pipeline Map* and City of Red Deer Engineering Services research. Revision June 1, 2004.

Natural Features

Natural treed areas have been identified along Piper Creek in Sector D. Additionally, there is a significant wetland and other large semi-permanent wetlands, and drainage courses for Piper Creek throughout the sector. Several stands of native trees and some native and non-native stands associated with homestead development are also present. Portions of the area serve as a wildlife corridor.

Soils and Land Use

The agricultural soil classification within this sector is 'moderate' to 'moderate severe'[15]. Soils are lacustrine[16]. The majority of this land is agricultural with limited tree cover along the creek. Red Deer County has no approved Area Structure Plan for this sector at this time.

Development Restraints

Oil and Gas Extraction

There are currently five active oil or gas wells operating within Sector D together with approximately 10 kilometres of oil or gas pipeline (see Figure 2.4). There are also two abandoned wells, although these should not have a significant impact on development. None of the active wells and pipelines in this area contain hydrogen sulphide gas, although even an active sweet well will require a 100 metres development setback[17]. Based on overall information available, resource extraction systems could potentially encumber approximately 30 hectares of land due to pipeline right-of-ways and well/facility setbacks. This equates to approximately 2% of the total development area of Sector D.

Other Development Constraints

- Based on the results of a servicing study for Section 30-37-26-W4 and Sections 25 & 26-37-27-W4 completed by Stantec Consulting Ltd. on behalf of the City in 2003, significant servicing constraints exist. With a 0.1% east to west slope at the south boundary of the development area and with the land sloping from north to south, numerous lift stations and force mains would be required for both sanitary and storm servicing[18].

- The 2000 Growth Study indicated future industrial growth within this Sector.

[15] UMA Engineering Ltd. In association with PriceWaterhouseCoopers, *City of Red Deer Growth Study*. February 2000.

[16] BD Walker, RL McNeil, and PE Smith, *Agricultural Profile of Red Deer County*. Prepared for Red Deer County by BeauTerre Soilscapes Consulting Inc, Landwise Inc, and Meridian GIS. 2003.

[17] Abacus Datagraphics Ltd. *City of Red Deer Well Site and Pipeline Map* and City of Red Deer Engineering Services research. Revision June 1, 2004.

[18] Stantec Consulting, *City of Red Deer Industrial Land Servicing Study*. August 2002

2.3.5 Sector E

Location

Sector E, situated west of the City of Red Deer, is bound on the east by Highway 2, on the north by Highway 11A, on the west by Range Road 282, and on the south by the Red Deer River and Sylvan Creek. The sector is approximately 1,987 hectares in size, with roughly 1,477 hectares being developable area.

Geology and Topography

Bedrock depths are predominately between 6 and 9 metres except for a band between 9 and 12 metres paralleling Highway 2. The surficial geology for most of this sector is clay, ground moraine, with small seams of sand and silt mix. The land in this sector generally slopes from west to east and north to south. The Agricultural Profile undertaken for Red Deer County in 2003 describes this area as predominately glacial till (ice).

Natural Features

The Red Deer River and Sylvan Creek form the south boundary of the sector, with significant regional natural areas / vegetated areas along the riverbank. There are also some significant wetlands and seasonal streams throughout the sector. Notable among these is Cameo Lake, located immediately north of Highway 11; it is a permanent Crown owned water body covering 60 hectares (148 acres). The Lake drains to a ditch that flows southward, eventually into the Red Deer River. A study undertaken by the landowner has indicated that the shoreline may be appropriately designated as environmental reserve. As well, it is recommended within various environmental reviews completed for this sector, that an appropriate buffer or setback be established from the lake's shore[19].

The sector also contains several large native tree stands and several native and non-native stands associated with homestead development. These stands are comprised of species such as poplar and willow, also present are sedge and swamp grasses. As well, a significant peat land meadow located is in the NW quarter of Section 36 and the NE quarter of Section 35. Additional information on natural features in this area is contained with the County's Burnt Lake Area Structure Plan (2000).

Soils and Land Use

In terms of land use, there is limited acreage development throughout the sector and a growing commercial/industrial concentration near Highway 11 and Burnt Lake Trail. Lands within the sector are included in the Burnt Lake Area Structure Plan as illustrated in Figure 2.3. Industrial and commercial developments are currently being constructed in NE quarter 24-38-28-W4 and in SE quarter 25-38-28-

[19] Red Deer County, *Burnt Lake Area Structure Plan.* Bylaw No. 15/99, March 2000.

W4. Much of the sector is utilized for agricultural purposes in the form of grazing and hay/grain production. The soils are classified as 'moderate limitations' in terms of capability.

Development Restraints

Oil and Gas Extraction

There are currently four active oil or gas wells and three gas or oil facilities (i.e. tank batteries) operating within Sector E together with approximately 15 kilometres of oil or gas pipeline. Refer to Figure 2.4. There are also 15 abandoned wells[20], although these should not have a significant impact on development. None of the active wells in this area contain hydrogen sulphide gas, although one high pressure pipeline running north-south through the sector does. Given current data, resource extraction systems could potentially encumber 30 to 40 hectares of land due to pipeline right-of-ways and well/facility setbacks. This equates to approximately 2% of the total development area of Sector E.

Other Development Constraints

- With the exception of low lying lands south of Highway 11 and those east of Highway 596, the entire area can be serviced with water, sanitary and storm. Sanitary servicing will consist of a series of lift stations and force mains.
- Access points are limited because Highways 11, 11A, and 2 (designated freeways) run through this sector.
- There is existing development and current development momentum within the southern portion of this area based on the County's approved Burnt Lake Area Structure Plan.

2.3.6 Sector F

Location

Sector F, occupying the very northwest corner of the study area, is approximately 1,512 gross hectares in size. City of Red Deer Engineering Services calculates that approximately 948 hectares of the total area is developable. Sector F is bound to the east by Highway 2, to the south by Highway 11A, to the west by Range Road 281, and on the north by the Blindman River.

Geology and Topography

Bedrock depths are likely between 6 and 9 metres, based on earlier reviews of the study area. The land in this sector generally slopes from west to east and south to north.

[20] Abacus Datagraphics Ltd. *City of Red Deer Well Site and Pipeline Map* and City of Red Deer Engineering Services research. Revision June 1, 2004

Natural Features

Lands within Sector F contribute to one of Red Deer County's more significant environmental areas, namely portions of the *North Red Deer Wetlands*. As stated previously, the County of Red Deer profile of environmentally significant areas, completed in 1990,[21] recognizes the larger wetland system found in this area as well as sectors A and E as among the twenty two most regionally significant sites found in the County. The profile, noted features such as significant wetlands/ marshes and treed areas as contributing to the significance of the area. The profile indicates that small bulrush marshes and cultivated land are found in the area west of Highway 2 which allow it to function as a highly productive location for a variety of marsh birds and waterfowl. The area was accorded regional significance because of the role productive wetlands play in the environment of the Parkland Region[22].

Additionally, the Blindman River valley and several tree stands have been recognized as being environmentally significant.

Soils and Land Use

The majority of the sector is utilized for agricultural purposes, specifically a mix of grazing and hay/grain production. The land uses within this sector are subject to the County's Crossroads Area Structure Plan. The soils are classified as 'moderate' in terms of soil capability. A significant pocket of country residential development, known as Linn Valley, is situated north of Highway 11A. Soils are glacial till (ice)[23].

Development Restraints

Oil and Gas Extraction

There are currently four active oil or gas wells and three gas or oil facilities (i.e. tank batteries) operating within Sector F together with approximately 10 kilometres of oil or gas pipeline. There are also 12 abandoned wells, although these are not expected to have a significant impact on development. Refer to Figure 2.4. None of the active wells in this area contain hydrogen sulphide gas, although one pipeline running through the sector does[24]. Due to the large number of facilities, rights-of-ways, and setbacks, resource extraction wells, facilities, and pipelines could potentially encumber approximately 25 hectares of land. This equates to roughly 3% of the total development area of Sector F.

Other Development Constraints

- Based on highway/transportation standards, access for development of arterial roads in Sector F will be restricted to only two points.

[21] Sweetgrass Consultants Ltd. for Red Deer Regional Planning Commission and Alberta Forestry, Lands, and Wildlife, *Environmentally Significant Areas of the County of Red Deer.* March 1990.

[22] Sweetgrass Consultants Ltd., 1990, *Environmentally Significant Areas County of Red Deer* Level of Significance. Figure 1.

[23] BD Walker, RL McNeil, and PE Smith, *Agricultural Profile of Red Deer County.* Prepared for Red Deer County by BeauTerre Soilscapes Consulting Inc, Landwise Inc, & Meridian GIS. 2003.

[24] Abacus Datagraphics Ltd. *City of Red Deer Well Site and Pipeline Map* and City of Red Deer Engineering Services research. Revision June 1, 2004.

- The Canadian National Railway bisects this sector in an east-west direction.
- The existing and well established country residential developments within this area, including Linn Valley, would need to be considered in all future planning.
- With the exception of low lying lands north of the rail line, the entire area can be serviced with water, sanitary and storm. Sanitary servicing will consist of a series of lift stations and force mains.

2.3.7 *Special Study Area 1*

Location

Special Study Area 1 is the most heavily developed growth sector surrounding the City of Red Deer. The area is approximately 2,184 gross hectares. Developable area would vary by level of servicing and style of future development. Located south of the current city limits, this sector is bound by Range Road 272 on the east and Highway 2A/ Canadian Pacific Railway on the west. The "Blind Line" 1.6 kilometres south of Township Road 374 forms the south boundary.

Natural Features

In terms of natural features, the sector includes portions of Piper and Waskasoo creeks and vegetated bank areas as well as important vegetated areas west of Highway 2 and east of the CP Rail line. Several wetlands are also present, the largest of which is Slack's Slough, a regionally significant wetland serving as habitat for key waterfowl, shorebirds and marsh birds. The area contains extensive bulrush and some sedge and cattail marshes. As a productive wetland a variety of marsh birds are found in the area including diving ducks, grebes, and Canada Geese. It is considered an important staging, production, and moulting area. It also plays a role in the migration of some species of shorebirds. Slack's Slough and the adjacent wetlands within this sector contain some of the largest concentrations of waterfowl in the region. The County of Red Deer Environmentally Significant Areas profile recommends maintenance of adjacent undisturbed vegetation cover in order to benefit waterfowl production and limitations on heavy grazing in order to best manage the area[25]. In addition, there are some substantial wooded areas west of Highway 2 which are recognized as significant natural features.

Geology and Topography

Bedrock depths, as determined through earlier growth studies, are between 9 and 12 metres towards the east of the sector, with depths in excess of 12 metres for the balance of the lands. The surficial geology is a sand and silt mix throughout the entire sector, primarily aeolian. The sector has a rolling topography varying by about 10 metres in elevation change as illustrated in Figure 2.2.

[25] Sweetgrass Consultants Ltd. for Red Deer Regional Planning Commission and Alberta Forestry, Lands, and Wildlife, *Environmentally Significant Areas of the County of Red Deer.* March 1990.

Soils and Land Use

Soil classifications range between 'moderate limitations' to 'very severe limitations' across the sector.

The area includes land subject to the South Hills Area Structure Plan as well as lands under the Medicine River Area Structure Plan. Existing development, which has continued to expand significantly since the 2000 Growth Study, includes a mix of industrial, commercial, and residential land uses, such as manufactured home parks, aggregate removal operations, highway commercial uses, automotive dealers, and "big box" retailers. Services/servicing arrangements are in place for portions of the sector to include a water reservoir, water distribution (connection to city service system), sanitary collection system, trunk sanitary sewer main, and stormwater management facilities. Highway 2 bisects the area with the commercial corridor known as Gasoline Alley situated along this stretch of highway.

Development Restraints

Oil and Gas Extraction

As shown in Figure 2.4, there are currently five active oil or gas wells and three gas or oil facilities (i.e. meter station and tank batteries) operating within Special Study Area 1 together with approximately 15 kilometres of oil or gas pipeline. There are also four abandoned wells[26]. None of the active wells and pipelines in this area contain hydrogen sulphide gas. Overall, resource extraction wells, facilities, and pipelines could potentially encumber approximately 40 hectares of land due to pipeline right-of-ways and well/facility setbacks.

Other Development Constraints

As a special study area Red Deer County will address growth potential and development constraints for this sector.

2.3.8 Special Study Area 2

Location

Special Study Area 2 totals approximately 3,455 gross hectares. Sitting southwest of the current city limits, it is bound by natural and human barriers including Highway 2/Highway 2A/Canadian Pacific Railway to the east and northeast and the Red Deer River to the west. The developable area contained in this special study area would vary by level of servicing and style of future development.

Geology and Topography

Bedrock depths are predominantly in excess of 12 metres, with the exception of the Red Deer River valley, which contains a concentration of sand and silt surficial geology. Rolling topography,

[26] Abacus Datagraphics Ltd. *City of Red Deer Well Site and Pipeline Map* and City of Red Deer Engineering Services research. Revision June 1, 2004.

similar to that described within Special Study Area 1, is found to the east. Levelling off occurs in the central portions of the sector. Fairly significant slopes are found along the river valley in the west.

Natural Features

With regard to natural features, there is a substantial clustering of trees immediately west of the CP Rail line. Other tree stands are found intermittently across the sector. As noted above, the Red Deer River, (which acts as the west boundary of this sector) and its bank area are of regional environmental significance[27].

Soils and Land Use

The bulk of the area, consisting of primarily agricultural lands with limited amounts of acreage development, has been classified as 'moderate limitations' for agricultural purposes.

Development Restraints

Oil and Gas Extraction

There are currently four active oil or gas wells and six gas or oil facilities (i.e. metering station and tank batteries) together with approximately 25 kilometres of oil or gas pipeline operating within Special Study Area 2. Refer to Figure 2.4. There are also 10 abandoned wells[28]. None of the active wells in this area contain hydrogen sulphide gas, although one pipeline running through the special study area does contain hydrogen sulphide gas. Overall, resource extraction wells, facilities, and pipelines could potentially encumber approximately 50 hectares of land due to pipeline right-of-ways and well/facility setbacks.

Other Development Constraints

As a future County study area Red Deer County will address growth potential and development constraints for this sector.

2.4 Internal Growth Areas

In addition to potential new growth areas surrounding the city, internal growth areas (lands within the current city boundary) are being reviewed as part of this update as there remains some capacity within each of these areas to accommodate some degree of residential, industrial, and commercial growth. It is recognized from the outset, however, that the capacity remaining in these internal growth sectors will be completely insufficient to accommodate 50 years of city growth and in fact may provide less than 10 years of developable area. These internal areas include the undeveloped portions of the northwest (NW), east hill (SE) and southwest (SW) quadrants of the city as well as the downtown which is

[27] Sweetgrass Consultants Ltd. for Red Deer Regional Planning Commission and Alberta Forestry, Lands, and Wildlife, *Environmentally Significant Areas of the County of Red Deer.* March 1990.

[28] Abacus Datagraphics Ltd. *City of Red Deer Well Site and Pipeline Map* and City of Red Deer Engineering Services research. Revision June 1, 2004

expected to experience continued growth in the form of redevelopment and infill development in the next few years. Land uses currently developed within the City of Red Deer as well as future development/land uses within the city boundaries are shown on Figure 2.5.

2.4.1 City – Northwest Sector (NW)

The northwest development area referred to in this report reflects the boundaries identified in the City of Red Deer Northwest Major Area Structure Plan. This Major Area Structure Plan covers lands located within the current city boundary, situated in the northwest quadrant of Red Deer. Included are the neighbourhoods of Kentwood, Johnstone Park, Johnstone Crossing, and Oriole Park West, as well as the Edgar and Golden West Industrial Parks. Of particular relevance to this Growth Study update, are the lands within this area which remain undeveloped. In total, as of January 2004 there were 163 hectares of residential lands still vacant and available for development, and approximately 60 hectares of vacant industrial lands, of which 30 hectares were owned by the City. These figures include lands in Riverside Industrial areas. By August 2004, the total of vacant industrial lands had dropped to only 4 hectares of city owned land available. The remaining land, 30 hectares of privately owned industrial land, were seen to face some environmental, building, or economic constraints which could render some of these lands not developable at this time. A limited amount of commercial land was available in this sector, estimated to be approximately 16 hectares.

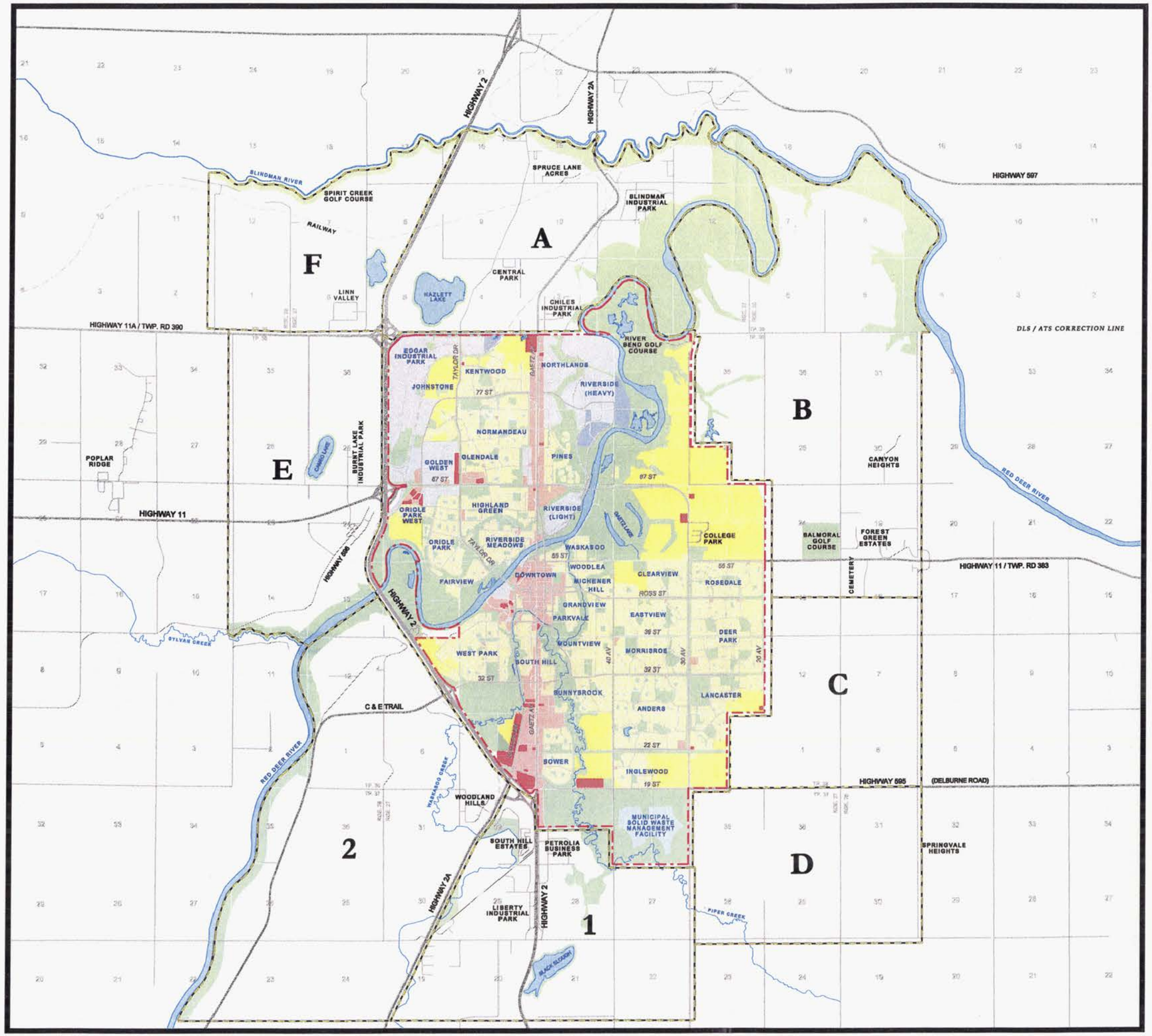
Of particular note, Red Deer County and the City of Red Deer have agreed to explore some long range planning concepts for the area north of Highway 11A as part of the Northwest Major Area Structure Plan and the Central Park Area Structure Plan updates on the basis that part of this area is shown as a future City growth area (in the Intermunicipal Development Plan) and that the County has received development inquiries in this area. Any concepts developed for lands north of Highway 11A would need to be mutually agreed to, and be shown in the Northwest Major Area Structure Plan similar to the process used in regard to lands within County jurisdiction in the East Hill Major Area Structure Plan.

2.4.2 City – East Hill Sector (SE)

The southeast development area referred to in this report includes lands located within the city limits which are part of the East Hill Major Area Structure Plan. This encompasses the neighbourhoods of Clearview, Rosedale, Deer Park, Lancaster, Anders, Inglewood, portions of Eastview and Morrisroe, and undeveloped land south of Sunnybrook and within the Michener Centre property. The plan also illustrates land use for parcels which at the time of plan adoption were situated in the urban-rural fringe area within Red Deer County but have since been annexed into the city. These include College Park and the section of land surrounding it as well as lands north of 67 Street up to and encompassing Riverbend Recreation Area and Golf Course.

EXISTING DEVELOPMENT AREAS AND APPROVED LAND USES

FIGURE 2.5



LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- **A & 1** SECTOR LABLES

LAND USES

- UNDEVELOPED RESIDENTIAL
- DEVELOPED RESIDENTIAL
- UNDEVELOPED COMMERCIAL
- DEVELOPED COMMERCIAL
- UNDEVELOPED INDUSTRIAL
- DEVELOPED INDUSTRIAL
- PUBLIC SERVICE
- OPEN SPACE

CITY OF RED DEER
2004 GROWTH STUDY

DECEMBER 2004 SCALE 1:85,000

THE CITY OF Red Deer

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The Major Area Structure Plan also presents conceptual information for two quarters of land south of the Lancaster neighbourhood which remain in Red Deer County. The East Hill Major Area Structure Plan is presently being amended/revised, with an expected completion date in mid 2005. The remaining undeveloped residential land within this sector totals 363 hectares as well as 13 hectares of undeveloped commercial land.

2.4.3 City – Southwest Sector (SW)

The southwest quadrant includes lands located in the southwest part of the city, along Highway 2. No Major Area Structure Plan has been adopted for these lands. Red Deer College and the neighbourhoods of West Park and Westlake are included in this area. Riverview Park (existing country residential development) and the existing Heritage Ranch Recreation Area are within Red Deer County's jurisdiction but are located adjacent to this quadrant. Since the 2000 Growth Study, the Westlake Neighbourhood Area Structure Plan has been approved and is now under development. As a result of strong interest by home buyers, there is little vacant residential inventory available in this quadrant. No industrial or major commercial lands are identified within this area.

2.4.4 Downtown Sector (DT)

The downtown area boundaries have been established for this study to be consistent with the Greater Downtown Action Plan boundaries. The greater downtown area consists of 289 hectares identified for varying levels of redevelopment and intensification. To some extent, efforts to enhance housing and commercial development in the city centre will impact the level of demand/rate of absorption for such land uses in newly developing areas, but will also offer unique opportunities for inner-city living. The boundaries of the downtown are south of the Red Deer River to Waskasoo Creek and 43 Street, and between the River and Piper Creek. The greater downtown includes the Riverlands redevelopment area (approximately 25 hectares)[29]. An Area Redevelopment Plan has been adopted by City Council to direct revitalization of this area.

2.4.5 Other Development Areas within the City

The 2000 Growth Study identified approximately 50 hectares of potential industrial lands immediately south of Delburne Road, within the section of land containing the current city solid waste management facility. Due to setbacks imposed by the landfill operation, this area is prohibited from residential development and certain types of commercial development. However, utilization of the land as industrial

[29] Of that portion, about 10 hectares is occupied by the City of Red Deer's West Yards which is the portion having the greatest potential for long term new development. Approximately 2 hectares will be designated for public/civic/cultural developments. Another ±5 hectares has the potential for more immediate redevelopment including the UFA, Atco and former C/A Meats sites.

(excluding food processing and related operations) to capitalize on the Delburne Road access and possible extra capacity in the existing systems, was recommended as a prudent development opportunity to explore. Since the time of that recommendation, however, the current solid waste management facility has now become operational and the nearby residential neighbourhood of Inglewood West is now in stages of development. Based on these changes and also based on the need for additional updated servicing, marketing, environmental and transportation information, the possibility of limited industrial or commercial development within the setback zone requires more thorough review. Until such time as that additional review is undertaken (which is beyond the mandate of this study) no recommendation as to the feasibility, type, or amount (if any) of development within the setback area can be put forward by this Growth Study.

2.5 Summary

In summary, the approximately 257 km^2 being considered by this Growth Study combines a wide variety of properties both with the current city boundaries and within the urban-rural fringe surrounding the city. Base data pertaining to geology, topography, soil types, land use, resource extraction, and environmental features of these areas, as well as possible development constraints, as presented, will be used to assist in determining appropriate urban growth options within the following study.

section

3

Development Trends

section 3

Development Trends

3.1 Demographic Trends and Impacts

Impacts of the national and provincial economy, employment trends, recreational activities, and societal make-up often trigger impacts that are felt broadly in many communities. Responses to these trends and impacts, and the new or innovative means to address them, especially when proven successful elsewhere, are often replicated in communities across Canada. In order to more accurately attempt to forecast the nature of Red Deer's future development, it is important to look at emerging responses to demographic, social, and economic trends. This section updates the findings of research conducted during the 2000 Growth Study relating to these trends.

3.2 Methodology

In addition to reviewing the literature on the topic, the 2000 Growth Study also conducted a survey of communities similar in size to Red Deer to determine which trends were actually being experienced in medium sized cities, and how population thresholds related to various aspects of community composition and land use demand. As population projections identified Red Deer's growth to increase from the 2000 figure of ±60,000 to ±120,000 over the following 50 years, communities having a similar population forecasts were surveyed. Those municipalities between 45,000 and 120,000 were asked to respond to the questionnaire. In total, 18 responses were tabulated. Although Red Deer's population projections now range from the current count of approximately 75,900 up to ±160,000 by 2054, the survey conducted in 2000 continues to provide a relevant sample of Canadian communities within a reasonable population range. As there are numerous factors affecting community growth rates, the intent of the survey was to identify generalities rather than to draw defensible statistical correlation. The survey findings are included throughout the following discussion on trends and community responses.

3.3 Changing Demographics

Communities are growing older. The ageing of the baby-boom generation is a social phenomenon that is one of the leading catalysts for changing trends. This topic has captured widespread attention with numerous studies and best-selling books. The number of households headed by persons under the age of 45 is expected to continue to decline significantly. At the same time, there will be a significant cohort (population group) moving into the fifty plus demographic. These individuals are fairly affluent, generally healthier and more active than their predecessors, and will place new demands on the communities they are residing in.

In addition to an aging population, family composition is changing. Family size has been decreasing for decades, the average number of children has

now dropped to less then two per family and the number of childless couples will continue to rise. As well, an increasing number of families are headed by a single parent, which further affects household size. These changes mean an overall decrease in the average number of persons living in each housing unit. In 1995, the average household size in Red Deer was 2.56, as of June 2004 it had shrunk to 2.4. This downward trend is forecasted to continue.

Economic factors such as a strong economy and low mortgage rates have allowed many people, who could not purchase homes before, the opportunity to enter the first time buyers market. For example, single persons and in particular, single women now make up a greater share of new home buyers than ever before in Canada's history. Shifts in housing demand, type, and residential development trends, will result.

The life expectancy in Canada has increased dramatically in the last several decades, people are living longer and due to medical advances are living healthier, more active lives. With the encouragement of health professionals, family involvement, and the support systems put in place over the last several years, many elderly are able to remain in their own homes longer. Aging in place then, is also becoming a key factor to be addressed in the planning and development of communities.

Related to the increase in the number of elderly persons remaining in their own homes for longer, is the de-institutionalized of not only the elderly but also other special needs populations who now frequently live in their own homes rather than residing in large institutions. This is particularly relevant in Red Deer given the decline in the number of residents living in the Michener Centre institution.

3.4 Economic Trends

There are many economic trends which could impact future city growth. These trends are discussed in detail within the *Industrial Land Absorption Forecast and Municipal Impact Study* conducted by PriceWaterhouseCoopers in October 2002 for the City of Red Deer. By all accounts Red Deer is expected to face positive economic growth trends, strong business growth, and much prosperity.

In general, trends indicate that Alberta's economy will continue to diversify towards more knowledge-based businesses, however, resource extraction based activity will remain a significant part of the provincial economy well into the future. For this reason, Red Deer's traditional industrial composition is not anticipated to change significantly and the levels of demand for oil and gas related industrial land uses are anticipated to remain a strong proportion of overall land demand[30].

The Canada West Foundation suggests that Alberta will continue to act as a competitive and attractive place in which to work and live based on its strong fiscal position. Additionally, the Conference Board of Canada

[30] PriceWaterhouseCoopers, *Industrial Land Absorption Forecast and Municipal Impact Study*, for the City of Red Deer, October 2002 p. 18.

predicts that the Province's gross domestic product (GDP) will grow at an average rate each year of 3.1% up to 2020[31]. Statistics Canada has also released data which shows the Calgary-Red Deer-Edmonton corridor to be one of the fastest growing regions in Canada. Red Deer was seen to have a key role in the corridor in the future as it provides tertiary services to much of central Alberta and to other locations across the province. The resulting strength of the Red Deer economy predicted based on these trends will continue to fuel growth and land demand.

It is also important to note, however, that labour shortages may result as early as 2010 because the population needed to fill vacancies left by retiring baby boomers has not expanded at the rate necessary. The resulting worker shortage could lead to low unemployment rates and a competitive hiring market. Local businesses will want to focus on employee retention, amenities, training, and attracting migrants to fill positions, as labour shortage conditions can ultimately have a negative impact on GDP growth and on business productivity.

3.5 Future Development Trends

The demographic changes involving age, family composition, and community norms are triggering a number of responses impacting the housing industry, commercial development trends, and the way in which cities grow. Anticipated trends in each area, and identified Red Deer responses, are detailed below.

3.5.1 Residential Development Trends

Among the most significant of future residential changes is the move towards higher density development. It is important to note that this is not limited to simply a higher number of apartment units, but rather a paradigm shift in expectations, needs, and demands of the homeowner.

In general, older persons, less able persons, smaller families, and singles are driving the demand for smaller housing units. Together with the need for lower maintenance and affordability, this has resulted in reduced lot size and increased density. Additionally, rising land costs are also impacting the behaviour of home purchasers and their desire for larger lots. Despite higher density in newly developing areas, as the average household size shrinks, more units are required to house the same number of persons, thereby increasing the overall demand for residential land absorption.

As can be expected with the transition to higher density development, new housing forms are starting to become increasingly more prevalent. In terms of densification, this can either be market driven, as described above, or forced. Forced densification usually refers to municipal requirements and generally occurs in response to edge development or from the fear of sprawl destroying a city's interface with rural areas. Forced densification presents the risk of sparking demand for housing outside of municipal boundaries, fuelled by buyers who still wish to live

[31] Ibid. p. 12.

on larger lots. This type of "fringe development" or "rur-urban" residential development may place pressure on agricultural land, the environment or rural service systems. It may also impede or complicate long term expansion of the adjacent urban municipality. Through careful planning and cooperation between the urban and rural municipalities, some of these issues can be prevented. In the central Alberta context, it is very important to note that Red Deer County is looking at how to buck the negative aspect of this trend by looking at intensifying hamlet development and preventing sprawl in the form of fringe development. The Reeve's Task Force and the Agricultural Viability study are two examples of the work being done by the County.

From a 2000 UMA survey, housing trends across the responding communities were predominantly in favour of smaller lots for all single-family neighbourhoods. Based on the 1999-2000 results, there was generally a move to a higher proportion of multiple family development in the form of 3-4 storey condominium apartments, duplexes and especially townhouses. This appears to be driven by both municipal development objectives as well as through consumer demand for more affordable housing alternatives.

Red Deer developers have responded to this trend by increasing the amount of narrow lot (R1-N) development. This will result in an increased average number of units per hectare. Related to this, and more specifically addressing the demand for smaller housing units, is the increase in Red Deer's stock of multiple-family units, specifically townhouses and apartment condominiums.

Affordable housing and the general shortage of rental units has resulted in mounting interest in secondary suites. Many communities have considered the appropriateness of such accommodations and methods of control. Some communities have proactively approached the issue by amending land use bylaws or establishing criteria, while others are trying to implement other ways of meeting the housing demand and eliminating the need for homeowners to consider this option. In terms of defining "secondary suites", the name and style differs by locale, but many aspects are the same. The main type of secondary suite is the accessory residential unit in traditional single-family housing. These units can be found as developed lofts, basement suites, in-law apartments, or 'granny' flats. These apartments are usually separate-entry units found within the main dwelling. This trend is most prevalent in areas experiencing a shortage of rental units and 'affordable' housing alternatives. Affordable in this sense could apply to the affordability needs of the renter but could also address the need of home owners to meet high mortgage obligations, or in the case of elderly home owners, to acquire live-in assistance with home maintenance or security issues. Additionally, in some cases, these units may function as an ideal solution to accommodating aging parents or family members with special needs. As of 2004, Red Deer now allows secondary suites in single detached homes within new neighbourhoods where pre-identified. As a result, developers are beginning to offer/

market lots and new homes with the possibility of legal secondary suites in some areas.

Another significant change will be the move towards "adult communities" and/or gated communities. There is growing demand for lower maintenance, single storey, multi-storey or ground related residential units clustered within comprehensively planned communities. The financial and physical abilities of baby-boomers are allowing them to travel more often, leaving their permanent residences for extended periods. As a result, the preference is for secured gated or condominium communities with little or no yard maintenance obligations. Over the last four to five years Red Deer has seen the development of several gated or adult communities and many condominium developments geared to low maintenance demands. A new study by Parkland Community Planning Services completed in January 2005 further investigates gated communities and their impact on overall community development.

Another expected phenomenon is the move towards non-traditional housing forms, inner city redevelopment, and "mixed-use" residential-commercial development in general. In some larger cities such as Toronto and Vancouver, vacant office and light industrial space is being converted to residential units. Inner city areas in many Canadian and American communities have undergone revitalization to attract new populations to the downtown core for living, shopping, and working. Quite often these developments or redevelopments take the form of ground floor retail with upper floor residential. This can be taken a step further with a level of predominantly office space developing between the retail and residential storeys.

Another trend similar to non-traditional development is neo-traditional development. In general terms, neo-traditional housing is the concentration of housing near other amenities such as schools, employment sources, and commercial areas. It is important to note that the success of these efforts has been mixed at best and may be slow to achieve the original objectives. Studies have found that society has become extremely automobile dependant and the desire to live next to convenient services may not rank as highly with the average homebuyer as other factors might. However, as the population ages, the proximity to health care facilities; clinics, doctors' offices and hospitals, is growing in importance. Proximity to these services has already differentiated the popularity of some developments over others.

Having said this, emerging work by "walkable communities" advocates, such as Dan Burden of the United States, is depicting growing municipal interest in more diversified or mixed community development. Evidence shows that the integration of businesses, retailers, commercial uses, varied housing styles and types, and civic/public buildings into blended communities increases the mobility of residents in these neighbourhoods, improves walking and biking options, increases access for people of all ages, abilities, and from all walks of life, enhances community pride, and increases levels of community

involvement. As infrastructure and fuel costs rise, the concept of compact "villages" of mixed uses within residential communities may gain greater prominence.

On a different front is the increased popularity of home-based businesses. Working from home triggers the need for office space within the traditional residential family unit as well as investment in high-tech communication infrastructure. Evolving telecommunication technology and work from home options may offer benefits such as reduced peak traffic volumes, reduced commuting times, and increased activity (and therefore security) within neighbourhoods during daytime hours.

3.5.2 *Environmental Trends and Objectives*

In addition to trends in residential development, several environmental management trends are also set to influence the style and nature of growth in communities in the future. Trends pertaining to environmental sustainability and ecological conservation, open space and natural areas, and green infrastructure are discussed below.

3.5.2.1 Environmental Sustainability and Ecological Conservation

Three principles and concepts that are increasingly being considered by municipalities in decisions relating to environmental sustainability and ecological conservation include the ecological footprint concept, valuation of natural capital, and the incorporation of conservation principles and guidelines into municipal policy. It is important to note that each has a basis of support in the various guiding principles of the Alberta Environmental Protection and Enhancement Act (AEPEA)[32].

3.5.2.1.1 Ecological Footprint

The concept of an ecological "footprint" has been around for some time and is being used in various communities to guide growth planning[33]. The definition of the ecological footprint as explained by the Federation of Canadian Municipalities (FCM) is "the biologically productive area required to provide the space, materials, and energy the community consumes and to absorb its wastes.[34]" Generally, this means that the amount and rate at which one consumes resources relates to one's impact on the planet or "footprint". The more biological and physical resources like food, clean air, water, clothing, shelter, gasoline, energy, and other products and services consumed, the more

[32] Government of Alberta, *Alberta Environmental Protection and Enhancement Act*. 2002.

[33] City of Ottawa, 20/20 Infrastructure Master Plan (2004). http://ottawa.ca/city_services/planningzoning/2020/imp/toc_en.shtml

[34] Federation of Canadian Municipalities (2004) http://www.fcm.ca/newfcm/Java/frame.htm Report prepared for Federation of Canadian Municipalities by Anielski Management Inc. http://www.fcm.ca/english/communications/eco.pdf; and Backgrounder Ecological Footprint of Canadian Municipalities and Regions http://www.fcm.ca/english/communications/sept292004bac.html).

land required to harvest or produce this food, energy or manufactured goods.

The FCM advises that communities can use the ecological footprint to measure and report on progress towards community sustainability, to shape priorities, to redesign land use development practises, and to better plan/budget for transportation, housing, energy, and infrastructure. Based on the direction of FCM, possible uses for the footprint concept in future community growth could include:

- Measuring progress towards a municipal/urban sustainability vision.
- Tracking returns on investment from public transportation, green infrastructure and other sustainability capital investments.
- In strategic business planning and budgeting to consider the impact of municipal spending on achieving a "balanced ecological budget".
- Encouraging community or neighbourhood design that contributes to sustainable lifestyles.
- Tracking energy consumption (e.g. demand for "green" or energy efficient housing) and considering buying locally/ supporting local enterprise.
- Offering incentives for "green" buildings.
- Encouraging renewable energy infrastructure investments through building codes, issuing renewable energy bonds or other ecological tax incentives.

Proponents indicate that the analysis of an ecological footprint does not have to mean a reduction in quality of life. Instead, it means factoring in more widely the impacts of our current uses and actions and developing and applying more efficient ways to limit our reliance on a finite biological resource base. Canada's footprint is ranked among the highest in the world. The concept of measuring and managing the ecological impact or the footprint of a nation or a municipality relates to sustainable development, which ensures that the use of resources and the environment today does not impair prospects for their use by future generations. Potential developments to be built in newly annexed lands and other growth areas offer many opportunities for investigating and taking actions in reducing the ecological footprint of the City of Red Deer[35].

3.5.2.1.2 Valuing Natural Capital

The Growth Study recognizes ongoing research and emerging ideas related to defining and valuating natural capital. As society

[35] National Round Table on the Environment and the Economy (NRTEE) Environmental Quality in Canadian Cities: The Federal Role 2003 and the NRTEE web page 2004. http://www.nrtee-trnee.ca/eng/index_e.htm

traditionally uses monetary or real estate appraisal methods to assess land, the value of the natural features found on that land is often intrinsically understood but monetarily underestimated or not recognized. Concepts related to non-market valuation have been emerging over the last several decades and are now being acknowledged in the present context of planning to more accurately define, incorporate and value natural capital benefits[36]. These methods are intended to result in better understanding of non-monetary benefits, more appropriate protection standards, and more accurate ecological as well as economic assessment of a community's natural capital[37].

Natural capital includes ecological assets and the critical role played by these resources in sustaining life. Examples of natural assets include native tree and wetland habitats and ecosystems, trees and shrub beds, turf and rough cut grass areas, rivers and creeks, wildlife corridors, and open space parks. The benefits or values provided by such resources may include: air purification, microclimate regulation, noise buffering, increased opportunities for recreation or physical activity, individual enjoyment of natural beauty, the cleansing of water through wetlands; attraction and retention of skilled labour or new business, attraction of tourists, wildlife corridors and viewing opportunities, and overall aesthetic value[38]. All of these have "non-market" value and importance.

From the research, there are a number of steps that some developers as well as municipalities are beginning to take to better calculate the benefits of natural capital and the non-market costs of losing such assets. A few of these include:

- Recognize and protect special forms of natural capital.
- Develop urban natural capital management plans.
- Proactive, integrated and long-range approach to urban natural capital.
- Measure the stock of natural capital and assign non-monetary credits or linked monetary value to the benefits it produces.
- Pursue alternative options to acquire and protect urban natural capital.

[36] National Round Table on the Environment and the Economy. Securing Canada's Natural Capital: A Vision for Nature Conservation in the 21st Century. 2003. and National Round Table on the Environment and the Economy web page (2004). http://www.nrtee-trnee.ca/eng/index_e.htm

[37] The Environment Canada Policy Research Seminar Series – Natural Capital and Sustainable Development (2000). http://canada.gc.ca/main_e.html and Crompton, J. The Impact of Parks and Open Space on Property Values and the Property Tax Base (2000) – National Recreation and Parks Association, USA.

[38] Costanza, R., D'-Arge, R., Groot, R.D., et al. The value of the world's ecosystem services and natural capital. *Nature [London]* 1997. http://www.esd.ornl.gov/benefits_conference/nature_paper.pdf

- Recognize cities as only one part of a greater environmental region[39].

The City of Red Deer has a history of addressing many of the above steps and is currently pursuing ongoing initiatives that will apply in new developments in the Growth Study area. A numerical integrated inventory of ecological assets, including geographic location and associated data has been developed over a number of years and is an important initial step in calculating the values and benefits associated with natural capital[40].

Several objectives using the inventory include valuing the ecological assets in neighbourhood and open space parks, natural tree and wetland areas and municipal trees in new development areas. This is not unlike any other form of inventory of assets, such as streetlights or fire hydrants, where location, number and derived benefits are accounted for, valued and appreciated. Ongoing refinement and use of the ecological inventory will help provide similar results.

3.5.2.2 Incorporating Conservation Principles and Guidelines

Municipal policy in future may begin to more stringently review conservation principles which may in turn impact style and form of developments. For instance, the City of Red Deer recognized the Canadian Biodiversity Strategy in the mid 1990's and has since completed substantial biodiversity inventories in the region[41]. To protect biodiversity and to plan for ecosystem conservation, the health of lands surrounding "protected areas" must also be considered. This is called whole landscape planning and helps to ensure the long-term survival of loosely connected habitats and concurrent exchange of biodiversity. Adopting conservation principles and guidelines, and placing these into action through planning and development procedures, is becoming a more common way of assuring a rich supply of biodiversity.

Recognized steps that are being used in North America to assure the long-term sustainability and community enjoyment of natural area ecosystems include[42]:

[39] Canada West Foundation. Green Among the Concrete – the Benefits of Urban Natural Capital. 2004.

[40] Grant Moir, (1999) Proposal to make a final application to become the Alberta participant in the Sustainable Communities Initiative in partnership with Natural Resources Canada (Information on Parks integrated mapping and inventory system).

[41] Red Deer Environmental Advisory Board. Canadian Biodiversity Strategy (1994).

[42] City of Red Deer Ecological Profiles (2003) and Canadian Forest Services - Atlantic Forestry Centre Report (accessed 2004). http://www.lib.unb.ca/Texts/Forest/bin/get7.cgi?directory=MX205/&filename=freedman.html and Hardner, J. and R. Rice (2002). Rethinking green consumerism. Scientific American 286(5):88-95 and Proceedings of the Vision 2015 Symposium (2002 Draft) – Alberta Recreation and Parks Association (ARPA) Re: Conserving and Enhancing the Environment (pg. 34) and Stewardship: Protecting and Preserving Alberta's Environment (pg. 50-51).

- Looking beyond the geographic boundaries to natural habitats, ecological reserves, watersheds, and whole landscape level connections.
- Investigation of additional methods to preserve natural habitat. Some of these include private landowner conservation agreements/ easements, the concept of conservation concessions (leasing of conservation resources and/or lands), swapping land of less ecological value for land of more ecological value, and donations of ecologically important habitat. These methods could result in a greater number of unique natural features being preserved outside of the normal requirements set aside for municipal and environmental reserve.
- Adoption of architectural landscape standards that promote the selection of native plant material rather than non-native material;
- Promote the use of Integrated Pest Management (IPM) strategies to reduce pesticide use;
- Habitat Stewardship Programs to provide education for individuals/groups.
- Investigate solar panels or other alternative energy sources.
- Investigate the use of environmentally friendly building and infrastructure products.

3.5.3 *Open Space and Natural Areas Trends*

Open space, green corridors, greenways, ecological reserves and environmentally conscious development are now important considerations. New recreation and ecological management demands are also evolving as demographic shifts occur. The demand for passive open space areas is forecasted to increase as the population ages and recreational habits adjust. Older population cohorts do not demand large block type park areas or sports playing fields, therefore, planning will need to shift to some extent away from the focus on large central playing fields. Housing with direct access to walking/cycling paths and natural amenities will be in demand. The traditional large playing fields may give way to natural preserves or paths conducive to walking, inline skating and cycling. At the same time the popularity of basketball, volleyball, and skate boarding among youth will still lead to sports focused park, albeit with focus on these smaller land consuming activities.

Ecological management, which is defined as the inclusion of environmental issues into decision making, is growing in importance. This is true not only in terms of advancing legislation but also to the average homeowner. Research suggests that ecological management and interpretation and proximity to natural features is rising in significance to home buyers and concerned citizens. The environmental aspects are the result of a general educating of society

and the maturing of cohorts that have been raised/educated in the classroom to be fully aware of the impacts of development. As a result, developers are promoting "soft" amenities such as storm ponds and constructed wetlands as benefits for land ownership.

Changes in policy regarding landfills, water quality and open space have also encouraged a focus to environmentally sensitive development. Emphasis is being placed on usable open space buffers, linear green corridors and passive parks, and away from large manicured park developments. The types of land accepted by the City as municipal reserve dedication, and the acquisition of environmental reserve, will need to be reflective of all of these trends and expectations.

3.5.3.1 A Regional Approach to Conservation

Regional approaches to conservation are gaining momentum nationwide. It has long been recognized that natural features and wildlife fair much better when there are close linkages and connections between habitat areas. Many habitat areas in Red Deer have been separated as a result of a variety of land uses. Conservation of surrounding natural areas will be crucial to the long-term sustainability of Red Deer parks and natural areas.

3.5.3.2 Green Municipal Services: Green Infrastructure

Infrastructure systems which build on natural capital as "green" infrastructure are now being recognized in some communities. Funding opportunities from provincial and federal bodies such the *Green Municipal Fund* (GMF), administered by the Federation of Canadian Municipalities (FCM) or the recent *Infrastructure Canada/Alberta Program* (ICAP), offer an indication of increased prospects for green infrastructure funding in the future. Listed below are examples of current and potential green infrastructure developments that could qualify as green municipal services.

Green Infrastructure

Green infrastructure can be viewed as the incorporation and use of natural capital features as functioning infrastructure. Examples could include improving the quality of storm water runoff by filtering it through wetlands or planting shrubs and trees for improving air quality[43]. Protecting wetlands and planting trees has typically been a role of municipal parks departments. The use of natural features has largely been aesthetic in appeal and function. Under the label of green infrastructure, natural capital considered for use may begin to become a shared responsibility of municipal

[43] Environmental Quality in Canadian Cities: The Federal Role (2003) (National Round Table on the Environment and the Economy (NRTEE)) and Canada West Foundation "Green Among the Concrete – the Benefits of Urban Natural Capital" (2004).

[44] The City of Ottawa, 20/20 Infrastructure Master Plan. 2004. http://ottawa.ca/city_services/planningzoning/2020/imp/toc_en.shtml

departments. This will result in the need for unified policies in management and planning processes[44].

Emerging ideas for green infrastructure now being tried within the development industry include:

- Green roofs in industrial and commercial developments. A limited number of buildings in large urban centres are starting to incorporate green roofs, in which a roof is strategically covered with plants and organic substrate as a functional part of improving the building's design and efficiency. The benefits can include reduced energy costs due to increased insulation for heating in winter and cooling in summer, absorption and cleansing of runoff from the rooftop, and incorporation of a green space for building occupants to enjoy. Challenges such as building costs and confirming the overall efficiency of green roofs under varying climate conditions presently exist[45].

- Increased planting of vegetation throughout industrial parks. Several new industrial parks now have much more integration of green space than older style developments. Given that industrial parks usually have higher concentrations of heavy equipment, emissions, noise, or other pollutants in a confined area which can negatively impact air quality, plantings, increased landscaping, or corridors of trees connected throughout an industrial park help provide additional air cleansing benefits/noise absorption and make the developments more aesthetically pleasing.

- Eco-industrial parks and similar applications in large commercial developments. Eco-industrial parks are related to eco-efficient business practices. The confined nature, common uses, and sheer volume of materials produced in industrial parks allows for enormous potential for companies to work closely together to help recycle products, pool resources, and reduce environmental impacts. In examples where this has been used, the key is developing cooperative design and operational plans for the whole industrial park to allow for a relationship between companies so that they can more efficiently share resources and produce less waste. This could be something as simple as accessing a list of waste materials from each company, which other companies review. Some of the products to be disposed to the landfill by one company, may be in great demand by others. Another example may be a sharing of transportation needs so that employees of neighbouring companies can carpool together. In developing a system of shared eco-efficient business practices, companies can discover many more ways of reducing impacts on the environment[46].

[45] The Cardinal Group web page (2004) (e.g. Green Roofs for Healthy Cities; Canadian Eco-Industrial Network; New Urban Agenda etc.) http://www.greenroofs.ca

[46] Burnside Ecosystem. Industrial Parks As Ecosystems. 2004. http://www.mgmt.dal.ca/sres/eco-burnside/burnsideecosystem.html

In summary, all of these environmental trends and emerging actions will impact the type, scale, and design of future land use and development.

3.5.4 Commercial Retail Trends

Changing trends in commercial retail and consumer behaviour have been studied for years. To some in the commercial industry, identifying these trends and jumping in at the right time are the keys to both short-term success as well as longevity. Looking at trends, history tells us that 'the general store' was the hub of retail activity for almost every community. This multi-purpose retail centre often functioned as the town gathering place. As communities grew, and the make up of those communities changed, so did the provision of retail services.

Evolving from the general store came "main street" and the double loaded street-side retail. This trend has lasted many years due mainly to its positioning in the downtown - the focus of most communities. Main street retail can best be described as ground level retail with second floor office development. This office space was often convertible to apartment residential.

The main street concept eventually evolved into the strip mall or strip plaza. These commercial centres began to develop outside of the downtown core on the primary transportation links. Their development was concurrent with the growing popularity of the automobile. New suburban residential development of most centres was placing people beyond easy walking distance to downtown and creating shopping demand closer to new neighbourhoods. The retail plaza offered a 'main street' of sorts but with convenient parking and placement of shops in closer proximity to one another. The plaza also allowed for larger sized stores to distinguish the shopping experience.

Soon the plaza evolved into the indoor shopping mall. The shopping mall housed a complete range of retail options in addition to other services and speciality stores all under one roof. Parking was plentiful and shopping was done within a climate-controlled environment. Malls traditionally were anchored with one to three major department stores with smaller speciality stores lining the linking corridors. The "mall" has remained a mainstay in present society, often as the focal point of communities and a destination hub of transit services. The decline of the downtown as a shopping destination because of the competitive advancement of the mall is well documented across North America. In this way, the mall was the first style of retail development that dramatically impacted preceding retail types.

The mall environment continued to change and redefine itself to meet the increasing demands of a more affluent society. Malls grew in size and services offered, with the addition of theatres, ancillary offices, and speciality stores. We are now beginning to see the prominence of the mall declining. No new major indoor shopping malls have been constructed in Canada within the last 10 years and in fact in some cities, malls have been scheduled for demolition to be replaced by housing or office developments.

The shift in preference away from the traditional mall has led to new retail alternatives. The first of these alternatives is the factory outlet. The larger factory outlet centre was more of a step back towards the shopping plaza. These individual and brand specific stores have predominantly street level entrances directly off parking lots and walkways. The selection of the mall is available but with the ability to drive to the preferred destination point and park in close proximity. Another factor increasing the popularity of these centres is the perceived economic advantage of shopping for the same major brands offered by the major anchor stores, at discounted rates.

Following closely behind the factory outlet has come the category dominant retailing, big box, and warehouse club retailers. These retailers are synonymous with names such as Costco, Home Depot, and Future Shop. The big box retailers have established themselves in the non-traditional locations such as highway commercial industrial areas and urban fringe settings. By selling in "bulk", the assumption is that the consumer will travel the extra distance to capitalize on the economies of bulk purchasing. While, the big box outlet often functions as a warehouse which was traditionally a form of industrial development, big box outlets are now more often considered, and zoned as a commercial use. Research efforts continue to examine how big box stores will effect a variety of urban growth issues. These growth issues include traditional retailing, sprawl, transportation, commerce, infrastructure, social services, and edge development.

The scale of big box development has resulted in even more automobile dependence. Some of these locations are not on transit routes and are sited away from residential development. The positioning away from traditional commercial corridors has resulted in ancillary commercial and related services suffering from reduced sales. The magnitude of these big box centres is also resulting in large masses of land being consumed. This may be the catalyst for the most recent trend, that of the power centre. Power centres are the hybrid of the traditional mall, the big box, and the strip mall.

For the most part, power centres are extensive areas of commercial development. Within these areas are various retail establishments and service companies. Almost everything that was found in the traditional shopping mall can be found within the power centre. This includes retail such as the discount department stores, speciality shops, and now the big box retailer. It also includes medical services, restaurants and theatres. The difference is that most of these businesses are found within their own stand-alone building, sharing parking facilities and internal road networks. The factor that may appeal to the consumer is that they can drive to the front door of the business without extensive walking. It resembles the strip mall in that building access/egress is directly to the parking lot along a shared walk.

There are many theories as to why consumer preference has changed. These range from the competitive pricing of the factory outlet, power centre, and big box retailer to the theory that the mall just got too big, and that the convenience of one-stop shopping was lost in extensive

walking, consumer confusion, and better alternatives. Consumers have refined the way in which they shop, by shifting more towards focused destination shopping. This means that each trip is focused on a particular purchase rather than general browsing.

Also evolving is the prevalence of electronic forms of retailing, including e-commerce or Internet shopping, home shopping television, smart cards, on site interactive systems, and new opportunities for vending machines. It was estimated in the 2000 Growth Study that electronic retailing accounted for only 1 to 2% of all sales. However, research conducted by Media Life Magazine in the United States in 1999 suggested that the number of shoppers purchasing items using e-commerce means was growing at a rate of 72% per year[47]. As the overall population becomes more confident with on-line credit card use, this is forecasted to continue to expand. While it is not known to what extent this sector of the market will eventually grow, some studies suggest that it could reach as high as 20% of all sales, particularly as the technology becomes more accessible and consumer trust increases.

Increasing in popularity is the neighbourhood convenience commercial centre or strip mall (such as Red Deer's C2/C3 sites) located in residential suburbs away from the traditional downtown and highway commercial areas. Because of the competition this newer form of retailing places on the downtown, most municipalities are undertaking downtown revitalization efforts in hopes of retaining an active and vibrant community centre. These efforts seem to be concentrated around the intensification of the core area through increased high-density residential, creation of entertainment districts focused around cultural hubs, arts centres, and performance theatres, and a combination of speciality and general retail. Successful efforts to-date have capitalized on creating a mixed-use environment with various amenities to attract people to both live around, and visit the area.

3.5.5 Downtown Redevelopment Trends and Objectives

Downtown revitalization efforts are often deemed a major challenge. Research indicates that revitalization should have less focus on retail activities than social activities, and that the downtown core is not necessarily the best venue and vehicle to meet shopping trends and needs. Where the revitalization intention is to incorporate retail activities along with other uses, efforts should include a full mix of leisure, entertainment, commercial, cultural, institutional, residential, and social needs. Revitalization areas should be compact and easily defined/recognizable, efficiently serviced by transit, oriented toward human scale, and based on a walkable streetscape.

Reliance on the automobile as the primary mode of transportation has placed emphasis on parking as the determinant of success. There

[47] Schlosberg, Jeremy. "People Who Shop Online Increasingly Buy On-Line" in *Media Life Magazine*. http://archives.medialifemagazine.com\news 1999\june99\news5625.html

appears to be no easy solution for this except to create an area so desirable that the public will willingly forgo the convenience of parking nearby. On the other hand is the need to generate demand for downtown living and thus put people in continual close proximity to these areas. There are differing views on how this is best achieved. Some communities have placed restrictions on high-density development outside the downtown core while others have altered zoning restrictions to allow for infill development in the core.

There appears to be an argument in favour of mixed use development whereby the lower floors of a building would be retail/office and the upper floors would be apartment/condominium. For communities with the foresight to recognize an inevitable change to the downtown core, the implementation of policies and programs to encourage infill and redevelopment opportunities is a must. There is also recognition that this cannot be done at the expense of more traditional development on the community periphery, but rather as a complementary effort.

As alluded to above, the type of residential intensification associated with downtown redevelopment varies. At the low density end, single family homes become almost non-existent in terms of redevelopment. An enclave of estate type housing may remain in the more historical areas but this is usually very limited. Much infill development is in the form of duplex or multi-plex development. As well, more significant redevelopment, in which multiple lots or blocks are cleared, can occur in the form of multi-family buildings. This follows traditional planning theory in that the density increases as you move to the core of the city. The periphery may consist of multiplex buildings, town houses, and condominium villas. As one moves to the core, these structures change to multiple storey buildings ultimately with the towers synonymous with larger cities. The most prominent factor in this is the land values associated with core properties. Larger residential towers may be a more appropriate fit with larger cities, but the concept of concentrating density remains relevant even in communities the size of Red Deer.

Since 2000, Red Deer has benefited from a very strong Main Street Programme operating in the historic downtown. The Programme's aim is to enhance downtown by restoring historic buildings, enhancing the pedestrian environment, improving collaboration, and increasing the mix of leisure, entertainment, commercial, cultural, and social needs in the core. It has met with success thus far and funding will be extended for another two years. In 2000, Red Deer's Greater Downtown Action Plan was also put in place to enhance the downtown. Implementation of this plan is ongoing. Major efforts aimed at a pedestrian promenade, transportation improvements, park redevelopment, land use changes, and culture projects are underway. Between the Main Street Programme and the Greater Downtown Action Plan, a great deal of expertise and resources are being directed into Red Deer's downtown revitalization efforts.

Revitalization is not an immediate result of redevelopment efforts. Research suggests that the process may take as many as ten years before the full rewards of the effort can be realized. Red

Deer's Greater Downtown Action Plan has a 15-20 year implementation schedule.

3.5.5.1 Impact on Red Deer

Planning for future commercial retail development must be based on a comprehensive understanding of the new forces that impact commercial development. While some emphasis must be placed on historic trends, recognition and understanding of the North American (and in part global) environment in which new retail trends are emerging is critical.

Using data compiled from communities across Canada as part of the 2000 Growth Study, a calculation of retail/commercial space per resident was established. To determine the amount of new space likely to be required, this figure was then applied against the existing inventory of commercial lands in Red Deer. The results project an increase in the number of new neighbourhood and small convenience centres needed as well as new expansion and infilling of established commercial corridors and power centres.

Red Deer has evolved from the traditional "small-town" centre into a dynamic urban centre located within an exploding Highway 2 development corridor that is second to none in Canada in terms of the impact on growth and development. Red Deer with its central location, good job opportunities, desirable residential areas and excellent park and recreational amenities has matured to the "next" level in regards to commercial development activity and in particular, in the context of the broader region.

Demand for larger commercial parcels that can accommodate a variety of multiple building sites, accommodate big employers and facilitate single store multi-use branding (grocery store, liquor outlet and gas bar) are changing the face of commercial development. The increasing lack of the City's traditional Gaetz Avenue corridor to be able to provide large single site development opportunities is pushing new major commercial developments to the edge of the City boundary including spilling out into the County's Gasoline Alley and Burnt Lake commercial development areas. Furthermore, the City's Gaetz Avenue north corridor is generally perceived to be more industrial in nature while the Gaetz south corridor is clearly recognized as the prime existing and emerging commercial area. The south Gaetz Avenue commercial area has the advantage, from a regional perspective, of having better accessibility from the Highway 2 corridor.

The Red Deer Regional Airport will gain considerable importance in the coming years and will add increased development pressures to the City's south side. Furthermore, the amount of new residential development envisioned in Red Deer County south of the City could essentially be viewed as the equivalent of a large City neighbourhood(s). The possibility of a future 20,000 population base in the South Hills, Springbrook and Penhold areas, combined with the

impact of accessibility to Highway 2 traffic, will place the City's south side and County's Gasoline Alley commercial areas in the middle of a significant commercial growth area.

The high cost of land in the City's downtown commercial areas and the general availability of only smaller development sites puts the downtown at a disadvantage in comparison with new commercial development sites elsewhere in the City and/or surrounding County areas. While significant progress has been made to make the downtown an attractive place to do business, there is strong private sector pressure to allow office type developments to locate outside of the downtown. Allowing office buildings outside the core or in the County's commercial business parks will erode the City's ability and efforts to direct its office development to only downtown areas.

Proposed major residential growth in the City's southeast and northeast sectors will place a strong demand for increased future commercial development in these areas. The proposed major 20 Avenue transportation corridor and its bypass connections with Highway 2 (via McKenzie Road) and Highway 11A (via new river bridge crossing) and the proposed realigned Highway 11, will facilitate prime neighbourhood, district and regional commercial development opportunities on the City's east side.

Proposed new residential growth areas in the City's north development areas, albeit significantly less than the residential growth envisioned on the City's east side, will still generate a need for new commercial development in this area. Similar to the east side, major transportation corridors and accessibility will determine new commercial development locations. In this case, future north side commercial development opportunities would be near or along portions of Highway 11A.

To summarize:

- fringe lands located in surrounding Red Deer County will increasingly be providing new commercial development opportunities including availability of municipal servicing infrastructure, and a competitive edge in pricing and allowable uses of land,
- future C3 Commercial and C2 District Commercial sites will likely continue to be developed in a format/style similar to current C3 and C2 District commercial developments,
- future C2 Regional and C4 Arterial Commercial sites will not be developed on linear strips of land running adjacent to major roadways. Rather, future C2 Regional and C4 Arterial sites will be developed on large sites as commercial villages located strategically at major transportation nodes. These sites will be integrated along side residential neighbourhoods and would be expected to include mixed use commercial/residential developments, main street development concepts and contain community elements and gathering places/uses,

- C2, C3 or C4 Commercial sites may be developed in combination with each other at the same location, and
- C2, C3 and/or C4 Commercial sites may be developed at the same major transportation node but separated by, or located opposite each other by, an arterial roadway.

3.5.6 Downtown Neighbourhoods

Owing both to the paradigm shift of Red Deer moving from a small community to a regional centre and from the impact of the ageing baby-boom demographic, future interest and demand for 'downtown living and working' is expected to increase. Residential demand combined with redevelopment and revitalization initiatives for commercial areas, will impel the downtown to start to take on a new vibrancy.

Implementation of the City's 2000 Greater Downtown Action Plan has produced enhanced development design criteria for downtown neighbourhoods to address building fronts, street edge aesthetics, landscaping and the public realm including street furniture. A new comprehensive mixed use residential and commercial redevelopment strategy has been prepared for the west downtown's Riverlands area encompassing the under-utilized river front. The vision for this area is to create a unique urban environment with a mixture of medium to high density housing forms appealing to a range of income levels and lifestyles blended with commercial uses that provide employment opportunities. The area will contain a strong pedestrian environment and a significant civic square area that will incorporate public open spaces and cultural facilities, programming and performance space.

Anticipated increased demand for housing in the downtown (including multi-family housing) will be key to its future sustainability and is intrinsically linked to the demand for increased commercial services. Because these outcomes are so closely linked, distinguishing exact timelines is difficult. What is anticipated is that commercial development will intensify, and that the downtown resident population will increase steadily over the coming years.

3.5.7 Industrial Trends and Objectives

The industrial sector continues to change in terms of operations and areas of focus. Technology persists in reducing the space requirements in sheer size, as well as per employee. Industrial servicing needs are also changing, placing different demands on community infrastructure, as well as adjacent land uses.

The recent trend towards reduced workspace can translate into operating cost savings for companies. As such, firms are more open to the sharing of workspaces within organizations, as well as the sharing of common or meeting facilities between different organizations. One implication of these trends is a general requirement for less permanent space for each employee. This is reflected in the reduced number of

square feet per employee in many office environments. In the industrial sector, firms continue to move towards locations with high ceilings, to maximize the use of vertical space.

Another factor that may impact the use of lands in industrial areas is the trend towards maximizing efficiencies by consolidating different functions of an organization at one location. This may include, for example, retail uses as a component of a manufacturing facility, or head office co-located with other plant functions. Consequently, urban areas must strive to ensure that there is adequate flexibility in permitted uses in industrial areas. This is evident in some areas that now refer to "business lands" or "employment areas" rather than industrial land.

The anticipated impact that new industrial trends will have on the Red Deer community are the same as those affecting other communities today, although these may not be as widespread due to the traditional industry sectors in Red Deer such as oil and gas field services. PriceWaterhouseCoopers projected a diminishing industrial land absorption trend in the region over 5-year periods from 2006 to 2030 from a high of 243 net hectares in the first 5 years to 81 net hectares for each of the 5 year periods 2021-2025 and 2026-2030. This reflects the current high levels of industrial land absorption and Conference Board of Canada population projections that anticipate slowing of population growth in Alberta due to the aging baby boom. The overall 25 year average remains 28.3 net hectares or 33.5 gross hectares per year. These figures have been utilized in this study update, however, the task force committee recognizes that industrial land absorption trends may in fact increase over the long term as the Red Deer and Central Alberta populations continue to grow. Industrial land absorption rates and trends should therefore be reviewed and updated the next time the Growth Study is updated. In addition, it is recognized that there is a need to continue to diversify and expand from the traditional dependence on the oil and gas sector. Embedded in this diversifying economy, is the nature of 'industrial' development, with emphasis changing from manufacturing, processing and other heavy industries towards 'employment centres' or 'business parks'. The factory will diminish in prominence to the 'flex-space' building. Flex-space facilities are usually shells that resemble a typical warehouse from the outside, but are multi-purpose on the interior. Quite often these are distinguished by the presence of offices within the front and larger open working areas towards the rear. The working areas can be further subdivided to provide incubator opportunities and assembly operations.

The movement to high-tech industries both in process and product will change the nature of industrial sites as will changing operational procedures such as just-in-time delivery. Ultimately, all these will reduce the spatial requirements both on site as well as off-site. The high-tech operating environment will place increased demands on the type of servicing for industrial lands. In addition to water and sanitary requirements, fibre optics and advanced networking requirements will need to be met.

A 2004 industrial inventory indicates that raw land stock has been virtually depleted in Red Deer, with a one to two year supply remaining. Identification and development of new industrial lands is warranted and required immediately.

3.6 Utilities and Servicing

Utility servicing and transportation has and continues to assist in defining growth patterns for most municipalities. The cost of infrastructure factors into the economic viability of new development areas. As a result, municipalities frequently identify future growth sectors in part based on the most economically serviceable areas first. The dominant factors in establishing infrastructure costs continue to be topography, geology, existing systems and their available capacities, and transportation networks.

When growth is robust, the demand for new infrastructure can outpace the ability of municipalities to fund the required expansion to these systems. As a result, the practise has been towards placing the financial responsibility on the developer including, in some rare instances, schools, fire halls, and libraries. These additional development costs are then put against the new lots and homes, and ultimately covered by the purchaser. Objections from the development community and from the homebuyer are beginning to lead towards more cost sharing and partnering.

As a goal of sustainable development, using infrastructure efficiently is recognized as a critical component. Utilizing systems to capacity or near capacity reduces the need for expansion and reduces the share that is applied on a per unit basis. Optimization can be met by an overall increase in neighbourhood density through multi-family, small lot, or mixed-use development.

3.7 Major Public Service Uses

As cities grow they may experience increased demand for major public service uses. These uses may range from health cares uses such as hospitals to educational facilities to major public works sites.

A series of major health care uses such as hospitals, treatment centres, medical research or teaching facilities are frequently found in larger centres. In Red Deer's case, the David Thompson Health Region has facilities located both within the city of Red Deer and throughout the region. The major facility in the city is the Red Deer Hospital. The hospital has recently undergone substantial expansion and renovations on its existing site. This current expansion is expected to handle short to medium term growth. Other facilities such as nursing homes or offices are located in other parts of the city. New facilities required in Red Deer outside the hospital for specialized training, medical or nursing care, or office use are likely to be accommodated as infill development within existing facilities or as the redevelopment of existing public service buildings (e.g. re-use of vacant public service or similarly appropriate re-designated sites).

In terms of major educational facilities, Red Deer is well served by the 117 hectare Red Deer College campus, situated in the south west part of the city. The College maintains a Land Use Master Plan to provide strategies for future development and long term build out of the campus. This plan was most recently updated in June 2003. The plan looks ahead approximately 20 years in order to meet needs for sustainable long term grow. Based on the current plan and College land need projections, the existing campus site is sufficient in size to meet longer term needs. At this time, neither future additional campus locations nor expansion of the land area of the existing campus is expected.

While the current public works needs of the city are being well served by existing sites such as the City's land fill site south of Delburne Road, future population increases, city waste reduction policies or programs (e.g. recycling), and the use of new technology will impact future public works land needs. At this time, the current city land fill is expected to meet city needs over the next four decades. Studies investigating any future sites or expansions needed beyond 40 years would be required and are beyond the scope of this study.

3.8 Land Use

3.8.1 Land Use Ratios

In terms of land use, the ratio or split between residential, commercial, and industrial land uses among various communities is typically fairly similar. The only variations detected are usually between those municipalities with a recognized concentration of industrial development (which were considered as major economic generators for their particular region) and predominantly "bedroom" or "commuter" communities, in which land uses were more skewed towards residential development.

Among all communities surveyed in 2000 this split averaged out at approximately 69% residential, 18% industrial, and 13% commercial. In 2000 Red Deer had a split of 67% residential, 22% industrial, and 11% commercial which is reflective of the industrial concentration in the community. However, as of 2004, the current split is 71% residential, 17% industrial, and 12% commercial. In Red Deer, it appears that industrial lands have not expanded at the rate other land uses have. This may attributable to the record residential land absorption over the last five years. Therefore, the city is now below the typical proportion of industrial land found in similar sized Canadian cities. It is interesting to note that Red Deer County has seen significant industrial development in the areas surrounding the city over the last few years so while the city's proportion of industrial land may be low, the regional split is likely somewhat more balanced.

It is also important to note that the city's previous Growth Study did not consider the portion of land dedicated to public service uses or natural/ park/open space. In factoring in these land uses for the 2004 Growth Study, Red Deer's land use mix is as follows: 44% residential, 11% industrial, 8% commercial, and 37% public or institutional lands,

environmental areas, and park spaces (summarized in Table 3-1 as "other"). By considering the amount of land dedicated to these "other" land uses, it becomes apparent that these uses do form a substantial part of the city's total land area and that planning for future parks, natural area preservation, and public/institutional land (e.g. new waste management facility site, educational facilities, or medical facility) is critical.

Table 3-1: City of Red Deer Land Use Area Calculation, January 2004

Land Use	Hectares	Acres	Km^2	Percentage
Commercial	470	1161	4.7	8%
Residential	2710	6696	27.1	44%
Industrial	710	1755	7.1	11%
Other	2330	5757	23.3	37%
Total	6220	15369	62.2	100%

3.8.2 Land Use Diversity

One of the conclusions drawn from the 2000 survey is that the general land use composition of cities between 50,000 and 100,000 population do not vary significantly. Nearer the 200,000 population threshold; communities do start to assume a more cosmopolitan diversity with regard to overall and specialized land use. Interestingly, Red Deer exhibits some of this diversity at the present time due to faster growth than anticipated combined with the market draw from the central Alberta trade area. In the last two years Red Deer has benefited from major retailers such as Wal-Mart, Canadian Tire, Save-On Foods, Sobey's and Mark's Work Wearhouse adding second stores to serve the marketplace and increased diversity of leisure, sporting, and cultural activities. In 2003 Red Deer received the "Cultural Capital of Canada" award from the federal government in recognition of its cultural diversity.

3.9 Summary

The trends identified pertaining to expected residential, open space, commercial, public service, industrial and infill development are relevant to Red Deer at its current population level and as it moves towards future growth thresholds. Having surpassed the 75,000 population threshold this past year, Red Deer's economy, business mix and service base is becoming more diversified and resilient to change. Demographic shifts suggest an aging population while economic predictions suggest strong growth in central Alberta over the coming decades. Conclusions drawn about the nature of Red Deer's future growth includes an assumption that the current split between residential and non-residential development will not change significantly and that Red Deer will grow as a regional business and service centre as it reaches and surpasses various growth thresholds.

section

4

Servicing and Transportation

section 4

Servicing and Transportation

4.1 Introduction

This portion of the study reviews servicing and transportation issues for each of the potential development sectors, including the following existing and future systems:

- water treatment, storage and pumping facilities and water distribution systems,
- wastewater collection and treatment facilities,
- stormwater collection and storage facilities,
- solid waste disposal,
- electrical, telephone, cable television, and natural gas distribution systems,
- transportation network (expressways and arterial roadways) and transit system,
- Police and Emergency Services

The drawings included in this section are conceptual in nature and do not consider the potential land uses that may be developed within the various parts of each sector.

4.2 Water Treatment, Storage and Distribution System

4.2.1 Water Treatment

The City currently has two water treatment plants (WTP) located near the intersection of 54 Avenue and 55 Street adjacent to the Red Deer River.

WTP No. 1 was originally constructed in 1953 and was upgraded in 1995. The prime purpose of WTP No. 1 is to act as a limited backup to the WTP No. 2 pumping station. The primary source of treated water for the city is WTP No. 2. However, pumps at WTP No. 1 are operated once a week to circulate the clear well and keep the pumps active.

WTP No. 2 was constructed in 1984. In 1995 capacity was added to the pump bank and a backup power source was installed. WTP No. 2

is the only water production facility within the water network. Its capacity varies throughout the year, depending on seasonal variances of the raw water supply. Several upgrades are currently being completed. These upgrades include two new high rate clarifiers, a plant filtration upgrade, and the installation of a UV disinfection system. Following completion of plant upgrades in 2004 and 2005, anticipated plant capacities will be:

Table 4-1: Anticipated Water Treatment Plant Capacities

Period	Plant Capacity
Winter	55,000 cubic metres per day
Spring	70,000 cubic metres per day
Summer	90,000 cubic metres per day
Fall	65,000 cubic metres per day

Peak day demand as of June 2003 is 61,942 cubic metres. With the 2004 addition of the Lancaster Reservoir, the present treated water storage facilities have a combined capacity of approximately 48,000 m^3 and are adequate to supply domestic demands and fire flows for a projected population of approximately 110,000 people. As the City grows in the various sectors, water treatment will continue to be provided from WTP No. 2. A third WTP will be constructed immediately south of WTP No. 2 when additional treatment capacity is required.

The city's current water license allows an annual allotment withdrawal of approximately 21 million cubic metres, with an estimated return flow of 19 million cubic metres. The maximum daily withdrawal rate is approximately 103,000 cubic metres. In conjunction with the Regional Water Supply Project, the City has applied for a 5.2 million cubic metre annual increase in the water withdrawal license. This is expected to meet projected needs to the year 2048.

4.2.2 Existing Pressure Zones, Storage, and Pumping Facilities

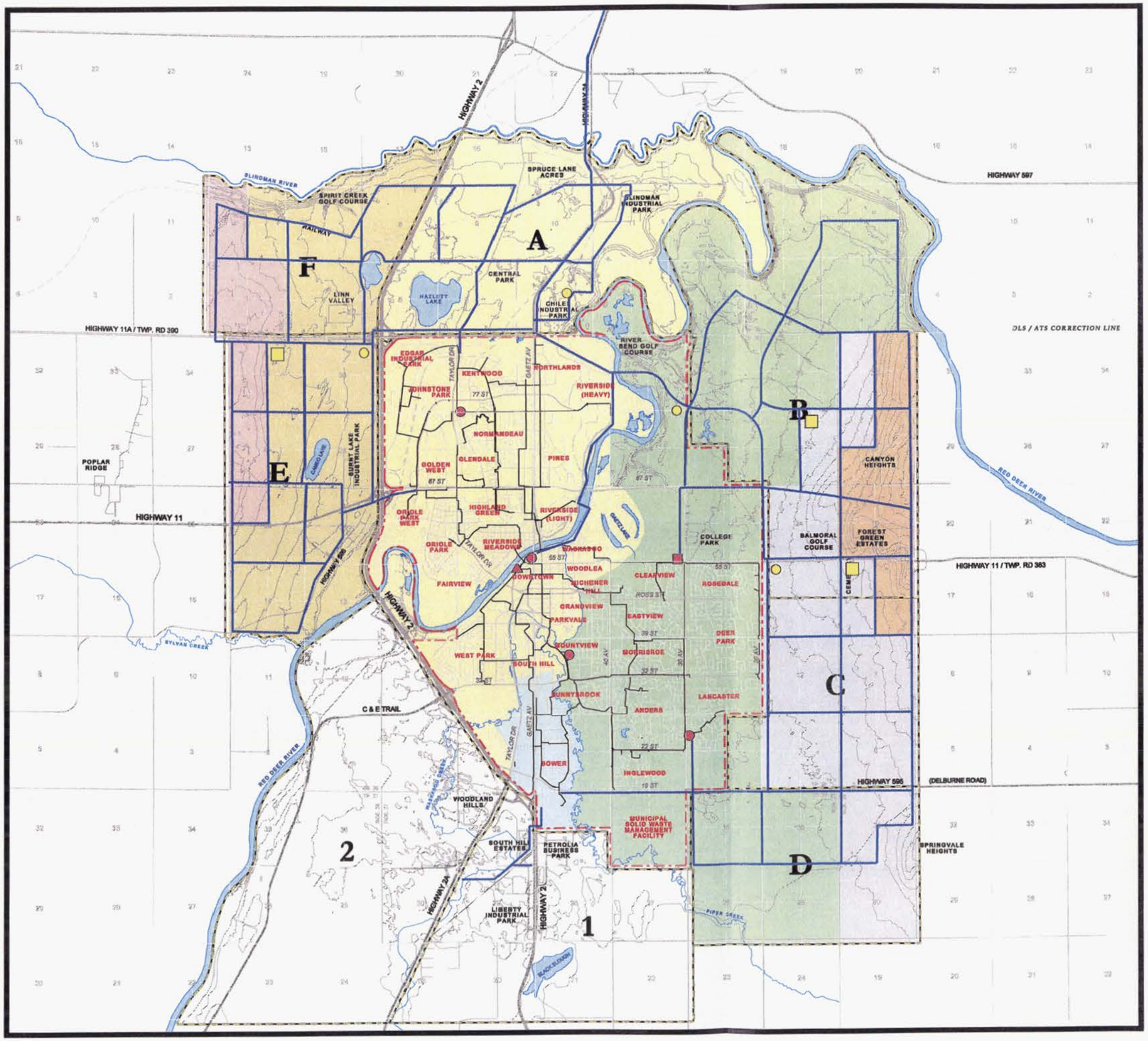
The existing water distribution system consists of three pressure zones within the current City boundary as illustrated on Figure 4.1.

a. The Water Treatment Plant Pressure (WTPPZ) mainly services the north and west area of the City and feeds directly off the water treatment plant. Pumping facilities are located at the water treatment plant, and at the Glendale Reservoir. Storage for this zone is provided at the water treatment plant, the Belleview Reservoir adjacent to WTP No. 1, and at the Glendale Reservoir.

b. The East Hill Pressure Zone (EHPZ) mainly services the east area of the City and feeds directly off the water treatment plant.

WATER SERVICING CONCEPT

4.1



LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- A & 1 SECTOR LABELS

PRESSURE ZONES

- WATER TREATMENT PLANT
- EAST HILL
- SOUTH
- EASTRIDGE
- CANYON HEIGHTS
- BURNT LAKE
- WESTRIDGE

EXISTING TRUNK WATER SYSTEM

- EXISTING WATER TRUNKS (PIPE >300mm)
- WATER TREATMENT PLANTS
- RESERVOIR / PUMP STATION
- PUMP STATION

PROPOSED TRUNK WATER SYSTEM

- PROPOSED WATER TRUNKS
- PROPOSED PUMP STATION
- PROPOSED RESERVOIR PUMP STATION

NOTE: TRUNK WATER SYSTEM REQUIREMENTS IN SECTORS 1&2 TO BE DETERMINED BY RED DEER COUNTY

CITY OF RED DEER
2004 GROWTH STUDY

DECEMBER 2004 SCALE 1:85,000

THE CITY OF Red Deer

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Pumping facilities are located at the intersection of 30 Avenue and 55 Street (Clearview Pump Station), the water tower (Mountview Booster Pump Station), and at the Lancaster Green Pump Station. Storage for this zone is provided at the Mountview Reservoir with some storage at the Tower itself, and at the Lancaster Green Reservoir.

c. The South Pressure Zone (SPZ) encompasses the Bower subdivision in the south central area of the City. The SPZ is an extension of the EHPZ, but has a slightly lower pressure facilitated by two pressure reducing chambers located on feeder mains to the Bower area.

4.2.3 Existing Water System

The existing water system consists of the treatment plants, reservoirs, booster stations, trunk water mains, distribution mains, and appurtenances. In general, water mains 350 mm and larger will be designated "Trunk Water Mains" and the cost of these mains are included in the Water Off-site Levy Rate. Water mains of 150 mm to 300 mm in size will be designated "Distribution Mains". The standard grid main network required within residential subdivisions is on Drawing 1.02 of the City of Red Deer Design Guidelines.

4.2.4 North Red Deer Regional Water Supply Main

In 2002, the North Red Deer Water Service Commission (NRDWSC) applied to connect to the City water distribution system for a proposed regional water main from Red Deer to Ponoka. The Commission proposed construction of a 750 mm supply main from the intersection of Gaetz Avenue and Northland Drive north along Highway 2A with a metering station near the Blindman River on Highway 2A.

The City of Red Deer commissioned Stantec Consulting Ltd. to evaluate and make recommendations for upgrades to the City distribution system. A report titled "City of Red Deer – 2003 Water Distribution Analysis for the Purpose of Regional Water Supply" was completed by Stantec Consulting. The following is a summary of the report recommendations:

- To meet the maximum day demand requirements of the NRDWSC through to the year 2051, a new large diameter trunk water main will be required from the City's water treatment plant(s) to the proposed connection point at the intersection of Gaetz Avenue and Northland Drive. The proposed routing includes twinning the existing 900 mm water main from the Treatment Plant to Gaetz Avenue, constructing a new 750 mm Red Deer River crossing east of Gaetz Avenue connecting to the existing 500 mm water main in the Riverside Light Industrial Park, continuing north with a 750 mm water main along Riverside Drive to Northland Drive, and then heading west along Northland Drive to the connection at Gaetz Avenue and Highway 11A.

- The first upgrading stage of the 750 mm trunk main will be from the intersection of 46 Avenue and 62 Street (Note: the existing 500 mm water main ends on the east side of the CNR right-of-way at 46 Avenue and 62 Street), north along Riverside Drive and west along Northland Drive to the connection point on Gaetz Avenue at Highway 11A.

- It is also recommended, based on the risk analysis completed in the report, that the City consider installing a new 750 mm river crossing in 2006 to provide a secondary feed to the North Hill area and the NRDWSC main. This will provide a backup crossing in the event that the existing 900 mm steel water main crossing is not in service. Once these above noted improvements are completed, no other water main improvements are required until 2036 at which time the existing 900 mm diameter steel water main from the WTP to Highway 11A at Gaetz Avenue will require twinning.

In July 2004, the City entered into an agreement with the NRDWSC for the connection of a regional water supply pipeline connecting to the City distribution system.

4.2.5 Proposed Pressure Zones, Storage and Pumping Facilities

Figure 4.1 shows the proposed water distribution and storage system necessary to serve the study area including four additional pressure zones.

4.2.5.1 Sector A

The Water Treatment Plant Pressure Zone will be expanded to include Sector A. Water would be supplied to Sector A from connections to the NRDWSC Regional trunk and extension of the Taylor Drive trunk. Additional storage and pumping capacity would be provided from an expanded Glendale Reservoir and a proposed storage and pumping facility located in Section 3-39-27-W4.

4.2.5.2 Sector B

The East Hill Pressure Zone (EHPZ) can be expanded to accommodate developments in part of Sector B through trunk main extensions as shown in Figure 4.1. A second pressure zone, shown as the "Eastridge Pressure Zone", is required to service developments in the east part of Sector B, which rises higher toward Canyon Heights. Trunk main extensions, booster stations, and a storage reservoir will be required to service this new pressure zone. A third pressure zone (Canyon Heights PZ) would be required to serve the Canyon Heights and Forest Green country residential areas if needed.

4.2.5.3 Sector C

The East Hill Pressure Zone (EHPZ) can be expanded to accommodate developments within two quarter sections in the southwest corner of Sector C. The remainder of the sector would be served by the Eastridge Pressure Zone. Water would be supplied to the Eastridge PZ from the reservoir and booster station located in Sector B.

4.2.5.4 Sector D

The East Hill Pressure Zone (EHPZ) can be expanded to accommodate developments in part of Sector D through trunk extensions and expansion of the Lancaster Reservoir and pump station. The eastern part of Sector D would be served from the Eastridge PZ through trunk extensions from Sectors B and C.

4.2.5.5 Sector E

A new pressure zone (Burntlake PZ) is required for development of Sector E. Water would be supplied from an existing trunk in the Edgar subdivision and extension of the Taylor Drive trunk along Highway 11A. Booster pumps and a reservoir will be required to maintain adequate water flow and pressure. A higher pressure zone (Westridge PZ) and booster station would be required to serve the most westerly portion of Sector E.

4.2.5.6 Sector F

The Burntlake and Westridge Pressure Zones and associated reservoir and booster stations would be extended from Sector E to serve Sector F. Water would be supplied from extension of the Taylor Drive trunk along Highway 11A.

4.3 Wastewater System

The City has a general policy of providing trunk sanitary mains to service each quarter section of land. This will be accomplished utilizing gravity mains, lift stations and force mains in each of the proposed development sectors to allow for the conveyance of sanitary wastewater to the Wastewater Treatment Plant (WWTP). This concept is illustrated on Figure 4.2 (Sanitary Servicing).

4.3.1 Wastewater Treatment Plant

Wastewater treatment for the City of Red Deer is carried out at the treatment facilities located on Northland Drive adjacent to the Red Deer River. Sewage treatment was initiated in Red Deer in 1961 with the construction of lagoons. The first mechanical plant was constructed in 1973 with subsequent upgrades resulting in a 1982 capacity of 53,600 cubic metres per day.

The hydraulic capacity of the WWTP was reduced from 53,600 cubic meters per day to 33,000 cubic meters per day in 1999 when the plant moved from activated sludge treatment to the first stage of biological nutrient removal (BNR). The last stage of the biological nutrient removal expansion will be completed by 2006. It was decided to move to the BNR process as a proven performer in the field of wastewater treatment that could meet the new Alberta Environment guidelines that would be imposed on the plant in October of 2007. The biological nutrient removal process reduces the plant hydraulic capacity in order to achieve the lower limits required for phosphorous and ammonia nitrogen reduction.

The increased hydraulic capacity identified by 2006 from 33,000 cubic meters per day to 44,500 cubic meters per day is due to a required 3A bioreactor expansion in order to meet projected growth. Based on The City of Red Deer Wastewater Treatment Master Plan, the projected Wastewater Treatment Plant capacity is as shown:

Table 4-2: Projected Wastewater Treatment Plant Capacity

Period	Population	Plant Capacity
to 2006	75,000	33,000 cubic metres per day
2006 to 2025	96,000	44,500 cubic metres per day

The average-day flow in 1999 was 33,354 cubic metres. However, the maximum-day flow during that year was measured to be 57,567 cubic metres during July. This is mainly attributable to several extreme rainfall events and the related inflow/infiltration flows. In 2002, the average-day flow was 29,288 cubic metres with the maximum-day flow at 32,816 cubic metres. The plant will continue to be expanded as required to meet demand as development occurs in the proposed city growth sectors.

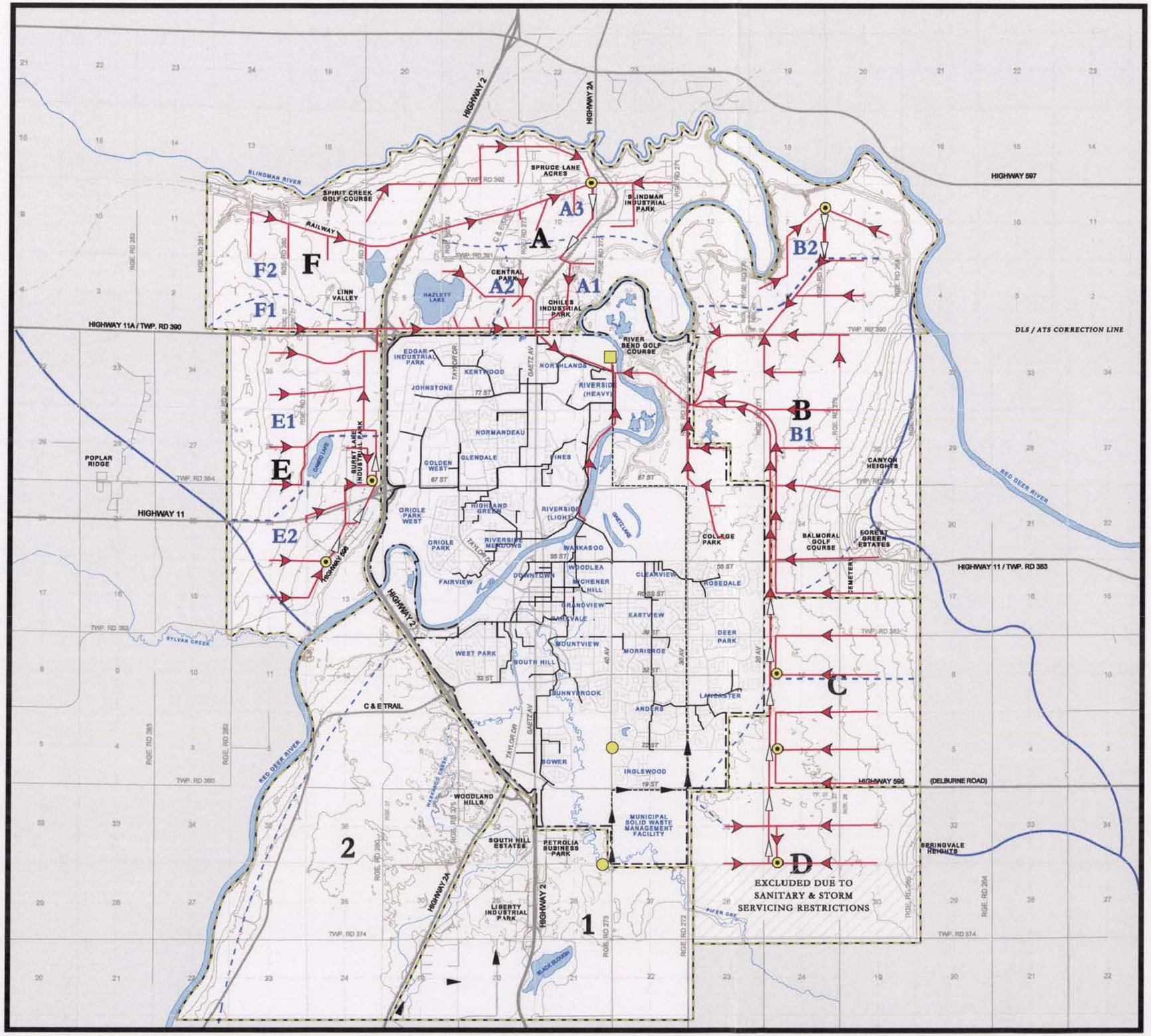
4.3.2 Existing Wastewater Collection System

Wastewater from all existing and proposed developments within the City of Red Deer boundary is collected via a gravity sanitary sewer collection system. The sanitary sewer trunk mains consist of 375 mm diameter to 1,200 mm diameter mains as generally noted on Figure 4.2. The collection system diverts all sewage to the wastewater treatment plant. Four quarter sections in the south part of the City have gravity collection systems discharging into a lift station and from this lift station, sewage is pumped via force main to the nearest gravity trunk. With extensions of existing trunk mains, all of the developable areas within the present City boundary can be serviced.

The present sanitary sewer collection system has sufficient capacity for dry weather flows and a component of wet weather flows. Under wet weather flow conditions, the capacity utilization progressively

SANITARY SERVICING CONCEPT

4.2



LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- **A & 1** SECTOR LABELS

EXISTING SANITARY SYSTEM

- EXISTING SANITARY SYSTEM (PIPE >300mm)
- EXISTING SANITARY FORCE MAIN SYSTEM
- EXISTING WASKASOO REGIONAL TRUNK SYSTEM
- WASTE WATER TREATMENT PLANT
- LIFT STATION

PROPOSED SANITARY SYSTEM

- PROPOSED GRAVITY TRUNK MAIN
- PROPOSED FORCE MAIN
- PROPOSED LIFT STATION

NOTE: TRUNK SANITARY SYSTEM REQUIREMENTS IN SECTORS 1&2 TO BE DETERMINED BY RED DEER COUNTY

TOPOGRAPHY

- MAJOR DRAINAGE BOUNDARIES
- MINOR DRAINAGE BOUNDARY
- **A1** MAJOR DRAINAGE BOUNDARY LABEL

CITY OF RED DEER
2004 GROWTH STUDY

MARCH 2005

SCALE 1:85,000

THE CITY OF Red Deer

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increases and hydraulic grade lines rise. As future developments proceed, improvements to the present collection system will be required to accommodate development.

A new 1050 mm sanitary trunk main, including a river crossing at the location of the existing siphon, must be constructed from the Wastewater Treatment Plant south along Riverside Drive to provide additional capacity for developing lands south of the Red Deer River, within the current City boundary. Other trunk mains north of the river have the capacity to service all existing and future developments within the present boundaries. A 750 mm trunk main, which currently is terminated at the intersection of Gaetz Avenue and Northland Drive can provide service to proposed developments north of the City limits. This main is capable of servicing approximately 650 hectares of land north of Highway 11A outside of the present City boundary.

4.3.3 Waskasoo Regional Wastewater System

In addition to the collection system servicing the developments within the present boundaries of the city, a regional system which was constructed in 1983, serves the Town of Penhold, the Red Deer Airport, the Hamlet of Springbrook and part of Special Study Area 1. It has been connected to the WWTP. The system consists of a combination of gravity mains, lift stations and force mains. Within the city, the regional system changes from a force main to gravity main at Lancaster Drive on 30 Avenue. The Waskasoo trunk main ties to the 1,200 mm diameter city trunk main at 77 Street on Riverside Drive (40 Avenue). The system downstream of the lift station, located approximately 1 kilometre south of 19 Street on 40 Avenue, has a design capacity of 155 litres per second. The City owns capacity in the Waskasoo Trunk for the section of main located downstream of the 30 Avenue / 61 Street intersection to WWTP, for servicing parts of Section 22, Section 23, and Section 27. The City's oversize design peak flow is 165 litres/second.

4.3.3.1 Sector A – Proposed Wastewater Servicing

Sanitary servicing for Sector A, as shown on Figure 4.2, is generally divided into 3 drainage areas. Area A1, located east of Highway 2A, is relatively flat, although the land generally slopes to the southeast and northeast from the east-west ridge located approximately 2 kilometres north of Highway 11A. The south part of Area A1 can be serviced with a new gravity trunk main along Northland Drive and through Section 3 from the intersection of Highway 2A and Central Park Road to the WWTP. This main would be oversized to accommodate flows from the north half of Area A1 and Area A3.

The north half of Area A1 will be serviced by gravity mains, a lift station located west of Highway 2A and a force main connecting to the gravity trunk main located at the intersection of Highway 2A and Central Park Road.

Area A2, located south of the east-west ridge and west of Highway 2A, is also relatively flat, with a general slope towards the south and southeast. Area A2 can be serviced utilizing an existing 750 mm trunk main, which currently is terminated at the intersection of Gaetz Avenue and Northland Drive. This main is capable of servicing approximately 650 hectares of land. The remainder of Area A2 would be serviced by collection mains connected to a new trunk main routed immediately north of Highway 11A, that would be designed to provide sanitary service for Sector E and part of Sector F.

Area A3, located north of the east-west ridge and west of Highway 2A, is relatively flat with the land sloping down to the northeast. Area A3 will be serviced utilizing gravity mains, a lift station and a force main connecting to the gravity trunk located at the intersection of Highway 2A and Central Park Road.

4.3.3.2 Sector B – Proposed Wastewater Servicing

With regard to Sector B, sanitary servicing is generally divided into 2 drainage areas. Area B1, located south of the proposed arterial roadway along the north side of Township Road 390, has a moderate slope down to the north and northwest from ridges running along the east and south Sector boundaries. All lands within Area B1 can be serviced by gravity mains connecting to the trunk main at the intersection of Northland Drive and 30 Avenue.

Area B2, located north of the road allowance along the north edge of Township Road 390, has a moderate slope down to the north and northwest. Area B2 can be serviced utilizing gravity mains, a lift station, and a force main extending to the trunk main at the intersection of Northland Drive and 30 Avenue.

Areas B1 and B2 will be serviced by a trunk main to be constructed along the Northland Drive alignment from the WWTP to 30 Avenue. The trunk mains located in 30 Avenue, 67 Street and 20 Avenue from Northland Drive to Ross Street will need to be oversized or twinned to accommodate wastewater from Sectors C and D.

4.3.3.3 Sector C – Proposed Wastewater Servicing

Sector C is relatively flat with the land sloping down to the southwest from a ridge running along the north and east boundary of the Sector. Sector C will be serviced utilizing a series of gravity mains, lift stations and force mains connecting to the gravity trunk main extended through Sector B to the intersection of Ross Street and 20 Avenue.

4.3.3.4 Sector D – Proposed Wastewater Servicing

Most of Sector D is extremely flat with the land sloping very gradually to the southwest from the north and east boundaries of the Sector. The north half of Sector D will be serviced utilizing a series

of gravity mains, lift stations and force mains connecting to the gravity trunk main extended through Sector B to the intersection of Ross Street and 20 Avenue. The south half of Sector D has been excluded due to restrictions identified in a report titled "City of Red Deer - Industrial Lands Servicing Study" prepared by Stantec Consulting Ltd. for the City of Red Deer in 2002[48].

4.3.3.5 Sector E – Proposed Wastewater Servicing

Within Sector E, sanitary servicing is generally divided into 2 drainage areas. Area E1, located north and west of Cameo Lake and north of Highway 11, is moderately flat with the land sloping down to the northeast from the west boundary of the Sector. Area E1 can be serviced by gravity mains connecting to the trunk main located in the northeast corner of the sector.

Area E2, located east and south of Cameo Lake, is moderately flat with the land sloping down to the east and southeast from the west boundary of the Sector. Area E2 will be serviced by a series of gravity mains, lift stations and force mains. The force mains will connect to trunk gravity mains in the Area E1.

Wastewater from Sector E will be directed to a new trunk main routed along Highway 11A and Northland Drive from the northeast corner of Sector E to the WWTP. This trunk main would be oversized to provide gravity sanitary service to the quarter sections in Sector F immediately north of Highway 11A.

4.3.3.6 Sector F – Proposed Wastewater Servicing

Sanitary servicing for Sector F is generally divided into 2 drainage areas. Area F1 is comprised of the quarter sections abutting the north side of Highway 11A, including the Linn Valley subdivision. Area F1 slopes down to the south and can be serviced by gravity mains connecting to a trunk main located in the southeast corner of the Sector F.

Area F2, comprised of the remaining lands in Sector F, slopes down to the northeast from the south and west from the west boundary of the Sector. Area F2 will be serviced utilizing a series of gravity mains, lift stations and force mains connecting to a trunk main located in the south east corner of the Sector F.

4.3.4 Stormwater Management

The existing stormwater management system is shown in Figure 4.3. The City has a general policy of providing trunk stormwater management facilities to service each quarter section. This will be accomplished utilizing stormwater storage facilities (e.g. dry ponds, wet ponds, wetlands) and gravity mains in each of the proposed development sectors to allow for the conveyance of stormwater to the

[48] Stantec Consulting Ltd. for the City of Red Deer, "City of Red Deer – Industrial Lands Servicing Study", 2002. Available from Engineering Services, City of Red Deer.

receiving water bodies (e.g. Red Deer River, Blindman River, Waskasoo Creek, Piper Creek and Sylvan Creek). This concept is illustrated on Figure 4.3.

According to the City of Red Deer Engineering Design Guidelines, the minor piped system is to be designed for the 1:5 year storm and the major overland system is to accommodate the 1:100 year storm.

Based on recommendations in the "City of Red Deer Industrial Lands Servicing Study", the design discharge rate to the Red Deer River and Blindman River will be based on a discharge rate of 0.0045 m^3/sec./ha. Restrictions will be placed on any proposed stormwater discharge to Waskasoo Creek, Piper Creek and Sylvan Creek to keep discharge to predevelopment flow rates, which are estimated to be as follows:

1 in 25 year storm	0.0013 m^3/sec./ha
1 in 100 year storm	0.0036 m^3/sec./ha

4.3.5 Existing Stormwater Collection System

The City of Red Deer's surface runoff from existing developments is transported through buried pipe systems to the Red Deer River, Waskasoo Creek and Piper Creek. This trunk system is depicted in Figure 4.3. Since 1993, the City has adopted the policy of restricting the stormwater discharges to the Red Deer River, Waskasoo Creek, and Piper Creek in order to limit potential damage associated with the increased rates of runoff from urban developments. Minor flows (runoff generated from storms having a return frequency of 5 years or less) are conveyed to the detention ponds and/or other receiving water bodies by a piped system. Major flows (runoff generated from storms having a return frequency of 100 years or less) are routed overland to the ponds and/or other receiving water bodies.

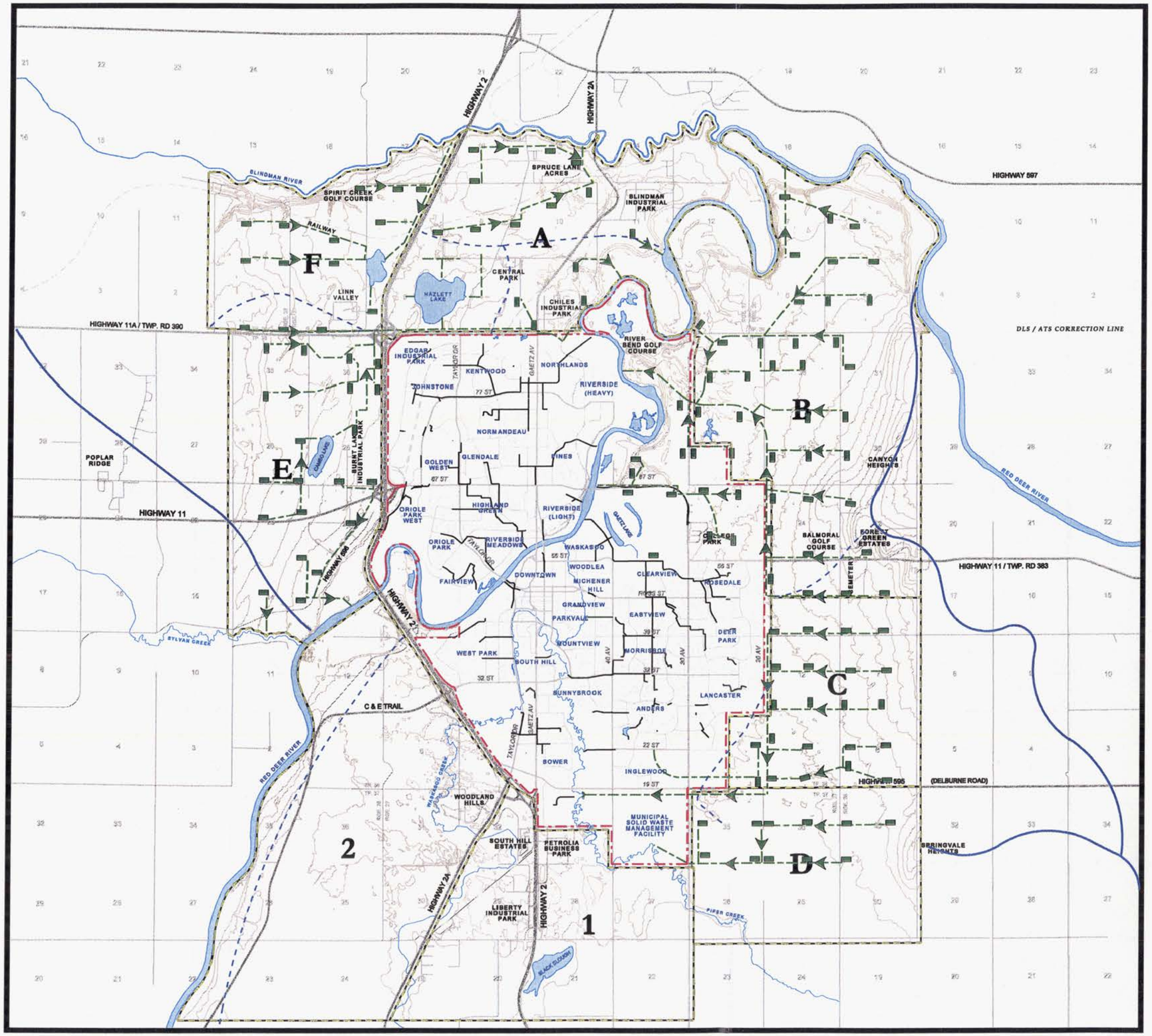
4.3.5.1 Sector A – Proposed Stormwater Management

As shown in Figure 4.3, storm sewer servicing for Sector A is generally divided into 3 drainage areas. Area A1, located east of Highway 2A, is relatively flat with a general slope to the southeast and northeast from a ridge running east-west approximately 2 kilometres north of Highway 11A. Area A1 will be serviced with a series of detention ponds and new gravity trunk mains discharging directly to the Red Deer River.

Area A2, located south of the east west ridge west of Highway 2A, is relatively flat with the land sloping generally to the south and southeast. Area A2 and part of Area A1 bound by Highway 2A, Highway 11A and the CPR can be serviced utilizing a series of detention ponds and gravity mains connected to a new trunk main, designed to provide storm sewer service for Sector E and part of Sector F, to be routed along Highway 11A and Northland Drive from

STORM SERVICING CONCEPT

4.3



LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- **A & 1** SECTOR LABELS

EXISTING STORM WATER SYSTEM

- EXISTING STORM WATER SYSTEM
- EXISTING STORM PONDS

PROPOSED STORM WATER SYSTEM

- PROPOSED STORM WATER SYSTEM
- FLOW DIRECTION
- PROPOSED STORM PONDS

TOPOGRAPHY

- MAJOR DRAINAGE BOUNDARIES
- MINOR DRAINAGE BOUNDARIES

NOTE: TRUNK STORM SYSTEM REQUIREMENTS IN SECTORS 1&2 TO BE DETERMINED BY RED DEER COUNTY

CITY OF RED DEER
2004 GROWTH STUDY

DECEMBER 2004 **SCALE 1:85,000**

THE CITY OF Red Deer

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Highway 2 to the Red Deer River. Hazlett Lake, located in the southwest part of Area A2, would be retained and potentially used as a stormwater storage facility

Area A3, located north of the east-west ridge west of Highway 2A, is relatively flat with the land sloping down to the northeast. Area A3 will be serviced utilizing detention ponds and gravity mains discharging to the Blindman River.

4.3.5.2 Sector B – Proposed Stormwater Management

Sector B has a moderate slope with the land sloping down to the north and northwest from a ridge running along the east and south boundary of the Sector. All lands within Sector B can be serviced utilizing a series of detention ponds and gravity mains discharging to the Red Deer River at a number of locations. The mains for all lands south of Northland Drive would be connected to a trunk main located at the intersection of Northland Drive and 30 Avenue.

4.3.5.3 Sector C – Proposed Stormwater Management

Sector C is moderately to relatively flat with the land sloping down to the southwest from a ridge running along the north and east boundary of the Sector. Sector C will be serviced utilizing a series of detention ponds and gravity mains discharging to Piper Creek by extending a gravity main along 19 Street, from Piper Creek to 20 Avenue.

4.3.5.4 Sector D – Proposed Stormwater Management

The majority of Sector D is extremely flat with a slight general slope down to the southwest from the north and east boundaries of the Sector. The north half of Sector D will be serviced utilizing a series of detention ponds and gravity mains discharging to Piper Creek. The south half of Sector D has been excluded due to servicing restrictions identified in the previously discussed "City of Red Deer Industrial Lands Servicing Study" prepared in 2002.

4.3.5.5 Sector E – Proposed Stormwater Management

For Sector E. storm servicing is generally divided into 2 drainage areas. Area E1, located north and west of Cameo Lake, is moderately flat with a general slope to the east and northeast from the west boundary of the Sector. Area E1 can be serviced by utilizing detention ponds and gravity mains connecting to a trunk main extending from the northeast corner of the sector, along Highway 11A and Northland Drive to the Red Deer River.

Area E2, located east and south of Cameo Lake, is moderately flat with the land sloping down to the east and southeast from the west boundary of the Sector. Area F2 will be serviced utilizing a series of detention ponds and gravity mains discharging to the Red Deer River and Sylvan Creek.

4.3.5.6 Sector F – Proposed Stormwater Management

With regard to Sector F, storm servicing is generally divided into 2 drainage areas. Area F1 is comprised of the quarter sections abutting the north side of Highway 11A, including the Linn Valley subdivision., Area F1 slopes down to the south and can be serviced by utilizing a series of detention ponds and gravity mains connecting to a trunk main extending from the southeast corner of the sector, along Highway 11A and Northland Drive to the Red Deer River.

Area F2, comprised of the remaining lands in Sector F, slopes down to the northeast from the south and west boundaries of the Sector. Area F2 will be serviced utilizing a series of detention ponds and gravity mains discharging to the Blindman River. A permanent water body, located in the east part of Area F2, would be retained and used as a stormwater storage facility.

4.4 Telephone Services

The 2000 Growth Study reported that, all sectors except for B, were rated evenly as servicing has been planned for in advance and the networks are in place to handle expansion in all areas.

4.5 Cable TV Services

The 2000 Growth Study reported that cable servicing to all internal development areas such as downtown, the northwest and southeast are in place and thus is readily available. Extensions into Sectors A and C are simple and also readily available. New sectors B, D, E and F will require additions to the trunk system and substantial upgrades to the network for high speed internet access.

4.6 Gas Services

Similar to other shallow utilities, as noted in the 2000 Growth Study, the gas service rating is based on the ease of servicing the new areas and the proximity of the main gas source to the City and the feeder system. The northwest, southeast, and downtown all scored high for serviceability. Similarly, Sector C scored high as it was easily accommodated through an extension of existing systems. The remaining sectors rated slighted lower, as they will require minor improvements to feeder mains, stations and some new mains.

4.7 Solid Waste

The existing solid waste facility that services the City of Red Deer and a portion of Red Deer County is located off 40 Avenue, immediately south of Delburne Road. Services to the City are provided by private contractors who are under contract to the City to service residential and commercial developments or under direct contract to industrial developments. Solid waste is picked up weekly and deposited to the waste disposal site. Within the County, for residential development, generally disposal is by residents, while commercial and industrial have private contractors who pick up the waste.

The new Solid Waste Disposal Site located in Section 34–37–27–W4 was commissioned in 2003. Design plans for the construction, operation and monitoring of the site including appropriate setbacks from residential developments in the southeast area of the City. Based upon the design of the facility and projected waste generation, it is anticipated the service life will be approximately 40 years. Changing technology, waste generation habits and new environmental standards will impact the future service life, but the proposed new facility should handle the solid waste disposal for development in the study area over the long term.

As noted previously, the south half of Sector D has been excluded from the developable area due to servicing restrictions. This area could be considered as a possible expansion site for solid waste disposal.

4.8 Transportation

Road networks are developed to safely and efficiently move traffic to its intended destination. These networks are created through a hierarchy of roads, each serving a particular function. As a result, each is assigned a functional classification within the transportation system resulting in design criteria such as, acceptable traffic volumes, required roadside development setbacks, design speed, and type of access control. The existing and planned City of Red Deer transportation system is shown in Figure 4.4.

Roads within the study area can be grouped according to two basic road classification systems. The first is a distinction between urban and rural. The second is based on function, format of access control, and design speed. These include the classifications of freeway, expressway, arterial, collector, and local. These classification systems were described in detail in the Transportation Association of Canada publication titled *Geometric Design Guide for Canadian Roads, Current Edition*. The Transportation Association of Canada (TAC) classification system has been adopted by the City of Red Deer.

Only the major roads, classified as freeways, expressways, and arterials are considered in this update of the Growth Study as they create the skeleton of the transportation network by providing service between principal areas.

The 2003/04 Transportation Plan Update has modelled the transportation system to the 115,000-population horizon and has identified the necessary staged improvements to the transportation network during this period. The City will continue to update the Transportation Study every 5 to 10 years, depending on the rate of growth.

4.9 Transit

The Transit and Special Transportation Study 2003/2004 was completed in July 2004 and accepted as the key planning tool for public transit services over the next 25 years. Key strategies to increase market penetration and increase the transportation mode split to conventional public transit service include route structure changes that maintain the central hub focus coupled with grid systems to provide quicker service to most key trip generators such as downtown; malls; schools; college; and key recreational areas. Satellite bus transfer stations will be considered in the longer term linking the entire city with a ring routes on major corridors. High frequency bus service will also be considered in the Gaetz Avenue Corridor in the longer term. Integration of conventional and specialized transit service will also be a key strategy structuring all public transit services together. Specific services to industrial and regional areas will be considered on a case by case basis and gaining partnerships to provide these services will continually be explored.

4.10 Electrical Services

In terms of electrical services, additional substations may have to be constructed in order to have adequate capacity to service the entire expansion area. Development into all sectors may require that the City of Red Deer electric utility purchase the existing AltaLink distribution systems. Figure 4.5 illustrates alignments and locations of existing electrical transmission facilities.

4.11 Police Services

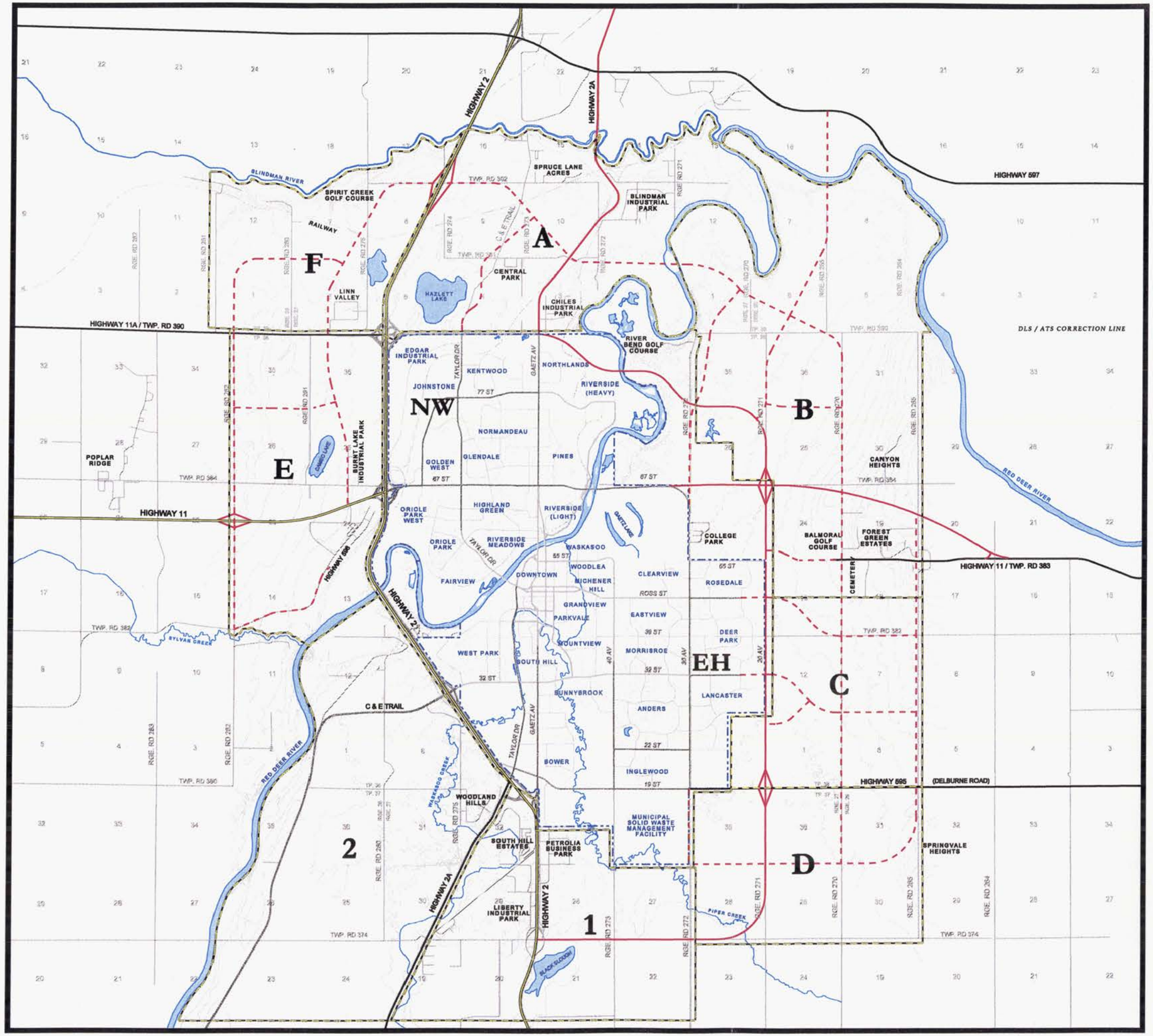
The level of service, response time, and the density of the population will impact police services to an area. Other than the downtown core, all new developments should be similar in density. As development gets further from the core (i.e. the location of the detachment office), satellite stations will be required to service the new growth sectors.

4.12 Emergency Services

The level of service, response time, and the density of the population will impact emergency services to an area. All new developments should be similar in density. As development expands into new growth sectors, satellite stations will be required to service these areas. The location and timing for construction of these facilities will be included in updates of the Emergency Services Master Plan.

TRANSPORTATION CONCEPT

4.4



LEGEND

- *EXISTING CITY BOUNDARY*
- *PROPOSED GROWTH STUDY SECTORS*
- **A & 1** *SECTOR LABELS*

EXISTING TRANSPORTATION NETWORK

- *EXISTING TRANSPORTATION NETWORK*
- *EXISTING FREEWAY*
- *EXISTING EXPRESSWAY*
- *EXISTING ARTERIAL*

PROPOSED TRANSPORTATION NETWORK

- *PROPOSED EXPRESSWAY*
- *PROPOSED ARTERIAL*

NOTE: TRANSPORTATION SYSTEM REQUIREMENTS IN SECTORS 1&2 TO BE DETERMINED BY RED DEER COUNTY

CITY OF RED DEER
2004 GROWTH STUDY

DECEMBER 2004 **SCALE 1:85,000**

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EXISTING ELECTRICAL TRANSMISSION FACILITIES

FIGURE 4.5

LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- TRANSMISSION RIGHT-OF-WAY
- A & 1 SECTOR LABELS
- POWER SUBSTATION

CITY OF RED DEER
2004 GROWTH STUDY

DECEMBER 2004

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4.13 Major Road, Water, Sanitary, and Storm Cost Estimates

The current city policy is to recover trunk water, trunk sanitary, trunk storm and major roadway costs by way of an offsite levy. For some sectors, trunk facilities are shared with other sectors. For example, the storm and sanitary trunks proposed to be routed along Highway 11A and Northland Drive to the WWTP or Red Deer River will provide service for portions of Sectors A, E, and F. Similarly, the Northland Drive/20 Avenue sanitary trunk will serve portions of Sectors B, C, and D. In these cases, only the cost to serve the area in question is included. The cost to over-size the line to serve other sectors is included in those sector estimates. On-site road and servicing costs are presumed to be similar for any of the Sectors and is not included in these cost estimates.

"Order of Magnitude" cost estimates for the proposed trunk facilities and major roadways are shown for each sector in Tables 4.3 through 4.8 and a summary of the sector cost estimates is shown in Table 4.9. Please note that it is only economically efficient to size trunk lines for enough service areas to last approximately 25 years. Beyond that timeframe, the trunk mains would be twinned to handle additional growth in these Sectors.

Table 4.3: Sector A – Order of Magnitude Cost Estimates

Item	Estimated Cost	Serviceable Area	Cost per Hectare
Water	$11,502,000	1,486	$7,700
Sanitary[1]	$8,571,000	1,486	$5,800
Storm[1]	$19,920,000	1,215	$16,400
Roads	$65,800,000	1,222	$53,800
Totals	**$105,793,000**		**$83,700**

[1] Note that the major storm and sanitary trunks along Highway 11A and Northland Drive will also serve Sectors E and F. The additional costs to oversize these trunks are $4.6 million and $ 1.9 million respectively.

Table 4.4: Sector B – Order of Magnitude Cost Estimates

Item	Estimated Cost	Serviceable Area	Cost per Hectare
Water	$23,421,000	3,007	$7,800
Sanitary[1]	$13,789,000	3,007	$4,600
Storm	$68,539,000	3,050	$22,500
Roads	$137,228,000	2,902	$47,300
Totals	**$242,977,000**		**$82,200**

[1] Note that the major sanitary trunk along Northland Drive and extending to 20 Avenue will also serve Sectors C and D. The additional cost to oversize this trunk would be $ 0.6 million.

Table 4.5: Sector C – Order of Magnitude Cost Estimates

Item	Estimated Cost	Serviceable Area	Cost per Hectare
Water	$11,148,000	1,434	$7,800
Sanitary[1]	$7,215,000	1,434	$5,000
Storm	$37,177,000	1,365	$27,200
Roads	$62,721,000	1,337	$46,900
Totals	**$118,261,000**		**$86,900**

[1] Note that the major sanitary trunk along 20 Avenue will also serve Sector D. The additional cost to oversize this trunk would be $ 1.1 million.

Table 4.6: Sector D – Order of Magnitude Cost Estimates

Item	Estimated Cost	Serviceable Area	Cost per Hectare
Water	$3,961,000	779	$5,100
Sanitary	$7,543,000	779	$9,700
Storm	$15,028,000	715	$21,000
Roads	$34,470,000	758	$45,500
Totals	**$61,002,000**		**$81,300**

Table 4.7: Sector E – Order of Magnitude Cost Estimates

Item	Estimated Cost	Serviceable Area	Cost per Hectare
Water	$13,189,000	1,666	$7,900
Sanitary[1]	$11,718,000	1,666	$7,000
Storm[1]	$33,208,000	1,460	$22,700
Roads	$53,699,000	1,477	$36,400
Totals	**$111,814,000**		**$74,000**

[1] Note that the major storm and sanitary trunks along Highway 11A and Northland Drive will also serve Sector F. The additional costs to oversize these trunks are $0.9 million and $0.8 million respectively.

Table 4.8: Sector F – Order of Magnitude Cost Estimates

Item	Estimated Cost	Serviceable Area	Cost per Hectare
Water	$7,867,000	1,083	$7,300
Sanitary	$8,635,000	1,083	$8,000
Storm	$17,835,000	970	$18,400
Roads	$29,371,000	948	$31,000
Totals	**$63,708,000**		**$64,700**

Table 4.9: Major Road and Trunk Servicing Cost Summary

Item	Estimated Cost	Cost per Hectare
Sector A	$105,793,000	$83,700
Sector B	$242,977,000	$82,200
Sector C	$118,261,000	$86,900
Sector D	$61,002,000	$81,300
Sector E	$111,814,000	$74,000
Sector F	$63,708,000	$64,700
Average Cost per hectare	$78,800	

As indicated, overall road and servicing costs appear to lowest in Sector F. It should be noted however that development of Sector F would depend on completion of Sector A for sanitary trunks and Sector E for water reservoir and pumping. Transportation network connections and soft services such as fire and police, in Sector F would also depend on contiguous extension of development from Sectors A and E.

Sector E road and servicing costs are also relatively low, primarily related to road costs. This is likely related to the slightly broader conceptual spacing of arterial roads within the sector and the lack of river and railway crossings.

Sectors A, B, C, and D are similar in cost, although the highest overall road and servicing costs are shown to be in Sector C. This is most notably related to the cost of extending storm service from Piper Creek and the costs of sanitary service extension from the WWTP.

It should be noted that there are portions of these sectors that can be serviced more economically that others. For instance, the south half of Sector A is more economical to develop than the north half, primarily due

to transportation conflicts with the railways and Highways 2 and 2A, as well as a river crossing in the north half. The south half of Sector A also presents opportunity to share trunk costs with Sector E.

Similarly, Sectors C and D can be more economically serviced following development of the southwest portion of Sector B as all three sectors rely on a sanitary trunk that extends through Sector B from the WWTP and water trunk extension from the WTPPZ through Sector B. Transportation in Sector B also relies on an additional river crossing as development progresses further north.

section

5

Growth Needs

section 5

Growth Needs

5.1 Land Use Demands

For the purposes of this study update, five land use categories have been identified for consideration of future growth and development patterns. These include the designations of residential, industrial, and commercial land uses. Also being recommended are the categories of future institutional (public service) land and natural areas/open space preservation. It is recommended that both institutional and open space land uses be considered as part of the study since together they make up over one third (37%) of the city's current land area. This sum is more than industrial and commercial land uses combined, suggesting the significance of institutional land and natural areas/open space preservation to the healthy functioning of the City of Red Deer. Major public service projects or major park projects (such as expansion of key educational facilities or the potential extension of the city's Waskasoo park system) to occur over the next 50 years would require substantial in-depth planning. Such research is beyond the scope of this study, however the need for land to be considered as a future possibility for such uses should be noted and investigated in a broad-based manner. Furthermore, all of these land uses, including institutional and natural areas/open space are identified in policy 1.5.3 of the City of Red Deer Strategic Plan. It specifically directs the City to "plan for an appropriate mix of parks, natural areas, residential, commercial, industrial, and institutional land uses."

Looking first at population projections for the city and anticipated land absorption rates; the following section of the study considers future population growth, the amount of land required in each of the five land use categories as the city reaches these growth levels, and the types of site criteria required or desirable in each land use category. This information will later be used to assist in determining appropriate directions and opportunities for future urban growth.

5.2 Population Projections 2004-2054

In August 2003, Parkland Community Planning Services together with the City of Red Deer's Land and Economic Development and Inspections and Licensing departments, as well as the Corporate Services Division, released revised city population projections. These projections were an update to previous forecasting completed by Nichols Applied Management which extended to the year 2025 and by UMA Engineering Ltd. (undertaken for the 2000 Growth Study) which projected population growth to 2050. These projections were updated following the release of the 2004 City Census information.

The 2003-2004 city population projections forecast growth from 2003 to 2031. It concluded that the previous work may have been too low in expectations for short term population growth. In analysing updated population numbers from recent city censuses, historic growth rates,

economic conditions, rates of national and provincial growth, and population projections for other similar Alberta communities, an annual average growth rate of 1.7% was derived as a realistic growth rate for Red Deer over the study period (28 years). Population projection results were broken into two segments. The first looked at annual projected populations in the short to medium term between the years of 2003 to 2011. In this instance, a 2.19 annual growth rate was identified. The second portion of the study calculated population figures for the longer term based on each five year period from 2011 to 2031 to coincide with federal census years. In this case, the rate was projected to drop to 1.7% and then to 1.6% average growth per year.

The results of the 2003-2004 population projections indicate that by 2011 the city population is predicted to reach almost 85,000, by 2021 it is expected to top 100,000 people and by 2031 it is forecast to be 119,328. The results of this population projection analysis and the anticipated growth rate were used to develop a specific year by year forecast to 2054 for use in this Growth Study update. These results suggest that by 2054 the city's population will exceed 161,900. Table 5-1 presents the population forecasts for 2004 to 2054 in detail.

Table 5-1: Projected population growth 2003 to 2031
(Updated November 2004)

Census Year	Base year 2003	2004	2005	2006	2007	2008	2009	2010	2011	2016	2021	2026	2031
Population	72691	75923	77669	79223	80569	81939	83250	84749	86444	94045	101814	110224	119328
Annual growth rates (one year intervals to 2011; thereafter 5 year)	Base year	4.45	2.30	2.00	1.70	1.70	1.60	1.80	2.00	1.70	1.60	1.60	1.60
Annual growth rate for the period 2003 - 2011	2.19 (19%)								86444				
Annual growth rate for the period 2011 - 2031	1.62 (38%)												119328
Annual growth rate for the period 2003 - 2031	1.79 (64%)												119328

It should be noted that population projections are a best estimate only. They are linked to many unknowns such as economic conditions, population mobility, immigration rates, and demographic shifts. They are useful in suggesting the rate at which the city may grow and in providing a general guide to future population levels but they are not an exact science. These projections need to be updated regularly as conditions change over time.

5.3 Population Thresholds

Because population projections are a best estimate of anticipated growth, which may or may not fluctuate as local conditions change, it can be problematic to link expected population levels to specific dates. Instead, using population thresholds (key population levels) in place of specific dates or years is a more workable technique. In the event that economic or development conditions are unexpectedly strong or weak in a certain period of time, tying growth to thresholds has the advantage of being focused on population levels rather than set years which may or may not reflect all external economic factors. For these reasons, it has also been the practise of the City's previous growth study, the transportation study, and other major engineering studies to use a similar approach of tying major initiatives or future undertakings to population thresholds rather than specific years.

Previously, the Growth Study thresholds were set at the 75,000, 90,000 and 115,000 population levels. These thresholds have been updated to reflect the increase in Red Deer's current population level, which has recently surpassed the 75,000 threshold (2004 municipal census) and to respond to robust future population forecasts. The thresholds now being considered within the Growth Study are:

- 90,000 population
- 115,000 population
- 160,000 population

Based on the 2004 population projections, at this time, these thresholds generally correspond to the years 2014, 2029, and 2052.

5.4 Land Demand

Before determining where the city may grow as it reaches the above thresholds over the next 50 years, it is necessary to calculate the amount of future demand generated by each of the five main land use categories identified within this study.

5.4.1 Residential Land

As of January 1, 2004, the city had approximately 520 hectares of vacant residential land available for development. Over and above this total, the city received approval effective on July 1, 2004 for annexation of an additional 830 hectares, 420 of which is developable residential land. This brings the total vacant available, developable residential land inventory within the city limits to approximately 940 hectares.

The figures pertaining to the amount of developable land in inventory are based on parcel amounts contained in signed development agreements with the City of Red Deer as of December 31, 2003. It is important to note that as we are now through the year 2004, the

Table 5-2: Residential Land Absorption Rates and Projections

(Calculated February 11, 2004; Updated August 2004)

A	B	C	D	E	F	G	H	I	J	K	L	M	
Year	Population June 30	Persons per unit	Population increase	No. of units	Minimum density target for new neighbourhood development (units per hectare	No. of new units	Estimated residential ha. developed Dec. 31 (actual up to previous year; for current and future years, use Column G/Column F)	Total residential ha. designated within City limits less constraint area	Annexed land addition	Constraint areas	Total developed residential ha. (January 1)	Total vacant residential ha. (January 1	
1995	59834	2.56		24056				3924					
1999	63940	2.50	4106	25618		1562	162	3773		150.9	2657	1116	
2000	65701	2.49	1761	26343		725	78	3773			2819	954	
2001	68308	2.49	2607	27461		1118	118	3773			2897	876	
2002	70593	2.46	2285	28644		1183	108	3773			3015	758	
2003	72691	2.40	2098	30274		1630	130	3773			3123	650	
2004	75,923	2.39	3232	31752	12.35	1478	120	4193	830.0	410.0	3253	940	Actual
2005	77,669	2.38	1746	32619	12.35	867	70	4193			3373	820	Projected
2006	79,223	2.37	1554	33412	12.35	793	64	4193			3443	750	
2007	80,569	2.36	1346	34123	12.35	712	58	4193			3507	686	
2008	81,939	2.35	1370	34851	12.35	728	59	4193			3565	628	
2009	83,250	2.34	1311	35560	12.35	709	57	4193			3624	569	
2010	84,749	2.33	1499	36356	12.35	796	64	4193			3681	512	
2011	86,444	2.32	1695	37243	12.35	887	72	4193			3746	448	
2012	87,913	2.31	1469	38039	12.35	797	65	4193			3817	376	
2013	89,408	2.30	1495	38854	12.35	815	66	4193			3882	311	
2014	90,928	2.29	1520	39687	12.35	833	67	4193			3948	245	
2015	92,473	2.28	1545	40539	12.35	851	69	4193			4015	178	
2016	94,045	2.27	1572	41409	12.35	871	70	4193			4084	109	
2017	95,550	2.26	1505	42258	12.35	849	69	4193			4155	38	
2018	97,079	2.26	1529	43030	12.35	771	62	4193			4223	-30	
2019	98,632	2.25	1553	43815	12.35	785	64	4193			4286	-93	
2020	100,210	2.25	1578	44615	12.35	800	65	4193			4350	-156	
2021	101,814	2.24	1604	45430	12.35	815	66	4193			4414	-221	
2022	103,443	2.24	1629	46260	12.35	830	67	4193			4480	-287	
2023	105,098	2.23	1655	47106	12.35	845	68	4193			4548	-354	
2024	106,779	2.23	1681	47967	12.35	861	70	4193			4616	-423	
2025	108,488	2.22	1709	48844	12.35	877	71	4193			4686	-493	
2026	110,224	2.22	1736	49738	12.35	894	72	4193			4757	-564	
2027	111,987	2.21	1763	50648	12.35	910	74	4193			4829	-636	
2028	113,779	2.21	1792	51575	12.35	927	75	4193			4903	-710	
2029	115,599	2.20	1820	52519	12.35	944	76	4193			4978	-785	
2030	117,449	2.20	1850	53481	12.35	962	78	4193			5054	-861	
2031	119,328	2.19	1879	54460	12.35	980	79	4193			5132	-939	
	121,118	2.19	1790	55404	12.35	943	76	4193			5211	-1018	

2033	122,935	2.18	1817	56364	12.35	960	78	4193			5288	-1095
2034	124,779	2.18	1844	57341	12.35	977	79	4193			5366	-1172
2035	126,651	2.17	1872	58335	12.35	994	81	4193			5445	-1252
2036	128,550	2.17	1899	59346	12.35	1011	82	4193			5525	-1332
2037	130,414	2.16	1864	60346	12.35	1000	81	4193			5607	-1414
2038	132,305	2.16	1891	61363	12.35	1017	82	4193			5688	-1495
2039	134,224	2.15	1919	62398	12.35	1035	84	4193			5770	-1577
2040	136,170	2.15	1946	63450	12.35	1052	85	4193			5854	-1661
2041	138,144	2.14	1974	64520	12.35	1070	87	4193			5939	-1746
2042	140,079	2.14	1935	65577	12.35	1057	86	4193			6026	-1833
2043	142,040	2.13	1961	66651	12.35	1074	87	4193			6112	-1918
2044	144,028	2.13	1988	67743	12.35	1092	88	4193			6199	-2005
2045	146,045	2.12	2017	68853	12.35	1111	90	4193			6287	-2094
2046	148,089	2.12	2044	69982	12.35	1129	91	4193			6377	-2184
2047	150,088	2.11	1999	71095	12.35	1113	90	4193			6468	-2275
2048	152,115	2.11	2027	72226	12.35	1131	92	4193			6558	-2365
2049	154,168	2.10	2053	73375	12.35	1149	93	4193			6650	-2457
2050	156,249	2.10	2081	74543	12.35	1168	95	4193			6743	-2550
2051	158,359	2.09	2110	75730	12.35	1187	96	4193			6838	-2644
2052	160,497	2.09	2138	76936	12.35	1206	98	4193			6934	-2741
2053	162,663	2.08	2166	78162	12.35	1226	99	4193			7031	-2838
2054	164,859	2.08	2196	79408	12.35	1246	101	4193			7131	-2937
Ave. population increase / year			1807		Ave. no. of ha. developed /year		78					

Notes:

1. Oriole Park West (7.18 du/ha), Kentwood Northeast (11.22 du/ha) and West Park Extension (11.79 du/ha) may build out at densities lower than the minimum target density of 12.35 du/ha. All other developing neighbourhoods will be achieving the minimum target density: Inglewood West (13.73 du/ha), Lancaster South (12.35 du/ha), Lonsdale (14.01 du/ha), Johnstone Crossing (13.09 du/ha) and Johnstone Park (15.28 du/ha). This will give an overall average density of 12.33 du/ha for all developing neighbourhoods. This is close enough to the minimum target density of 12.35 to be considered a negligible difference, especially when considering the fact that Oriole Park West NASP is due for an amendment in 2004, which may follow the transitional Guidelines & Standards to achieve the minimum target density.
2. The numbers of hectares of land developed and vacant, i.e. Columns H, I, L and M, are based on the development agreements signed at December 31 of the previous year. It is acknowledged that not all of the lands involved in those development agreements will be developed in the year they were signed or the next and that, because of the carry-over of undeveloped land to the next year, the actual land consumption for each year will lag behind the numbers projected here. However, this method achieves consistent calculations every year, and this is considered more important that the potentially insignificant "lagging behind" effect.
3. A portion of natural population growth and migration occurs into existing households (thus does not requiring new dwelling units). Existing sites may be redeveloped to higher densities to accommodate more population (e.g. new apartments in older areas, or, new secondary suites in existing homes) but these are not consuming vacant residential land. Information about these numbers may be readily accessed from the City. However, attempting to project the actual portion of natural population increase and migration that occurs into existing homes would be speculative at best. The effect of these processes is assumed to be relatively insignificant compared to the overall growth in the number of new dwelling units (Column G). Therefore, except for the fact that natural population growth is factored into the average household size (Column C), the effect of these processes is not being taken into consideration in calculating the rate of residential land consumption (Column H). The number of additional dwelling units (Column G) required each year is assumed to be developed on vacant residential land (Column M), and at the minimum density target (Column F) of 12.35 dwelling units per hectare (required as a standard in the Neighbourhood Planning & Design Guidelines & Standards effective January 2003). The minimum density target introduced in 2003 is consistently being achieved in all new neighbourhoods and those existing neighbourhoods which opted to transition to the new guidelines. It will be monitored and reviewed in the future.
4. The calculations show that, including the 2004 annexation of 420 developable hectares, in January of 2017 Red Deer will have insufficient land to meet the residential land needs for that year. This means that as of February 2004 the city had approximately 13 years of residential land within the City limits.

numbers reflect land in various states of "development readiness". Some of the vacant lands are currently under construction with housing to be occupied shortly, some lands are currently undeveloped but are subject to approved Neighbourhood Area Structure Plans which allow residential development in the near future, and some lands are many years away from development including lands in redevelopment areas or lands that are actively being farmed.

In order to determine how quickly the existing inventory will be absorbed and at what point future residential land demand will exceed the available inventory it is necessary to look at forecasts relating to housing growth. Table 5-2 calculates

the yearly population increase, the anticipated number of persons per housing unit and the number of units required to accommodate Red Deer's growing population.

For the purposes of Red Deer's analysis, the assumed density for future residential development has been set at 12.35 units per hectare. This is based on Red Deer's requirements for a density range of 12.35 to 17.30 units per hectare in all neighbourhoods approved after December 2002 (Policy 11.2 of the Municipal Development Plan). This range was put in place as part of the City's objective of applying "smart growth" principles in its urban development practices. The lower end of this density range was set using analysis of densities in established and developing neighbourhoods in the City of Red Deer. Throughout Red Deer's older neighbourhoods, densities may be as low as 10.9 dwelling units per hectare, while densities in neighbourhoods designed and built between 1998 and 2002 averaged 11.74 dwelling units per hectare. Red Deer neighbourhoods designed after December 2002 reflect the "smart growth" principles contained in the Neighbourhood Planning & Design Guidelines & Standards and will be expected to consistently reach higher densities within the 12.35 to 17.30 range. A constant density of 12.35 units per hectare was applied to this analysis as a means to reflect the maximum amount of new residential land that will be required for urban development. There is of course the possibility that less residential land will be absorbed if new neighbourhoods develop above the minimum requirements.

Actual numbers based on the city census indicate Red Deer had 72,691 people living in 30,274 units in 2003. This represents an average household size of 2.40 persons per unit. Figures released as of June 1, 2004 indicate the population had increased by over 4% to 75,923. The number of housing units was 31,685. These figures mean the average household size in the city had declined slightly to 2.396 persons per unit. Considering firstly, the decline being witnessed in average household size over the last few decades in Red Deer, together with the demographic and housing trends discussed in Chapter 3.0 of this report, the number of dwelling units required to house Red Deer's future population is expected to grow substantially. At the 90,000 population threshold, roughly one decade from now, close to 40,000 units will be needed to house Red Deer's population. By the 115,000 population, over 50,000 units will be needed. By the 160,000 population

almost 77,000 units will be needed. Given the amount of lead time required to ensure proper planning and to plan for and install necessary services, city and county policy indicates that the city should maintain a 20-30 year supply of developable land available within its boundaries[49]. The city falls short of this amount.

The projected number of units and the density of units per hectare can be applied to determine the absorption rate of future residential lands. This information is presented in Table 5-2 in detail and is summarized below in Table 5-3. These tables include land added to the city's jurisdiction during 2004 as a result of annexation.

Table 5-3: Residential Land Absorption and Demand Projections Summary

Population Threshold	Approximate No. of Units Land	Total Developed Demand	Incremental Land Demand	Cumulative Land	Land deficiency
90,000	39,687	3948 ha.	695 ha.	695 ha.	0 (+ 245 ha.)
115,000	52,519	4978 ha.	1030 ha.	1725 ha.	-785 ha.
160, 000	76,936	6934 ha.	1956 ha.	3681 ha.	-2741 ha.

All numbers reflect gross hectares

The residential demand figures being put forward are inclusive of all residential development potentially occurring within the City and study limits. In addition to the traditional single-family development, it also includes the future trends identified within earlier sections towards multi-family style housing as well as downtown infill projects. The figures being projected for the number of new units is a direct product of: the City's population projections, the forecasted number of persons per unit, and the minimum density per hectare set by City policy. Based on projected annual growth rates and expected density levels, these figures suggest that the city will run out of residential land before the 115,000 population threshold and will require close to 3,000 gross hectares for residential development at the 160,000 population threshold.

5.4.2 Public Service

Public service and/or institutional lands play a unique role in overall urban land consumption. Sharing characteristics with both residential and commercial land uses, public service lands are required by a range of diverse organizations, from Red Deer College to the local school authorities to the City of Red Deer Waste Management Facility to the Westerner Association to individual social care organizations.

[49] Red Deer County and City of Red Deer, *Intermunicipal Development Plan*, Policy 17.1.11, County Bylaw No. 10/99, City Bylaw No. 3244/99. 1999. Page 28.

In the 2000 Growth Study a rate of 2.5 percent of all new residential development was agreed upon for future public service land absorption requirements. This rate was also applied for the 2004 Study Update.

Based on the residential land requirement figures noted in the sections above, the following table, Table 5-4, depicts the public service gross land requirements at the study's set population thresholds.

Table 5-4: Public Service Land Demands

Population Threshold	Residential Land Demand	Cumulative Demand (2.5% of residential demand)
90,000	695 ha	17.37 ha
115,000	1725 ha	25.75 ha
160,000	3681 ha	48.90 ha

5.4.3 Industrial

At the beginning of 2004, Red Deer had approximately 60 hectares of undeveloped industrial land remaining in inventory which began diminishing quickly throughout the year. This total consists of undeveloped parcels located in Edgar Industrial Park and Riverside Heavy Industrial area. It includes both city owned and privately held land. Approximately 30 developable hectares was in private ownership. From an economic development point of view, there is some concern that privately held land may not be economically viable for owners to develop at current land values or that the private owners may not be motivated to sell or develop their remaining parcels. In addition, approximately 20-25 hectares of the remaining city owned lands are being held for municipal purposes and will not be made available for industrial development.

The potential for industrial development on the 50 hectares of land located within the waste management facility setback area immediately south of Delburne Road, has not been included within the inventory count. The land is not presently designated as industrial, issues around the preservation of natural areas within the vicinity would need to be addressed, and no specific decisions been made regarding use of the lands within the setback at this time.

Forecasts estimating future industrial land demand and land absorption predictions are presented in Table 5-5. These figures were derived based on studies completed in 2002 and 2003 by the City of Red Deer and PriceWaterhouseCoopers[50].

[50] The relevant studies are: *Industrial Land Absorption Forecast and Municipal Impact Study*, completed by PriceWaterhouseCoopers on October 8, 2002 for the City of Red Deer and an internal report entitled *Future Industrial Land Development Options* completed in 2003 by the City of Red Deer.

Table 5-5: Industrial Absorption Rates

Year	Population	Total Vacant Industrial Inventory in City	Annual City Developed Land (has)	Light Industrial Share	Heavy Industrial Share	Annual County-Developed Land (has)	Annual Total (Region)
1995	59,834	211.94	10.46			31.80	42.26
1996		201.49	9.73			21.86	31.59
1997		191.75	24.06			22.46	46.53
1998		167.69	12.68			19.00	31.69
1999	63,940	155.01	25.91			10.76	36.67
2000	65,701	129.09	23.29			27.97	51.25
2001	68,308	105.81	23.64			30.51	54.14
2002	70,593	82.17	7.50				
2003	72,691	74.67	14.67				
2004	75,923	60.00	33.50				
2005	77,669	26.50	33.50				
2006	79,223	-7.00	33.50	29.31	4.19	19.42	48.56
2007	80,569	-40.50	33.50	29.31	4.19	19.42	48.56
2008	81,939	-74.00	33.50	29.31	4.19	19.42	48.56
2009	83,250	-107.50	33.50	29.31	4.19	19.42	48.56
2010	84,749	-141.00	33.50	29.31	4.19	19.42	48.56
2011	86,444	-174.50	25.10	21.96	3.14	14.57	36.42
2012	87,913	-199.60	25.10	21.96	3.14	14.57	36.42
2013	89,408	-224.70	25.10	21.96	3.14	14.57	36.42
2014	90,928	-249.80	25.10	21.96	3.14	14.57	36.42
2015	92,473	-274.90	25.10	21.96	3.14	14.57	36.42
2016	94,045	-300.00	16.80	14.70	2.10	9.71	24.28
2017	95,550	-316.80	16.80	14.70	2.10	9.71	24.28
2018	97,079	-333.60	16.80	14.70	2.10	9.71	24.28
2019	98,632,	-350.40	16.80	14.70	2.10	9.71	24.28
2020	100,210	-367.20	16.80	14.70	2.10	9.71	24.28
2021	101,814	-384.00	11.20	9.80	1.40	6.48	16.19
2022	103,443	-395.20	11.20	9.80	1.40	6.48	16.19
2023	105,098	-406.40	11.20	9.80	1.40	6.48	16.19
2024	106,779	-417.60	11.20	9.80	1.40	6.48	16.19
2025	108,488	-428.80	11.20	9.80	1.40	6.48	16.19
2026	110,224	-440.00	11.20	9.80	1.40	6.48	16.19
2027	111,987	-451.20	11.20	9.80	1.40	6.48	16.19
2028	113,779	-462.40	11.20	9.80	1.40	6.48	16.19
2029	115,599	-473.60	11.20	9.80	1.40	6.48	16.19
2030	117,449	-484.80	11.20	9.80	1.40	6.48	16.19
Total			**707.94**	**619.45**	**88.49**	**447.65**	**1002.34**
Extrapolation							
2031	119,328	-496.00	11.20	9.80	1.40	6.48	16.19
2032	121,118	-507.20	11.20	9.80	1.40	6.48	16.19
2033	122,935	-518.40	11.20	9.80	1.40	6.48	16.19
2034	124,779	-529.60	11.20	9.80	1.40	6.48	16.19
2035	126,651	-540.80	11.20	9.80	1.40	6.48	16.19
2036	128,550	-552.00	11.20	9.80	1.40	6.48	16.19
2037	130,414	-563.20	11.20	9.80	1.40	6.48	16.19
2038	132,305	-574.40	11.20	9.80	1.40	6.48	16.19
2039	134,224	-585.60	11.20	9.80	1.40	6.48	16.19
2040	136,170	-596.80	11.20	9.80	1.40	6.48	16.19
2041	138,144	-608.00	11.20	9.80	1.40	6.48	16.19
2042	140,079	-619.20	11.20	9.80	1.40	6.48	16.19
2043	142,040	-630.40	11.20	9.80	1.40	6.48	16.19
2044	144,028	-641.60	11.20	9.80	1.40	6.48	16.19
2045	146,045	-652.80	11.20	9.80	1.40	6.48	16.19
2046	148,089	-664.00	11.20	9.80	1.40	6.48	16.19
2047	150,088	-675.20	11.20	9.80	1.40	6.48	16.19
2048	152,115	-686.40	11.20	9.80	1.40	6.48	16.19
2049	154,168	-697.60	11.20	9.80	1.40	6.48	16.19
2050	156,249	-708.80	11.20	9.80	1.40	6.48	16.19
2051	158,359	-720.00	11.20	9.80	1.40	6.48	16.19
2052	160,497	-731.20	11.20	9.80	1.40	6.48	16.19
2053	162,663	-742.40	11.20	9.80	1.40	6.48	16.19
2054	164,859	-753.60	11.20	9.80	1.40	6.48	16.19
Total			**976.74**	**854.65**	**122.09**	**603.07**	**1579.81**

Source: PWC Report "Industrial Land Absorption Forecast and Municipal Impact Study" October 2002

Table 5-5 indicates that there were approximately 212 hectares of industrial land available in the city in 1995. Over time, a strong national and regional economy, with many corporate expansions and demand for new industrial buildings coming to Red Deer has diminished this sum considerably. Industrial land uptake has varied from year to year, with some years exceeding 25 hectares of new development and some years as low as 7.5 hectares. Between 1995 and 2003, the average rate of industrial land absorption has been approximately 17 hectares annually.

Forecasts for 2004 to 2006 suggest rates of gross industrial land absorption of approximately 33.5 hectares annually. With only 60 hectares remaining readily available in the city for industrial development, these rates would indicate that the city will be out of industrial land supply (both city-owned and private ownership) as early as 2005.

The benefits of maintaining industrial land as part of the city's mixture of land uses are well articulated in research completed by the City of Red Deer in 2003[51]. These include: diversified tax base, employment generation, regional economic spin-offs and community corporate partnership opportunities. For these reasons, and based on policy direction from the City of Red Deer's Strategic Plan, this study assumes that the city will want to identify and designate future industrial lands within its boundary, preferably prior to the current inventory's depletion. The forecasted demand for future industrial land is shown in Table 5-6. Between 2004 to 2010 annual demand of 33.5 gross hectares is forecasted. This drops to 25.1 hectares annually between 2011 and 2015 and to 16.8 hectares and 11.2 hectares between 2016 and 2020 and 2021 and 2054 respectively. The forecasted declining rate of industrial growth is linked to factors operating both at the micro and macro economic levels; these factors include shifting economic climates, technology advancement, business practises, international trade patterns, as well as other global, national, and provincial tends.

In terms of threshold demand levels, the projected demand for industrial land, over and above the current inventory, is summarized in the table below. This table indicates that a zero hectare inventory of land for industrial uses will exist prior to the 90,000 population threshold and 250 additional hectares of land will be needed.

Table 5-6: Industrial Land Demand Thresholds (Gross) (in hectares)

Population Threshold	Incremental Demand	Cumulative Demand
90,000	+250	+250
115,000	+224	+474
160,000	+258	+732

[51] City of Red Deer, *Future Industrial Land Development Options* , 2003.

Due to its location on the Edmonton-Calgary corridor Red Deer is ideally suited as an industrial development location. Existing business/ industrial parks located in the City and in Red Deer County have been very successful owing in part to this locational advantage. The above calculations take into account the regional demand/attraction of industrial development. Previous analysis has shown that approximately 40 to 60% of all regional industrial land demand has occurred within the City of Red Deer. The remaining industrial development locates in county industrial development sites within the urban fringe area such as Burnt Lake Business Park, Blindman Industrial Park (including Chiles Industrial Park), Liberty Park (also known as South Hills), Petrolia Park, and Red Deer County Business (McKenzie Industrial) Park[52]. In forecasting the proportion of regional industrial land to be developed within the City of Red Deer over the next several years, this study anticipates strong growth for serviced land within the city limits. Therefore, this study has based industrial land absorption rates at a 60% share developing within the City of Red Deer and the remaining 40% share of regional industrial growth developing within county industrial areas. The numbers projected in the table above reflect the 60/40 split of industrial land absorption between the city and county.

The figures shown in Tables 5-4 and 5-5 also reflect both heavy industrial and light industrial land. Over the past 12 years, light industrial demand has made up 87.5% of all industrial land absorption, with heavy industrial comprising 12.5% absorption[53]. Based on the research of PriceWaterhouseCoopers, this split is expected to remain steady.

5.4.4 Commercial

The projection of commercial land demand in terms of type and size is closely linked to population. The area serviced by a commercial establishment is often larger than the immediate community in which it is located. This wider service region is referred to as the "trade area". The size and extent of the trade area will influence the amount and type of commercial development that could occur in the future, and will also influence the amount of land required to accommodate potential new development.

The trade area for Red Deer has been defined as roughly half the distance to Edmonton and Calgary, west to Rocky Mountain House and east to the Castor/Coronation area. In terms of population for 2004, the trade area has over 200,000 residents, with 75,923 of these residing in the City of Red Deer.

Historically, the amount of commercial land absorbed on a yearly basis has varied considerably. According to the 2000 Growth Study, approximately 3.1 to 3.7 square metres (33 to 40 square feet) of retail/

[52] PriceWaterhouseCoopers, *Industrial Land Absorption Forecast and Municipal Impact Study*, completed for the City of Red Deer, October 8, 2002.

[53] Ibid.

Table 5-7: Commercial Land Absorption Rates and Projections, December 2004

Year	Population	Population increase	Commercial demand based on 5.57 sq. m. /capita (60 sq ft)	Land (Ha) required based on 33% site coverage	Land absorption (Ha) for each threshold	Existing supply (Ha) less demand	Sum of floor space (sq m) for each threshold
1995	59,834						
1999	63,940	4,106					
2000	65,701	1,761					
2001	68,308	2,607					
2002	70,593	2,285					
2003	72,691	2,098				30	
2004	75,923	3,232	18,022	5.5			
2005	77,669	1,746	9,736	3.0			
2006	79,223	1,554	8,665	2.6			
2007	80,569	1,346	7,506	2.3			
2008	81,939	1,370	7,639	2.3			
2009	83,250	1,311	7,310	2.2			
2010	84,749	1,499	8,359	2.5			
2011	86,444	1,695	9,452	2.9			
2012	87,913	1,469	8,191	2.5			
2013	89,408	1,495	8,336	2.5			
2014	**90,928**	1,520	8,476	2.6	30.8	-0.8	101,693
2015	92,473	1,545	8,615	2.6			
2016	94,045	1,572	8,766	2.7			
2017	95,550	1,505	8,392	2.5			
2018	97,079	1,529	8,526	2.6			
2019	98,632	1,553	8,660	2.6			
2020	100,210	1,578	8,799	2.7			
2021	101,814	1,604	8,944	2.7			
2022	103,443	1,629	9,084	2.8			
2023	105,098	1,655	9,229	2.8			
2024	106,779	1,681	9,374	2.8			
2025	108,488	1,709	9,530	2.9			
2026	110,224	1,736	9,680	2.9			
2027	111,987	1,763	9,831	3.0			
2028	113,779	1,792	9,993	3.0			
2029	**115,599**	1,820	10,149	3.1	41.7	-42.5	137,571
2030	117,449	1,850	10,316	3.1			
2031	119,328	1,879	10,478	3.2			
2032	121,118	1,790	9,981	3.0			
2033	122,935	1,817	10,132	3.1			
2034	124,779	1,844	10,283	3.1			
2035	126,651	1,872	10,439	3.2			
2036	128,550	1,899	10,589	3.2			
2037	130,414	1,864	10,394	3.1			
2038	132,305	1,891	10,545	3.2			
2039	134,224	1,919	10,701	3.2			
2040	136,170	1,946	10,851	3.3			
2041	138,144	1,974	11,007	3.3			
2042	140,079	1,935	10,790	3.3			
2043	142,040	1,961	10,935	3.3			
2044	144,028	1,988	11,086	3.4			
2045	146,045	2,017	11,247	3.4			
2046	148,089	2,044	11,398	3.5			
2047	150,088	1,999	11,147	3.4			
2048	152,115	2,027	11,303	3.4			
2049	154,168	2,053	11,448	3.5			
2050	156,249	2,081	11,604	3.5			
2051	158,359	2,110	11,766	3.6			
2052	**160,497**	2,138	11,922	3.6	75.9	-118.4	250,361
2053	162,663	2,166	12,078	3.7			
2054	164,859	2,196	12,245	3.7			
Average increase / year		1807	10077	3.1	148.4		

service space per person was developed based on Red Deer's trade area population. This retail/service space was primarily for department store type merchandise, food stores, other retail and services that typically are found in larger commercial C2 or C4 developments. Actual building permit figures for the City of Red Deer, based on C1, C2, C3, C4 and commercial DC zoning, for the 2000-2003 period translate into approximately 11.15 square metres (120 square feet) of all commercial space developed per City resident[54]. This rate reflects the strong economy and growth that the City of Red Deer has experienced over the last five years and the draw from the trade area.

For the purposes of this study, in order to determine future warranted commercial space for the City of Red Deer, a conservative figure of 5.57 square metres (60 square feet) per city resident has been selected to reflect the projected growth of larger commercial developments only. Based on one-third site coverage, this figure is multiplied by a factor of three to determine the commercial land area required, as shown in Table 5-7.

While there remain many opportunities for infilling of smaller commercial development along the Gaetz Avenue corridor, throughout the downtown, and in the Riverlands area, there is limited new large scale commercial land available. Approximately 30 hectares of vacant land or a 10 year supply is presently available for larger types of commercial development within Red Deer. While it is recognized that smaller and remnant parcels will continue to accommodate infill development, Table 5-8 details the projected commercial land needs at the three population thresholds against the existing commercial land inventory.

Table 5-8: Commercial Space and Land Demand (in Hectares)

Population Threshold	Land Demand	Land in Inventory	Commercial Space (Sq. m)
90,000	31	-1	101,693
115,000	42	-43	137,571
160,000	76	-119	250,361
Total	149	-119	489,625

From Tables 5-7 and 5-8 it is evident that the current vacant allocated commercial land inventory will be absorbed by the time the City reaches a population of 90,000 in approximately 2014. Between the 90,000 to the 115,000 population threshold there will be a need for over 40 hectares of additional commercial land and between the 115,000 to the 160,000 threshold the need will have increased to 120 additional

[54] This calculation reflects C1, C2, C3, C4 commercial land use districts as well as Direct Control land use districts.

hectares for new commercial development. Over this period the average absorption is 3.1 hectares and over 10,000 square metres of commercial space per year.

In order for the City to maintain a minimum 25 to 30 year supply of developable commercial land (equivalent to 75 to 90 hectares of land) as directed within city-county policy (Intermunicipal Development Plan) the above analysis indicates that additional commercial land will be required prior to the City reaching the 90,000 population threshold. These lands will be required to meet demands created by a growing city population and an ever increasing regional trade area. With regard to large new commercial sites, to ensure that property is available at economic market values and to avoid complete depletion of this segment of the commercial inventory, lands should be designated well in advance of expected development.

In addition to more commercial land being required, it is important to note that different types of future commercial have differing parcel size requirements. These various "types" of commercial developments are described below.

5.4.4.1 C1/C1A Downtown Retail

The land use designations of C1 and C1A are found within the downtown core. Based on the fact that the downtown has excellent road access, public transit service, and a good pedestrian environment, these districts are designated as the primary office development area of the city with provision for a full range of commercial, retail, civic, and professional office services. Most retail uses reflect traditional street level development with individual storefronts while office and professional services are generally provided by larger multi-floor building structures. Redesignation of the former rail lands has provided some limited large scale commercial developments that have been able to provide significant on-site parking. Anticipated (re)development of the Riverlands area will facilitate additional commercial opportunities in the form of new mixed use commercial/residential developments with strong pedestrian and arts/culture elements. Although parcel size will range from typical small storefront businesses to large multi-tenant developments, most would likely be in the form of condominium developments in order to capitalize on the economies of scale regarding parking requirements and pedestrian enhancements.

5.4.4.2 C3 Neighbourhood Convenience Commercial

Neighbourhood Convenience Commercial is typically developed as a small strip plaza, often containing less than five stores, intended to serve the day-to-day local commercial needs of adjacent residents. The plaza is typically located on a collector roadway and anchored by a "convenience" store with other probable uses being a gas bar facility, personal care services such as a spa or hairdresser, and/or medical offices. Maximum size of these sites would be 0.6 hectares

(1.0 acre). The service area for this type of commercial centre would be approximately a one kilometre radius being equivalent to one C3 site per 2 or 3 neighbourhoods (quarter sections).

5.4.4.3 C2 District Commercial Centre

District Commercial Centres are intended to provide service centres primarily for a variety of retail shopping, but also to include medical offices and dwelling units as secondary functions. These are typically built in the form of a shopping centre located in a residential neighbourhood at the intersection of a collector and arterial roadway that serves the daily to weekly needs of persons residing within two to three kilometres of the site. Most district commercial centres are anchored by a full line grocery store, although some could have a large drugstore or specialized food store as an anchor tenant. Other typical uses found in these centres include a liquor store, a variety of eating establishments (fast food, restaurant, coffee shop), medical or veterinarian offices, gas bar, movie rentals and hair salon. The maximum size of a District Commercial site is 3.0 hectares (7.4 acres). These centres are usually open-air plazas developed in single "L" or "U" shaped building footprints with individual storefront entrances.

5.4.4.4 C2 Regional Shopping Centre

A regional shopping centre is a large shopping centre, also referred to as a "shopping mall" that serves large urban areas, as well as the surrounding regional, urban, and rural communities. Anchors would include traditional full-line department stores, discount department stores and a large concentration of specialty apparel stores. The City of Red Deer Land Use Bylaw indicates that regional centres also permit limited amounts of offices, personal services, and dwelling units as secondary functions. A typical regional centre is enclosed, may have multiple levels, and has parking that surrounds the outside perimeter. Regional shopping centres are located along arterial roadways.

More recently, some C2 Regional shopping sites have taken on the form of larger multi-tenant developments which share large common parking areas and joint site access. These sites are often referred to as "power centres". They are dominated by a combination of freestanding anchor "big-box" stores, warehouse clubs, discount department stores, specialty stores that offer significant selection in a particular merchandise category or multi-tenant buildings with individual storefronts and entrances. Power centres serve sections of, or entire urban areas, as well as surrounding rural communities.

5.4.4.5 C4 Major Arterial Commercial Areas

Major Arterial Commercial Areas are comprised of extensive mixed use commercial development centred along a city's major corridors. The general purpose of this district, as noted in the City of Red Deer Land Use Bylaw, is to facilitate the development of trade and

service related to automotive transportation, the automobile traveller, and other commercial land uses which are built at low densities. Major arterial commercial areas generally service the city and the region as a whole. Developments could be stand-alone sites or be multi-tenant developments on larger sites. Typically they are comprised of a variety of major commercial anchors such as major automotive stores and repair, home improvement centres, electronics retailers, department stores, and major restaurant and fast food establishments. Other major commercial retailers could include large drugstores or other discount or specialty stores selling items such as apparel, home improvement, furnishings, or sporting goods. Hotels, motels and related meeting rooms and convention facilities are also found in these areas. While a large variety of development formats are possible, most buildings are freestanding and, if part of a multi-tenant building, each are developed with individual storefronts and entrances and share common parking.

It is important to note that there are variations on these basic types of commercial centres with respect to size and tenant composition. These definitions are presented as "typical" for each centre, and are not meant to encompass the characteristics of all centres. It should also be noted that the form of future commercial centres will evolve into developments that are more comprehensively designed and integrated with adjoining land uses, particularly if the adjacent use is a residential community. The principles of sustainability now being implemented by the city will take into account fiscal, social and environmental elements and will be applied in a manner that would create healthy work/live environments and combine commercial developments as part of a community's gathering space in harmony with public facilities and services.

Future major commercial centres could take on the form of mixed use developments integrated with residential and public use components to reflect a "main street" look. More than one commercial centre could be located at strategic transportation nodes, such as Gaetz Avenue and Highway 11A in Sector A (+/- 30 hectares), 67 Street and 20 Avenue adjacent to Sector B (+/- 55 hectares), and 20 Avenue and Delburne Road (+/- 30 hectares) in Sector C.

5.4.4.6 Future Commercial Land Projections

For the purposes of this study to determine the amount of commercial land required, site coverage of three times for Downtown development and 33% for all other types of retail/service development was assumed based on existing land use bylaw regulations. The use of the upper limit is important if Red Deer is to maintain sufficient lands for new development and permit some choice of sites.

At the 90,000 population threshold:

- Three to four additional C3 neighbourhood convenience plazas would be required;
- Two or three C2 district centres could be required, one of which could alternatively take the format of a C2 regional, a C4 arterial commercial power centre to accommodate "big box" types of development, or an "urban village", offering mixed use residential/ commercial developments, work/live environments, community gathering places and integrated with an adjoining residential neighbourhood.
- Further, approximately five additional hectares of retail/service space could be developed/redeveloped in the Downtown and Riverlands areas.
- In total, 101,693 square metres (1.09 million square feet) of commercial space will be absorbed within this threshold, totalling more than 30 hectares.

By the 115,000 population threshold:

- Four to six more C3 neighbourhood convenience plazas,
- A combination of three to four more C2 district and/or C4 arterial commercial centres,
- An expanded C2 regional centre or its equivalent in the form of a "commercial urban village"; and
- Another 5 hectares of commercial retail/service space in the Downtown and/or Riverlands would also be warranted.
- In total, 137,571 square metres (1.48 million square feet) of commercial space will be absorbed during this threshold, totalling approximately 42 hectares of land.

By the 160,000 population threshold:

- While in many respects it is quite distant forecasting to provide a projection of anticipated commercial development by the 160,000 population threshold, a best estimate indicates that; an additional nine to ten C3 neighbourhood convenience plazas would be required,
- Six to eight C2 district and/or C4 arterial commercial centres,
- And at least one new or expanded "commercial urban village" type of large scale service centre is required.
- The Downtown and Riverlands areas would be built-out.
- In total, 250,361 square metres (2.69 million square feet) of commercial space will be absorbed, totalling over 75 hectares of land.

5.4.5 Open Space/Natural Areas

Essentially, this category represents the 10% reserve dedication on all developed land. Even in cases where cash in lieu is provided, for instance in commercial or industrial areas, this cash is often used to purchase other open space or park areas and therefore can be considered part of an overall 10% figure on all developed land. Table 5-9 presents total Municipal Reserve dedication at the various population thresholds (as these numbers are based on gross land calculations, actual reserve owing at the time of subdivision may vary from this estimate).

Table 5-9: Total Gross Land Demand by Use (new land) and Municipal Reserve Dedication, (in Hectares)

Population Threshold	Residential	Industrial	Commercial	Public Service	Total demand	Reserve Dedication (10% of all new development)
90,000		250	1	17	268	27
115,000	785	474	43	43	1345	135
160,000	2741	732	119	92	3684	368

Over and above the 10% municipal reserve dedication, the city may be looking at preserving key environmental areas (as environmental reserve or park/open space system). As these environmental areas often take the form of escarpments, ravines or wetlands, many are already identified within the context of this Growth Study update as "non-developable" land. Under the Municipal Government Act, environmental reserve is typically comprised of wetlands/water courses, escarpment and ravine, flood ways or creek areas. After review of the lands presently within the city and within the study boundary particularly significant natural sites have been noted through assessment by The Recreation, Parks, Recreation, and Culture Department and Parkland Community Planning Services. This assessment identified the significant unprotected natural areas surrounding the city of most pressing priority for preservation as including: the Hazlett Lake area, Michener Centre Lands, College Park treed area, treed area in Glendale, Riverside Heavy treed area and wetlands, wetlands/watercourse on Sections 35 and 26, the wetland at 40 Avenue and 19 Street, Burnt Lake environmental areas, and the Bower lands[55]. It is expected that some or all of these sites will be preserved as natural/open space. Some of these sites may be eligible as environmental reserve at the time of subdivision. Others may be preserved, if possible, through other private or public means. The significant environmental areas listed above which are presently within

[55] City of Red Deer, Recreation, Parks, and Culture Department and Parkland Community Planning Services, Memo on Red Deer's Unprotected Natural Areas, dated June 24, 2004.

TREE & WETLAND NATURAL HABITAT AREAS*

FIGURE 5.1

LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- A & 1 SECTOR LABELS
- PARK LANDS
- TREED AREAS+
- WETLANDS & SEASONAL STREAMS++
- HABITAT AREA NOT MAPPED+++

* INFORMATION FROM THE CITY OF RED DEER RECREATION, PARKS AND CULTURE DEPARTMENT INTEGRATED ECOSPACE (NATURAL HABITAT) MANAGEMENT AREA MAP (1995) (UPDATED 1998; MINOR UPDATES 2004)

+ PRIVATE
++ PRIVATE (INSIDE CITY - PUBLIC & PRIVATE)
+++ GROWTH STUDY AREAS CURRENTLY BEYOND LIMITS OF THE NATURAL HABITAT MAP

CITY OF RED DEER
2004 GROWTH STUDY

DECEMBER 2004 SCALE 1:85,000

THE CITY OF Red Deer

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the study area (but lay outside the city boundary) include approximately 162 hectares of land. Additional lands which should be preserved may also be identified in the future as more thorough biological and environmental analysis is completed. Figure 5.1 presents potential preservation/conservation lands.

5.4.5.1 Steering Towards a Regional Approach to Conservation

Nationwide there are presently numerous initiatives to develop natural habitat conservation plans that extend beyond immediate municipal boundaries. This is partly due to the fact that natural features and associated wildlife do not confine their activities to set boundaries and further that natural processes such as drainage do not follow municipal boundaries. Interconnectivity provides for a healthy ecosystem[56].

To help sustain a healthy natural system, provisions should be considered in future planning to allow for conservation of adequate surrounding natural areas in the urban/rural interface. This is particularly needed in sectors that have experienced a high degree of concentrated development and agricultural activities over time, which in turn results in diminished habitat and fewer remaining conservation opportunities.

Efforts aimed at natural habitat conservation may need to be expanded or enhanced as the city grows. Previous or existing examples of such work include the following:

- A regional tree and wetland inventory evaluation process (with direction from the Red Deer Environmental Action Plan, 1995)[57];
- the City's Ecospace (Natural Habitat) Evaluation Process for all habitat sites within the city and surrounding area for 194 square kilometers/75 square miles;
- Biodiversity surveys of plants and animals and;
- Contact with regional area landowners (e.g. mosquito control treatments) relating to environmentally sensitive wetlands.

To help consolidate much of this work and steer towards a regional approach to conservation, a regional conservation plan is being considered for the area surrounding the city[58]. The plan would take a measured and longer-term approach, working in full cooperation with landowners who currently preserve natural habitat. The proposed plan would be carried out potentially with Red Deer County, private landowners, developers and other interested parties. The plan would investigate the establishment of innovative methods for purchasing,

[56] Community Services, City of Edmonton. *Conserving Edmonton's Natural Areas – A Framework for Conservation Planning in an Urban Landscape.* Technical Report. Alberta Environmental Network; 2001.

[57] City of Red Deer, *Canadian Biodiversity Strategy Re: Red Deer Environmental Advisory Board* 1994, and Red Deer Environmental Action Plan (1995).

[58] The City of Red Deer, *Discussion Paper on Environmental Initiatives.* 2004.

swapping and/or leasing natural areas and establishing conservation agreements (easements) with a focus on landowner compensation and incentives to preserve additional natural areas in-perpetuity.

The results of a regional approach to conservation would ensure:

- An exchange of biodiversity from surrounding habitat for the long-term sustainability of the Waskasoo Park system[59];
- Opportunities for an ongoing supply of natural areas and ecological reserves for incorporation into new parks as the city expands;
- Improved air quality due to tree preservation;
- Protection of the wetlands, creeks and seasonal streams sustaining the river watershed;
- Retention of wildlife corridors and;
- Recreation, aesthetic, and health benefits and values for people in the region.

5.4.6 *Total Land Requirements*

Table 5-12 presents the total gross land demand, among all identified land uses, at the 90,000, 115,000 and the 160,000 population thresholds.

Table 5-12: Total Gross Land Demand (in Hectares)

Population Threshold	Residential	Industrial	Commercial	Public Service	Reserve Dedication	Environmental Areas	Total Demand All Uses
90,000		250	1	17	27		295
115,000	785	474	43	43	135		1480
160,000	2741	732	119	92	368	162	4214

5.5 Land Use Site Selection Criteria

Having projected the amount of land required up to the 160,000 population threshold in the five land use categories, it is now necessary to consider the site criteria required within each land use category. Site criteria simply refers to the preferred attributes of a site for a particular land use. For example, industrial land is best sited where it can easily access highway transportation routes. Whereas, residential land may be better suited to land that is closer to amenities such as schools, recreation facilities, and shopping. While not all criteria can be met in every single instance, the site criteria described within this portion of the report will be used to analyze the most suitable future growth areas for the City of Red Deer. Please note that some commercial development sites will require further study to determine exact size, location, phasing, access and related issues, this

[59] The City of Red Deer, *City of Red Deer Waskasoo Park Master Plan*. 1982, and the City of Red Deer and District Ecospace (Natual Habitat) Evaluation Process (1996).

detail would occur at the Major Area Structure Plan statutory planning process level.

There are some criteria that are common among all or almost all land uses, as a prerequisite for development. These types of criteria will be presented first followed by more unique or specific criteria demands of each land use.

5.5.1 Servicing Criteria

Future industrial, residential and commercial land uses will require land that is readily and efficiently serviceable with hard services, including:

- Water Supply
- Sanitary Sewer
- Storm Sewer
- Electrical Services
- Cable TV, Phone, Gas
- Solid Waste Collection

Public Service land uses, such as major educational or medical facilities, would also generally require full access to these services. Areas that will not be readily serviceable with such utilities within the 90,000, 115,000 or 160,000 thresholds will be inappropriate for these types of future development.

5.5.2 Transportation Criteria

While the size and type of roadway or transportation corridor required may vary by land use, in order to facilitate future industrial, residential, commercial, or public service development, access to a suitable transportation network is essential. Included also with transportation criteria is the public transit system. Provision of bus service to future development areas should be considered as a preferred criteria, as should the existence of other networks for alternative forms of transportation such as walking or biking paths.

5.5.3 Policing and Emergency Services

Because safety is paramount whether one is at work, at play, out shopping, or at home, the ability to provide effective policing and emergency services response is an important consideration for all types of future development. Inaccessible or more distant locations will rank lower for this criterion than sites with closer proximity to existing fire, ambulance, and police response centres.

5.5.4 Available Land Mass

The amount of land or critical mass required for feasible, efficient development will vary depending on the type of land use. This issue

will be most significant with industrial land and new residential neighbourhoods which require substantial area but also substantial upfront development costs. Major C2 or C4 commercial sites will require large single multiple tenant development sites in the range of 8- 50 hectares or larger and will be developed as commercial villages integrated with residential neighbourhoods rather than linear commercial strip development along a major transportation corridor.

5.5.5 Additional Residential Criteria

In addition to the general criteria noted above, future residential land should also consider site criteria such as:

- Suitable setbacks, screening, or buffering from nuisance sources (meaning sources of noise, fumes, dust, smoke, light or other such factors). Examples of nuisance sources may include major highways, rail lines, or industrial development.
- Limited encumbrances by oil/gas wells.
- Being located close to built amenities such as schools or recreation facilities.
- Ability for amenities to develop within the neighbourhood to achieve sustainable development principles (e.g. meeting place, local shopping, schools, recreation facilities).
- Proximity to natural features/amenities (e.g. natural areas or parks).
- Opportunities for effective multi-modal transportation, meaning not just a suitable road network but also public transit, biking lanes or trails, walking paths.
- Close to daily/frequent needs (e.g. churches, medical offices)
- Ability to respond to the emerging or current development trends as detailed in Section 3.0 of this report.

5.5.6 Additional Industrial Criteria:

Site criteria specific to industrial land includes:

- Visible location to ensure a business profile within the community.
- Access to major highway corridors for movement of goods.
- Proximity to major employment area to allow for grouping of like businesses and business service providers
- Proximity to employee base and easily reached by various transportation modes to ensure access by all potential employees.
- Setbacks or buffering from residential development to prevent land use conflicts which could curtail or limit industrial activities or expansions.
- Rail access is a site requirement for some types of industrial businesses such as companies that receive or ship products by train.

- Development controls in place that are compatible with the various types of industrial development proposed to be undertaken. Simply put, this means land should be available for some heavy industrial development compared with other areas which allow light industrial development.
- Opportunity for clustering of similar industrial businesses.
- Soil conditions suitable to industrial development.
- Site marketability and potential for re-sale of sites as industrial businesses change, move or expand and are replaced by other industrial users.

5.5.7 Additional Commercial Criteria

Commercial site criteria involves:

- Proximity to major employment area to allow for grouping of like businesses and business service providers
- Proximity to employee base and easily reached by various transportation modes to ensure access by all potential employees.
- Large non-linear sites preferred to allow development of "commercial village" or "main street" concepts;
- Integration with adjoining residential neighbourhoods allowing for mixed use residential/commercial developments and community gathering facilities and/or amenities;
- Proximity to areas of sustained population growth;
- Located at or near major transportation nodes;
- Arterial road access;
- Commercial service area to target and include regional trade area;
- Clustering of C2, C3 and/or C4 commercial sites

5.5.8 Additional Public Service Criteria

Given that the public service land use category covers a very wide range of types of development from major educational or medical facilities to major public works sites to recreation sites to civic development projects, it is difficult to pinpoint any additional specific criteria beyond those noted under the general site requirements.

5.5.9 Open Space/Natural areas

Land designated as open space and natural areas will obviously not require the types or levels of servicing demanded by industrial, commercial, residential and most public service uses. Included in this land use category is the protection of environmental and natural areas and the addition of future city park and recreational space. Sites containing significant natural or environmental features will be of

highest priority as will sites suitable for meeting community recreational needs such as walking trails, sports fields, built facilities or passive recreation.

5.6 Criteria Evaluation

Much of the desirable or mandatory site criteria required for the development of various types of land use remains unchanged from the 2000 Growth Study. Therefore, the current study update reviewed the criteria ratings of the various sectors as identified in 2000. New information or additional observations related to the advantages or disadvantages of any sector for particular land uses are noted in the updated study.

In 2000 in order to identify the preferred sectors for residential and industrial growth respectively, a method of evaluation was established. It considered all aspects of growth ranging from infrastructure costs, servicing efficiencies to intangibles such as proximity. It also needed to be unbiased and represent the consensus of many evaluators, not a limited few. A matrix was prepared that would allow specific factors to be evaluated and then applied against a composite total. The outcome desired through the evaluation, then as it is today, was the identification of the preferred sector(s) for growth for each needed land use type. In addition, within this Growth Study consideration was given to the policy direction provided by the City's Municipal Development Plan and the City-County Intermunicipal Development Plan.

This Growth Study acknowledges the importance of intangible criterion and reviewed it alongside more tangible criteria such as servicing availability.

5.6.1 Study Areas and Criteria Evaluation

Because revitalization efforts and area redevelopment planning work for the Greater Downtown, Riverlands, and Riverside Meadows are well underway and being implemented, for the purposes of this Growth Study, the focus was on lands currently outside the city boundary where future new growth will be concentrated. Therefore only lands outside the current city limits were discussed in terms of site criteria. A general review of the previous ranking/weighting occurred to determine if site circumstances have changed or if new information has become available. Each sector was assessed in terms of how well it met site criteria as identified previously for the various land uses, and what locational advantages and disadvantages it may offer for various types of land use. This overall criteria review and a more detailed assessment follow.

5.6.1.1 Sector A

Advantages:

- Close to major employment areas
- Significant environmental areas

- Located on a major highway
- Cable servicing into Sector A is simple and readily available.
- New emergency services station is being constructed in the Johnstone Crossing neighbourhood which could provide service to this area.

Disadvantages:

- Further away from major facilities (e.g. Red Deer College)
- Development into Sector A may require the City Of Red Deer electric utility to purchase the existing TransAlta utilities distribution systems.
- The industrial land study completed by the City of Red Deer in 2003 discounted this area for industrial development due to the cost to extend services and fragmentation of land uses.

Potentials:

- Potential commercial development node on the north side of the Taylor Drive and Highway 11A intersection based on its high visibility
- Intermunicipal Development Plan references this sector as the next short term urban expansion area (primarily residential) for the City of Red Deer[60].

5.6.1.2 Sector B

Advantages:

- Significant environmental areas and river escarpment
- Access to Highway 11
- Possible large land mass available
- Close to storm and wastewater treatment facilities
- Near major recreation facilities (e.g. Riverbend Golf and Recreation area)

Disadvantages:

- Further away from major facilities in the downtown (e.g. hospital, major office development).
- Encumbered by numerous oil and gas wells, well setbacks, and pipelines
- Sector B rated lowest in the 2000 assessment for transit service, simply because of the excessive distance to reach the existing routes and requirement for satellite terminals.
- Sector B rated most poorly in the 2000 study with regard to

[60] Red Deer County and City of Red Deer, *Intermunicipal Development Plan*, Map 4 "Long Term Land Use", County Bylaw No. 10/99, City Bylaw No. 3244/99. October 1999.

telephone service. All sectors except B, were rated evenly as servicing has been planned for in advance and the networks are in place to handle expansion in all other areas.

- Cable service, based on the review from the 2000 study in Sector B will require additions to the trunk system and substantial upgrades to the cable television/cable high speed internet network.

Potentials:

- As suggested in the 2000 study, potential for some highly marketable residential development adjacent to the river.
- Given the expected traffic volumes on Highway 11 east (realignment) opportunity for a "commercial urban village" as well.
- Intermunicipal Development Plan references this sector as a potential future urban expansion area, with portions shown as short term residential growth area.

5.6.1.3 Sector C

Advantages:

- Adjacent to existing residential development and some existing facilities
- Large land mass available
- The 2000 Study indicated that cable servicing into Sector C is simple and readily available.

Disadvantages:

- Further away from central transportation corridors and existing major employment areas
- Development into Sector C may require the City of Red Deer electric utility to purchase the existing TransAlta utilities distribution systems.
- Could be substantial costs to extend services to this area if development does not occur in Area B beforehand (e.g. costs due to "leap frogging" of Area B)

Potentials:

- As suggested in the 2000 study, Sector C will be an extension of existing residential growth patterns
- Intermunicipal Development Plan references this sector as a part of the potential future urban expansion area.
- Opportunity for a "commercial urban village" to be integrated with future residential development.

5.6.1.4 Sector D

Advantages:

- Adjacent to existing waste management site
- Large land mass available

Disadvantages:

- Wetland areas to be protected/constrain development
- Cable service for Sector D, based on the review from the 2000 study will require additions to the trunk system and substantial upgrades to the cable and high speed internet network.
- South three quarters of this area is very expensive/difficult to develop due to drainage issues.
- Somewhat limited market appeal for many types of industrial land uses.

Potentials:

- Suitability for industrial/public service uses compatible with adjacent waste management site
- Sector D is reasonably close to residential base and reasonably good access to Highway 2.
- Intermunicipal Development Plan references parts of this sector as a potential future urban expansion area.

5.6.1.5 Sector E

Advantages:

- Excellent Highway 2 access
- Close to major employment area
- Large land mass available
- New emergency services station is being constructed in the Johnstone Crossing neighbourhood which could provide service this area.

Disadvantages:

- Protection of regionally significant wetland areas will constrain development or require work around wetland protection/ constructed wetlands.
- Cable service for Sector E, based on the review from the 2000 study will require additions to the trunk system and substantial upgrades to the cable and high speed internet network.

Potentials:

- Well buffered from residential development, making it suitable for industrial development.

- Sector E is rated high based on existing industrial development in the area (existing Burnt Lake industrial development) and its proximity to Highway 2. It is also reasonably close to the large residential base in north and east Red Deer.
- The industrial study work completed in 2003 for the City of Red Deer recommended locating new industrial land within 8 quarter sections in the north east portion this sector.

5.6.1.6 Sector F

Advantages:

- Excellent Highway 2 access
- Some river valley and natural features
- New emergency services station is being constructed in the Johnstone Crossing neighbourhood which could provide service this area.

Disadvantages:

- Protection of regionally significant wetland areas will impact or constrain development
- Further from major employee base (residential areas) and major facilities in the downtown or at Red Deer College.

Potentials:

- As suggested in the 2000 study, this area has good access to Highway 2 and rail.
- Potential for future residential growth, perhaps as country residential style development.

Based on this criteria evaluation the next chapter, Chapter 6.0, will present the recommended future growth areas for the City of Red Deer.

section

Growth Strategy

section 6

6 GROWTH STRATEGY

6.1 Growth Areas

Present to 90,000 Threshold

Upon reaching the 90,000 threshold, 14,000 more persons are expected to be residing in Red Deer than today. This has many implications for future growth. Not the least of which is demand for land for new housing units. It is estimated that 7,935 new housing units will be required to accommodate the city's population growth to the 90,000 threshold. However, the community, or city as a whole, is already in a strong position to meet this upcoming shorter term demand. At present, some residential land remains available for development in the northwest and southeast portions of the city. These lands include both privately and city owned parcels. Major infill projects in the downtown will also create new developable residential land. A successful residential annexation also contributed an additional 830 gross hectares of land primarily for residential development within the city boundary (with 420 gross hectares being developable from this total).

Combining the amount of remaining "green field" areas with the amount of infill land available, the current inventory of developable residential land within the present city boundaries is expected to meet all residential growth demand to the 90,000 threshold, in that all new residential demand could be accommodated within the current city limits. For the most part infrastructure is available in the noted locations or is being planned accordingly to accommodate residential growth to the 90,000 threshold. As stated previously, the city should maintain an inventory of 20-30 year land supply within its boundaries to meet city-county policy contained in the Intermunicipal Development Plan. This ensures long range planning for residential development, gives lead time for servicing plans, creates stability and prevents land speculation.

By the 90,000 threshold, demand for Public Service land uses will total an additional 17 hectares of land, over and above the amount found in the city at present. As these types of uses are primarily expected to be located within the residential areas (e.g. schools, day care centres, or churches), these uses are grouped with the residential land demand. Therefore, no specific sites are being selected at the 90,000 threshold for the purposes of this study. Any larger scale or specialized public service lands which might be required to meet future health, education, public works, or other institutional or civic demands would require additional research beyond this study and should be specifically identified at that time.

Projected commercial demands are expected to exceed land available within the present boundaries by the 90,000 threshold. This will occur in spite of expected redevelopment and infilling of existing commercial strips and centres, building out of sites currently under development, and new construction on the undeveloped sites designated on the east hill. Also expected to be very important to the future of Red Deer is the

redevelopment of the downtown Riverlands area with both new residential and commercial development. As with all types of land uses, the City will not want to wait until the vacant land inventory is fully depleted to designate new commercial lands. Therefore, in the range of 40 to 60 hectares of new land should be designated and serviced prior to reaching the 90,000 population threshold to ensure available supply. It must be recognized, however, that even with long term commercial areas identified within the city boundary, some commercial development will be attracted to areas within the County contained in the urban fringe (for example sites within Special Study Area 1). This is to be expected given the attractiveness of these sites and/or the various amenities or opportunities offered within these areas, and in particular, their proximity to the Highway 2 corridor.

In the period leading up to the 90,000 population threshold, 10 to 20 hectares of commercial development in **Sector A** is projected to occur along Highway 11A at the junctions of Highway 2A (Gaetz Avenue) and Taylor Drive as a natural urban expansion of the city. (It is recognized that as servicing becomes available earlier demand for residential development may be triggered). In addition, 20 to 40 hectares of land will start to develop in the city boundary near **Sector B** in proximity to the Highway 11 (67 Street) intersections with 30 Avenue and 20 Avenue. It is required that the land identified for regional commercial development within the 90,000 and 115,000 population thresholds is readily serviceable over time for the duration of the population thresholds. The NE quarter Section of 22 and NW quarter Section of 23 are both serviceable presently, and the NE quarter Section of 23 will become serviceable towards the end of the 115,000 population threshold.

Similar commercial "town centres" analysed in other communities are proposed to be located either at an arterial/arterial intersection or an arterial/urban expressway intersection. According to research conducted as the City updates its East Hill Major Area Structure Plan, the lands on the northeast portion of the city offer only one location with the required arterial/urban expressway access into the commercial node and that is at the 30 Avenue/67 Street/Hwy 11 intersection. This location offers three collector street accesses from an arterial roadway and an urban expressway into the commercial node, in addition to collector street accesses from adjacent residential quarter sections internal to Section 23[61].

This future development should provide the opportunity to include, at the interface with adjoining residential neighbourhoods, integrated mixed use commercial/residential developments in the form of village or main street centres that incorporate community uses as well as commercial development. Community uses might include a variety of uses such as library, day care, community policing offices, places of worship, recreational uses, or open space.

In terms of industrial lands, the current inventory of lands within Red Deer is nearly depleted and as such a process for contemplating annexation or

[61] Parkland Community Planning Services, Memo Dated February 3, 2005 "Rationale for the location of the Proposed Town Centre on the East Hill Major Area Structure Plan."

designation of new industrial lands is important to maintain the current growth momentum of the city. Projections indicate that 250 hectares of industrial land will be needed within the city by the 90,000 threshold.

Based on the analysis of site criteria and servicing options, it is recommended that this demand (250 gross hectares of industrial land) be met through the development of lands within **Sector E**. The 90,000 threshold growth strategy, showing this new industrial growth area, is presented in Figure 6.1.

Park and open space demands to the 90,000 threshold will be met through ongoing municipal reserve dedication and the identification of environmental reserve where appropriate, as regulated under the Province of Alberta's Municipal Government Act.

90,000 to 115,000 Threshold

The growth of the city by 25,000 persons over the previous population threshold to reach the 115,000 mark will be satisfied through the build-out of various growth sectors, as depicted on Figure 6.1. By this point, it is assumed that the downtown core and the lands within the city boundary as we know them today will be fully redeveloped or built out. This will result in the demand for an additional 785 hectares of new residential land over and above the current inventory. Also to be considered alongside the residential demand is the anticipated need for 26 more hectares of public service lands required at this time and grouped with residential land demand for the purposes of this analysis.

In order to meet this demand, the development of land within **Sectors A** and **B** for residential land use is recommended as shown on Figure 6.1. **Sector A** with upgrading of the water system can be expanded for some residential development to maximize the reserve capacity of the sanitary sewer in the area.

The commercial requirements between the 90,000 and the 115,000 population thresholds total approximately 43 hectares. As identified in Figure 6.1 this need is recommended to be accommodated simultaneously in both **Sectors A** and **B**. The site in **Sector A** is expected to experience ongoing commercial expansion beginning in the current to 90,000 population threshold and stretching into the 115,000 threshold. This expectation is based on the site's location along Highway 11A and its proximity to both existing businesses and residential developments. The site west of **Sector B** is envisioned to become a large (approximately 55 hectare) commercial urban village(s). Should this node begin development prior to reaching the 90,000 population threshold, it is expected to continue to develop up to the 115,000 population threshold. As well, the establishment of a +/- 30 hectare commercial area along 20 Avenue north of Delburne Road in **Sector C** is recommended.

Between the 90,000 and the 115,000 population thresholds, the additional industrial demand (over and above the land required before the 90,000 threshold) equals 224 hectares. **Sector E** can accommodate this demand as an expansion of the industrial development recommended at the

90,000 threshold. Planning and possible servicing extension of future industrial lands in **Sector D** would need to be considered before the end of this threshold.

Park and open space demands to the 115,000 threshold will be met through ongoing municipal reserve dedication and the identification of environmental reserve where appropriate, as regulated under the Province of Alberta's Municipal Government Act.

115,000 to 160,000 Population Threshold

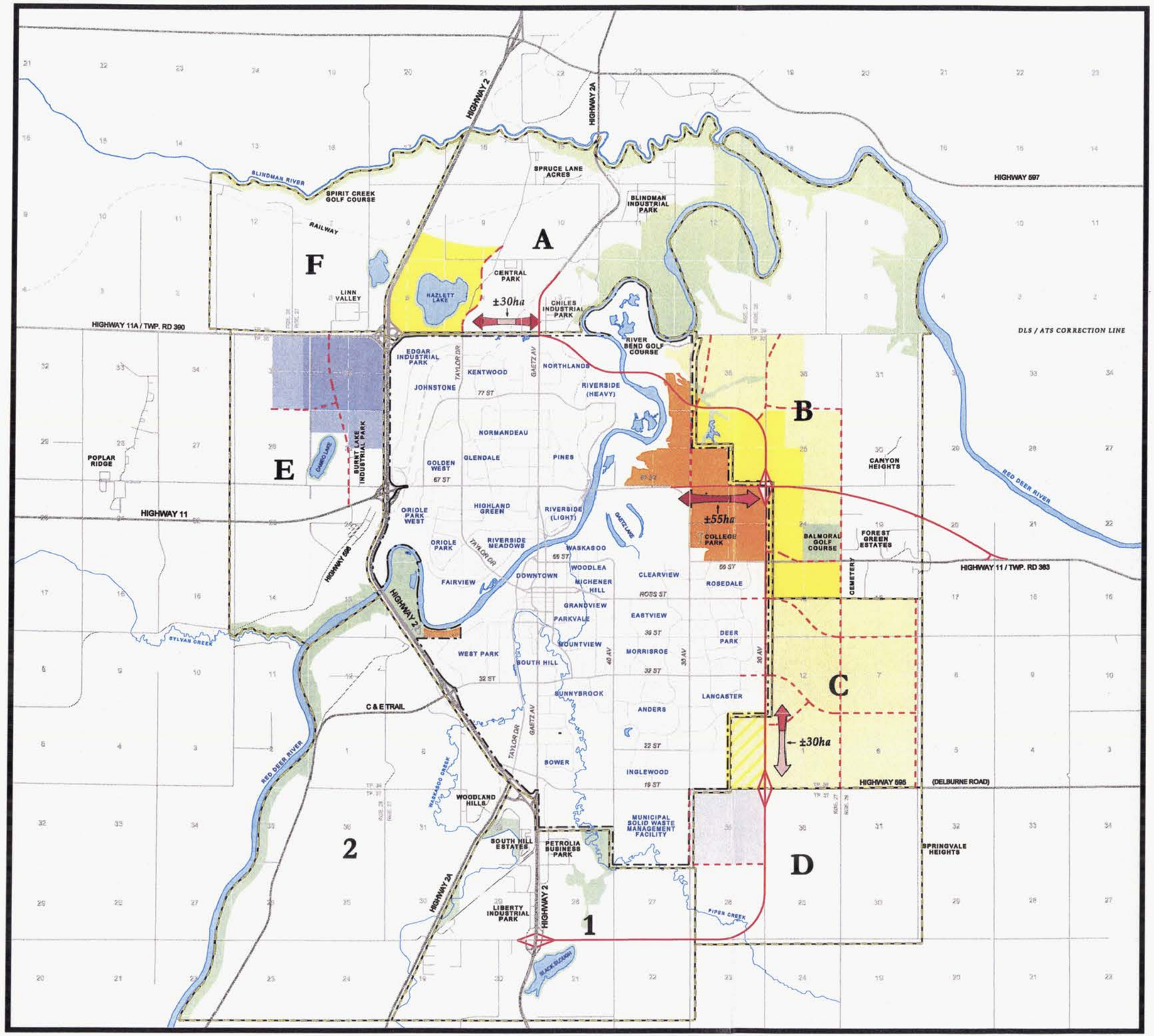
The long range population threshold being investigated by this study is the 160,000 threshold. At this threshold 45,000 additional persons over the previous threshold must be accommodated. It is projected that 1,956 hectares of new residential land will be required between the 115,000 population and the 160,000 to meet housing demand. As well, it is projected that 49 hectares of public service land will be required by this threshold. Combining the public service demand within the residential land requirements, over 2,000 hectares of land will be needed. Figure 6.1 illustrates the sectors which could accommodate this residential growth. Some development in **Sector B** is recommended as well as complete development of **Sector C**. It should be noted that if the issues around sanitary servicing of the NE and SE quarters of 2-38-27-4, within **Sector C**, can be resolved to the satisfaction of the City of Red Deer, these quarters may develop at an earlier threshold. In addition, the feasibility of residential growth in **Sector B** will require a great deal of further investigation, beyond this Growth Study, in terms of the impact and necessary development or setback standards pertaining to the extremely high concentration of oil and gas wells and 12 pipelines within this sector. In discussions with the Alberta Energy Utilities Board during the preparation of this study, their representatives indicated that no other major urban centre in Alberta has this number or density of oil and gas wells and pipelines within their growth area but the City of Calgary does have a limited number of wells within their municipal boundaries. Therefore, there are few existing models of how to approach residential development in such a situation and extensive work will be required prior to any development plans or approvals.

In terms of commercial development approximately 76 hectares of additional land is required by this population threshold. It is recognized that the majority of the 76 hectares will be absorbed in **Sectors A** and **C**. Expansion and completion of the commercial areas in those sectors as shown in Figure 6.1 will occur as the 160,000 population threshold is reached. In order to meet continued demand for commercial land beyond the 160,000 population level (and beyond the mandate of this study) ongoing development of the major commercial node north of the intersection of Delburne Road and 20 Avenue in **Sector C** is expected.

In addition to the above noted major commercial development sites, district commercial (C2) sites of approximately 3 hectares each in size may also be required in **Sectors B** and **C** or in other sectors to support the growth in residential populations. The location of these sites would be subject to further study at the Major Area Structure Plan or Neighbourhood Area Structure Plan level.

PROPOSED GROWTH STRATEGY

FIGURE 6.1



LEGEND

- EXISTING CITY BOUNDARY
- PROPOSED GROWTH STUDY SECTORS
- PROPOSED EXPRESSWAY
- PROPOSED ARTERIAL
- A & 1 — SECTOR LABELS
- PARK / ENVIRONMENTAL / RECREATIONAL
- *The NE 1/4 and SE 1/4 of 2-38-27-W4 may be able to be developed at an earlier stage (subject to sanitary servicing issues being resolved to the satisfaction of the City of Red Deer).*

LAND USE CONCEPTS

RESIDENTIAL

- 75,000 - 90,000
- 90,000 - 115,000
- 115,000 - 160,000

INDUSTRIAL

- 75,000 - 90,000
- 90,000 - 115,000
- 115,000 - 160,000

COMMERCIAL

- 75,000 - 90,000
- 90,000 - 115,000
- 115,000 - 160,000

Approximate location of future commercial development, (exact location, size, phasing, design, access, and related issues to be determined at the Major Area Structure Plan level). For more info See Chapter 5 & 6

CITY OF RED DEER 2004 GROWTH STUDY

DECEMBER 2004 SCALE 1:85,000

THE CITY OF Red Deer

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New industrial development is projected to require 258 additional hectares of land between the 115,000 to the 160,000 population threshold. As **Sector E** will be built out, development of **Sector D**, east of the landfill site adjacent to Delburne Road and the City of Red Deer Solid Waste Management Facility. The development of some industrial land to the south of the present city boundaries is consistent with long range city goals and policies relating to balanced growth between north and south sectors. **Sector D** would be serviced in conjunction with sanitary sewer upgrading planned to southeast. Development and will entail collecting and pumping sewage from this zone to a new trunk main connecting to the wastewater treatment plant.

It is prudent to identify the need to consider over-sizing the new sanitary trunk sewer servicing **Sector D** thus providing reserve capacity for further development of the balance of **Sector D**. Also, consideration should be given to providing additional capacity to service **Sector B** for residential.

Park and open space demands to the 160,000 threshold will be met through ongoing municipal reserve dedication and the identification of environmental reserve where appropriate, as regulated under the Province of Alberta's Municipal Government Act. As both the City and County have expressed interest in preservation and expansion of the Red Deer River park system, some consideration should be given to how this could be accomplished prior to reaching to the 160,000 population threshold. Consideration should also be given to the permanent preservation of irreplaceable, highly significant, natural features of the region such as Hazlett Lake, Cameo Lake, the river valleys and escarpment areas.

6.2 Conclusion

In conclusion, the City of Red Deer is poised to experience strong ongoing growth well into the next five decades. To accommodate these growth demands, it is recommended that the City of Red Deer's future growth be in the following areas:

- Growth to the west of the current city boundary (**Sector E**) is recommended for future short and medium term industrial development, and south east of the city boundary (**Sector D**) for longer term industrial growth.
- Lands to the north of the city (**Sector A**), situated north of Highway 11A are recommended for commercial as well as residential development. More specifically, lands situated along Highway 11A between Highway 2A and the C & E Trail are recommended for future short, medium, and longer term commercial development. The lands between Highway 2 and the C & E Trail surrounding Hazlett Lake are recommended for medium term residential growth (however as servicing becomes available it is recognized that residential demand may occur earlier). Preservation of the lake, adjacent natural areas, and potential recreation/park space is also recommended in this sector.

- Growth to the north-east of the current city limit (**Sector B**) for short, medium, and long term residential development is recommended, with the short term residential growth occurring in the 2004 annexation area (now within city limits). The type, design, and viability of longer term residential growth within this sector will depend issues with oil and gas wells and pipelines being resolved (**Sector B**). Existing escarpment, natural areas, and recreation areas within this sector will be retained.

- A major commercial node located near the Highway 11/30 Avenue/ 20Avenue area is recommended to be developed within the current city limits (adjacent to **Sector B**) in order to be positioned in proximity to future major residential development. The Major Area Structure Plan for the area will determine the detailed planning work around access, exact size and location, phasing, and related issues.

- Long term residential growth between the 115,000 and the 160,000 threshold is recommended to the southeast of the present city boundary (**Sector C**). Should issues around sanitary servicing of the NE and SE quarters of 2-38-27-4, within **Sector C**, be resolved to the satisfaction of the City of Red Deer, these quarters may develop at an earlier threshold.

- Long term commercial development between the 115,000 and the 160,000 population threshold is recommended north of the intersection of 30 Avenue and Delburne Road in **Sector C**. The Major Area Structure Plan for the area will determine the detailed planning work around access, exact size and location, phasing, and related issues.

- To the south of the city in **Sector D**, long term industrial development is recommended along Delburne Road/Highway 595.

- No city growth is recommended in Special Study Areas 1 or 2 within the timeframe of this Growth Study.

section

7

Appendix A

section 7

Appendix A

EUB Alberta Energy and Utilities Board

GENERAL BULLETIN GB 99-04

12 March 1999

TO: All Oil, Gas, Pipeline Operators, and Licensees
All Provincial Planning Authorities – via Alberta Municipal Affairs
All Provincial Real Estate Offices – via The Calgary Real Estate Board.

"LAND DEVELOPMENT INFORMATION PACKAGE" INTRODUCING A NEW SERVICE

The Alberta Energy and Utilities Board (EUB) announces a new "land use" package, which contains specific information extracted from EUB records in the vicinity of a land parcel identified by the customer. This package is intended for use by anyone planning land subdivision or development (or considering a land purchase for these purposes). Each package provides **basic**(1) details on nearby oil and gas related facilities and coal mines. Along with "vicinity specific data", also included is a discussion of EUB minimum setback recommendations and guides to understanding well and pipeline data.

(1) For example, information on a well would describe the precise location of the well, the type of well, and name of the licensee.

Data provided in the package covers a geographic area larger than the land parcel inquired about, due to the size of some EUB minimum setback recommendations and due to the township "shift" encountered at correction lines in the Dominion Land Survey (DLS) grid in Alberta. Customers must provide a DLS description of the land parcel they are inquiring about, describing a quarter section (or half or full section), township, range, and meridian.

Package contents:

- "Minimum Setback Recommendations - An Overview",
- "Unique Well Identifiers - A Brief Overview",
- A description of how to use the EUB pipeline licence register for determining basic pipeline details (note that the register, on microfiche, will not be included if there are no pipelines in the vicinity), and
- EUB Guide 30 which discusses ground disturbance near pipelines.

The following items are included only if EUB records show the described activity present in the vicinity:

- EUB licensed well information (including a separate listing of sour wells),
- Pipeline plats showing the approximate location of EUB licensed pipelines. When EUB pipeline plats are provided, also included is the EUB's pipeline licence register on microfiche,
- Battery information, and
- Coal mine information.

Information in the package is general in nature. Where **sour** wells and pipelines are concerned, customers are advised to contact the facility's licensee for more details such as confirmation of the facility's sour gas level designation which is a determining factor in the EUB's minimum recommended setback distance. As well, potential developers are advised to contact the licensees of **any pipeline**[2] that is within 200 metres of a contemplated development, at the earliest stage of planning. An increase in population density may require either design or operating changes for the pipeline system. The EUB recommends that comments from nearby pipeline licensees be considered when planning a development.

[2] This notification applies only to pipelines under the jurisdiction of the EUB.

The oil and gas industry is expected to respond in a timely manner to public inquiries concerning wells, pipelines, and facilities. Where the well, pipeline, or facility involves sour gas, the licensee must provide the sour gas level designation(s).

The package cost is $20.00 based on a customer's inquiry of not more than a quarter section. Larger requests are charged a $6.00 fee per item along with a charge of $.50 per paper or microfiche page copied (total price varies, depending on the amount of oil and gas activity in the area). Normal billing procedures, administered by Information Services at the EUB, will be in place.

To order this new catalogue item, call the EUB's Information Services "Customer's Inquiries" line at 297-8190 (Fax 297-7040) and request the "Land Development Information Package". Customers must provide a DLS location for the land parcel being inquired about. Please note that over the counter service will **not** be available for this item.

Data provided in the package is subject to change, depending upon oil, gas, and coal mine activity in the area.

G. C. Dunn P.Eng
Group Leader
Operations Group, Facilities Division

EUB Minimum Setback Recommendations An Overview

Dated March 1999

The Alberta Energy and Utilities Board (EUB) does not regulate land development. Specific questions in this area should be directed to the local municipal authority which may require larger setback distances to the wells, pipelines or facilities discussed here, in addition to many other setback requirements. The EUB does provide setback recommendations in the area of **sour gas** to these authorities on subdivision and development proposals. Approving authorities are required by the Subdivision and Development Regulation pursuant to the Municipal Government Act to abide by these setback distances as **minimum** requirements. The 100 metre minimum setback distance from certain development to oil and gas wells licensed under the EUB's jurisdiction, and the potential for exceptions, is also reflected in the Subdivision and Development Regulation. Any EUB Interim Directives (ID's), Informational Letters (IL's) or Guides referred to in this document may be obtained from Information Services at the EUB (297-8190) or from the EUB's web site at http://www.eub.gov.ab.ca.

Wells

- **Non sour wells**. The **minimum** recommended setback distance from a wellhead to an occupied structure or its equivalent (as defined in "permanent dwelling"), or a "public facility" is 100 metres (see the page titled "Definitions" of this document for descriptions of the development designations). The exception to this is abandoned wells.

  Setback distances are measured from the wellhead, which is located at a well's **"surface location"**. Wells are filed in EUB records according to "**bottom hole location"**. Normally, a well's "bottom hole location" and "surface location" are the same. However, because of deviated or horizontal drilling, occasions do arise where these two locations are different. When this occurs, both locations will be noted on the EUB's well list. Remember that for purposes of measuring setback distances it is a well's **"surface location"** that is used as a reference point.

  In rare situations, it has been acceptable to place occupied structures (or their equivalent) closer than 100 metres to a wellhead. These "setback relaxations", while strongly discouraged in EUB Informational Letter (IL) 95-07, must be approved in writing by the EUB, and be acceptable to the well's licensee. Contact the Operations Group at the EUB for additional information concerning setback relaxation requests.

  If there are any non-abandoned EUB licensed wells in the area, also read the section titled "Permanent flaring facilities and tank dykes" under "Gas Plants, Batteries and Compressors" of this document. There may be setback recommendations related to other facilities at the well site.

- **Sour wells**. Setback distance recommendations for sour wells are detailed on the page titled "Sour Gas Setback Distances" of this document.

  When a well's minimum setback distance requirement conflicts with a development proposal, the well's sour gas level designation **must be verified** by the development proponent before any planning decisions are made. Contact the well's licensee for verification.

  A description of **sour gas** can be found on the page titled "Definitions" of this document.If additional information is needed concerning sour well setback requirements for the petroleum industry, please refer to the EUB's Interim Directive (ID) 97-6. The EUB recommends the planning industry observe these same setback requirements as minimum standards.

- **Abandoned wells**. The EUB endorses the recommendations of draft document "Advisory Land Use Planning Notes - Abandoned Oil and Gas Wells". This document recommends permanent structures be setback at least 5 metres from abandoned wells, and underground utilities be set back at least 3 metres. It also advises to maintain a working space of at least 10 metres by 15 metres around the well, along with an access route not less than 8 metres wide. These areas are necessary in the unlikely event a well service rig is required. Also discussed are implications for abandoned wells where site development such as grading, roadways, and underground utilities is planned. The "Advisory Land Use Planning Notes - Abandoned Oil and Gas Wells" is available from Information Services at the EUB.

Pipelines

- **All EUB licensed pipelines** (including abandoned pipelines). The **minimum** recommended setback distance is the edge of the pipeline right of way **except for certain sour gas pipelines** which command larger setback recommendations.

  While it is never advisable to place permanent or temporary structures on a pipeline right of way, some land uses **may** be compatible. Examples are cultivation, certain storage yards, walkway/bicycle paths, road crossings, playgrounds, berms, and parking lots. Any ground disturbance(1) and some surface uses of a pipeline right of way must first be discussed with the pipeline licensee to ensure pipeline integrity will not be compromised. Considerations here include the continued ease of access to the pipeline in the event of an emergency, the added potential for third party damage to the pipeline and load bearing restrictions over the pipeline. Surface uses should be agreeable to the pipeline licensee and must be within the terms of the easement agreement (provisions may need to be renegotiated or relaxed). Where the pipeline is abandoned, the licensee can be contacted regarding future plans for the pipeline or its right of way.

(1)Normal cultivation is not considered a ground disturbance.

- **Sour gas pipelines**. Setback distance recommendations for sour gas pipelines are detailed on the page titled "Sour Gas Setback Distances" of this document. Sour gas pipeline levels **must be obtained by the development proponent from the pipeline licensees.** If the sour pipeline is discontinued or abandoned, for setback considerations the pipeline is considered to be **non-sour**.

  If additional information is needed concerning sour gas pipeline setback requirements for the petroleum industry, refer to the EUB's Interim Directive (ID) 81-3. The EUB recommends the planning industry observe these same setback requirements as minimum standards.

- **High Vapour Pressure and Large Diameter/High Pressure Hydrocarbon Pipelines**. The EUB has not established setback requirements for these pipelines other than the edge of the pipeline right of way. However, EUB Inquiry Report D83-F recommended that there be a setback distance of 200 metres from the centre line of these pipelines to public institutions where people are dependant upon others for evacuation such as hospitals, schools or senior citizen homes. Note that this recommendation applied only to the West Edmonton area, which was the subject of the inquiry. To date, the EUB has not extended this recommendation to other areas of the province.

- The Alberta Municipal Affairs document titled "Advisory Land Use Planning Notes On The Pipeline-Urban Encroachment Problem" recommended a 200 metre setback distance from these pipelines to any buildings housing social service functions or that provided emergency services and essential infrastructure in the event of a pipeline failure or rupture. This recommendation applied to the entire province.

  The EUB recommends anyone planning subdivision or development within 200 metres of **any pipeline** under the jurisdiction of the EUB contact the pipeline licensee at the earliest stage of planning. An increase in population density may require either design or operating changes for the pipeline system. The EUB recommends that comments from nearby pipeline licensees be considered when planning a development. Note that EUB pipeline plats do not show the location of low pressure pipeline systems licensed by Alberta Transportation and Utilities. Maps showing the approximate locations of these pipelines can be ordered from Information Services at the EUB.

Gas Plants, Batteries, and Compressors

- **Sour gas plants**. Setback requirements for sour gas plants are the same as sour gas pipelines. The level designation of a sour gas plant is determined by the highest level designation of the sour gas pipelines entering or leaving the plant. If it is believed a sour gas

plant could impact a specific potential land development, the plant's licensee must be contacted to determine the sour gas level designation of the plant.

Permanent flaring facilities and tank dykes. Where **any** development is proposed within 100 metres of a battery, compressor, gas plant or well **"lease"**, the facility's licensee should be contacted to determine if there are any permanent flaring facilities or tanks on the site. EUB equipment spacing rules require

1. permanent flaring facilities to be a minimum of 100 metres* from ***surface improvements*** other than surveyed roadways (*measured from the base of the flaring operation), and

2. the outer perimeter of tank dykes to be a minimum of 60 metres from ***surface improvements*** other than public roadways.

Surface improvement is defined by the EUB as a railway, pipeline or other right of way, road allowance, surveyed roadway, dwelling, industrial plant, aircraft runway or taxiway, building used for military purposes, permanent farm buildings, school, or church.

- **Benzene emissions**. Some well and facility sites contain glycol dehydrators. A program to reduce benzene emissions from glycol dehydrators commenced 1 January 1998. For additional information concerning the benzene emission reduction program (which may be of particular interest where residential development is planned within 75 metres of a glycol dehydrator), see EUB Informational Letter (IL) 97-04 for further information.

- **Noise control guidelines**. Some energy-related facilities produce sound. Acceptable sound levels are regulated by EUB Interim Directive (ID) 94-4. Compliance with this directive is **not a guarantee** that nearby residents will not hear facility related sounds. For additional information on EUB noise control guidelines, see EUB ID 94-4 and Guide G-38.

Coal Mines

- Past and present coal mine activity both on or near a land parcel slated for development requires investigation. Where EUB records show the presence of a past, current or proposed coal mine nearby, the local planning authority should be contacted regarding the mining activities. Locating structures over underground mines requires special evaluation in the area of ground stability. Nearby coal mining activity could pose clean air problems (dust), water well disruption, safety concerns, noise, odour and visual nuisances to area residents.

Electrical Transmission Lines and Communications Cables

- The minimum recommended separation or clearance distance from buildings, signs, bridges, light standards, antennas or other objects, to **overhead** electrical transmission lines, is as specified by the Electrical Protection Act, Electrical Communication Utility Systems Regulation[2]. These distances are summarized in the following table:

(2)Electrical and Communication Utility Systems Regulation pursuant to the Electrical Protection Act, section 360.

Overhead Conductor Voltage	Clearance Horizontally	Clearance Vertically
22 kilovolt (kV)	3.0 metres	5.0 metres
138 kV	3.6 metres	5.6 metres
240 kV	4.2 metres	6.2 metres

The minimum recommended separation or clearance distance from **direct burial**[3] electrical supply and communications cables or lines shall be not less than 0.3 metres.

(3)Electrical and Communication Utility Systems Regulation pursuant to the Electrical Protection Act, section 480

Sour Gas Setback Distances

EUB setback requirements for sour gas pipelines and facilities are detailed in EUB Interim Directive (ID) 81-3, and for sour wells in ID 97-6. The following recommendations are based on these directives. For more information on sour gas requirements for the petroleum industry, see the interim directives. Descriptions of the four development classifications referred to in the setback recommendations are in the section titled "Definitions" of this document.

Sour wells, level 1.

The minimum recommended setback distance to "permanent dwelling", "unrestricted country development", "public facility" or "urban centre" is 100 metres.

Sour pipelines and facilities, level 1.

The minimum recommended setback distance to "permanent dwelling", "unrestricted country development", "public facility" or "urban centre" is the edge of the pipeline right of way, or the edge of the facility lease boundary.

Sour wells, pipelines and facilities, level 2.

The minimum recommended setback distance to "permanent dwelling" or "unrestricted country development" is 100 metres[4].

(4) The 100 metre setback distance to "permanent dwelling" is an **absolute minimum** distance. The EUB would expect the actual separation distance for any high H_2S release rate well (particularly for levels 3 and 4) would be at least 3 to 4 times the minimum distance.

The minimum recommended setback distance to "public facility" or "urban centre" is 500 metres.

Sour wells, pipelines and facilities, level 3.

The minimum recommended setback distance to "permanent dwelling" is 100 metres[4].

(4) The 100 metre setback distance to "permanent dwelling" is an **absolute minimum** distance. The EUB would expect the actual separation distance for any high H_2S release rate well (particularly for levels 3 and 4) would be at least 3 to 4 times the minimum distance.

The minimum recommended setback distance to "unrestricted country development" is 500 metres.

The minimum recommended setback distance to "public facility" or "urban centre" is 1500 metres.

Sour wells, pipelines and facilities, level 4.

As specified by the EUB but not less than level 3.

Definitions

Battery

A system or arrangement of tanks or other surface equipment receiving the effluents of one or more wells prior to delivery to market or other disposition, and may include equipment or devices for separating the effluents into oil, gas or water and for measurement.

Compressor Site

An installation of service equipment that receives natural gas from a well, battery or gathering system prior to delivery to market or other disposition and is intended to maintain or increase the flowing pressure of the gas, and includes any equipment for measurement.

Dehydrator

An apparatus designed and used to remove water from raw gas.

H_2S

H_2S is the chemical symbol for hydrogen sulphide, a highly toxic gas formed by the decomposition of organic materials. The Occupational Exposure Limit (O.E.L.) for H_2S at a concentration of 10 parts per million[5] (ppm), allows for not more than 8 hours of exposure. At a concentration of 20 ppm (the O.E.L. ceiling), workers must wear appropriate breathing apparatus. A concentration of 1000 ppm causes **immediate** unconsciousness resulting in death or permanent brain damage unless promptly rescued.

(5) Parts of gas per million parts of air by volume. 1% = 10,000 ppm

High Vapour Pressure Pipeline

A pipeline system containing hydrocarbons or hydrocarbon mixtures in the liquid or quasi-liquid state with a vapour pressure greater than 110 kPa absolute at 38°C. Some examples are liquid ethane, ethylene, propane, butanes, and pentanes.

Large Diameter/High Pressure Hydrocarbon Pipeline

A hydrocarbon pipeline with **both** an outside diameter equal to or greater than 323.9 mm, **and** a maximum operating pressure equal to or greater than 3475 kPa.

Permanent Dwelling

The EUB has not formally defined "permanent dwelling". For purposes of applying the setback requirements of IDs 81-3 and 97-6, EUB staff apply the following general guidelines when considering the development designation of "permanent dwelling":

A "permanent dwelling" (also referred to as dwelling or individual dwelling) designation is generally considered to be any dwelling located on a quarter section with **eight or less** permanent dwellings, located outside the corporate boundaries of an urban centre and not situated at a public facility. In addition to dwellings, other situations appropriate to this classification may include other locales frequented by persons over a 24 hour period such as work sites and places of business (or similar activities), or where the evacuation situation appears complex.

Public Facility

A public building such as a hospital, rural school, or a major recreational facility situated outside of an urban centre; and for the purposes of applying the requirements of EUB Interim Directive (ID) 97-6, includes other developments the Board, after consultation with appropriate interested parties, may designate as a public facility based on the complexity of evacuation taking into consideration the number of people using the facility and the frequency and duration of their use.

Right of way

The strip of land in which a legal right of passage is granted over another person's property. This right can be acquired by means of an easement or by a right of entry order.

Separation or Setback Distance

The minimum required distance between a well, sour pipeline or other sour facility, permanent flaring facility or tank dyke and land-use development such as surface improvement, permanent dwelling, unrestricted country development, urban centre or public facility.

Sour Gas

Natural gas, from gas or oil wells, containing hydrogen sulphide (H2S), frequently a small amount.

Sour Well

Any oil or gas well expected to encounter sour gas-bearing formations during drilling or any oil or gas well capable of producing sour gas.

Sour Gas Level Classification

A designation to stipulate separation or setback distances for sour wells, pipelines and facilities for land-use and public safety purposes.

Surface Improvement

A railway, pipeline or other right of way, road allowance, surveyed roadway, dwelling, industrial plant, aircraft runway or taxiway, building used for military purposes, permanent farm buildings, school, or church.

Unrestricted Country Development

Any collection of permanent dwellings situated outside of an urban centre and having more than eight permanent dwellings per quarter section; and for the purpose of applying the requirements of EUB Interim Directive (ID) 97-6, includes any similar development the Board may designate as an unrestricted country development.

Urban Centre

A city, town, new town, village, summer village, hamlet with not less than 50 separate buildings each of which must be an occupied dwelling, or other incorporated centre, and for the purpose of applying the requirements of EUB Interim Directive (ID) 97-6, includes any similar development the Board may designate as an urban centre.

Search Area Recommendations

The following recommendations are based on both EUB minimum setback recommendations and the probable type of land development being planned. For descriptions of the various development classifications referred to here, please see the section titled "Definitions" of this document.

Permanent Dwelling

- **For wells**, we recommend examining the parcel slated for development and one legal subdivision surrounding the parcel (a legal subdivision - LSD - is approximately 400 metres). Note that if EUB records indicate no level 3 or 4 sour wells in the vicinity, the search area could be reduced to 100 metres.
- **For pipelines**, we recommend examining the parcel slated for development and a 200 metre area surrounding the parcel.
- **For gas plants, batteries and compressors**, we recommend examining the parcel slated for development and a 100 metre area surrounding the parcel.

- **For coal mines, electrical transmission lines and communications cables,** as a **minimum** we recommend examining the parcel slated for development.

Unrestricted Country Development

- **For wells**, we recommend examining the parcel slated for development and a 500 metre area surrounding the parcel (a legal subdivision - LSD - is approximately 400 metres). Note that if EUB records indicate no level 3 or 4 sour wells in the vicinity, the search area could be reduced to 100 metres.
- **For pipelines and gas plants**, we recommend examining the parcel slated for development and a 500 metre area surrounding the parcel.
- **For batteries and compressors**, we recommend examining the parcel slated for development and a 100 metre area surrounding the parcel.
- **For coal mines, electrical transmission lines and communications cables**, as a **minimum** we recommend examining the parcel slated for development.

Urban Centre or Public Facility

- **For wells**, we recommend examining the parcel slated for development and a 1500 metre area surrounding the parcel (a section is approximately 1600 metres). Note that if EUB records indicate no level 2, 3 or 4 sour wells in the vicinity, the search area could be reduced to 100 metres (a legal subdivision - LSD - is approximately 400 metres).
- **For pipelines and gas plants**, we recommend examining the parcel slated for development and a 1500 metre area surrounding the parcel.
- **For batteries and compressors**, we recommend examining the parcel slated for development and a 100 metre area surrounding the parcel.
- **For coal mines, electrical transmission lines and communications cables,** as a **minimum** we recommend examining the parcel slated for development.

Unique Well Identifiers - A Brief Overview

A complete discussion of unique well identifiers (UWI) is available in EUB Guide G 59.

..	..	..	...	..	.	.	..
LE	**LSD**	**SC**	**TWP**	**RG**	**W**	**M**	**ES**

These are the identifiers commonly used in EUB records. A complete UWI contains additional identifiers. See guide G 59 for more details.

LE **Location Exception Code.** This is generally used to describe the sequence in which drill holes were drilled in the legal subdivision. That is, the code is used to describe more than one oil or gas drill hole in a legal subdivision. 01 (zero one) is not allowed. Letters may appear for different resources or less common location situations. See guide G 59 for more details.

LSD **Legal Subdivision.**

SC **Section.**

TWP **Township.**

RG **Range.**

WM **West** and **Meridian** respectively.

ES **Event Sequence code.** Indicates the chronological sequence of significant drilling and/or completion operations at a well. Numbers 0 through 9 are used, except number 1 is not allowed.

Examples: (Note examples are shown as they would appear in EUB records)

00/15-23-074-09W4/0

The first well drilled in LSD 15. The first completion at the well.

02/15-23-074-09W4/0

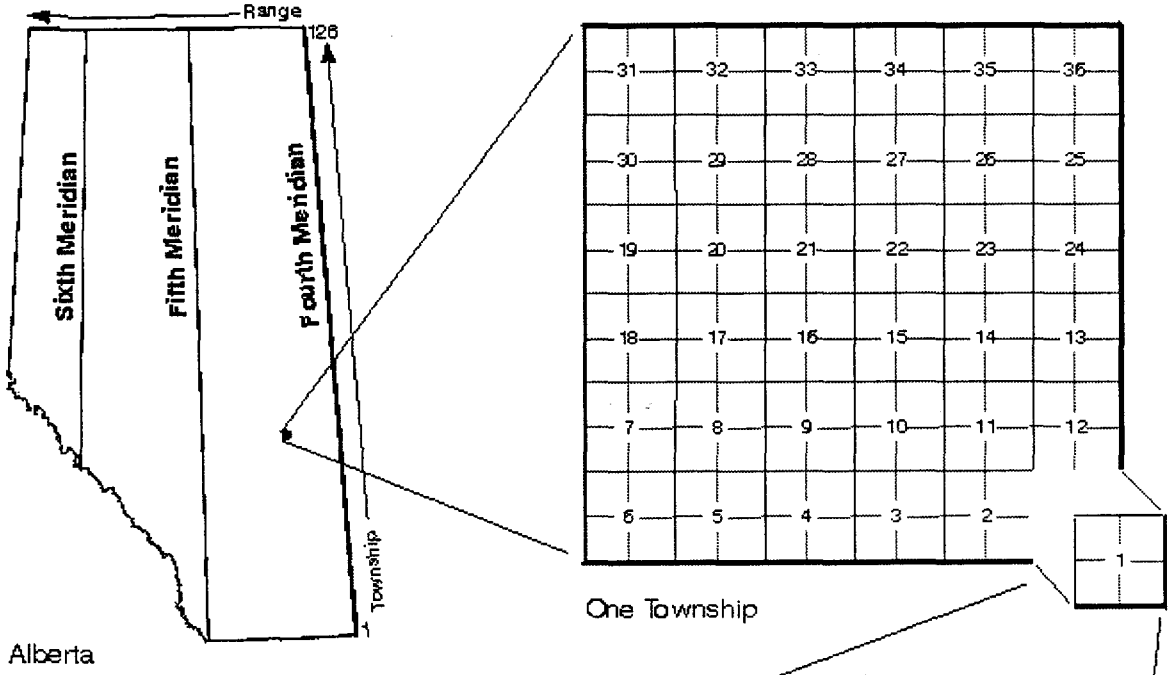
The second well drilled in LSD 15.

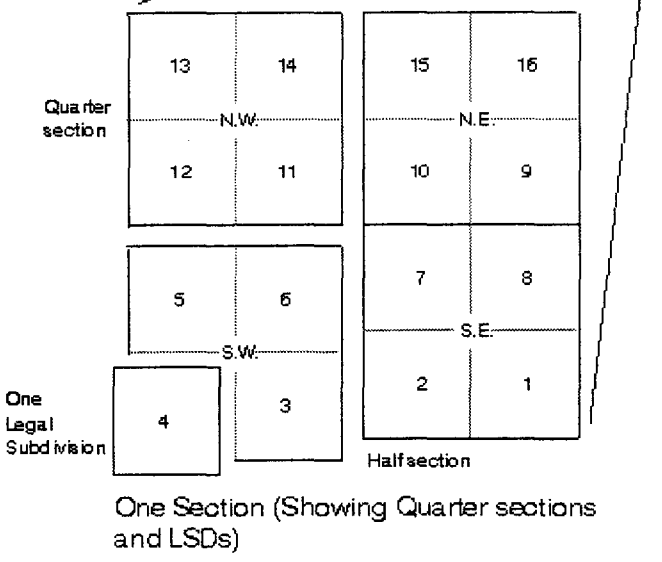
00/07-34-110-03W6/2

Either the second completion at the well *or*, a deepening of the original well *or*, a re-entry of a previously abandoned well *or*, a well that originated from an existing well bore.

Note: Well information is filed according to a well's "bottom hole" location. Occasionally, some wells have a surface location that is different from their bottom hole location. For setback distance and safety considerations relative to land development, it is always the well's surface location that must be considered. Setback distances are measured from a well's surface location.

Dominion Land Survey System (DLS)





One Section (Showing Quarter sections and LSDs)

Example Location

04	01	036	13	W4
LSD	Sec.	Twp.	Rge.	WM

Abbreviations

Legal Subdivision	LS or LSD
Section	SC or Sec.
Township	Twp.
Range	RG or Rge.
West	W
Meridian	M

THE CITY OF Red Deer

Legislative & Administrative Services

DATE: **March 7, 2005**

TO: **City Council**

FROM: **Legislative & Administrative Services Manager**

SUBJECT: **Neighbourhood Area Structure Plan Amendment 3217/F-2004**
West Park Extension Neighbourhood Area Structure Plan

History
At the Monday, February 14, 2005 Council Meeting, Council gave first reading to West Park Extension Neighbourhood Area Structure Plan Bylaw Amendment 3217/F-2004.

West Park Extension Neighbourhood Area Structure Plan Bylaw Amendment 3217/F-2004 provides for the allocation of public roads within the presently identified adult living community and the designation of seven R1 lots for permitted use secondary suite development. It also provides for the deletion and relocation of recreation facilities/structures within the central park area and the provision of a skating surface within the storm pond area.

Public Consultation Process
A Public Hearing has been advertised for Monday, March 14, 2005 at 7:00 p.m. in Council Chambers, during Council's regular meeting. The owners of the properties bordering the site have been notified by letter of the Public Hearing.

Recommendations
That following the Public Hearing, Council may proceed with second and third readings of the bylaw.

Kelly Kloss
Manager

KLAND
COMMUNITY
PLANNING
SERVICES

Suite 404, 4808 Ross Street
Red Deer, Alberta T4N 1X5
Phone: (403) 343-3394
FAX: (403) 346-1570
e-mail: pcps@pcps.ab.ca

DATE: February 2, 2005

TO: Kelly Kloss, Legislative & Administrative Services Manager

RE: **Neighbourhood Area Structure Plan Amendment No. 3217/F-2004**
West Park Extension Neighbourhood Area Structure Plan

INTRODUCTION

The City of Red Deer has received written application to amend the existing West Park Extension Neighbourhood Area Structure Plan (NASP). The proposed amendments directly affect currently undeveloped lands within the NASP. This proposal has been prepared by Interplan Strategies and Al-Terra Engineering Ltd. for Trademark Western Properties Inc.

PROPOSAL

The following amendments to the NASP are proposed. Please refer to Map A, which illustrates the existing land use concept, and Map B, which illustrates the land use concept including the proposed amendments. Map C indicates the changes proposed to the central park plan.

Overall, the proposed amendment bylaw contains three (3) main intents. They are:

1) the allocation of public roads within the presently identified adult living community;

2) the designation of seven (7) R1 lots for permitted use secondary suite development; and

3) the deletion and relocation of recreation facilities/structures within the central park area and the provision of a skating surface within the storm pond area.

REFERRAL

Upon receipt of the application, the proposed amendment was referred to all applicable City Departments, relevant agencies and authorities, and Red Deer County. No objections were received.

Comment was received from the Social Planning Department. The Department had indicated that six months advertising is required for sites proposing social care uses and, accordingly, that the applicant's text and mapping within the NASP should be revised to reflect this requirement of the Planning and Subdivision Guidelines. Furthermore, the Department is supportive of the concept regarding innovative housing such as secondary suites. The Department also supports the change within the existing adult living community, but would be further supportive of a

change to include more narrow lot and secondary suite housing rather than the proposed R1 designation, as the Department encourages a mix of housing types.

PUBLIC CONSULTATION

A meeting was conducted on the evening of December 15, 2004 at West Park Middle School. Flyers were delivered to approximately 150 residences deemed to be directly affected by the proposed amendment. The meeting, hosted by Parkland Community Planning Services (PCPS), presented the proposed changes to the NASP. Presentations were respectfully made by Steve Banack of Al-Terra Engineering and Doug Evans of the Recreation, Parks, and Culture Department. Approximately 14 area residents and a City Council representative attended the meeting. Two comments sheets were received at the meeting, while a written comment and a telephone call were received outside the meeting.

Public Road Allocation

At the neighbourhood meeting, no concern or objection was voiced regarding the allocation of the public roads within presently designated adult living community area. It was explained that the proposed road configuration would be similar to that previously approved.

Secondary Suite Designation

Regarding the designation of permitted use secondary suite development, concerns were raised over the exterior appearance and parking requirements associated with such a development. PCPS explained that secondary suites may only be developed within single-detached dwellings in the R1 District and that all required parking must be provided on-site.

Another concern raised was that of a possible increase of local traffic volumes associated with the proposed secondary suite lots. It was explained that a large increase in local vehicular traffic would not be anticipated. The proposed secondary suite designations have been targeted at the larger lots within the Westlake development and do not necessarily reflect the development wishes of those future property owners. It is quite possible that none of the designated lots will be developed for such a use. No comment or concern was received from Engineering Services regarding additional vehicular trip generation.

The above-mentioned telephone call was also regarding vehicular traffic. The resident expressed concern that the additional traffic generated by the proposed secondary suite lots would become excessive along Wilson Crescent, where he resides. The seven proposed secondary suite lots are located within the most southerly portion of Westlake. It is anticipated that the majority, if not all, of any such generated vehicular traffic would travel via Webster Drive from 32nd Street. The above-mentioned written comment also noted this concern.

Full build-out of these secondary suite lots would result in a density increase of 0.20 persons per hectare to a total of 36.97 persons per hectare, which amounts to a population increase of 12 persons within the overall plan area.

Park Facilities Redistribution

The City's Recreation, Parks, and Culture Department wishes to modify the current central park concept. Such modifications consist of the deletion of the parking area and multi-site, along with

the relocation of the play area/structure (Map C). The play area is proposed to be moved to approximately the location of the parking area's southwest boundary.

A concern was raised regarding the location of any vegetation removal and the amount thereof. It was explained that some trees would require removal to accommodate the proposed changes. In order to locate the proposed play facility/structure within a safe and secure area, the structure must be sited in a visible location and any nearby possibly hazardous or health-declining vegetation must be removed.

The majority of the residents were pleased with the proposed changes to the play area, as it was believed that it would be less intensive and/or intrusive on adjacent land uses in comparison to the approved existing plan, which includes a parking lot, multi-use pad, and a play structure.

With the proposed skating surfaces on the storm pond, concerns were raised regarding access to the pond. It was explained that pedestrian traffic is anticipated, as the surface would serve the surrounding community residents, and that no access point has yet been confirmed. In addition, a request was made that some form of landing/skate change area be constructed.

MUNICIPAL PLANNING COMMISSION

In accordance with the Planning & Subdivision Guidelines all NASP amendments must be forwarded to the Municipal Planning Commission (MPC) for recommendation prior to any submission to Council. The Plan Amendment No. 3217/F-2004 was considered by the Municipal Planning Commission on January 31, 2005, and the Municipal Planning Commission resolved to recommend that Council consider giving it first reading.

Upon request from the Municipal Planning Commission the developer deleted two secondary suite lots which were proposed in an area where lots had been subdivided and sold to individuals. Planning staff supports this request based on the requirement in the Neighbourhood Planning & Design Guidelines & Standards that where an area structure plan adjoins existing development (i.e. the existing West Park neighbourhood located east of West Park Extension) it shall propose housing of a similar type and density than that of the existing development.

RECOMMENDATION

That City Council proceed with first reading of Amendment Bylaw No. 3217/F-2004.

Johan van der Bank
Planner

attachments

c. Colleen Jensen, Director of Community Services

West Park Extension

in Red Deer

Neighbourhood Structure Plan

Within:
Section 7, Township 38, Range 27, W of 4

Prepared for: Trademark Western Properties

Plan Statistics	Acres ±	Hectares ±	%
Total Area	156.26	63.24	
Environmental Reserve	11.19	4.53	
Total Developable	145.07	58.71	
Single family Large Lots	8.08	3.27	5.57
Single family Std Lots	46.31	18.74	31.92
Single family Narrow Lots	8.18	3.31	5.64
Single family Adult Living	19.84	8.03	13.68
Multi family - Town House	8.21	3.32	5.66
Street and Lanes	28.73	11.63	19.80
Public Utility Lots	7.86	3.18	5.42
Church Site	1.0	0.40	0.69
Social Care Site (Social Housing/Day Care/ Retirement Home/R2	0.30	0.12	0.21
Municipal Reserve *	16.56	6.70	11.42
Net Developable Area	145.07	58.71	100.0

* Municipal Reserve Summary	Acres ±	Hectares ±
Central Park	8.57	3.58
Highway 2 Buffer	4.19	1.70
Buffer - Existing Community	1.16	0.47
Tot Lot	0.55	0.22
Feature Park	1.03	0.42
N.E. Storm Pond	0.76	0.31
Total Area for Municipal Reserve	16.56	6.70

Legend

- Neighbourhood Structure Plan Boundary
- Existing Power Poles
- Proposed 1.5m Pathway
- Proposed Walkway
- Existing Tree Cover
- Children Play Area
- Potential Walkout lots
- Landscaped Medians
- Proposed 2.5m Regional Pathway
- Existing Contours

Planning Team

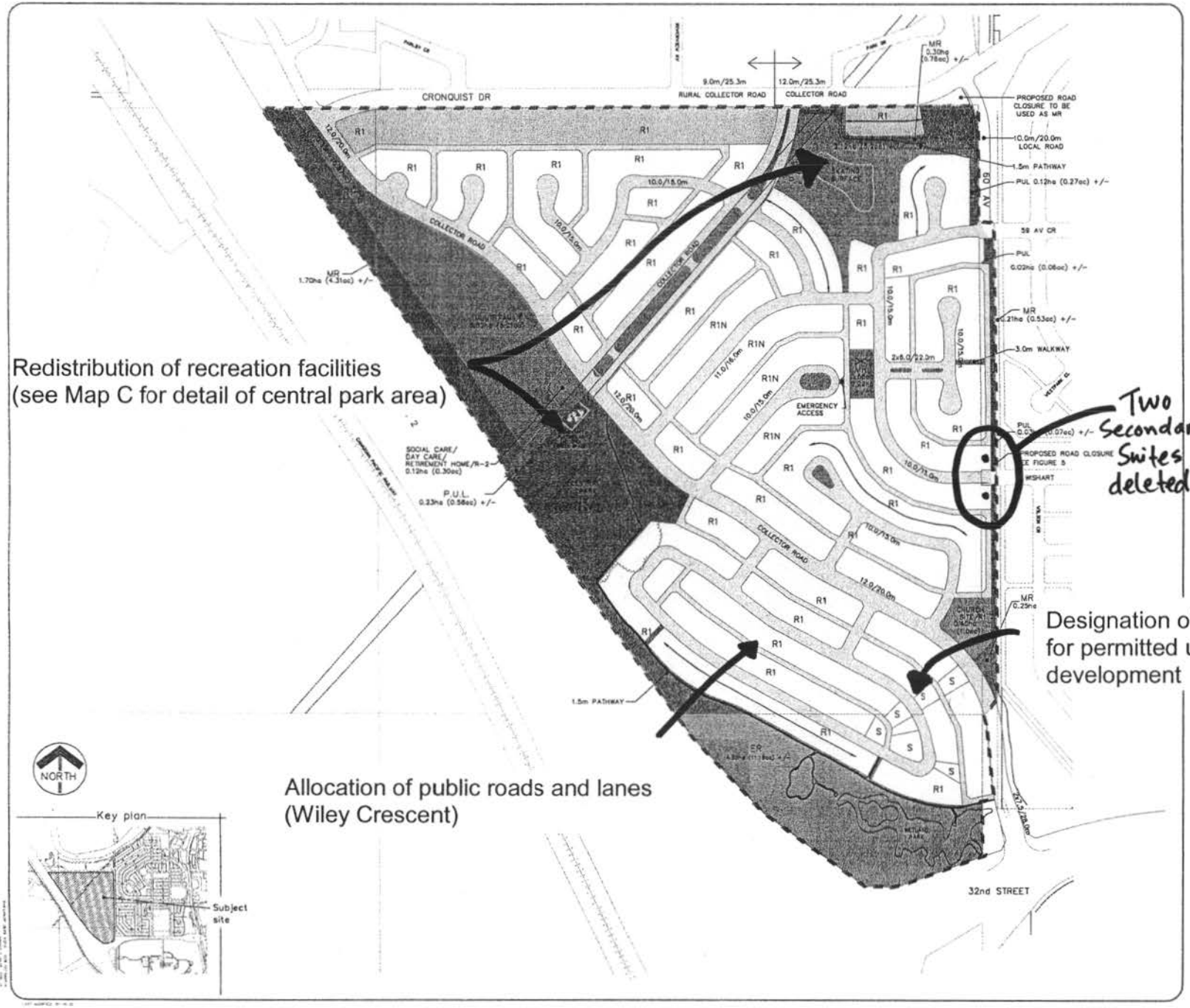
InterPlan Strategies Inc
Al-Terra Engineering Ltd
Lim Associates Inc
Finn Transportation Consultants
Westhoff Resources Engineering Inc
McElhanny Consulting Services Ltd
Group 2 Architects

Prepared By

InterPlan strategies inc. Land Planning Services

Date	Scale	Figure
Nov. 2001	0 20 50 100m	4
Rev. FEB 14/02 (MPC)		

MAP 'A' - EXISTING



West Park Extension

in Red Deer

Neighbourhood Structure Plan

Within:
Section 7, Township 38, Range 27, W of 4

Prepared for: Trademark Western Properties.

Plan Statistics	Acres ±	Hectares ±	%
Total Area	156.26	63.24	
Environmental Reserve	11.19	4.53	
Total Developable	145.07	58.71	
Single family Large Lots	8.08	3.27	5.57
Single family Stc. Lots	60.07	24.31	41.41
Single family Narrow Lots	8.18	3.31	5.64
Multi family – Town House	8.20	3.32	5.65
Secondary Suite Lots	1.19	0.48	0.82
Street and Lanes	33.63	13.61	23.18
Public Utility Lots	7.86	3.18	5.42
Church Site/R1	1.0	0.40	0.69
Social Care Site (Social Housing/Day Care/ Retirement Home/R1	0.30	0.12	0.21
Municipal Reserve *	16.56	6.70	11.42
Net Developable Area	145.07	58.71	100.0

* Municipal Reserve Summary	Acres ±	Hectares ±
Central Park	8.87	3.58
Highway 2 Buffer	4.19	1.70
Buffer – Existing Community	1.16	0.47
Tot Lot	0.55	0.22
Feature Park	1.03	0.42
N.E. Storm Pond	0.76	0.31
Total Area for Municipal Reserve	16.56	6.70

Legend

- Neighbourhood Structure Plan Boundary
- Existing Power Poles
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- Proposed Walkway
- Existing Tree Cover
- Children Play Area
- Potential Walkout lots
- Landscaped Medians
- Proposed 2.5m Regional
- Existing Contours

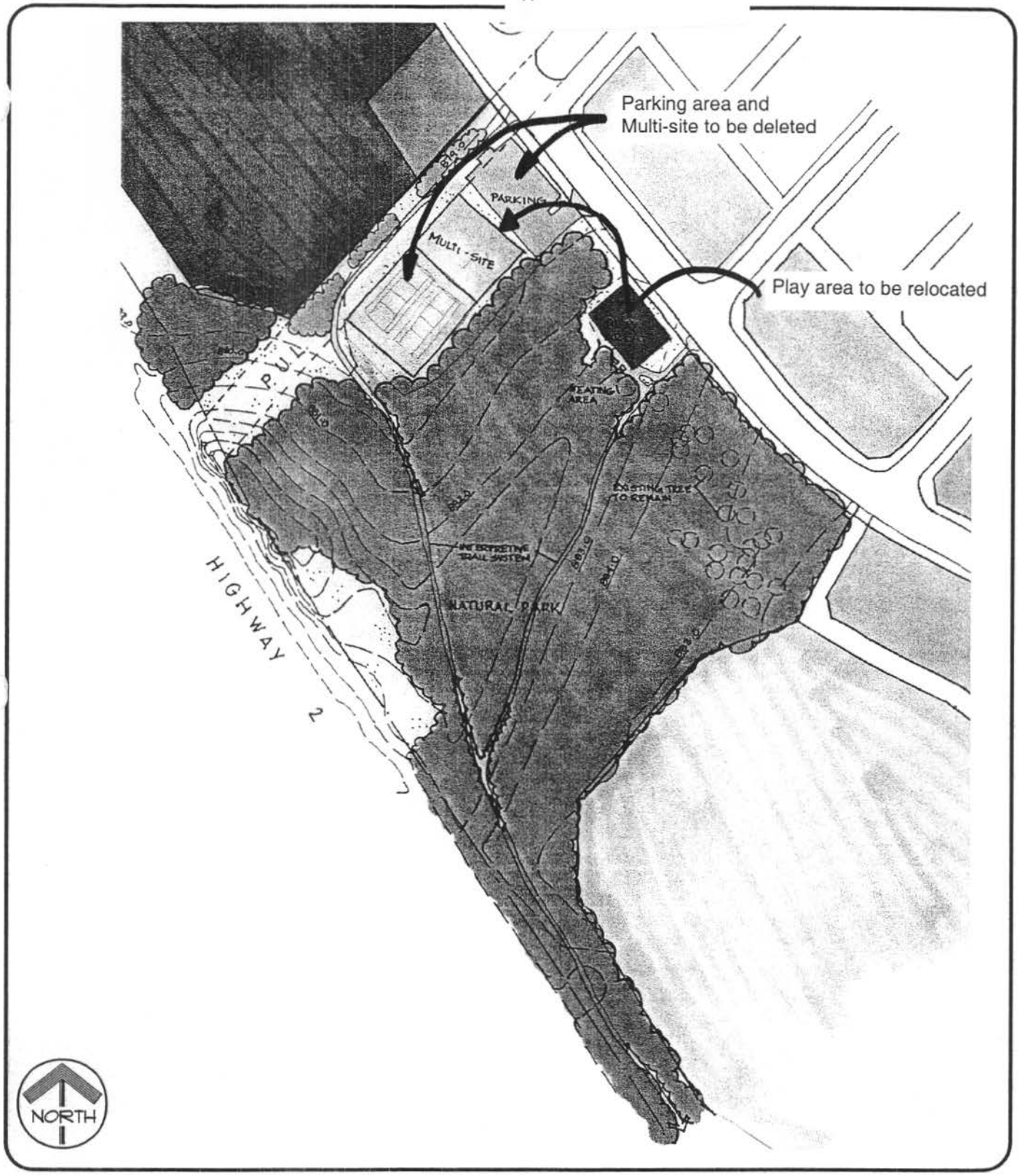
Planning Team
InterPlan Strategies Inc.
Al-Terra Engineering Ltd.
Lim Associates Inc.
Finn Transportation Consultants
Westhoff Resources Engineering Inc.
McElhanny Consulting Services Ltd.
Group 2 Architects

Prepared By
InterPlan strategies inc. Land Planning Services

Date Nov. 2001
Rev JAN 24/05 (ALT)
Scale 0 20 30 100m
Figure 4

16

MAP 'B' – PROPOSED



West Park Extension

Central Nature Park Concept Plan

Lim Associates Inc.

FIGURE 8

MAP 'C'

THE CITY OF Red Deer

Legislative & Administrative Services

DATE: **February 1, 2005**

TO: **City Council**

FROM: **Municipal Planning Commission**

RE: **West Park Extension Neighbourhood Area Structure Plan**
Neighbourhood Area Structure Plan Amendment No. 3217/F-2004

On January 31, 2004 the Municipal Planning Commission gave consideration to a report from Parkland Community Planning Services, Re: Proposed Plan Amendment – West Park Extension Neighbourhood Area Structure Plan / Bylaw 3217/F-2004. Following discussion the motion as shown below was introduced and passed.

> "Resolved that the Municipal Planning Commission recommend that City Council consider first reading of the West Park Extension Neighbourhood Area Structure Plan Amendment No. 3217/F-2004, which provides for the allocation of public roads within the presently identified adult living community; the designation of seven (7) R1 lots for permitted use secondary suite development; and the deletion and relocation of recreation facilities/structures within the central park area and the provision of a skating surface within the storm pond area."

This is provided for Council's information and consideration.

Mayor Morris Flewwelling, Chair
Municipal Planning Commission

FILE

THE CITY OF
Red Deer

Legislative & Administrative Services

DATE: **March 15, 2005**

TO: **Tony Lindhout, Parkland Community Planning Services**

FROM: **Kelly Kloss, Legislative & Administrative Services**

SUBJECT: **Secondary Suite Designations on Maps**

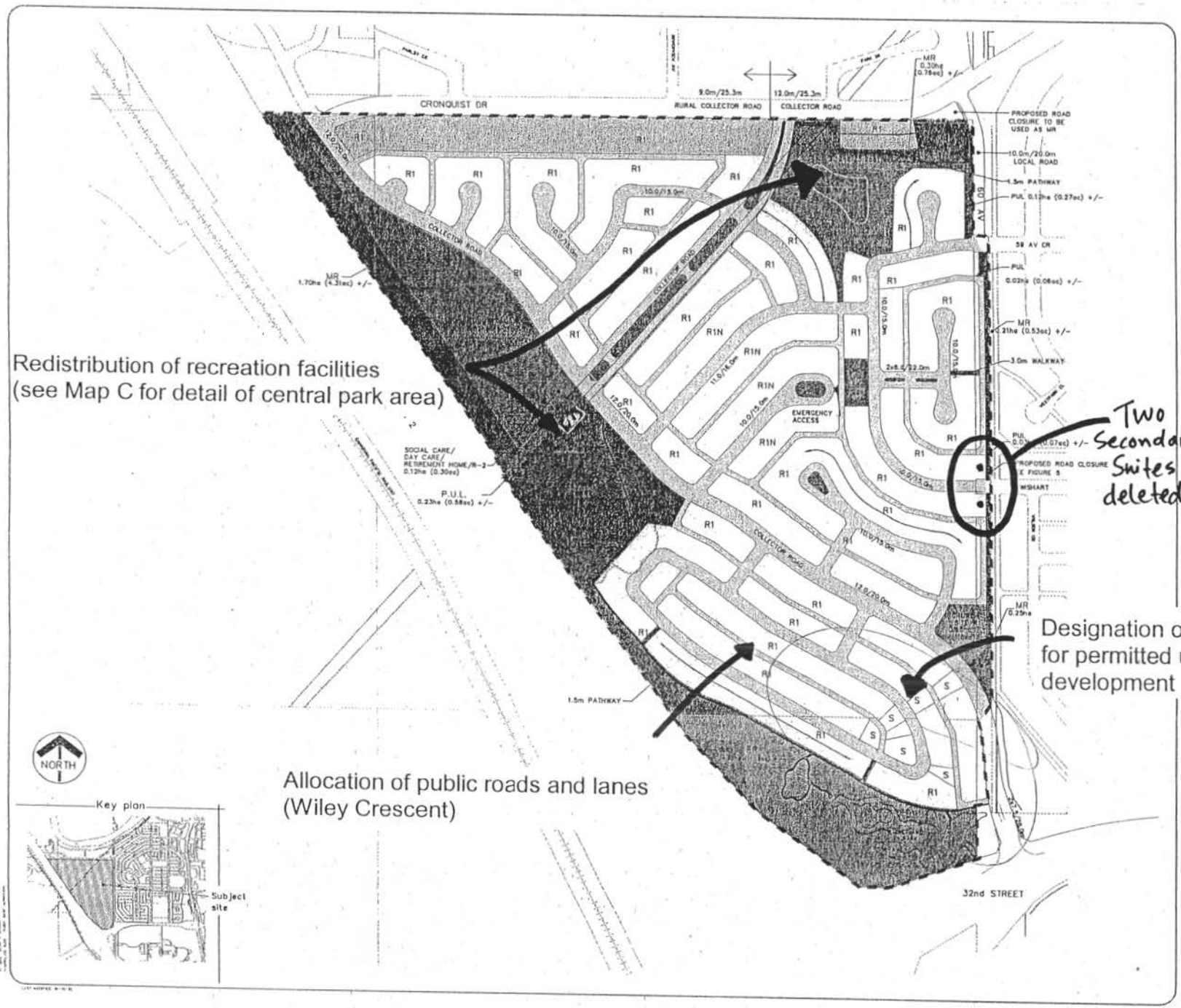
Further to discussion at the March 14, 2005 Council Meeting, please discuss this with City of Red Deer Engineering to determine which term should be used for secondary suite designations on maps, i.e. either use "S" or "SS". Once this is decided, documents should be updated and those who would be using the designations would need to be advised which designation to use.

See the attached maps from the March 14, 2005 Council Meeting Agenda – where two different designations for "secondary suites" were used.

Kelly Kloss
Manager

/attach.

/chk



West Park Extension

in Red Deer

Neighbourhood Structure Plan

Within:
Section 7, Township 38, Range 27, W of 4

Prepared for: Trademark Western Properties.

Plan Statistics	Acres ±	Hectares ±	%
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Social Care Site (Social Housing/Day Care/ Retirement Home/R2	0.30	0.12	0.21
Municipal Reserve *	16.56	6.70	11.42
Net Developable Area	145.07	58.71	100.0

* Municipal Reserve Summary	Acres ±	Hectares ±
Central Park	8.87	3.58
Highway 2 Buffer	4.19	1.70
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Legend

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- Landscaped Medians
- Proposed 2.5m Regional
- Existing Contours

Planning Team

InterPlan Strategies Inc.
Al-Terra Engineering Ltd.
Lim Associates Inc.
Finn Transportation Consultants
Westhoff Resources Engineering Inc.
McElhanny Consulting Services Ltd.
Group 2 Architects

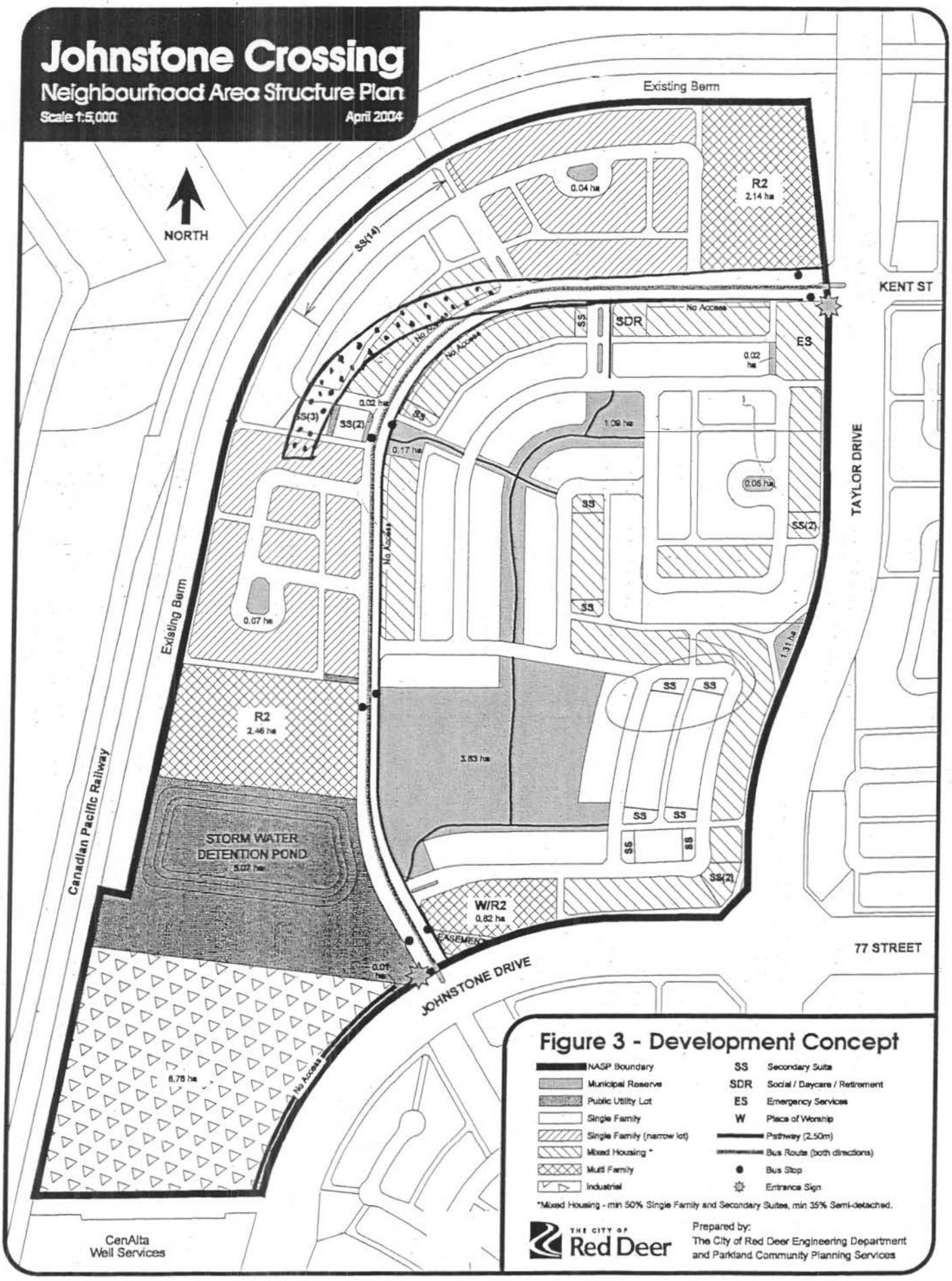
Prepared By

InterPlan strategies inc.
Land Planning Services

Date	Scale	Figure
Nov. 2001	0 20 50 100m	4
Rev JAN 24/05 (ALT)		

16

MAP 'B' - PROPOSED


Johnstone Crossing
Neighbourhood Area Structure Plan
Scale 1:5,000
April 2004
NORTH
Existing Berm
SS(14)
R2
2.14 ha
0.04 ha
KENT ST
No Access
SDR
ES
0.02 ha
SS
SS(3)
SS(2)
0.02 ha
1.09 ha
0.17 ha
0.05 ha
TAYLOR DRIVE
No Access
Existing Berm
0.07 ha
1.31 ha
R2
2.46 ha
3.83 ha
Canadian Pacific Railway
STORM WATER
DETENTION POND
5.02 ha
W/R2
0.82 ha
EASEMENT
77 STREET
0.01 ha
JOHNSTONE DRIVE
6.76 ha
No Access
CenAlta
Well Services
Figure 3 - Development Concept
NASP Boundary
Municipal Reserve
Public Utility Lot
Single Family
Single Family (narrow lot)
Mixed Housing *
Multi Family
Industrial
SS Secondary Suite
SDR Social / Daycare / Retirement
ES Emergency Services
W Place of Worship
Pathway (2.50m)
Bus Route (both directions)
Bus Stop
Entrance Sign
*Mixed Housing - min 50% Single Family and Secondary Suites, min 35% Semi-detached.
THE CITY OF Red Deer
Prepared by:
The City of Red Deer Engineering Department
and Parkland Community Planning Services

BACK-UP ONLY

BYLAW NO. 3217/F-2004

Being a bylaw to amend Bylaw No. 3217/98, the bylaw adopting the neighbourhood area structure plans as a bylaw of the City of Red Deer

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

That Bylaw No. 3217/98 is hereby amended:

1. By substituting the revised and updated text pages and maps, attached hereto and forming part of the bylaw, in the West Park Extension Neighbourhood Area Structure Plan [i.e. pages 12 to 17 and Figures 4, 8, 9, 16, 17, 20, 21, 22].

READ A FIRST TIME IN OPEN COUNCIL this day of , A.D. 2005.

READ A SECOND TIME IN OPEN COUNCIL this day of , A.D. 2005.

READ A THIRD TIME IN OPEN COUNCIL this day of , A.D. 2005.

AND SIGNED BY THE MAYOR AND CITY CLERK this day of , A.D. 2005.

MAYOR

CITY CLERK

townhouse site are provided as either a response to a particular residential market niche or a specific land use or site issue.

The concept plan also provides opportunities for walkout basements. The potential locations are identified in ***Figure 4.***

The proposed land use allocation is illustrated in ***Table 1.***

TABLE 1 LAND USE ALLOCATION

	Acres± (Ha±)	Percentage
Total Neighbourhood Area	**156.26 (63.24)**	-
Environmental Reserve	11.19 (4.53)	-
Developable Area	**145.07 (58.71)**	**100.00**
Land Use		
Single Family – Large Lots	8.08 (3.27)	5.57
Single Family – Standard Lots	60.07 (24.31)	41.40
Multi - Family – Townhouse	8.20 (3.32)	5.65
Single Family – Narrow Lot	8.18 (3.31)	5.64
Secondary Suite Lots	1.19 (0.48)	0.82
Municipal Reserve	16.56 (6.70)	11.42
Streets and Lanes	33.63 (13.61)	23.18
Public Utility Lots	7.86 (3.18)	5.42
Church Site	1.00 (0.40)	0.69
Social Care Site*	0.30 (0.12)	0.21

* Social Housing/Day Care/ Retirement Home/R2

Traffic will move efficiently and safely through the neighbourhood on a curvilinear road network that emphasizes cul-de-sac access to single family residences. The road network is supported by a complete rear lane system. Connections to the existing West Park and its local road network are strategically located to optimize efficiency of movement and safety, and to minimize through traffic.

A significant natural area along the western boundary is provided for recreation purposes and buffering of highway noise. Similarly, the existing natural wetland found at the southern end of the site is protected as habitat but is also upgraded for stormwater detention purposes.

It should be noted that the smaller wetland and associated park area located to the east of the 60th Avenue alignment is not within the site boundaries, even though each of these contribute to the neighbourhood. As such, they have not been included in the Neighbourhood Structure Plan area.

4.1.1 Single Family Detached

There are five single family detached lot types being proposed, all of which fall under the City of Red Deer's Residential Low Density District (R1) and Residential Narrow Lot District (R1N). Each of the lot types is described below.

Standard A: The typical and minimum widths of standard A lots are 15.2 metres ± (49.9 feet ±) and 12.8 metres ± (42.0 feet ±) respectively. Standard A lots account for 364 of the 692 (approximately 53 percent) dwelling units anticipated on the site, the highest proportion of any residential land use. They are found throughout the neighborhood

Secondary Suite: Similar in lot dimensions to Standard A, these lots are located in Phases 5 of the subdivision. These lots account for 7 of the 692 dwelling units anticipated on the site.

Standard B: At 16.8 metres ± (55 feet ±) wide standard B lots are wider than standard A lots. They are found along the neighborhood's eastern boundary where they back onto lots with similar dimensions in the adjoining established neighbourhood. They are intended to enhance compatibility and cohesiveness between existing and future residential development.

Large: Large lots are characterized by a 22.9 metre ± (75 feet ±) width, and lot depths of 48.8 metres ± (160 feet ±) and 40 metres ± (132 feet ±) . Located along

the south side of Cronquist Drive these lots are intended to enhance compatibility with larger suburban lots located on the north side of the road.

Narrow: Narrow lots are characterized by a minimum lot width of 10.4 metres (34.1 feet) and rear drive garages. They are located near the center of the neighbourhood in close proximity to major neighbourhood roads and park and natural areas.

4.1.2 Townhouses

A single, 3.32 gross hectare ± (8.21 acre ±) medium density townhouse site is strategically located in close proximity to a park / natural area and the internal collector road network. Townhouse units will be a maximum two stories high. They are intended for a range of potential homebuyers.

4.2 Development Density

As noted in Section 3.1 maximum density for new residential areas in the City of Red Deer is 45 persons per gross hectare. Based upon the existing policy and given a total neighbourhood development area of 63.24 hectares ± (156.26 acres ±), a maximum population of 2846 persons could be accommodated in the West Park Extension area.

The proposed development concept, however, is well below the maximum, as the estimated population density is 36.97 persons per hectare. This is based upon an estimated build-out of 692 dwelling units, City of Red Deer occupancy factors and a population of 2338 persons.

The population density calculation is summarized in ***Table 2.*** Table 2 also shows the estimated number of dwelling units and associated population for each of the residential land uses when the neighbourhood is fully developed. Single family Standard A lots account for the majority of dwelling units (494) and population (1679) as compared to the other residential land uses.

TABLE 2 ESTIMATED POPULATION DENSITIES

Land Use	Lot Width (m±)	Number of Dwelling Units	Number of Persons/ Unit	Total Population (Maximum)	Density Persons/Ha
Single Family, Large Lot	22.9	30	3.4	102	-
Single Family, Standard A Lots	12.8	494	3.4	1679	-
Single Family,Standard B Lots	16.8	14	3.4	48	
Single Family, Narrow Lots	10.4	81	3.4	275	
Single Family, Secondary Suite Lots	12.8	7	5.1	36	-
Multiple Family, Townhouse	*8.21 ac@8upa*	66	3.0	198	-
Total ***(With church and social care site)***		**692**	-	**2338**	**36.97**
Multiple Family, Townhouse ***(Additional- no social care site)****	*0.30 ac@8upa*	2	3.0	6	
Single Family, Standard Lot A (***Additional- no church)***	*12.9*	5	3.4	17	
Total ***(No church or social care site*)***		**699**	-	**2361**	**37.33**

** Social Housing /Daycare /Retirement Home /R2*

The relatively low estimated population density can be attributed to the amount of park and natural areas that are provided and the quantity of lower density single family detached development.

It should be noted that the calculations are based on the assumption that the church and community care sites would be developed for these intended purposes. Should the two sites be developed for residential purposes, the estimated population density for the entire neighbourhood would marginally increase to 37.33 persons per hectare (15.11 persons per acre). This is well within the 45 persons per hectare limit stipulated in the City of Red Deer *Municipal Development Plan.*

4.3 Parks and Open Space

The parks and open space system includes several different types of parks and an extensive pedestrian / cycling trail system connecting parks and neighbourhoods. The park and trail systems represent important community amenities and focal points for new West Park Extension residents as well as those from neighbouring communities. Approximately 10 per cent of the site is provided as municipal reserve, satisfying the *Municipal Government Act* and City of Red Deer requirements. It is comprised of a balance of natural areas, local play areas, buffer and linear parks. The percentage increases to 21 per cent when the environmental reserve areas and public utility lots such as the storm detention facility are included.

4.3.1 West Area Park

The neighbourhood's largest and most significant park is the linear park that runs the length of neighbourhood's western boundary. It includes a 3.58 hectare ± (8.87 acre ±) natural park located at approximately the midway point along the boundary (see ***Figure 8***). A "play area", complete with a elementary playground facilities and a open green space are integrated into the natural area park. The final location and layout of the play area will be determined in cooperation with the City of Red Deer Recreation Parks and Culture Department. The western linear park system connects the northern and southern detention ponds to form a

corridor of public use open space encompassing the entire western and southern boundaries of the neighbourhood.

The western boundary park serves several important purposes by offering excellent outdoor amenity and recreation opportunities to the community, protecting important tree stands and wildlife habitat, and acting as a noise and visual barrier to Highway 2. An approximately 30 metre (100 ft.) wide, landscaped berm complete with sound attenuation faculty, will be constructed adjacent to portions of the highway right-of-way for added noise and visual abatement. The design details of the berm are illustrated in ***Figure 9***.

4.3.2 East Area Park

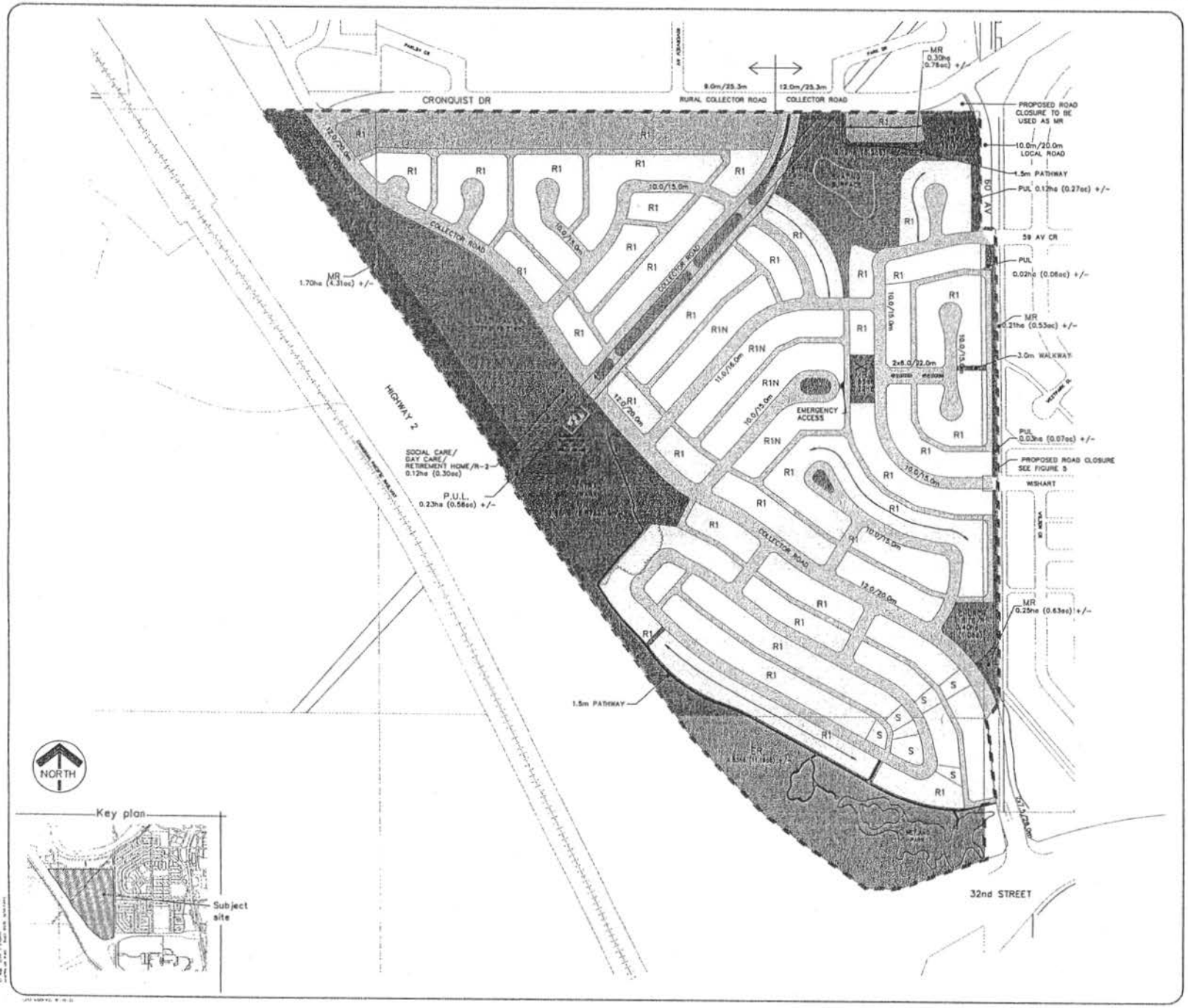
A second linear open space incorporating a 2.5 metre regional path will be created along the 60th Avenue alignment (see ***Figure 6***). It connects the historical northeast feature park at the intersection of Cronquist Drive and 60th Avenue in the north to the combination wetland / storm detention pond found in the south. The school site monument is the focus of the northeast feature park. This park and monument site will be enhanced with paved walking areas and seating facilities as illustrated in ***Figure 10***. The feature park is also connected to the storm detention facility located to the southwest and ultimately to the Grand Boulevard.

4.3.3 Grand Boulevard

The high-tension power line corridor has been integrated into the neighbourhood park and open space system by serving as a median for the main entry road (see ***Figure 7***). Special design treatments, such as extensive landscaping are intended to improve its visual and aesthetic quality and establish the Grand Boulevard as a neighbourhood gateway.

4.3.4 Local Parks

A 0.22 hectare ± (0.55 acre ±) "tot lot" in the east central area (see ***Figure 10***) is provided as a local play and amenity area.



West Park Extension

in Red Deer

Neighbourhood Structure Plan

Within:
Section 7, Township 38, Range 27, W of 4

Prepared for: Trademark Western Properties.

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* Municipal Reserve Summary	Acres ±	Hectares ±
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Highway 2 Buffer	4.19	1.70
Buffer – Existing Community	1.16	0.47
Tot Lot	0.55	0.22
Feature Park	1.03	0.42
N.E. Storm Pond	0.78	0.31
Total Area for Municipal Reserve	16.56	6.70

Legend

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- Proposed Walkway
- Existing Tree Cover
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- Landscaped Medians
- Proposed 2.5m Regional Pathway
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Planning Team

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Al-Terra Engineering Ltd.
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Finn Transportation Consultants
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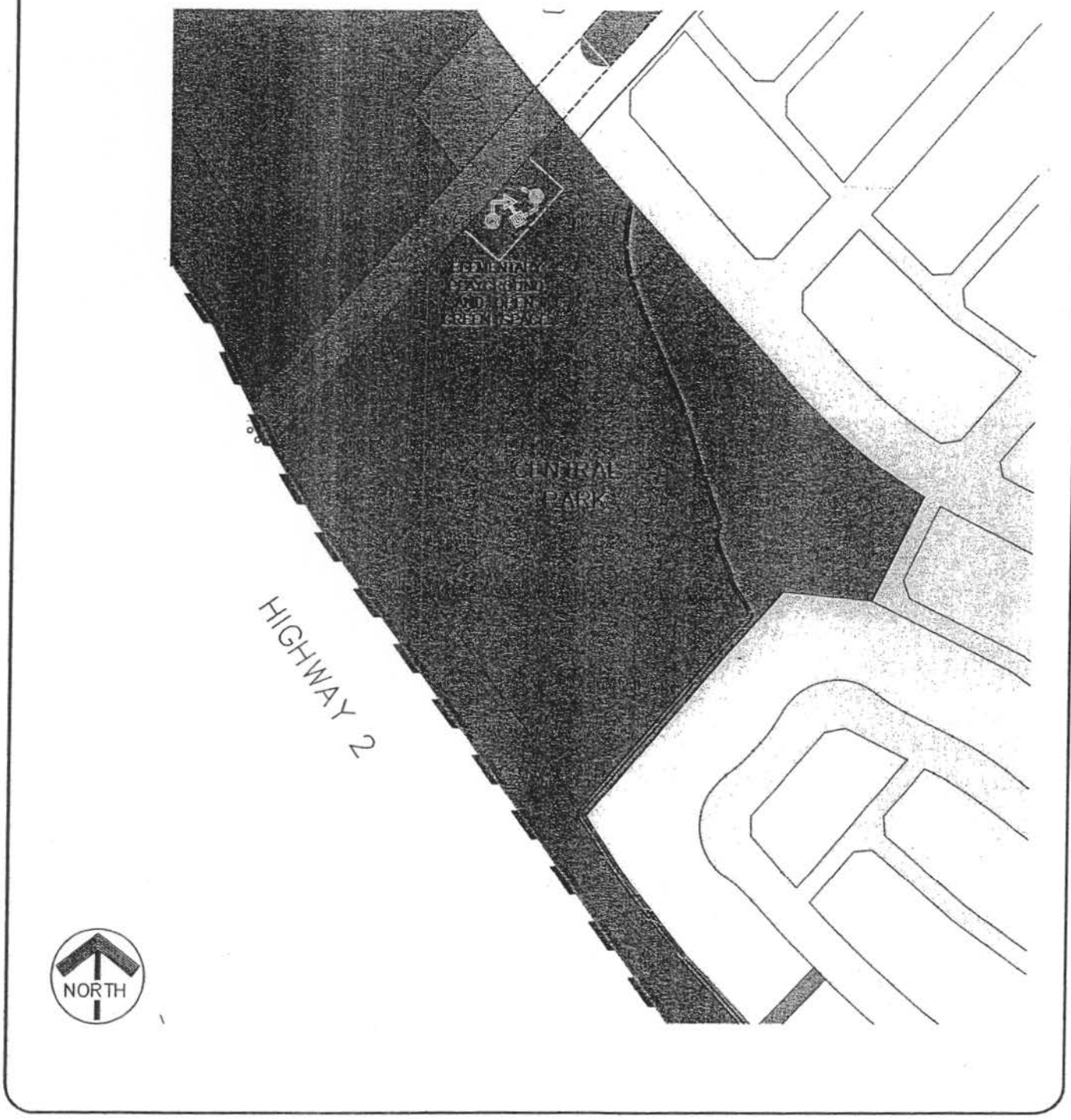
McElhanny Consulting Services Ltd.
Group 2 Architects

Prepared By

InterPlan strategies inc.
Land Planning Services

Date	Scale	Figure
Nov, 2001	0 20 50 100m	4
Rev JAN 24/05 (ALT)		

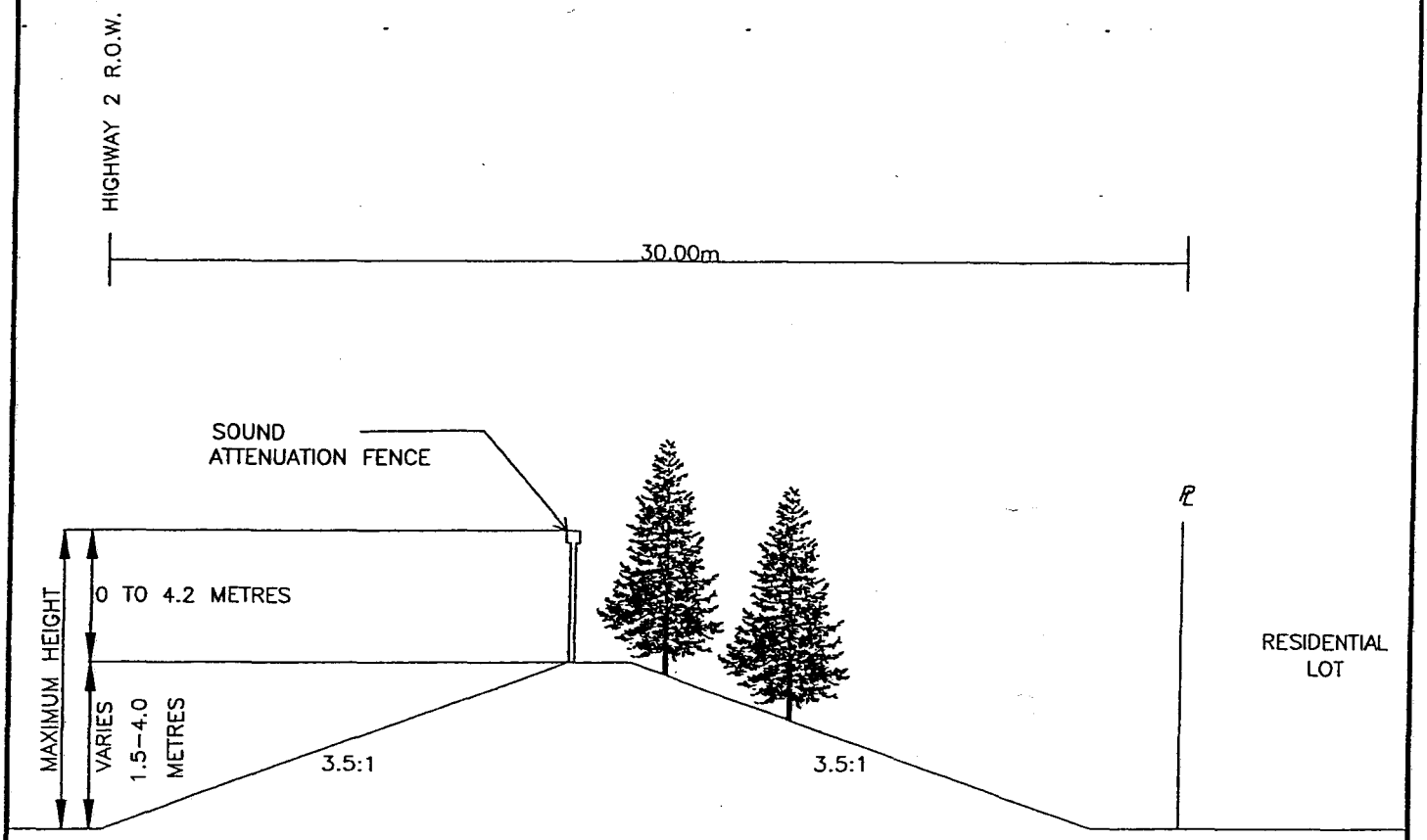


West Park Extension
Central Nature Park Concept Plan

Al-Terra Engineering Ltd.

FIGURE 8

HIGHWAY BERM DETAIL

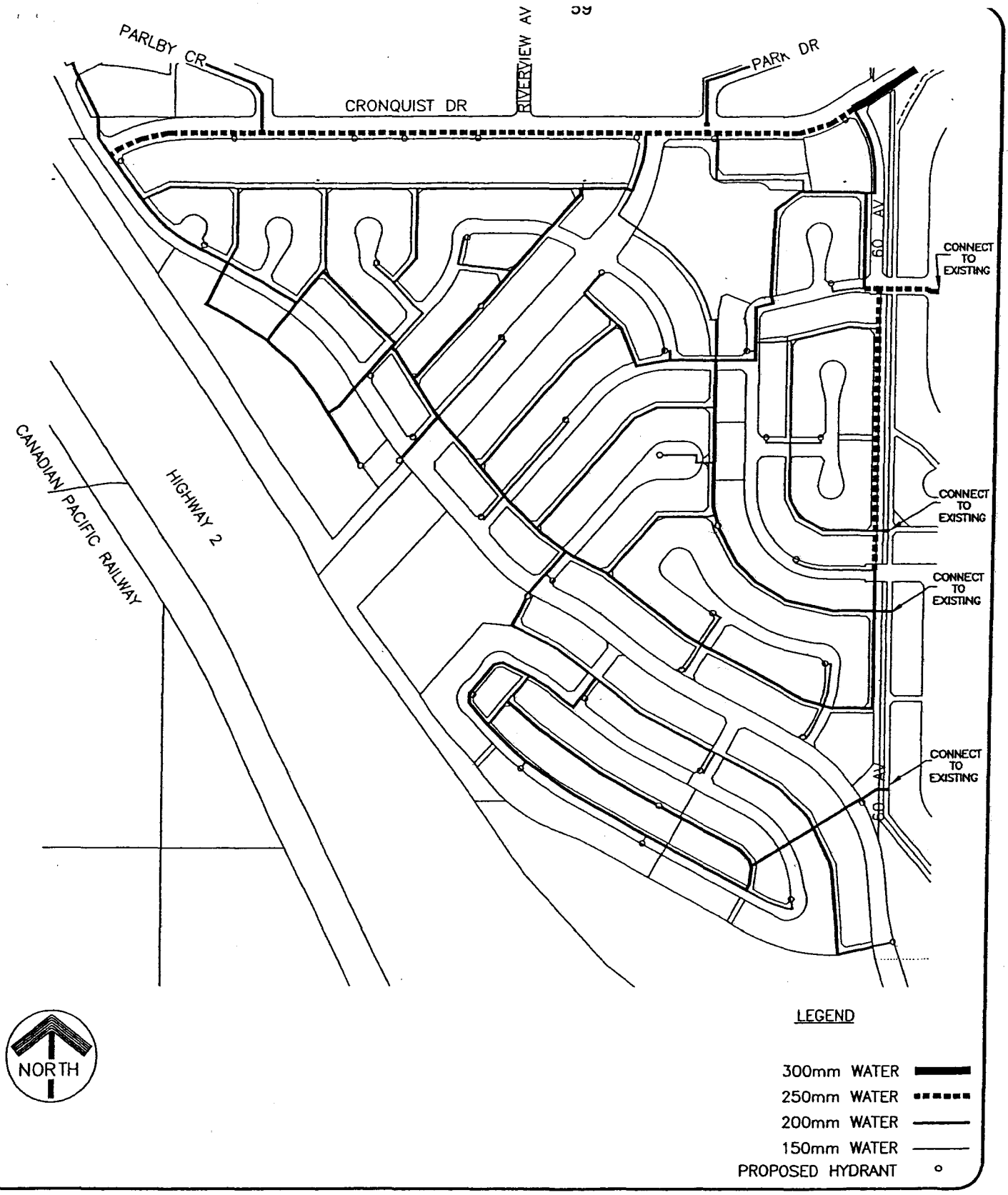


NOTE: –ALL DIMENSIONS ARE IN METRES
–BERM TO BE CONSTRUCTED A MIN HEIGHT OF 2.5m ABOVE HIGHWAY ELEVATION

West Park Extension
HIGHWAY BERM DETAIL

Al-Terra Engineering Ltd.

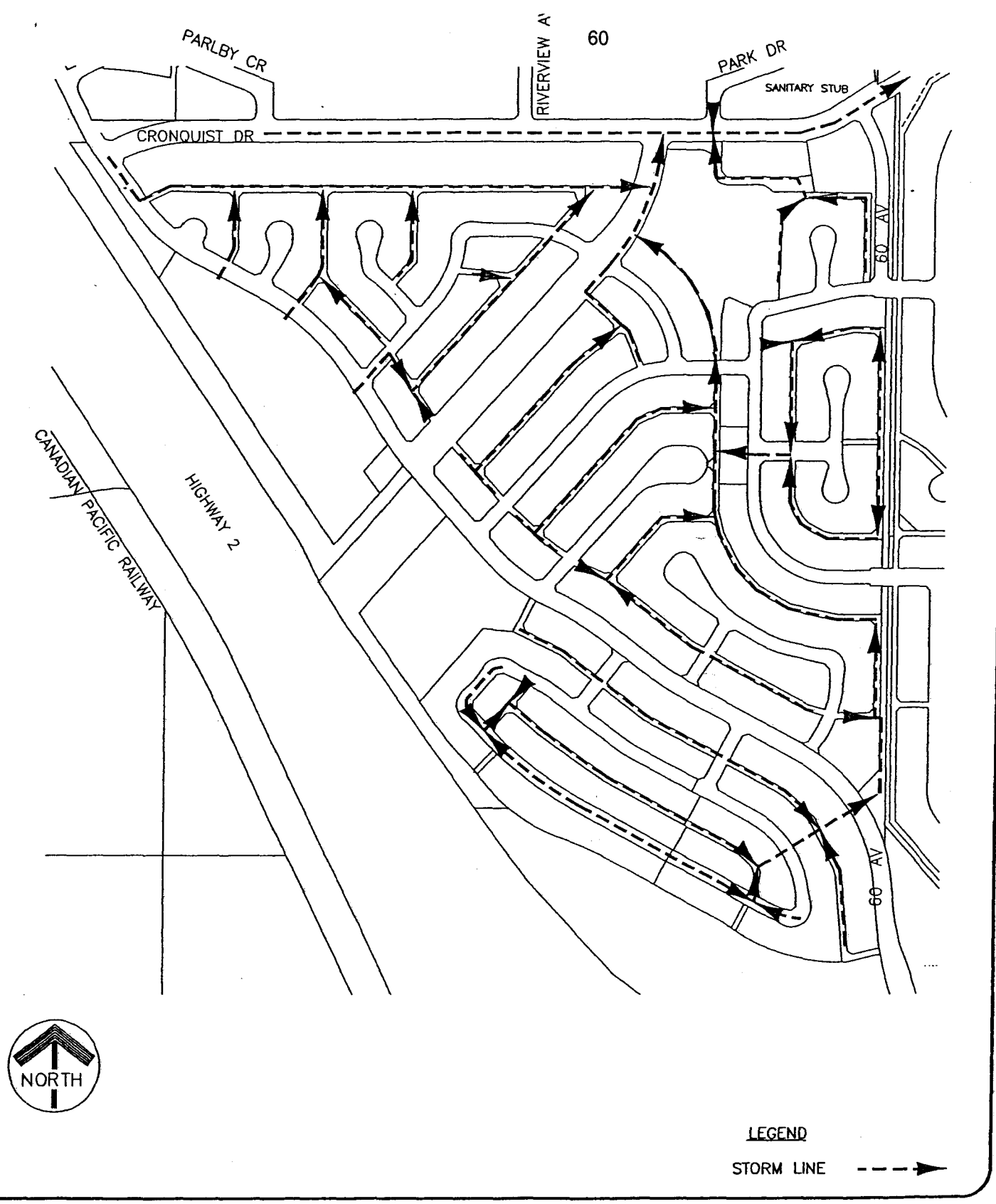
FIGURE 9



West Park Extension
Proposed Water Main

Al-Terra Engineering Ltd.

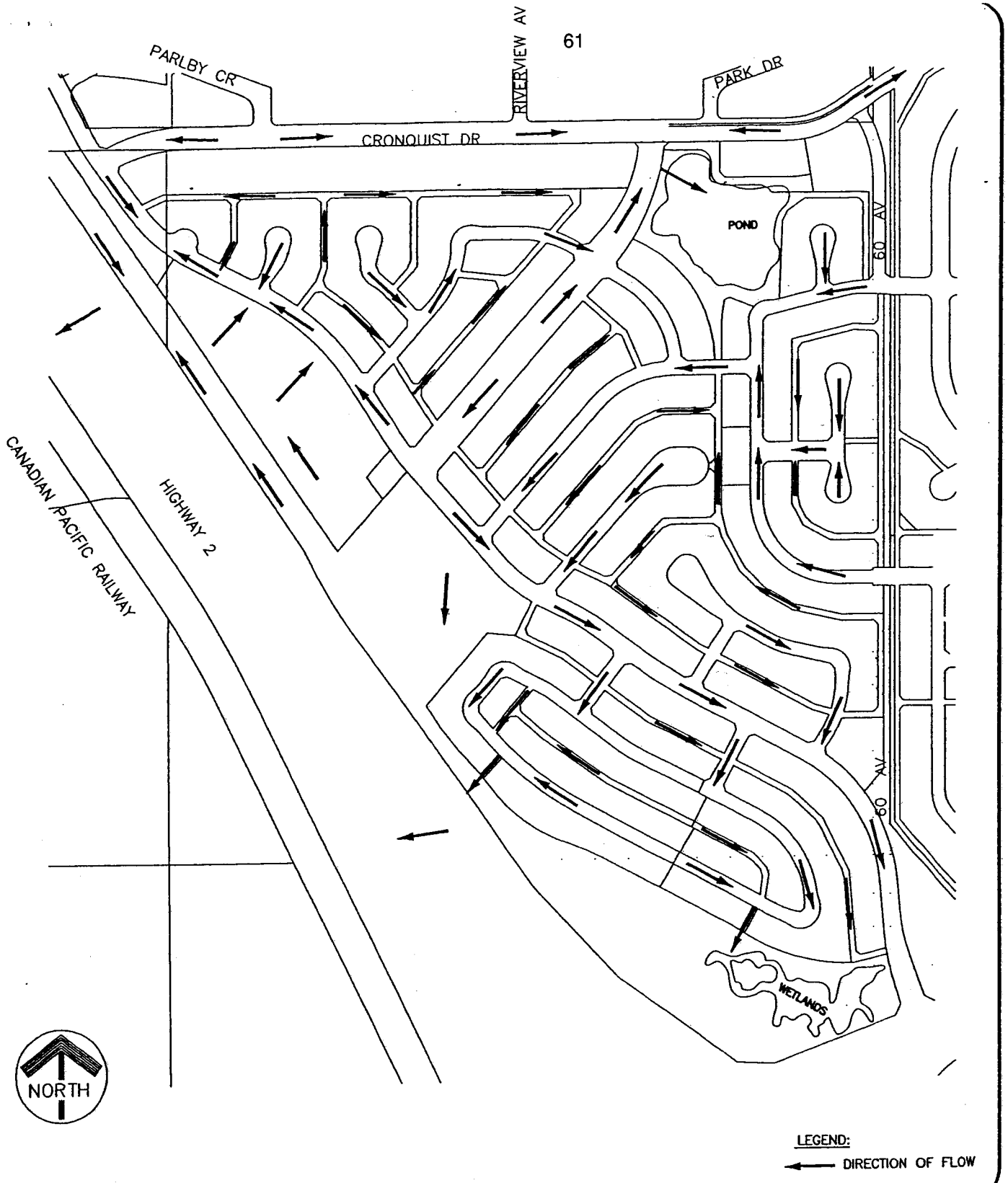
FIGURE 16



West Park Extension
Proposed Sanitary Sewer

Al-Terra Engineering Ltd.

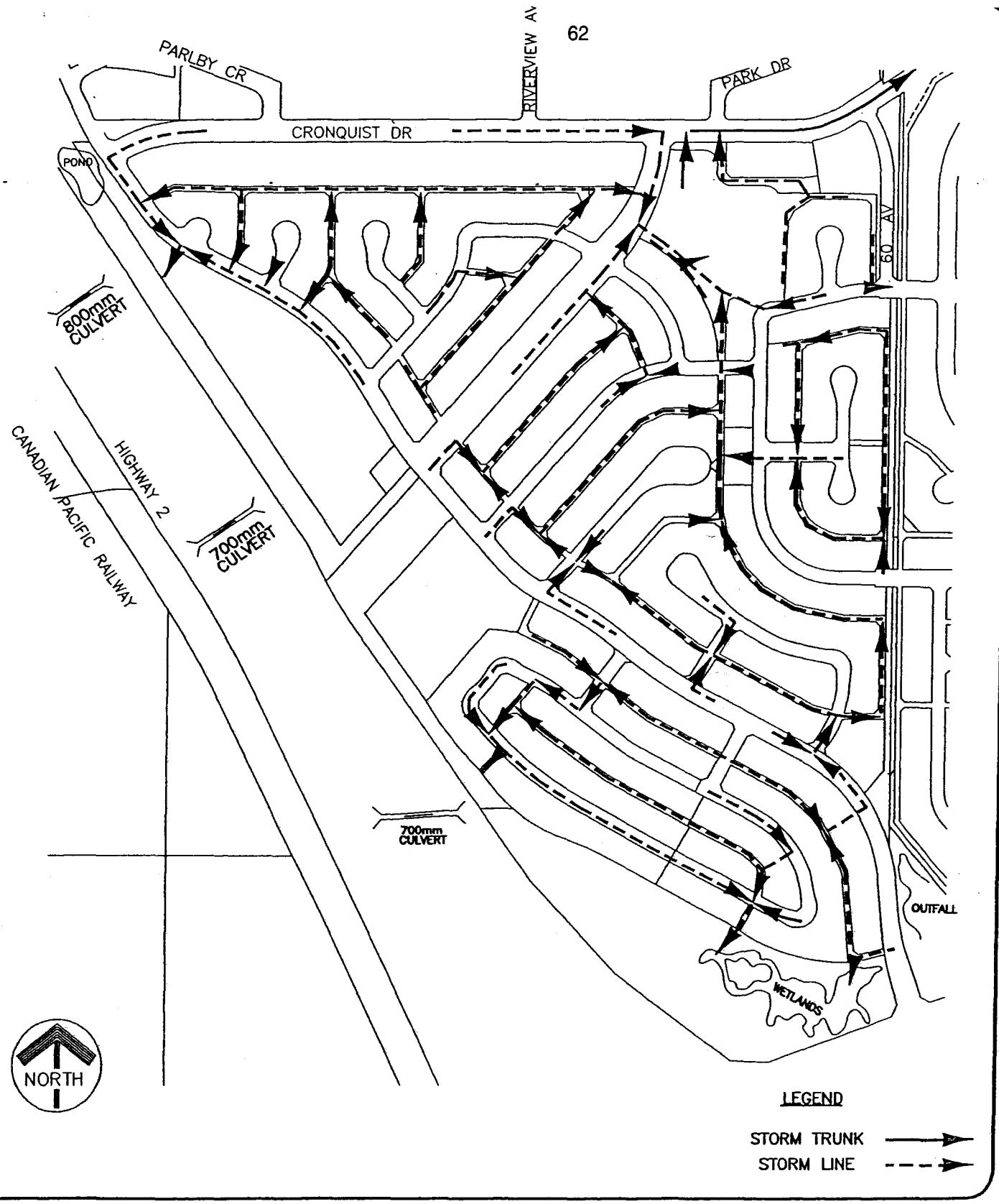
FIGURE 17



West Park Extension
Proposed Overland Drainage

FIGURE 20

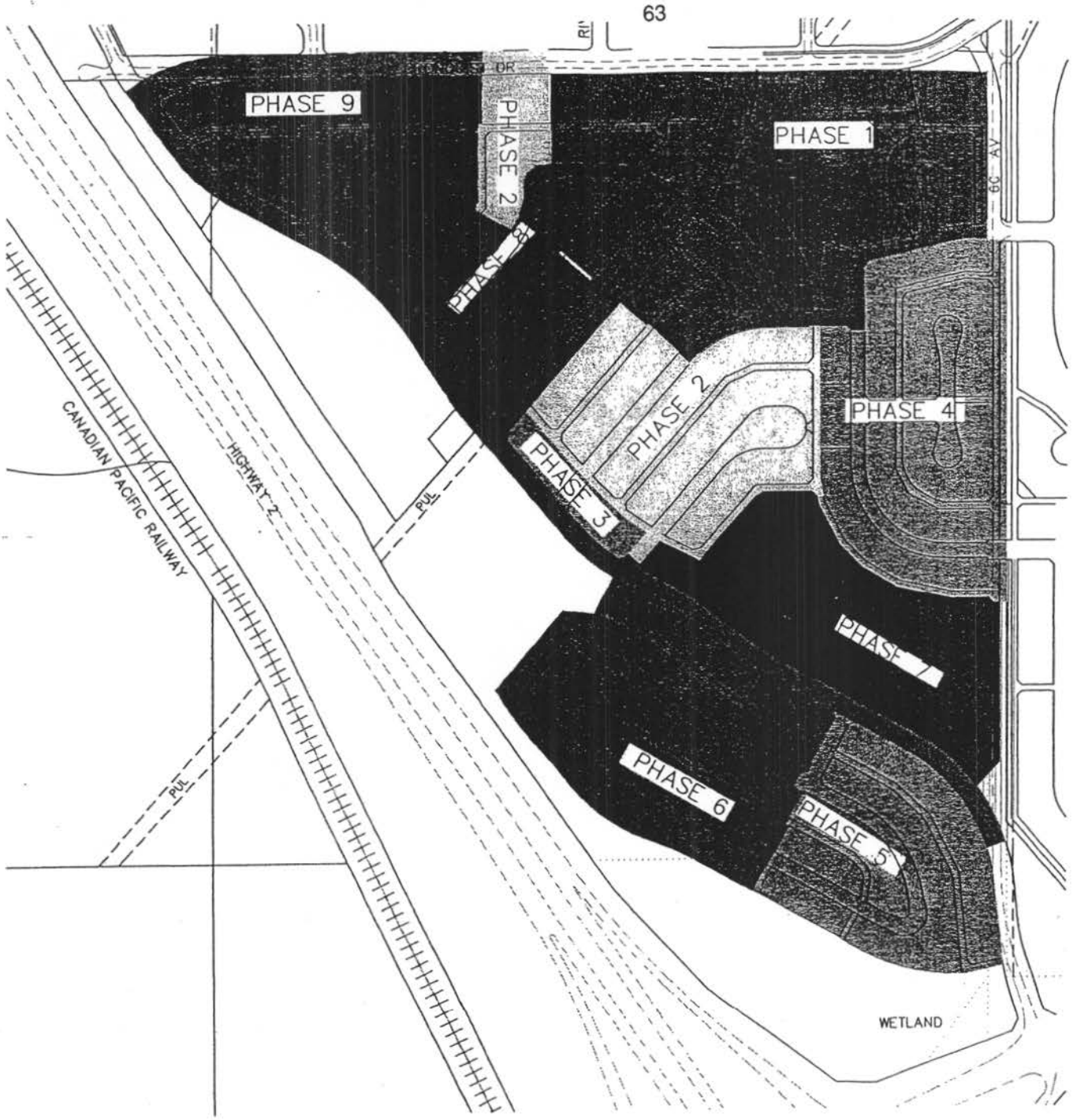
Al-Terra Engineering Ltd.



West Park Extension
Proposed Storm Sewer

Al-Terra Engineering Ltd.

FIGURE 21



West Park Extension
Phasing

FIGURE
22

Al-Terra Engineering Ltd.

THE CITY OF
Red Deer

Legislative & Administrative Services

DATE: **March 10, 2005**

TO: **Johan van der Bank, Parkland Community Planning Services**

FROM: **Christine Kenzie, Administrative Assistant**

SUBJECT: **West Park Extension**
Neighbourhood Area Structure Plan Amendment 3217/F-2004

Attached, for your information, is a copy of a letter received at Legislative & Administrative Services, from a citizen with concerns regarding the West Park Neighbourhood Area Structure Plan Amendment 3217/F-2004.

Please note this person did not want his name or address made public.

A copy of this letter has been provided in confidence to Council members for their review with their copy of the March 14, 2005 Council Agenda.

Christine Kenzie
Administrative Assistant

/attach.

Victor Tam
250 Webster Drive
Red Deer, Alberta
T4N 7E6

March 8, 2005

To Legislative &Administrative Services:

I am writing about the changes in the Westlake area. I am currently living in this area for about 8 months now and I can't say anything bad about it. I like the scenery every time I look out through my window. It was one of the reason why I selected this area because of the preserve area and the lay out of the Westlake subdivision.

To my understanding, the developer is going to change the private roads of Wiley Crescent into a public access. The reason why I disagree for this to change is because we have enough traffic coming and going. There are already 4 to 5 ways accessing into Westlake subdivision.. The noise and the traffic in Westlake will be very busy along with the traffic from the highway 2. **I strongly feels that it should stay what it was originally suppose to be**. (a Crescent) We do not want to increase the traffic flow, especially where families who has children around that area. It is one of the major reason why some of us planned to live in this area, because of the quietest.

By disagreeing with the public access to Wiley Crescent, I also disagree with the secondary suite development in that area. By limited the traffic flow and the noise from coming and going to Westlake, our area would be quiet. The residents can enjoy the relaxation from their own homes, not known there is traffic around. By leaving the 7 R1 lots and not having a secondary suite, it will limit the people renting their properties out to the collage students. We as home owners like to keep our property value up and not deter people away from us, especially coming in or out from Highway 2. We want this area to be nice and quiet and not having any major problem that may arise in the future.

Thank you for your time and consideration about how I feel about the changes in Westlake area.

Sincerely,

Victor Tam

Christine Kenzie

From: Victor Tam [vwltam77@hotmail.com]
Sent: March 09, 2005 3:43 PM
To: Christine Kenzie
Subject: Westpark Subdivision (Westlake)

Westlake.doc.wps

Here is my letter Christine.

Thank you!

[This message has been scanned for security content threats, including computer viruses.]

PER PHONE CALL FROM VICTOR TAM - HE DID NOT WANT HIS NAME OR ADDRESS MADE PUBLIC.

Victor Tam
250 Webster Drive
Red Deer, Alberta
T4N 7E6

March 8, 2005

To Legislative &Administrative Services:

I am writing about the changes in the Westlake area. I am currently living in this area for about 8 months now and I can't say anything bad about it. I like the scenery every time I look out through my window. It was one of the reason why I selected this area because of the preserve area and the lay out of the Westlake subdivision.

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Thank you for your time and consideration about how I feel about the changes in Westlake area.

Sincerely,

Victor Tam

THE CITY OF
Red Deer

FILE

LEGISLATIVE & ADMINISTRATIVE SERVICES

March 15, 2005

Victor Tam
250 Webster Drive
Red Deer, AB T4N 7E6

Dear Mr. Tam:

West Park Extension
Neighbourhood Area Structure Plan Amendment 3217/F-2004

At the March 14, 2005 Council meeting, Council received your letter regarding your concerns with the West Park Neighbourhood Area Structure Plan Amendment.

After the Public Hearing, Council did give second and third readings to the West Park Extension Neighbourhood Area Structure Plan Amendment 3217/F-2004. This amendment provides for the allocation of public roads within the presently identified adult living community and the designation of seven R1 lots for permitted use secondary suite development. It also provides for the deletion and relocation of recreation facilities/structures within the central park area and the provision of a skating surface within the storm pond area.

Please call if you require any additional information.

Sincerely,

Kelly Kloss
Manager

c Parkland Community Planning Services

THE CITY OF
Red Deer

LEGISLATIVE & ADMINISTRATIVE SERVICES

March 15, 2005

Mr. Gary Grelish
Trademark West Park Inc.
#200, 6245 – 136 Street
Surrey, BC V3X 1H3

Dear Mr. Grelish:

West Park Neighbourhood Area Structure Plan
Bylaw Amendment 3217/F-2004

At the City of Red Deer's Council meeting held March 14, 2005, a Public Hearing was held with respect to West Park Neighbourhood Area Structure Plan Bylaw Amendment 3217/F-2004. The bylaw amendment was given second and third readings, a copy of which is attached.

West Park Extension Neighbourhood Area Structure Plan Bylaw Amendment 3217/F-2004 provides for the allocation of public roads within the presently identified adult living community and the designation of seven R1 lots for permitted use secondary suite development. It also provides for the deletion and relocation of recreation facilities/structures within the central park area and the provision of a skating surface within the storm pond area.

Please call me if you have any questions or require additional information.

Sincerely,

Kelly Kloss
Manager

/attach.

c Parkland Community Planning Services

THE CITY OF
Red Deer

Council Decision – March 14, 2005

Legislative & Administrative Services

DATE: **March 15, 2005**

TO: **Johan van der Bank, Parkland Community Planning Services**

FROM: **Kelly Kloss, Legislative & Administrative Services Manager**

SUBJECT: **Neighbourhood Area Structure Plan Amendment 3217/F-2004**
West Park Extension Neighbourhood Area Structure Plan

Reference Report:
Parkland Community Planning Services, dated February 2, 2005

Bylaw Readings:
West Park Extension Neighbourhood Area Structure Plan Bylaw Amendment 3217/F-2004 was given second and third readings. A copy of the bylaw is attached.

Report Back to Council: No

Comments/Further Action:
West Park Extension Neighbourhood Area Structure Plan Bylaw Amendment 3217/F-2004 provides for the allocation of public roads within the presently identified adult living community and the designation of seven R1 lots for permitted use secondary suite development. It also provides for the deletion and relocation of recreation facilities/structures within the central park area and the provision of a skating surface within the storm pond area.

Kelly Kloss
Manager

/chk
/attach.

c Director of Development Services
Inspections & Licensing Manager
Land & Economic Development Manager
City Assessor
B. Greter, Clerk Steno

BYLAW NO. 3217/F-2004

Being a bylaw to amend Bylaw No. 3217/98, the bylaw adopting the neighbourhood area structure plans as a bylaw of the City of Red Deer

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

That Bylaw No. 3217/98 is hereby amended:

1. By substituting the revised and updated text pages and maps, attached hereto and forming part of the bylaw, in the West Park Extension Neighbourhood Area Structure Plan [i.e. pages 12 to 17 and Figures 4, 8, 9, 16, 17, 20, 21, 22].

READ A FIRST TIME IN OPEN COUNCIL this 14th day of February , A.D. 2005.

READ A SECOND TIME IN OPEN COUNCIL this 14th day of March , A.D. 2005.

READ A THIRD TIME IN OPEN COUNCIL this 14th day of March , A.D. 2005.

AND SIGNED BY THE MAYOR AND CITY CLERK this 14th day of March , A.D. 2005.

MAYOR

CITY CLERK

townhouse site are provided as either a response to a particular residential market niche or a specific land use or site issue.

The concept plan also provides opportunities for walkout basements. The potential locations are identified in ***Figure 4***.

The proposed land use allocation is illustrated in ***Table 1.***

TABLE 1 LAND USE ALLOCATION

	Acres± (Ha±)	Percentage
Total Neighbourhood Area	**156.26 (63.24)**	-
Environmental Reserve	11.19 (4.53)	-
Developable Area	**145.07 (58.71)**	**100.00**
Land Use		
Single Family – Large Lots	8.08 (3.27)	5.57
Single Family – Standard Lots	60.07 (24.31)	41.40
Multi - Family – Townhouse	8.20 (3.32)	5.65
Single Family – Narrow Lot	8.18 (3.31)	5.64
Secondary Suite Lots	1.19 (0.48)	0.82
Municipal Reserve	16.56 (6.70)	11.42
Streets and Lanes	33.63 (13.61)	23.18
Public Utility Lots	7.86 (3.18)	5.42
Church Site	1.00 (0.40)	0.69
Social Care Site*	0.30 (0.12)	0.21

* Social Housing/Day Care/ Retirement Home/R2

Traffic will move efficiently and safely through the neighbourhood on a curvilinear road network that emphasizes cul-de-sac access to single family residences. The road network is supported by a complete rear lane system. Connections to the existing West Park and its local road network are strategically located to optimize efficiency of movement and safety, and to minimize through traffic.

A significant natural area along the western boundary is provided for recreation purposes and buffering of highway noise. Similarly, the existing natural wetland found at the southern end of the site is protected as habitat but is also upgraded for stormwater detention purposes.

It should be noted that the smaller wetland and associated park area located to the east of the 60th Avenue alignment is not within the site boundaries, even though each of these contribute to the neighbourhood. As such, they have not been included in the Neighbourhood Structure Plan area.

4.1.1 Single Family Detached

There are five single family detached lot types being proposed, all of which fall under the City of Red Deer's Residential Low Density District (R1) and Residential Narrow Lot District (R1N). Each of the lot types is described below.

Standard A: The typical and minimum widths of standard A lots are 15.2 metres ± (49.9 feet ±) and 12.8 metres ± (42.0 feet ±) respectively. Standard A lots account for 364 of the 692 (approximately 53 percent) dwelling units anticipated on the site, the highest proportion of any residential land use. They are found throughout the neighborhood

Secondary Suite: Similar in lot dimensions to Standard A, these lots are located in Phases 5 of the subdivision. These lots account for 7 of the 692 dwelling units anticipated on the site.

Standard B: At 16.8 metres ± (55 feet ±) wide standard B lots are wider than standard A lots. They are found along the neighborhood's eastern boundary where they back onto lots with similar dimensions in the adjoining established neighbourhood. They are intended to enhance compatibility and cohesiveness between existing and future residential development.

Large: Large lots are characterized by a 22.9 metre ± (75 feet ±) width, and lot depths of 48.8 metres ± (160 feet ±) and 40 metres ± (132 feet ±) . Located along

the south side of Cronquist Drive these lots are intended to enhance compatibility with larger suburban lots located on the north side of the road.

Narrow: Narrow lots are characterized by a minimum lot width of 10.4 metres (34.1 feet) and rear drive garages. They are located near the center of the neighbourhood in close proximity to major neighbourhood roads and park and natural areas.

4.1.2 Townhouses

A single, 3.32 gross hectare ± (8.21 acre ±) medium density townhouse site is strategically located in close proximity to a park / natural area and the internal collector road network. Townhouse units will be a maximum two stories high. They are intended for a range of potential homebuyers.

4.2 Development Density

As noted in Section 3.1 maximum density for new residential areas in the City of Red Deer is 45 persons per gross hectare. Based upon the existing policy and given a total neighbourhood development area of 63.24 hectares ± (156.26 acres ±), a maximum population of 2846 persons could be accommodated in the West Park Extension area.

The proposed development concept, however, is well below the maximum, as the estimated population density is 36.97 persons per hectare. This is based upon an estimated build-out of 692 dwelling units, City of Red Deer occupancy factors and a population of 2338 persons.

The population density calculation is summarized in ***Table 2.*** Table 2 also shows the estimated number of dwelling units and associated population for each of the residential land uses when the neighbourhood is fully developed. Single family Standard A lots account for the majority of dwelling units (494) and population (1679) as compared to the other residential land uses.

TABLE 2 ESTIMATED POPULATION DENSITIES

Land Use	Lot Width (m±)	Number of Dwelling Units	Number of Persons/ Unit	Total Population (Maximum)	Density Persons/Ha
Single Family, Large Lot	22.9	30	3.4	102	-
Single Family, Standard A Lots	12.8	494	3.4	1679	-
Single Family,Standard B Lots	16.8	14	3.4	48	
Single Family, Narrow Lots	10.4	81	3.4	275	
Single Family, Secondary Suite Lots	12.8	7	5.1	36	-
Multiple Family, Townhouse	*8.21 ac@8upa*	66	3.0	198	-
Total ***(With church and social care site)***		**692**	-	**2338**	**36.97**
Multiple Family, Townhouse ***(Additional- no social care site)****	*0.30 ac@8upa*	2	3.0	6	
Single Family, Standard Lot A ***(Additional- no church)***	*12.9*	5	3.4	17	
Total ***(No church or social care site*)***		**699**	-	**2361**	**37.33**

** Social Housing /Daycare /Retirement Home /R2*

The relatively low estimated population density can be attributed to the amount of park and natural areas that are provided and the quantity of lower density single family detached development.

It should be noted that the calculations are based on the assumption that the church and community care sites would be developed for these intended purposes. Should the two sites be developed for residential purposes, the estimated population density for the entire neighbourhood would marginally increase to 37.33 persons per hectare (15.11 persons per acre). This is well within the 45 persons per hectare limit stipulated in the City of Red Deer *Municipal Development Plan.*

4.3 Parks and Open Space

The parks and open space system includes several different types of parks and an extensive pedestrian / cycling trail system connecting parks and neighbourhoods. The park and trail systems represent important community amenities and focal points for new West Park Extension residents as well as those from neighbouring communities. Approximately 10 per cent of the site is provided as municipal reserve, satisfying the *Municipal Government Act* and City of Red Deer requirements. It is comprised of a balance of natural areas, local play areas, buffer and linear parks. The percentage increases to 21 per cent when the environmental reserve areas and public utility lots such as the storm detention facility are included.

4.3.1 West Area Park

The neighbourhood's largest and most significant park is the linear park that runs the length of neighbourhood's western boundary. It includes a 3.58 hectare ± (8.87 acre ±) natural park located at approximately the midway point along the boundary (see ***Figure 8***). A "play area", complete with a elementary playground facilities and a open green space are integrated into the natural area park. The final location and layout of the play area will be determined in cooperation with the City of Red Deer Recreation Parks and Culture Department. The western linear park system connects the northern and southern detention ponds to form a

corridor of public use open space encompassing the entire western and southern boundaries of the neighbourhood.

The western boundary park serves several important purposes by offering excellent outdoor amenity and recreation opportunities to the community, protecting important tree stands and wildlife habitat, and acting as a noise and visual barrier to Highway 2. An approximately 30 metre (100 ft.) wide, landscaped berm complete with sound attenuation faculty, will be constructed adjacent to portions of the highway right-of-way for added noise and visual abatement. The design details of the berm are illustrated in ***Figure 9***.

4.3.2 East Area Park

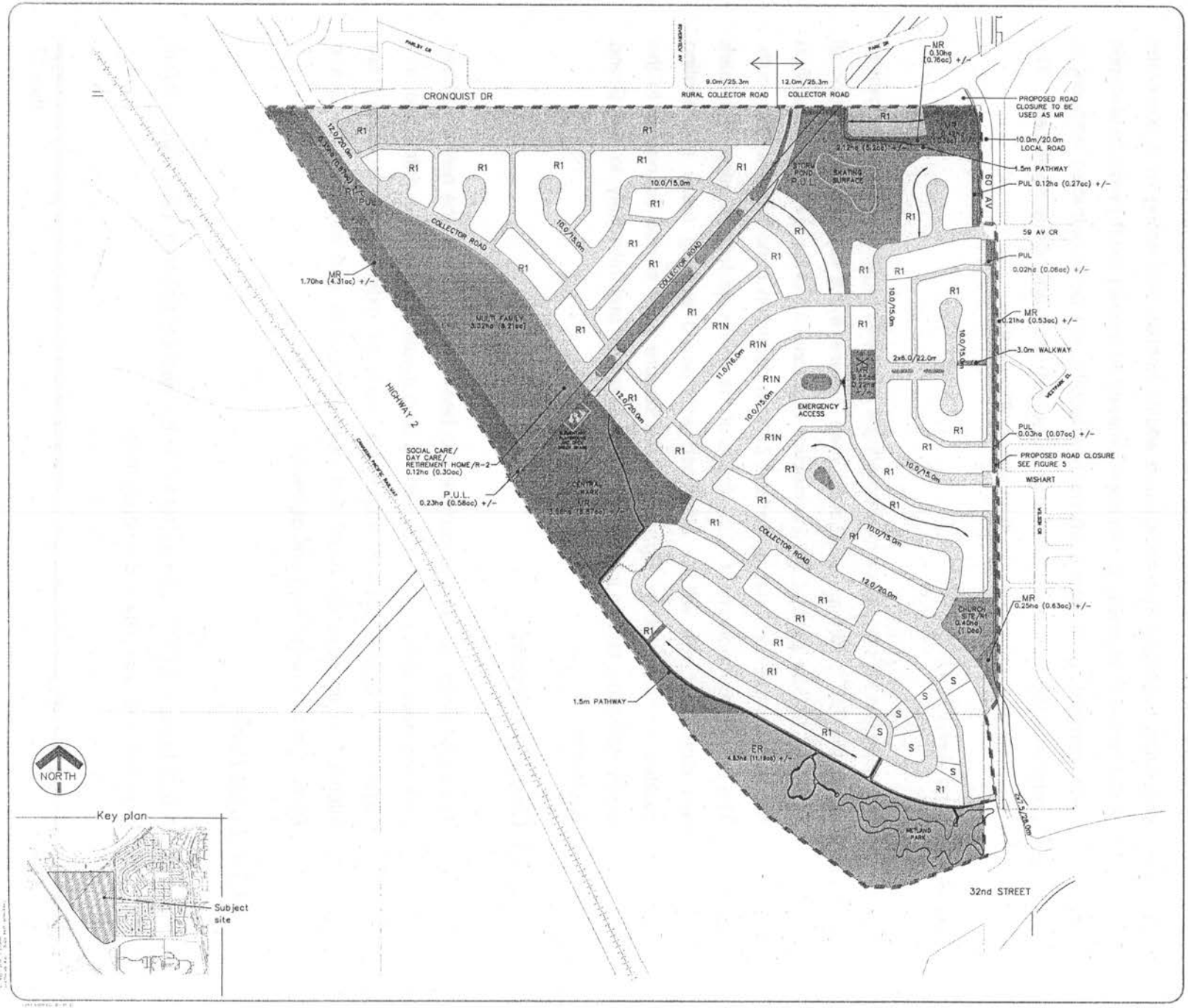
A second linear open space incorporating a 2.5 metre regional path will be created along the 60th Avenue alignment (see ***Figure 6***). It connects the historical northeast feature park at the intersection of Cronquist Drive and 60th Avenue in the north to the combination wetland / storm detention pond found in the south. The school site monument is the focus of the northeast feature park. This park and monument site will be enhanced with paved walking areas and seating facilities as illustrated in ***Figure 10***. The feature park is also connected to the storm detention facility located to the southwest and ultimately to the Grand Boulevard.

4.3.3 Grand Boulevard

The high-tension power line corridor has been integrated into the neighbourhood park and open space system by serving as a median for the main entry road (see ***Figure 7***). Special design treatments, such as extensive landscaping are intended to improve its visual and aesthetic quality and establish the Grand Boulevard as a neighbourhood gateway.

4.3.4 Local Parks

A 0.22 hectare ± (0.55 acre ±) "tot lot" in the east central area (see ***Figure 10***) is provided as a local play and amenity area.



West Park Extension

in Red Deer

Neighbourhood Structure Plan

Within:
Section 7, Township 38, Range 27, W of 4

Prepared for: Trademark Western Properties.

Plan Statistics	Acres ±	Hectares ±	%
Total Area	156.26	63.24	
Environmental Reserve	11.19	4.53	
Total Developable	145.07	58.71	
Single family Large Lots	8.08	3.27	5.57
Single family Std. Lots	60.07	24.31	41.41
Single family Narrow Lots	8.18	3.31	5.64
Multi family – Town House	8.20	3.32	5.65
Secondary Suite Lots	1.19	0.48	0.82
Street and Lanes	33.63	13.61	23.18
Public Utility Lots	7.86	3.18	5.42
Church Site/R1	1.0	0.40	0.69
Social Care Site (Social Housing/Day Care/ Retirement Home/R2	0.30	0.12	0.21
Municipal Reserve *	16.56	6.70	11.42
Net Developable Area	145.07	58.71	100.0

* Municipal Reserve Summary	Acres ±	Hectares ±
Cental Park	8.87	3.58
Highway 2 Buffer	4.19	1.70
Buffer – Existing Community	1.16	0.47
Tot Lot	0.55	0.22
Feature Park	1.03	0.42
N.E. Storm Pond	0.76	0.31
Total Area for Municipal Reserve	16.56	6.70

Legend

- Neighbourhood Structure Plan Boundary
- Existing Power Poles
- Proposed 1.5m Pathway
- Proposed Walkway
- Existing Tree Cover
- Children Play Area
- Potential Walkout lots
- Lancscaped Medians
- Proposed 2.5m Regional Pathway
- Existing Contours

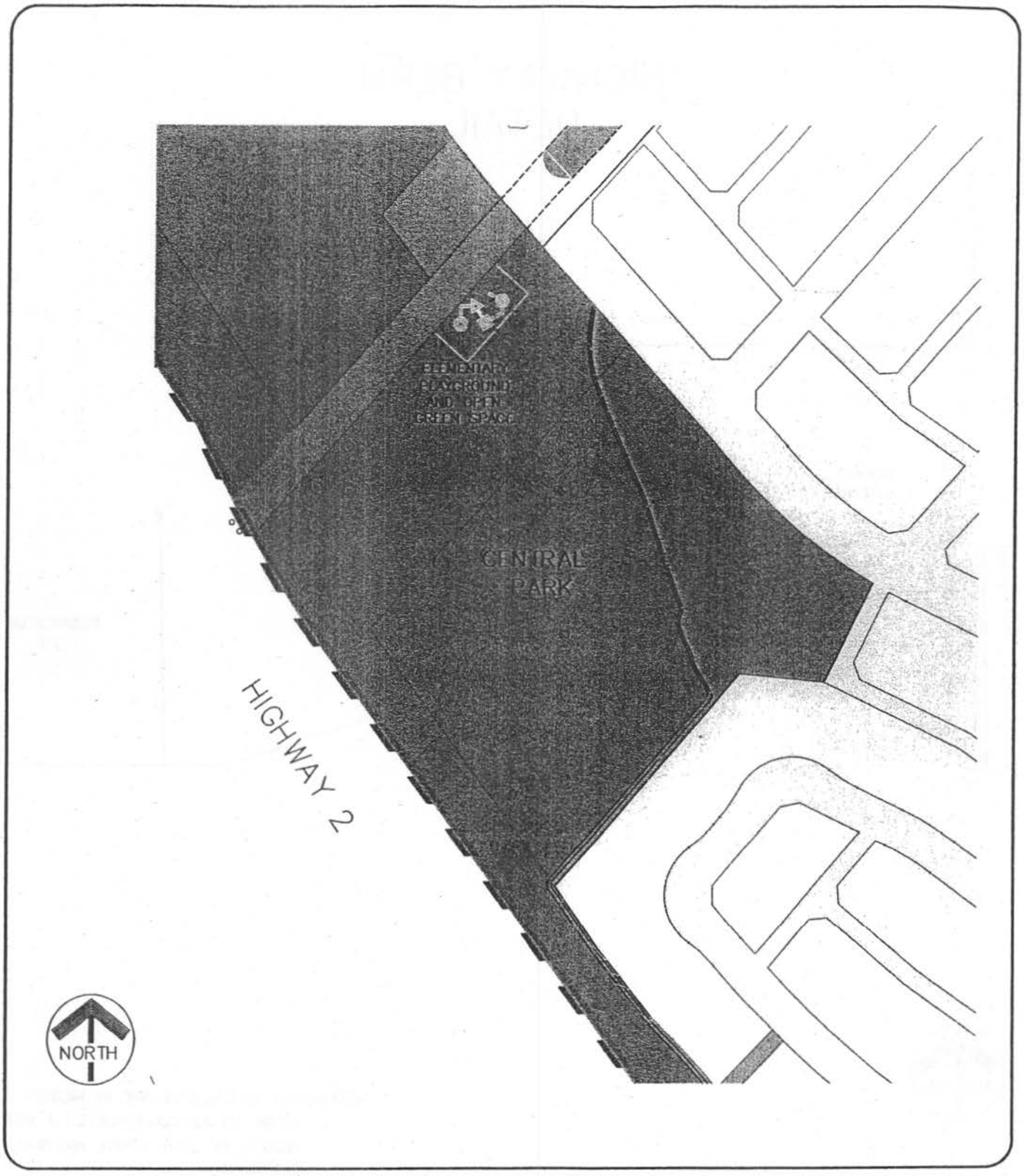
Planning Team

InterPlan Strategies Inc.
Al-Terra Engineering Ltd.
Lim Associates Inc.
Finn Transportation Consultants
Westhoff Resources Engineering Inc.
McElhanny Consulting Services Ltd.
Group 2 Architects

Prepared By

InterPlan strategies inc.
Land Planning Services

Date	Scale	Figure
Nov. 2001	0 20 50 100m	4
Rev JAN 24/05 (ALT)		

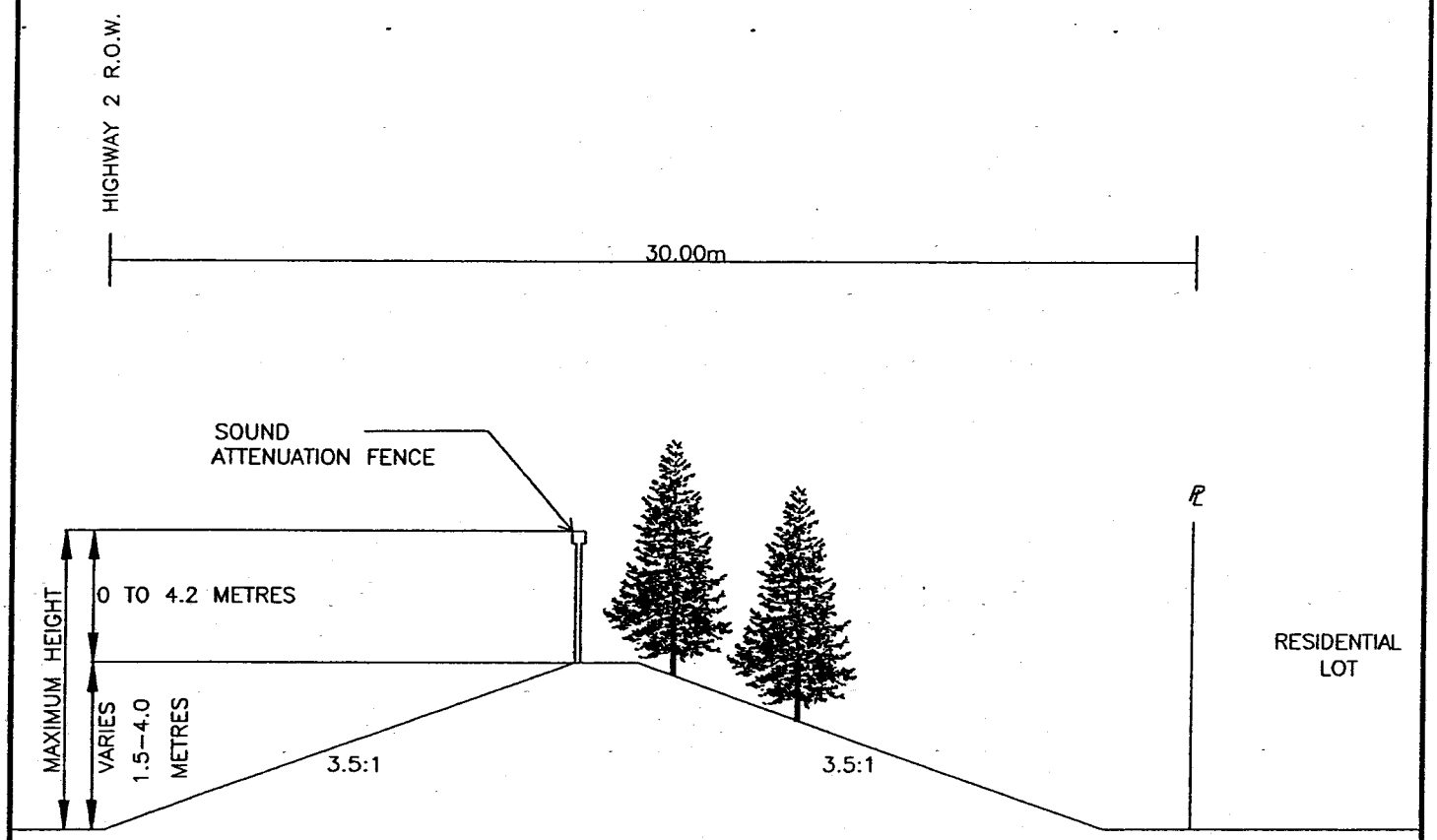


West Park Extension
Central Nature Park Concept Plan

Al-Terra Engineering Ltd.

FIGURE 8

HIGHWAY BERM DETAIL

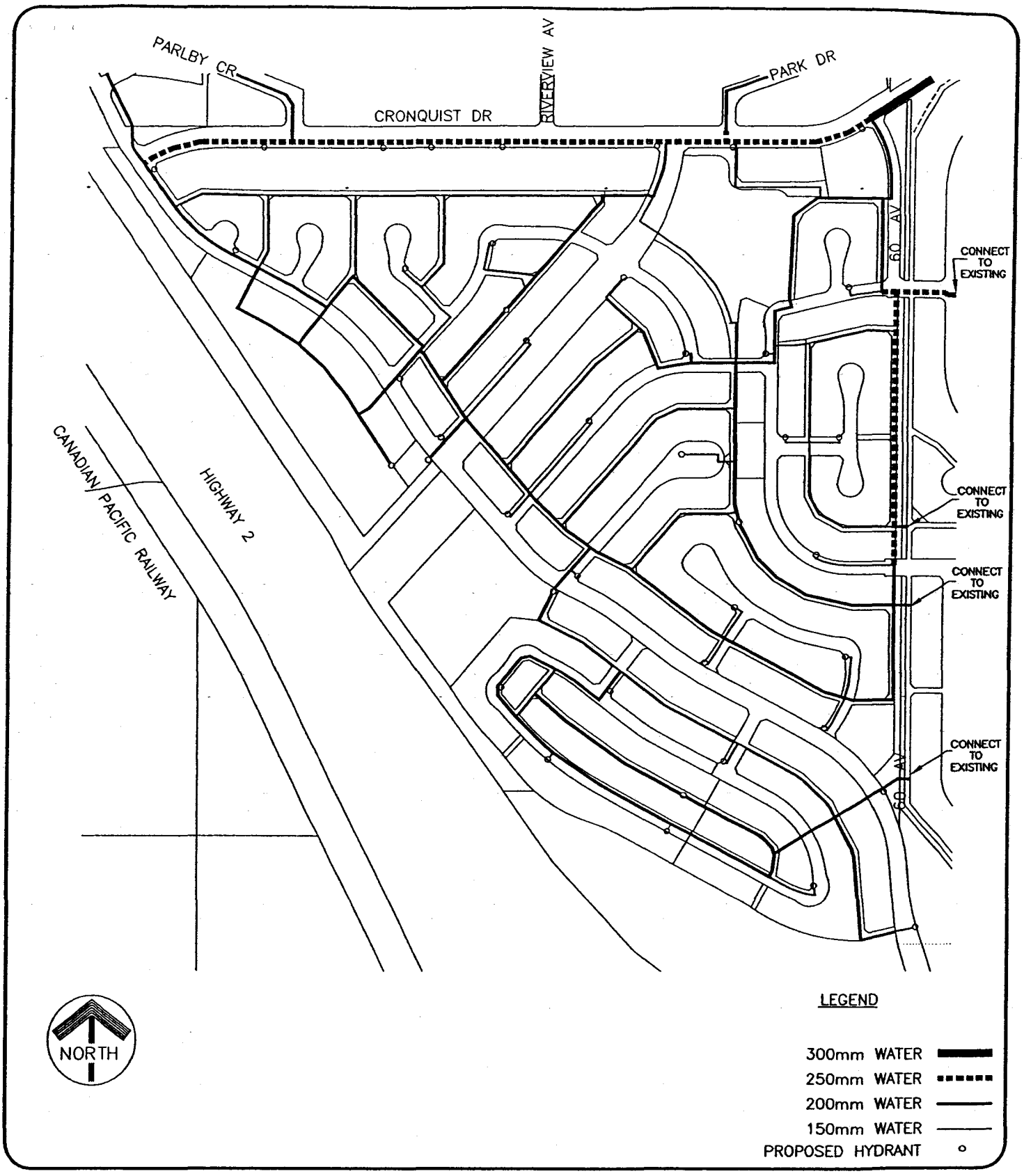


NOTE: –ALL DIMENSIONS ARE IN METRES
–BERM TO BE CONSTRUCTED A MIN HEIGHT OF 2.5m ABOVE HIGHWAY ELEVATION

West Park Extension
HIGHWAY BERM
DETAIL

Al-Terra Engineering Ltd.

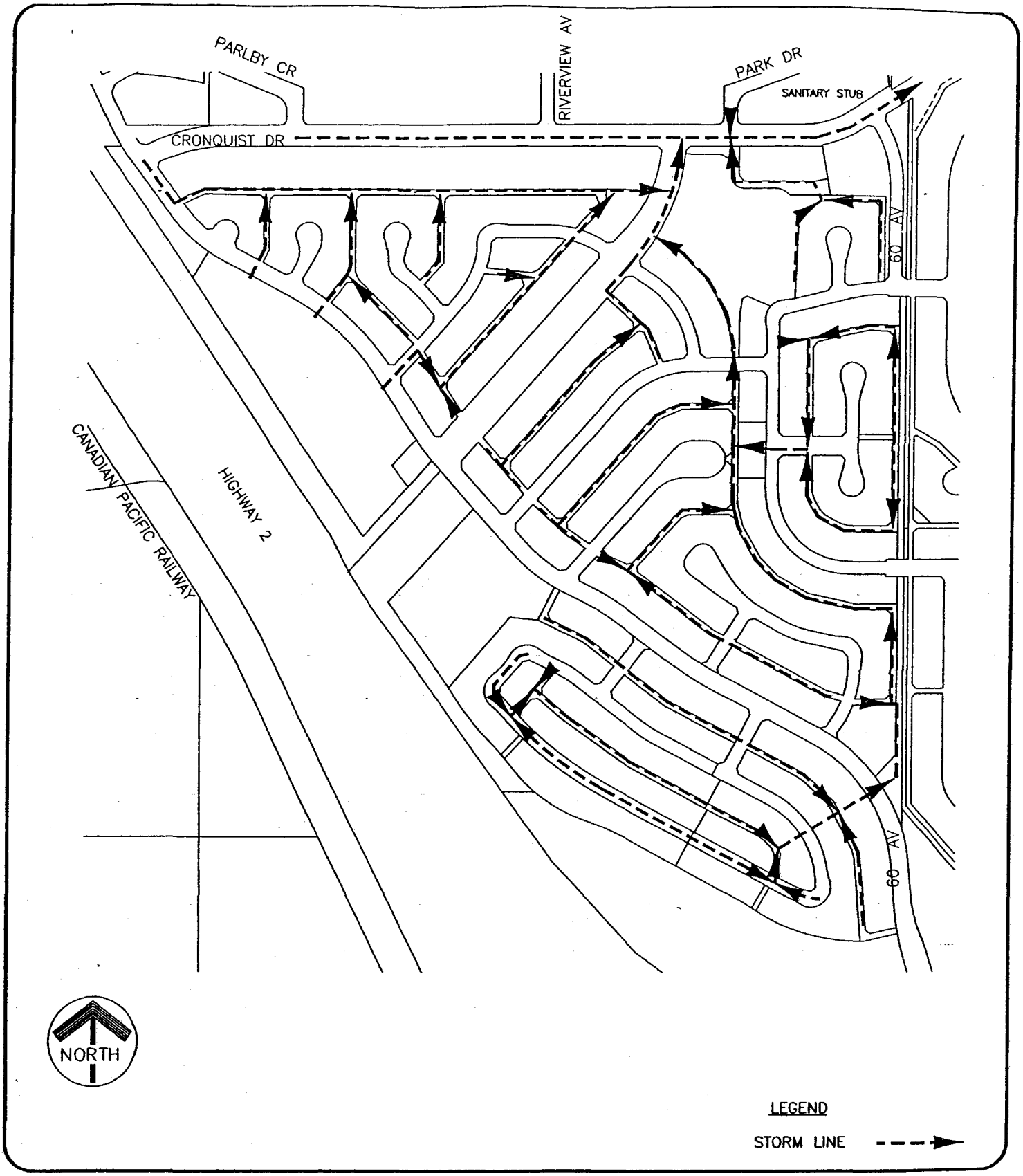
FIGURE 9



West Park Extension
Proposed Water Main

Al-Terra Engineering Ltd.

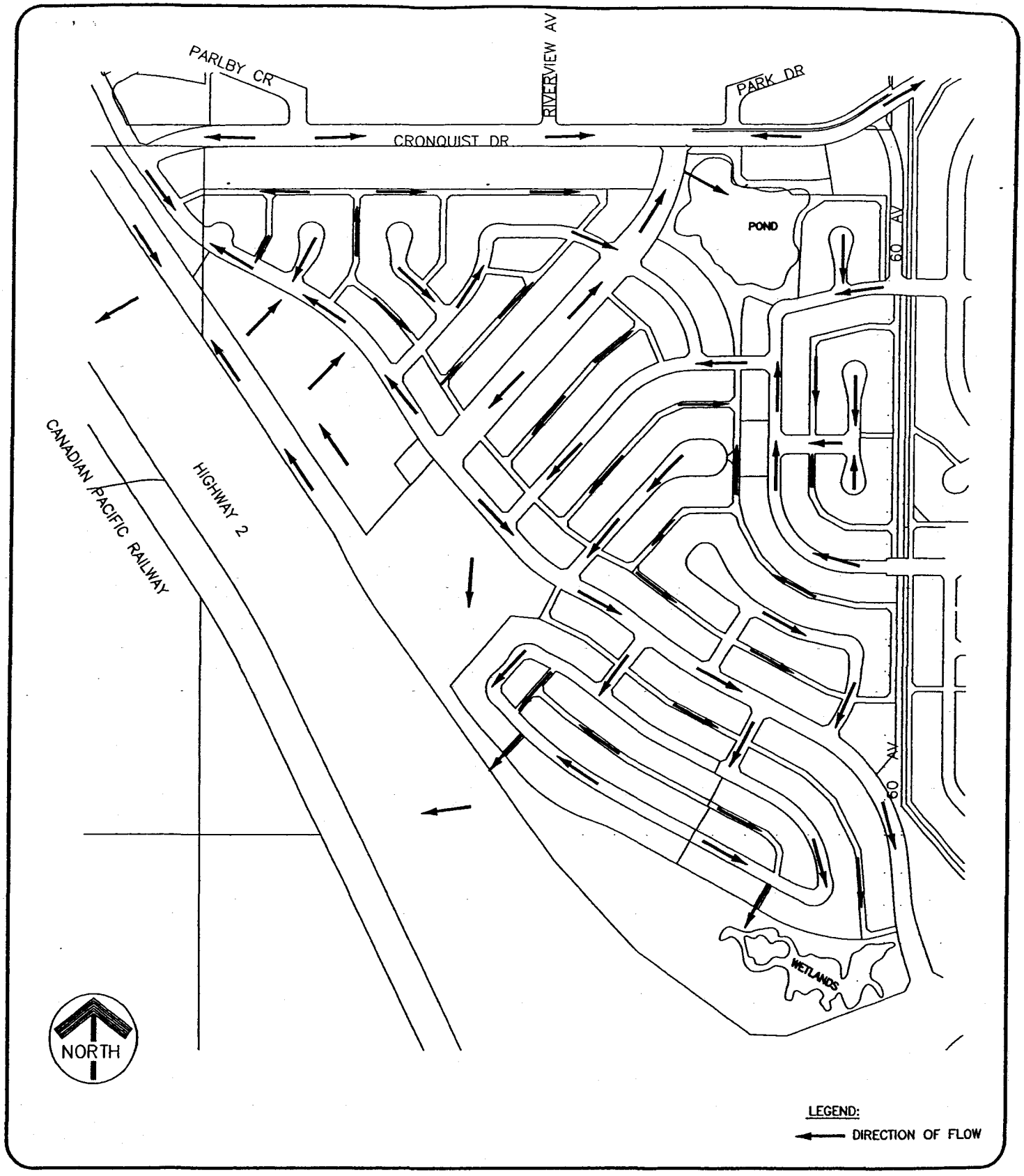
FIGURE 16



West Park Extension
Proposed Sanitary Sewer

FIGURE 17

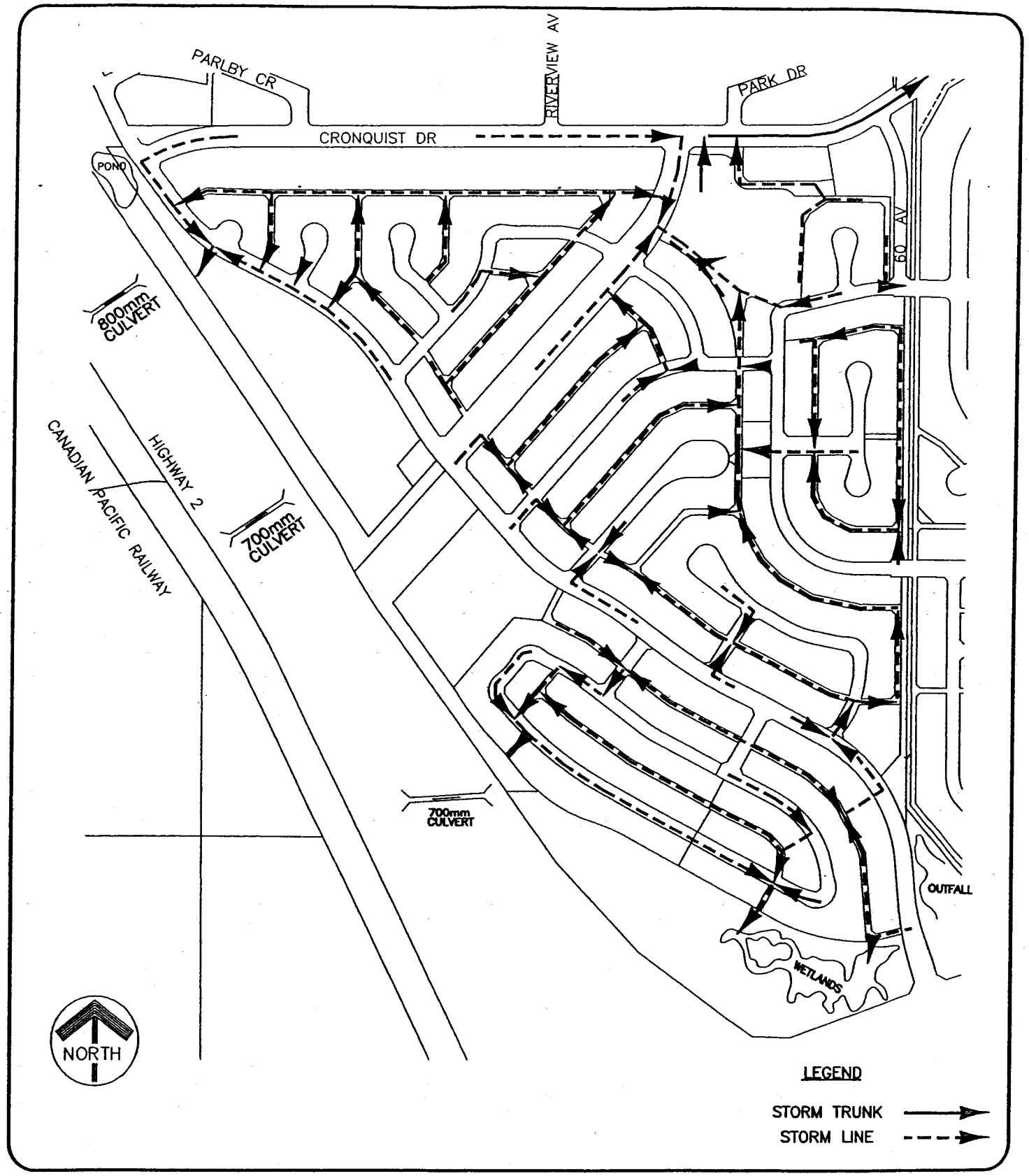
Al-Terra Engineering Ltd.



West Park Extension
Proposed Overland
Drainage

Al-Terra Engineering Ltd.

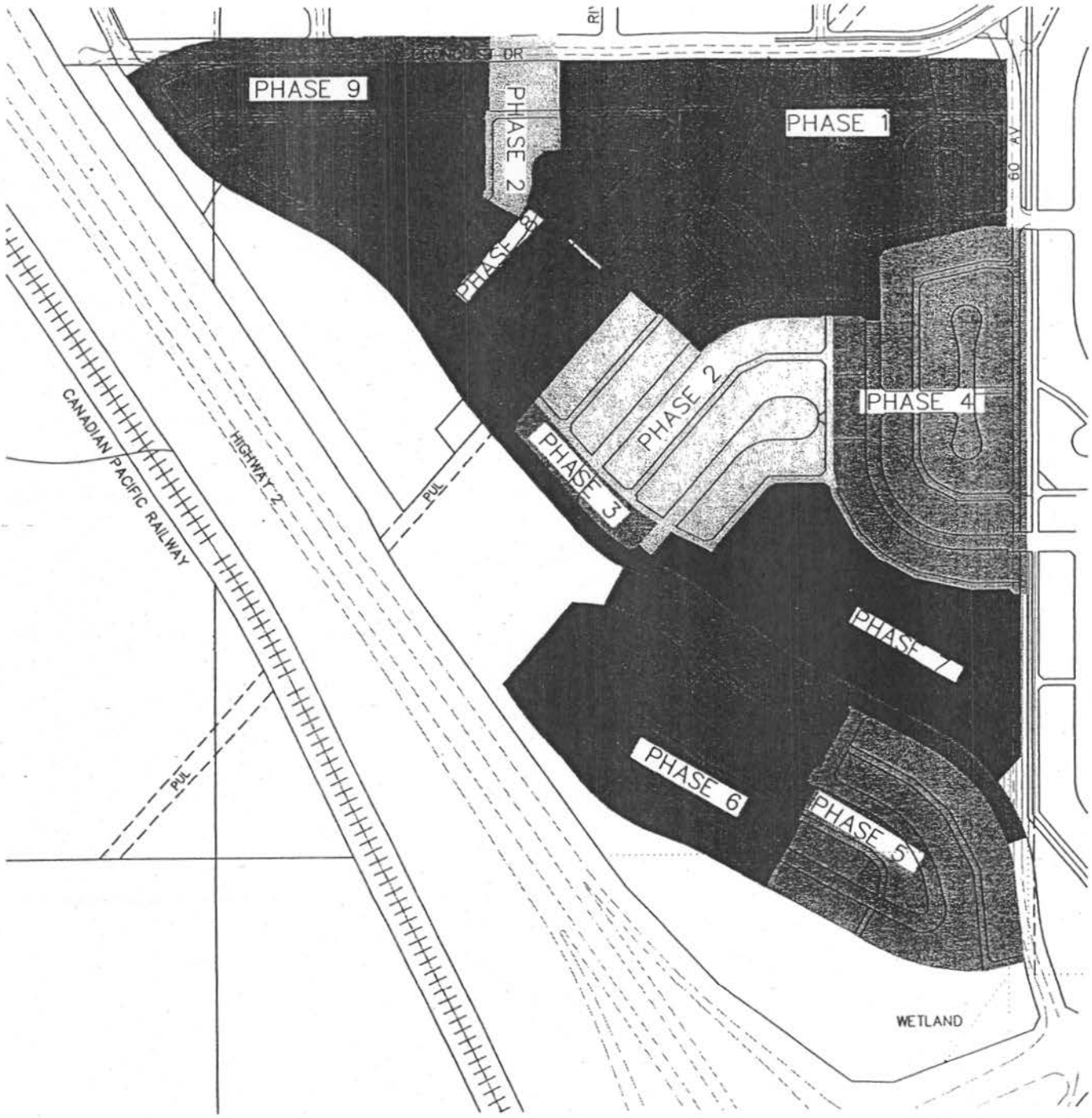
FIGURE 20



West Park Extension
Proposed Storm Sewer

Al-Terra Engineering Ltd.

FIGURE 21



West Park Extension
Phasing

FIGURE
22

Al-Terra Engineering Ltd.

Item No. 2

THE CITY OF Red Deer

Legislative & Administrative Services

DATE: **March 7, 2005**

TO: **City Council**

FROM: **Legislative & Administrative Services Manager**

SUBJECT: **Road Closure Bylaw 3342/2005 – Road Plan 822 0501**
Land Use Bylaw Amendment 3156/A-2005
Johnstone Crossing Phases 4 & 5

History
At the Monday, February 14, 2005 Council Meeting, Council gave first reading to Road Closure Bylaw 3342/2005 and Land Use Bylaw Amendment 3156/A-2005.

Road Closure Bylaw 3342/2005 provides for the closure of a portion of Road from Jordan Parkway in Johnstone Crossing. Land Use Bylaw Amendment 3156/A-2005 provides for the rezoning of the portion of Road to A1 Future Urban Development District.

Public Consultation Process
Public Hearings have been advertised for Monday, March 14, 2005 at 7:00 p.m. in Council Chambers, during Council's regular meeting. The owners of the properties bordering the site have been notified by letter of the Public Hearing.

Recommendations
That following the Public Hearings, Council may proceed with:

(a) second and third readings of Road Closure Bylaw 3342/2005
(b) second and third readings of Land Use Bylaw Amendment 3156/A-2005

Kelly Kloss
Manager

Memo

Date: January 27, 2005

To: Kelly Kloss, Manager Legislative and Administrative Services

From: Howard Thompson, Land & Economic Development Manager

Re: Road Closure – Road Plan 822 0501 – Johnstone Crossing

In 1982 the City of Red Deer registered Road Plan 822 0501 (shown on the attached sketch) for utilities and future collector roadway. The registration was consistent with the NW Major Area Structure Plan at that time.

The statutory plans have since changed and the current Johnstone Crossing Neighbourhood Area Structure Plan calls for the road to be registered in a similar but not identical alignment. Our legal survey consultant advises that the most efficient way to accomplish this is to close the existing road plan in its entirety. The registration of phases 5 and 6 of the Johnstone Crossing subdivision is intended for this spring and will include registration of Jordan Parkway from Taylor Drive to the north limit of phases 1 and 3 of this neighbourhood.

Our survey consultant has provided us with a description of the area to be closed as "All that area lying within road plan 822-0501".

A report regarding the rezoning of this land from road to A1 - Future Urban Development District appears elsewhere on this agenda.

RECOMMENDATION

Land and Economic Development recommend that City Council:

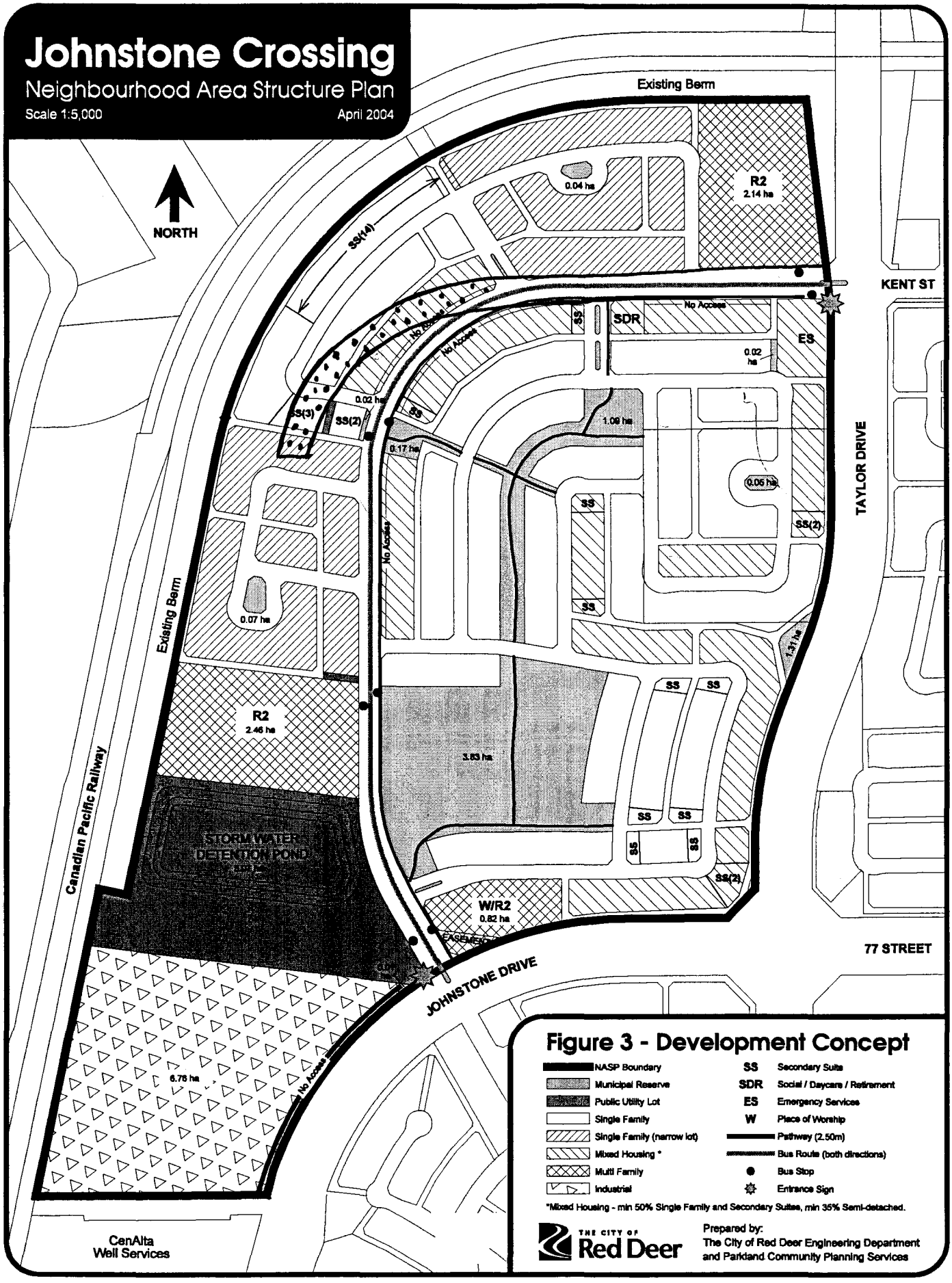
1. Give first reading to a Bylaw having the effect of closing the following:

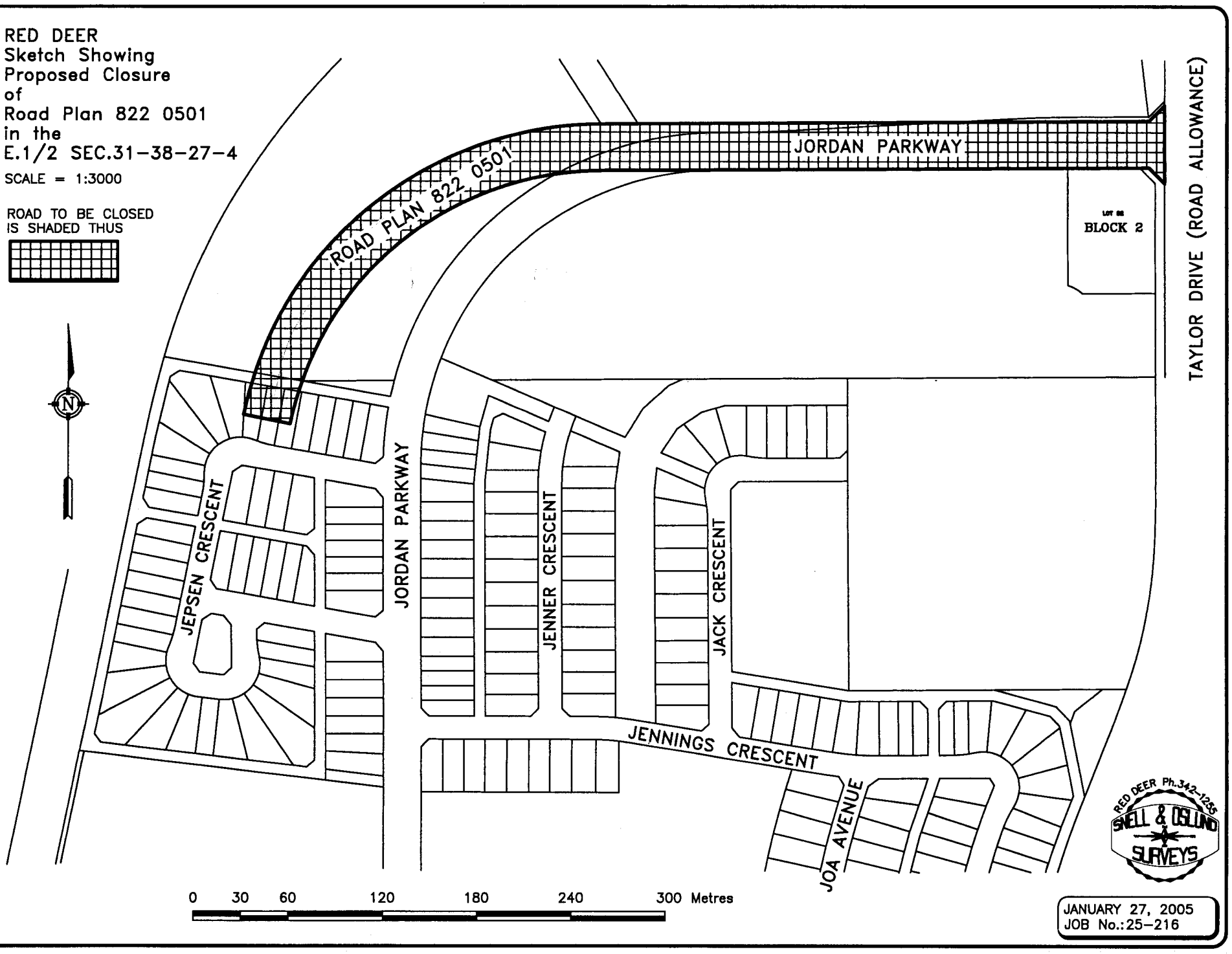
   "All that area lying within road plan 822-0501".

2. Amend the Land Use Bylaw to rezone the closed road to A1 – Future Urban Development District.

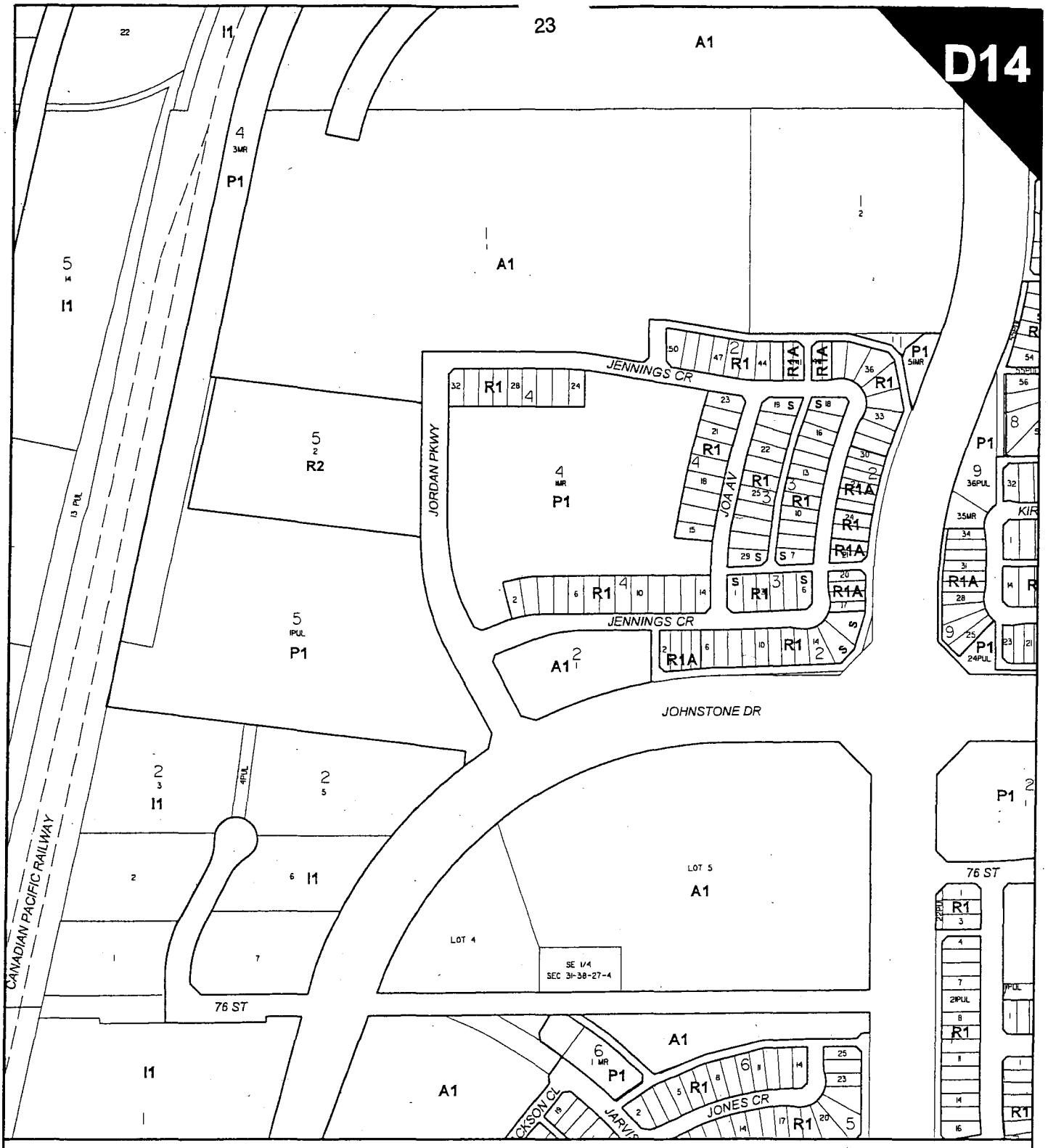
Howard S. Thompson
Land & Economic Development Manager

Attach.


Johnstone Crossing
Neighbourhood Area Structure Plan
Scale 1:5,000
April 2004
NORTH
Existing Berm
R2
2.14 ha
0.04 ha
SS(14)
KENT ST
No Access
SDR
ES
SS
0.02 ha
SS(3)
SS(2)
1.09 ha
0.17 ha
0.05 ha
TAYLOR DRIVE
Existing Berm
0.07 ha
R2
2.46 ha
Canadian Pacific Railway
STORM WATER DETENTION POND
3.83 ha
1.31 ha
W/R2
0.82 ha
77 STREET
JOHNSTONE DRIVE
6.76 ha
CenAlta
Well Services
Figure 3 - Development Concept
NASP Boundary
Municipal Reserve
Public Utility Lot
Single Family
Single Family (narrow lot)
Mixed Housing *
Multi Family
Industrial
SS Secondary Suite
SDR Social / Daycare / Retirement
ES Emergency Services
W Place of Worship
Pathway (2.50m)
Bus Route (both directions)
Bus Stop
Entrance Sign
*Mixed Housing - min 50% Single Family and Secondary Suites, min 35% Semi-detached.
THE CITY OF Red Deer
Prepared by:
The City of Red Deer Engineering Department
and Parkland Community Planning Services


RED DEER
Sketch Showing
Proposed Closure
of
Road Plan 822 0501
in the
E.1/2 SEC.31-38-27-4
SCALE = 1:3000
ROAD TO BE CLOSED
IS SHADED THUS
ROAD PLAN 822 0501
JORDAN PARKWAY
BLOCK 2
TAYLOR DRIVE (ROAD ALLOWANCE)
JORDAN PARKWAY
JEPSEN CRESCENT
JENNER CRESCENT
JACK CRESCENT
JENNINGS CRESCENT
JOA AVENUE
N
0 30 60 120 180 240 300 Metres
RED DEER Ph.342-1255
SNELL & OSLUND
SURVEYS
JANUARY 27, 2005
JOB No.:25-216

22



Part Six of the Bylaw outlines the Land Use District Definitions

refer to the Index Map for the Legend

NORTH
Scale 1:5,000

© The City of Red Deer, Engineering Department

The City of Red Deer

Land Use Bylaw 3156/96

Amendments to SE¼ Sec 31

3156 / OO-99	*Jan 17, 2000*
3156 / GG-2000	*Sept 25, 2000*
3156 / K-2004	*Apr 19, 2004*
3156 / N-2004	*May 17, 2004*

C15	D15	E15
C14	D14	E14
C13	D13	E13

SE¼ Sec 31
Twp 38- Rge 27 - W4th

printed on
Jun 17, 2004

PARKLAND
COMMUNITY
PLANNING
SERVICES

Suite 404, 4808 Ross Street
Red Deer, Alberta, T4N 1X5
Phone: (403) 343-3394
FAX: (403) 346-1570
E-mail: pcps@pcps.ab.ca

DATE: February 2, 2005

TO: Kelly Kloss, Legislative & Administrative Services Manager

RE: Land Use Bylaw Amendment No. 3156/A-2005
Map No. 1/2005
Johnstone Crossing Phases 4 & 5
NE and SE ¼ Section 31-38-27-W4M
City of Red Deer

BACKGROUND

In phases 4 and 5 of the Johnstone Crossing Neighbourhood Area Structure Plan (NASP) is an existing roadway plan 082 0501, which was subdivided in 1982 as a future collector street and to facilitate the extension of utilities to Edgar Industrial Park.

The Johnstone Crossing NASP which was adopted in 2003 proposes a collector street with an alignment which is slightly different to the extent that Roadway Plan 082 0501 is no longer needed (see attached Figure 3: Development Concept).

PLANNING COMMENT

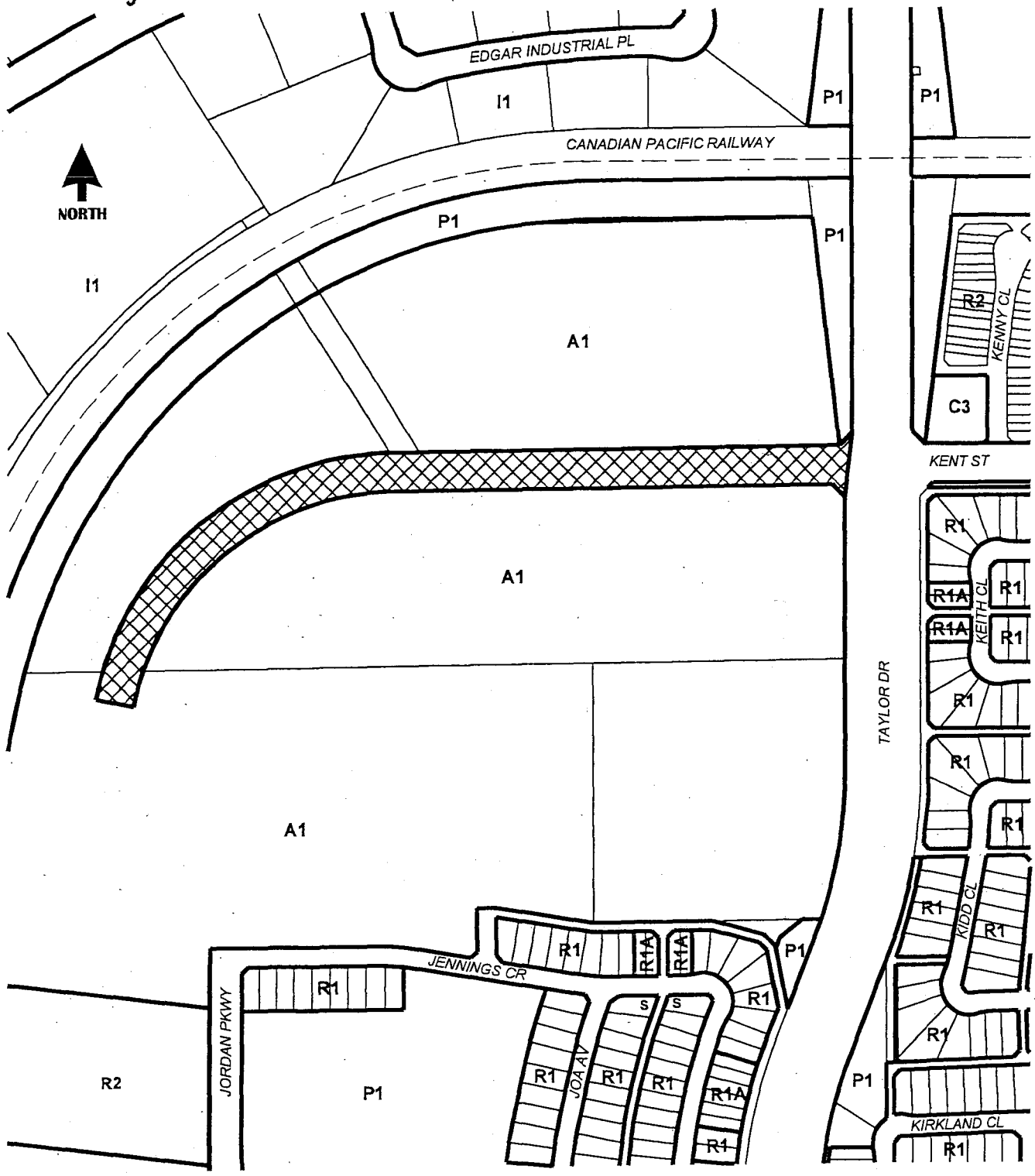
In another item on this agenda a road closure bylaw is being proposed. When a roadway is closed it is recreated as a new lot. Since roadways are not designated into any particular land use district, when the road closure bylaw is adopted the newly created lot will not carry any land use designation. All land within the City limits is required to be designated into a land use district, and therefore it is proposed that this land be designated as A1 Future Urban Development District. This will facilitate the future redesignation and subdivision of the land in accordance with the Johnstone Crossing NASP.

RECOMMENDATION

Subject to City Council giving first reading to Road Closure Bylaw No. 3342/2005, planning staff recommends that City Council considers first reading of Land Use Bylaw Amendment 3156/A-2005.

Johan van der Bank
Planner
Attachment

The City of Red Deer *PROPOSED LAND USE BYLAW AMENDMENT*



AFFECTED DISTRICTS:
A1 - Future Urban Development

Change from :
Road to A1

MAP No. 1 / 2005
BYLAW No. 3156 / A - 2005

FILE

THE CITY OF Red Deer

Legislative & Administrative Services

Council Decision – March 14, 2005

DATE: March 15, 2005

TO: Howard Thompson, Land & Economic Development Manager
Johan van der Bank, Parkland Community Planning Services

FROM: Kelly Kloss, Legislative & Administrative Services Manager

SUBJECT: Road Closure Bylaw 3342/2005 – Road Plan 822 0501
Land Use Bylaw Amendment 3156/A-2005
Johnstone Crossing – Phases 4 & 5

Reference Report:
Land & Economic Development Manager, dated January 27, 2005 and Parkland Community Planning Services, dated February 2, 2005

Bylaw Readings:
Road Closure Bylaw 3342/2005 and Land Use Bylaw Amendment 33156/A-2005 were given second and third readings. Copies of the bylaws are attached.

Report Back to Council: No

Comments/Further Action:
Road Closure Bylaw 3342/2005 provides for the closure of a portion of Road from Jordan Parkway in Johnstone Crossing. Land Use Bylaw Amendment 3156/A-2005 provides for the rezoning of the portion of Road to A1 Future Urban Development District. This office will amend the Land Use Bylaw and distribute copies in due course. A certified copy of the Road Closure Bylaw is attached for your reference.

Kelly Kloss
Manager

/chk
/attach.

c Director of Development Services
Inspections & Licensing Manager
City Assessor
B. Greter, Clerk Steno
D. KUTINSKY - GRAPHICS DESIGNER

BYLAW NO. 3342/2005

Being a bylaw to close portions of road in the City of Red Deer, as described herein.

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

1 The following portions of roadway in the City of Red Deer are hereby closed:

"All that area lying within Road Plan 822-0501"

READ A FIRST TIME IN OPEN COUNCIL this 14th day of February 2005.

READ A SECOND TIME IN OPEN COUNCIL this 14th day of March 2005.

READ A THIRD TIME IN OPEN COUNCIL this 14th day of March 2005.

AND SIGNED BY THE MAYOR AND CITY CLERK this 14th day of March 2005.

MAYOR

CITY CLERK

CERTIFIED TO BE A TRUE AND CORRECT
COPY OF THE ORIGINAL

BYLAW NO. 3156/A-2005

Being a Bylaw to amend Bylaw No. 3156/96, the Land Use Bylaw of the City of Red Deer, as described herein

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

1. The "Land Use District Map D15" contained in "Schedule B" of the Land Use Bylaw is hereby amended in accordance with the Land Use Bylaw Amendment Map No. 1/2005 attached hereto and forming part of the bylaw.

READ A FIRST TIME IN OPEN COUNCIL this 14th day of February , A.D. 2005.

READ A SECOND TIME IN OPEN COUNCIL this 14th day of March , A.D. 2005.

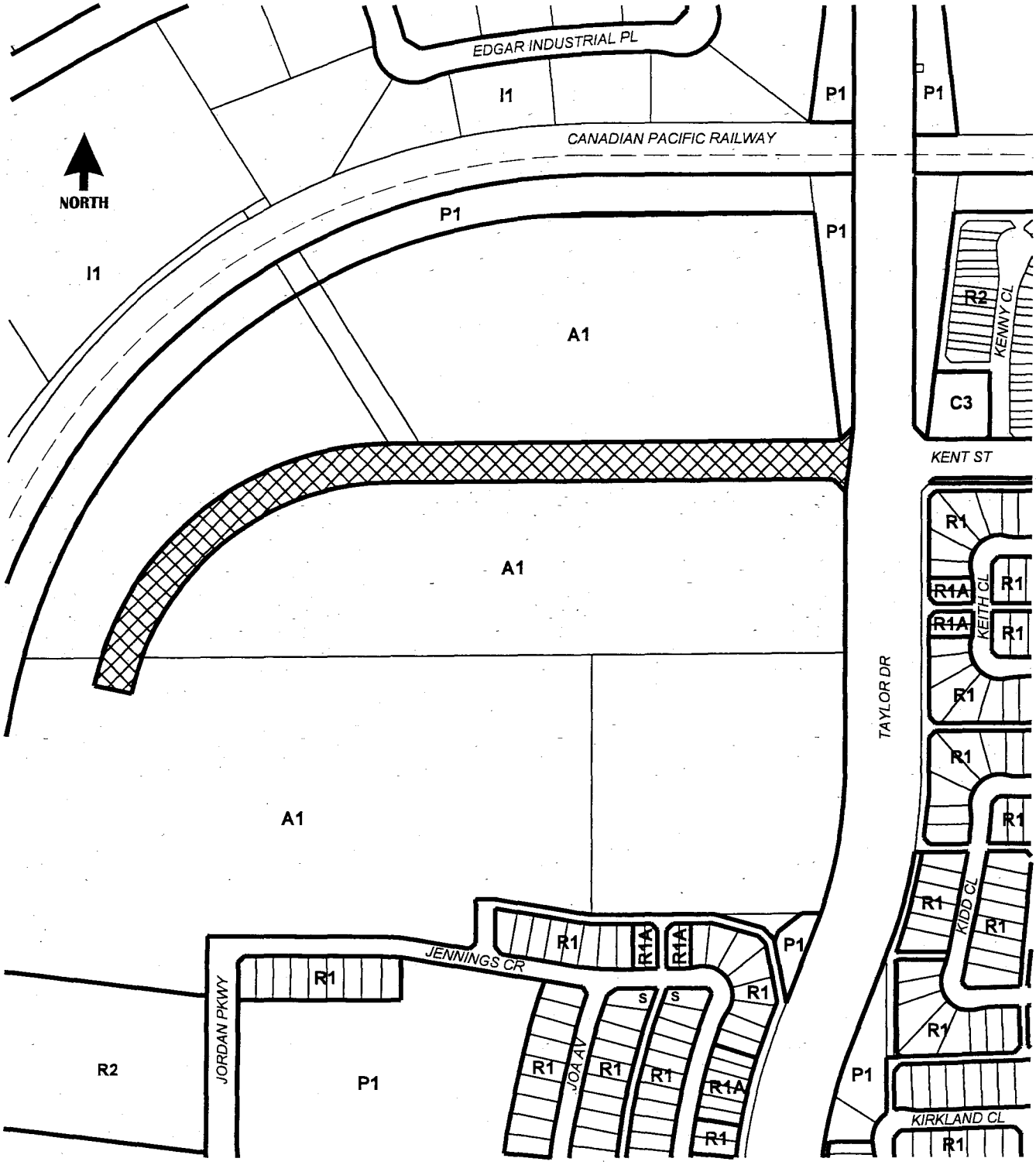
READ A THIRD TIME IN OPEN COUNCIL this 14th day of March , A.D. 2005.

AND SIGNED BY THE MAYOR AND CITY CLERK this 14th day of March , A.D. 2005.

MAYOR

CITY CLERK

The City of Red Deer *PROPOSED LAND USE BYLAW AMENDMENT*



AFFECTED DISTRICTS:
A1 - Future Urban Development

Change from :
Road to A1

MAP No. 1 / 2005
BYLAW No. 3156 / A - 2005

THE CITY OF Red Deer

COMMUNITY SERVICES

Date: **March 8, 2005** **CS-05-0015-0160**

To: **Kelly Kloss, Manager**
Legislative and Administrative Services

From: **Colleen Jensen, Director**
Community Services

Re: **Request to Amend the Committees Bylaw**
Appointment of Youth Member to Policing Committee

Background

The involvement in youth in certain aspects of crime prevention in the community is one that could be very beneficial. The Crime Prevention and Policing Study supports community involvement in crime prevention, however, does not give specific recommendations on how to involve youth, other than through programming initiatives. Participation on committees may be one way that youth could become involved and there are likely many other options as well. Council will be aware that the development of the Implementation Plan for the Crime Prevention and Policing Study is underway, which will provide the detail of the upcoming work that will be undertaken to fulfill the broad strategies in the Study. Kristina Getz has been seconded by Community Services to lead this process. It is anticipated that the plan will outline very specific actions to be taken, who will be responsible, the timeline for implementation and the resources that will be needed. Completion should be by the end of July at the latest.

Another initiative that is underway is the development of a Community Youth Plan. This process is being led by youth, with the support of others such as Social Planning staff and a consultant that has been hired to assist in the development of the plan. This plan will provide direction for how youth will be involved in the community in the future. It will address many aspects of participation that is important to the youth themselves. It is anticipated that the Youth Plan will set the stage for youth similar to how the Housing Plan set the stage for housing over the past few years.

In changing the Committees Bylaw, past practice has been the changes are usually made during the year, such that implementation of the change occurs in October when all the committees are appointed. One of the more recent examples is the implementation of the Culture Board. If this same approach is used, then there is currently no pressing timeline to get changes underway.

.../2

Discussion

Having youth input to the Policing Committee is something that would likely be very useful, particularly in fulfilling some of the work in the Crime Prevention and Policing Study. How this input happens could be handled in more than one way.

In speaking with Social Planning staff, who are working on the Youth Plan process, it has been suggested that perhaps it would be useful to speak with the youth about how they feel they could participate and input to the best of everyone's advantage. Having only one youth member on the Policing Committee may be difficult for the youth member to participate in a meaningful way with all other members being adults. Other experience with youth on City committees has shown that it is often difficult to get consistent attendance and participation (e.g. Transportation Advisory Board). Another alternative could be to have a youth committee set up in the community, who are prepared to provide input to all kinds of issues, including crime prevention and policing. This approach allows the youth to participate as a group, and on an "as needed" basis.

In addition, in considering changes to the Committees Bylaw, it may be possible that, through the Implementation Plan development for the Crime Prevention and Policing Study, there could be recommendations of other changes to the Policing Committee. Since it would seem reasonable to do all changes at once and since changes are not likely to be implemented until the October appointment of committees, it may be beneficial to delay making changes to the Bylaw until later this year.

While the intent of the Policing Committee, in recommending a youth member be appointed to their committee, is a good one, it may be beneficial to speak with youth about how they would like to participate, consider other options, and to delay changes to the Committees Bylaw until the Implementation Plan for the Crime Prevention and Policing Study is completed later this year.

Recommendation

It is recommended that Council for The City of Red Deer:

- Direct administration, along with representatives from the Policing Committee, to meet with youth representatives who are working on the Youth Plan to discuss how youth feel it would be the most beneficial for them to participate in the work of the Policing Committee
- Delay any changes to the Committees Bylaw relating to the Policing Committee until such time as the Community Youth Plan and the Implementation Plan for the Crime Prevention and Policing Study are completed, thereby allowing all changes that might be recommended to happen at once.

Colleen Jensen

c. Superintendent Jim Steele
Phil Hyde, Chairman, Policing Committee

Government of Canada / Gouvernement du Canada

MEMORANDUM NOTE DE SERVICE

TO / À
Kelly Kloss, Manager
Legislative & Administrative Services
City of Red Deer

FROM / DE
Supt. J. Steele
Officer In Charge
Red Deer City Detachment
Policing Committee Member

SECURITY - CLASSIFICATION - DE SÉCURITÉ
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OUR FILE - NOTRE RÉFÉRENCE
City of Red Deer-0895
YOUR FILE - VOTRE RÉFÉRENCE
DATE
2005-03-02

SUBJECT / OBJET **POLICING COMMITTEE REQUEST FOR ADDITIONAL MEMBER**

On January 18, 2005 the Policing Committee met and discussed the addition of a youth member to this committee.

Attached is the request from the Policing Committee, outlining the background for this decision and the formal request to Council to have the Committees Bylaw #3265/2000, Section 26 amended to include a youth member.

J. Steele, Supt.
Officer In Charge

Attachment

/ez

MEMO

DATE: **March 2, 2005**

TO: **Legislative & Administrative Services Manager**

FROM: **Supt. J. Steele, Officer in Charge, Red Deer City Detachment**

SUBJECT: **Request to Amend the Committees Bylaw**
Appointment of Youth Member to Policing Committee

History

On October 23, 2000 the Committees Bylaw came into force. The Bylaw allowed for Council to establish various committees under the authority of the Municipal Government Act. Section 26 of the Committees Bylaw relates specifically to the Policing Committee and sets out the membership of the Committee as follows:

(a) One Councillor
(b) Five Citizens-at-Large
(c) One Downtown Business Association Representative

Background

On January 18, 2005 the Policing Committee discussed the addition of a youth member to the Committee. The addition of a youth member would be beneficial for the following reasons:

- The Crime Prevention and Policing Study indicated a need to get youth involved in crime prevention
- With the problems surrounding the downtown bar situation and recent problems at Red Deer College, a youth member could pass on information to peers as a way of educating youth
- The population in Red Deer is young and the addition of a youth member is another avenue to approach the community.

. . .2/

The youth member should be between the ages of 16 to 21 years, be someone other youth would see as approachable, someone who stands out within the community and the schools, and possibly be a college student. The Committee noted that a resume would have to be submitted and that Council should have input into the selection criteria for a youth member. The youth member would be an addition to the Policing Committee.

Consultation

It is proposed that the selection of a youth member to the Committee would take place as per the current Council appointment procedures.

Recommendation

On January 18, 2005 the Policing Committee passed the following resolution:

> "Resolved that the Policing Committee recommends to City Council that the Committees Bylaw be amended to allow a youth member (16-21 years) to be appointed to the Policing Committee. "

The Committee requests that Council appoint a youth member temporarily until the current Council procedures for committee member replacement is activated.

The recommendation from Administration is that Council amend the current Committees Bylaw 3265/2000 to reflect that the Policing Committee would consist of eight members as follows:

- One Councillor
- Five Citizen-at-Large
- One Downtown Business Association Representative
- One Youth-at-Large

J. Steele, Supt.
Red Deer City Detachment
Staff Liaison – Policing Committee

26 **The "Policing Committee"**

(1) The committee consists of seven members as follows:

(a) One councillor;

(b) Five citizens-at-large;

(c) One Downtown Business Association representative.

(2) The committee will:

(a) Act in an advisory role to Council on policy issues relating to policing;

(b) Act in an advisory role to City administration on issues that may impact the implementation or administration of policy relating to policing;

(c) Provide a forum for the public to share or express concerns and suggestions relating to policing.

(d)[1] Act in an advisory role to Council and City Administration on issues that may impact the implementation or administration of policy relative to the safety and security of the downtown area.

(3) The committee has the following responsibilities pertaining to the Taxi Business Bylaw:

(a) To act as the Taxi Commission and fulfil the responsibilities of the commission as outlined in the Taxi Business Bylaw;

(b) Make recommendations to Council for changes to the Taxi Business Bylaw.

(4) The committee is responsible for hearing appeals submitted with respect to revocation of a permit or license under the City Alarm Bylaw and has authority to:

(a) Confirm the revocation of any permit or license;

(b) Direct that a permit or license be issued;

(c) Reinstate a revoked permit or license, either unconditionally or upon completion of specified conditions, such conditions to be determined by the committee.

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[1] 3265/B-2001

Comments:

We concur with the recommendations of the Community Services Director.

"Morris Flewwelling"
Mayor

"Norbert Van Wyk"
City Manager

Government of Canada / Gouvernement du Canada

MEMORANDUM NOTE DE SERVICE

TO / À: Kelly Kloss, Manager
Legislative & Administrative Services
City of Red Deer

Backup

FROM / DE: Supt. J. Steele
Officer In Charge
Red Deer City Detachment

SECURITY - CLASSIFICATION - DE SÉCURITÉ
Protected A
OUR FILE - NOTRE RÉFÉRENCE
City of Red Deer -0895
YOUR FILE - VOTRE RÉFÉRENCE
DATE
2005-03-02

SUBJECT / OBJET **REQUEST TO AMEND THE COMMITTEES BYLAW #3265/2000**
Section 26(1) Policing Committee

History:

On 23 October 2000 the Committees Bylaw came into force. The Bylaw allowed for Council to establish various committees under the authority of the Municipal Government Act.

Section 26 of the Committees Bylaw relates specifically to the Policing Committee and sets out the membership of the committee as follows:

Sec 26(1)(a) One Councillor
(b) Five Citizens-at-large
(c) One Downtown Business Association Representative

Background:

On 18 January 2005 the Policing Committee discussed the addition of a youth member to the Committee. The addition of a youth member would be beneficial for the following reasons:

* The Crime Prevention and Policing Study indicated a need to get youth involved in crime prevention.
* With the problems surrounding the downtown bar situation and recent problems at Red Deer College, a youth member could pass on information to peers as a way of educating youth.
* The population of Red deer is young and the addition of a youth member is another avenue to approach the community.

The youth member should be between the age of 16 to 21 years; be someone other youth would see as approachable; someone who stands out within the community and the schools; and possibly be a college student. The Committee noted that a resume would have to be submitted and that Council should have input into the selection criteria for a youth member. The youth member would be an addition to the Policing Committee.

Alternatives:

Nil

. . ./2

Consultation:

It is proposed that the selection of a youth member to the Committee would take place as per the current Council appointment procedures. The Committee requests that Council appoint a youth member temporarily until the current Council procedures for Committee member replacement is activated.

Financial Implications:

Nil

Questions and Answers:

Nil

Recommendation:

On 18 January 2005 the Policing Committee passed the following resolution:
"Resolved that the Policing Committee recommends to City Council that the Committees Bylaw be amended to allow a youth member (16-21 years) to be appointed to the Policing Committee."
The recommendation from Administration is that Council amend the current Committees Bylaw #3265/2000 to reflect that the Committee would consist of eight members as follows:

* One Councillor
* Five Citizens-at-large
* One Downtown Business Association Representative
* One Youth-at-large

J. Steele, Supt.
Red Deer City Detachment
Member of Policing Committee

Attachment: Committees Bylaw #3265/2000

/ez

Christine Kenzie

To: Kelly Kloss
Subject: Report from Jim Steele re Policing Committee Youth Member

FYI

I talked to Colleen Jensen this morning re Jim's report. Colleen was aware of the report coming and would like to have it delayed until the Implementation Plan for Crime Prevention is in place. Her thinking is that there may be more recommendations from the Implementation Plan for other amendments to the Committee Bylaw.

She felt the change should be effective in October and feels it may be difficult to get a youth member right away. She has talked to Phil Hyde about this but Phil is insistant that the change be effective as soon as possible.

Colleen will be talking with you about this. I talked to Jim Steele and told him about your suggested change in the recommendation to include a time line for Council to make a decision. I told Jim to hold off on making any changes until you and Colleen have talked.

I also offered to make the changes to the report for him if he did not have time. He is away this Friday and from Tuesday all of next week.

Christine Kenzie
Legislative & Administrative Services
City of Red Deer
403.342.8201
christine.kenzie@reddeer.ca

THE CITY OF Red Deer

Council Decision – March 14, 2005

Legislative & Administrative Services

DATE: **March 15, 2005**

FILE

TO: **Colleen Jensen, Community Services Director**
Supt. J. Steele, RCMP, Red Deer City Detachment

FROM: **Kelly Kloss, Legislative & Administrative Services Manager**

SUBJECT: **Request to Amend the Committees Bylaw**
Appointment of Youth Member to Policing Committee

Reference Report:
Community Services Director, dated March 8, 2005 and Supt. J. Steele, dated March 2, 2005

Resolutions:

"*Resolved* that Council of the City of Red Deer having considered the report from the Community Services Director, dated March 8, 2005, re: Request to Amend the Committees Bylaw, Appointment of Youth Member to the Policing Committee, hereby:

1. Directs Administration, along with representatives from the Policing Committee, to meet with youth representatives who are working on the Youth Plan to discuss how youth feel it would be most beneficial for them to participate in the work of the Policing Committee.

2. Authorizes the Mayor to appoint an interim non-voting youth member (16-21 years old) to the Policing Committee for a term to expire October, 2005."

Report Back to Council: No

Comments/Further Action:
Please proceed with Point 1 of the Resolution. This office will begin the process of advertising for a ~~student~~ member.

Kelly Kloss
Manager

/chk
/attach.

c P. Hyde, Chair, Policing Committee

Item No. 2

THE CITY OF Red Deer

RECREATION PARKS AND CULTURE

Date: **March 9, 2005**

To: **Kelly Kloss, City Clerk**

From: **Greg Scott, Recreation, Parks & Culture Manager**

Cc: **Colleen Jensen, Director of Community Services**
Kerry Dawson, Culture Development Superintendent

Subject: **Alexander Way Proposed Public Art Locations**

Background

The City of Red Deer is transforming newly designated "Alexander Way" (formerly 48 Street Promenade) into a dynamic, pedestrian-friendly corridor that will link our park system to our cultural hubs and resources through an engaging downtown streetscape.

City Council at their December 20, 2004 meeting agreed that dollars from the Alberta Centennial Per Capita Municipal Grant Program be allocated for the installation of public art works along Alexander Way, including the development of the "Alexander" character which will be used as an icon to market Alexander Way. The following resolution was passed:

> *"Resolved that Council of the City of Red Deer having considered the report from the Community Services Director, dated December 13, 2004 re: Use of the Alberta Centennial Per Capita Municipal Grant Program, hereby approves the expenditure of the Alberta Centennial Per Capita Municipal Grant, in the amount of $225,342 on the development and installation of public art, as explained in said report presented to Council on December 20, 2004, with administration being responsible for the undertaking of the project management and implementation".*

The report proposed that an "Alexander" character be developed, that will be seen, hopefully in many forms and poses, along Alexander Way. This character will be based loosely on the history of the railroad fellow that the original Alexander Street was named for. Once "Alexander" has been graphically designed, the intent would be to develop and install depictions of him, as a public art form all along the Way. In addition, is was proposed that there would be the installation of several other public art pieces, and the suggestion that The City approach the Alberta Foundation for the Arts for the permanent loan of pieces to supplement what we could afford with the Grant funding.

In undertaking the process for the installation of any public art pieces, in accordance with The City's Public Art Policy, it is required that the Culture Board review and that City Council approve the selection and placement of public art.

The Culture Board at their Wednesday, March 2, 2005 meeting reviewed and discussed the Alexander Way Public Art project and passed the following resolution in support of the Alexander Way proposed art locations as well as the selection of the Alexander Icon concept.

"Resolved that the Culture Board support:

1. *The selection of Jason Frizzell as the artist responsible for the development of the Alexander Way icon;*

2. *The public locations for the installation of public art on Alexander Way, as follows:*

   - *Site A – in front of 5004 – 48 Street*
   - *Site B – in front of 4909 – 48 Street*
   - *Site C – in front of 4720 – 51 Avenue*
   - *Site D – in front of Community Savings*
   - *Site E – Downtown Plaza Park*

   - *Site F – 48 Street / 47 Avenue bump-out*
   - *Site G – in front of Field's*
   - *Site H – bulb at 47 Avenue*
   - *Site I – northwest corner of Rotary Recreation Park as it connects to Alexander Way*
   - *Site J – on the corner of 48 Avenue and 48 Street*

3. *The installation of the 'Alexander Icon' in such locations as adjacent to benches, light standards, and pointing to amenities, etc.*

Discussion

a. Selection of "Alexander"

In early January 2005 an invitation was sent to six local artists to submit a rendering of "Alexander" depicting the artist's vision of the unique character. It was indicated that the submissions would be juried to select one piece that would be further developed as the icon. Five submissions were received, and these were unveiled to the community at a reception on February 16 at the Public Library on "the mezz".

An ad hoc committee was established to jury the five pieces. The artist's rendering that was selected was by Jason Frizzell and is attached for Council's review.

b. Locations for Public Art Works on Alexander Way

With the guidance of UMA Engineering Group, The City has identified several potential sites along Alexander Way for art work installations. Some of the locations are on public property, which are the ones that Council will need to approve, and others are on private property, where the owners of the property will need to be approached as to whether they would agree to an installation on their property.

Until submissions are actually received for the various pieces (there will also be a call for proposal for these pieces), it is difficult to know how many of the locations will actually be used, but at this time it is anticipated that the funding, as approved by Council, may be able to support the following:

- 2-3 sculptures,
- 2-3 large murals,
- installation costs for 2 large sculptures provided to The City of Red Deer from the provincial government (Alberta Foundation for the Arts) art lending program,
- 3 sites for "temporary" art projects, which would see sculpture pieces changed every two to three years, where mostly student art from Red Deer College would be showcased.
- several sites along the way for sidewalk art pieces (e.g. chalked or painted pieces right on the sidewalk surface),
- installation of a number of the "Alexander Icon" presently being designed for this street,
- the costs of installation of a tiled bench as donated by the Association of Professional Engineers, Geologists and Physicists.

The following sites have been identified as appropriate for Art installation projects on public property. Through detailed design these locations may be modified slightly. All of these sites require Council's approval.

- SITE A – in front of 5004 – 48 Street: large/medium sculpture (maximum base size 1.2 m x 1.2 m (4' x 4').
- SITE B – in front of 4909 – 48 Street: large/medium sculpture (maximum base size 1.2 m x 1.2 m (4' x 4')
- SITE C – in front of 4720 – 51 Ave: large/medium sculpture (maximum base size 2.4 m x 2 m (8'x7')
- SITE D – in front of Community Savings: street painting 3m x 4m (10' x 12')
- SITE E – Downtown Plaza Park –one of the loaned pieces from AFA
- SITE F – 48 Street / 47Ave Bump Out - one of the loaned pieces from AFA
- SITE G – in front of Field's - one of the temporary art locations
- SITE H – bulb at 47 Ave - one of the temporary art locations
- SITE I – northwest corner of Rotary Recreation Park as it connects to Alexander Way – one of the temporary art locations
- SITE J – on the corner of 48 Ave and 48 St. - locate the APEGGA bench
- Installation of the "Alexander Icon" as adjacent to benches, light standards, pointing to amenities etc, as deemed appropriate in the implementation of Phase I of Alexander Way (these are not noted on the map, as they are yet to be determined)

The locations on private property that are being pursued for murals are:

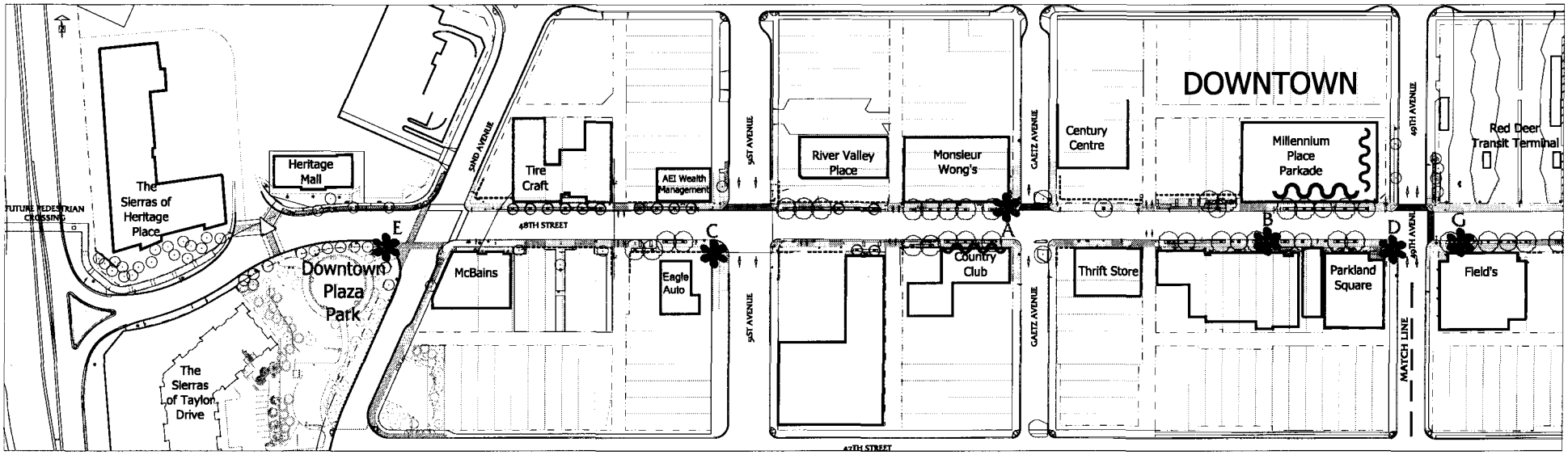
- 4710 – 50 Ave (north facing wall): mural
- Millennium Parkade (south facing wall and east facing wall): mural
- 5129 – 48th Street mural

All of the public sites have been identified on the attached art work map (with the exception of the Alexander installations). The business owners whose property the sculptures will be adjacent to have previously been contacted through the mail. The private property owners where mural installations are being proposed also have been contacted by phone. This communication was completed to ensure all of these individuals were aware of this information prior to coming to Council.

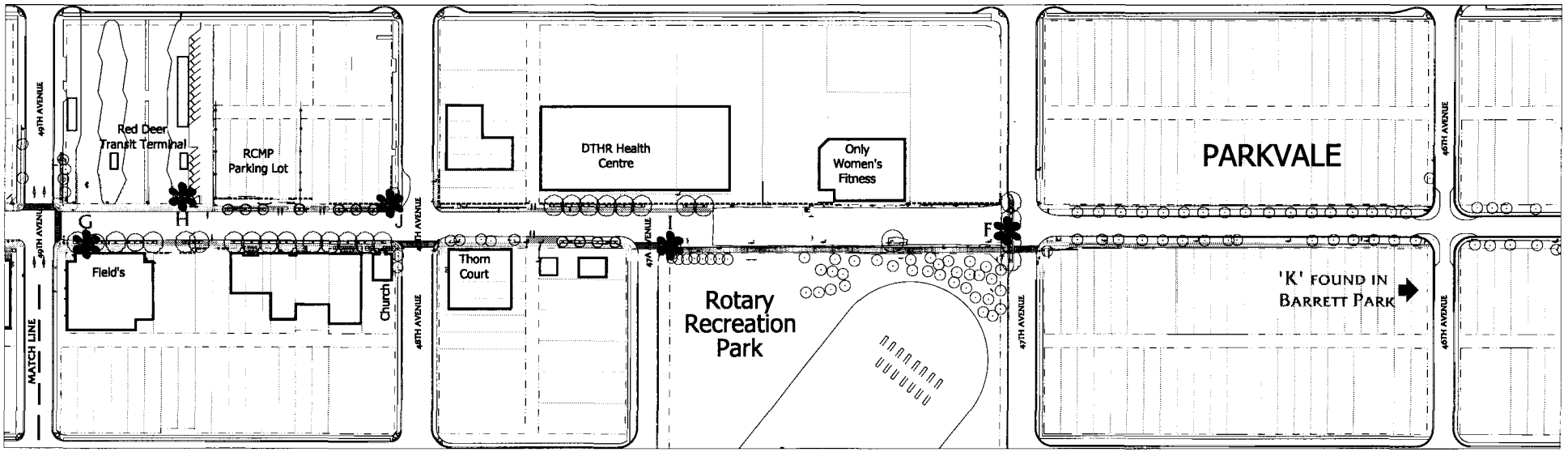
Recommendation

That Council approve:

- The selection of the Alexander Icon graphic design concept as developed by artist Jason Frizzell, and any other further depictions and poses of the icon developed by Jason Frizzell that will be developed and placed along Alexander Way.
- The installation of the "Alexander Icon" in the various poses in locations along Alexander Way.
- The Alexander Way Public art installation locations, A through J as identified on the attached "Phase 1 - Art Work Locations" map.



TAYLOR DRIVE - 49TH AVE

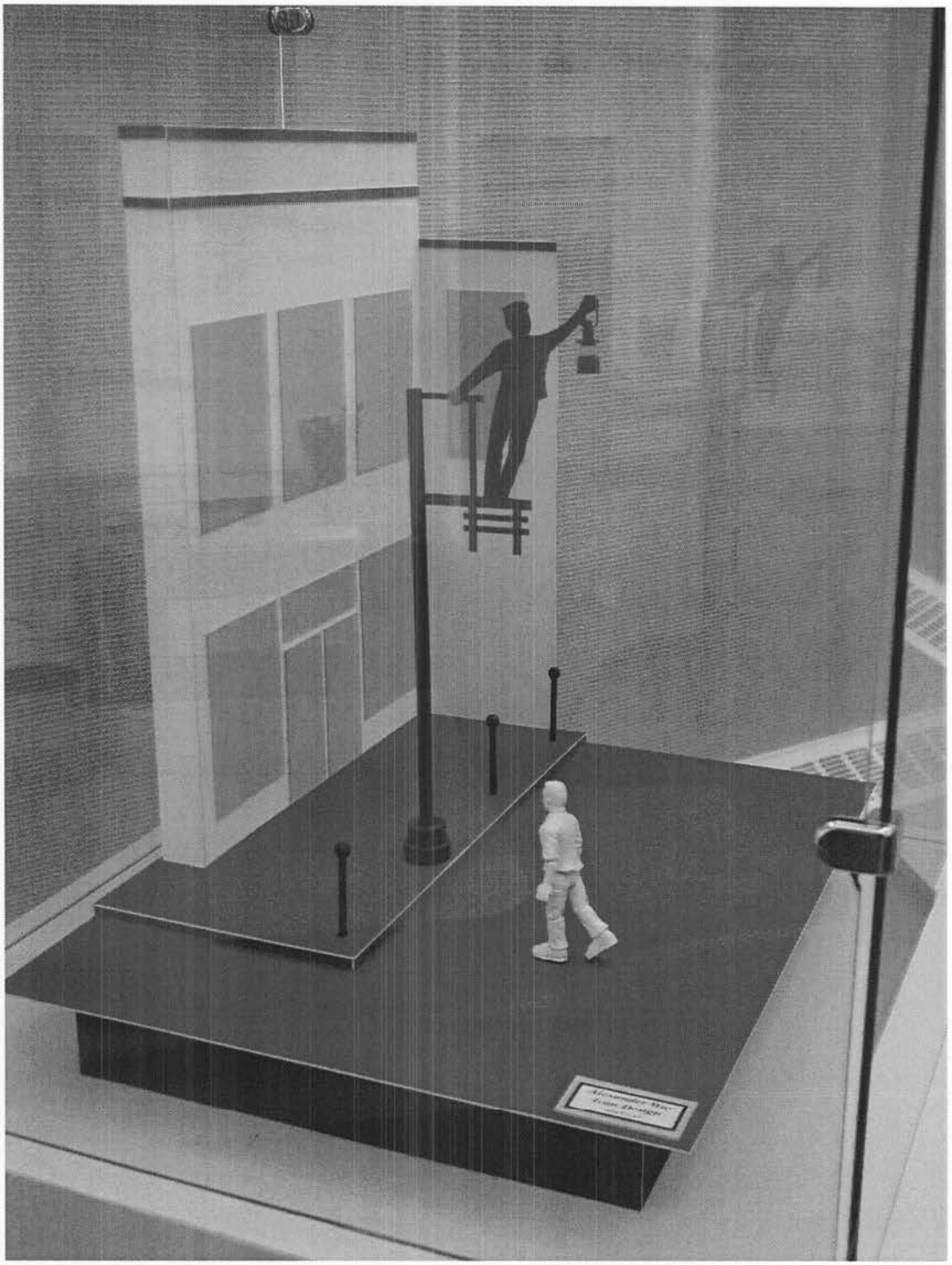


49TH AVE - 46TH AVE

PHASE 1 - ARTWORK LOCATIONS

MURAL LOCATION

PUBLIC ART WORK LOCATION



Comments:

We concur with the recommendations of the Recreation, Parks and Culture Manager.

"Morris Flewwelling"
Mayor

"Norbert Van Wyk"
City Manager

THE CITY OF Red Deer

Council Decision – March 14, 2005

Legislative & Administrative Services

DATE: **March 15, 2005**

TO: **Greg Scott, Recreation, Parks & Culture Manager**

FROM: **Kelly Kloss, Legislative & Administrative Services Manager**

SUBJECT: **Alexander Way Proposed Public Art Locations**

Reference Report:
Recreation, Parks & Culture Manager, dated March 9, 2005

Resolutions:

"Resolved that Council of the City of Red Deer having considered the report from the Recreation, Parks & Culture Manager, dated March 9, 2005, re: Alexander Way Proposed Public Art Locations, hereby approves the following:

1. The selection of the "Alexander Icon" graphic design concept as developed by artist Jason Frizzell, and any other further depictions and poses of the icon developed by Jason Frizzell that will be placed along Alexander Way.

2. The installation of the "Alexander Icon" in various poses in locations along Alexander Way.

3. The Alexander Way public art installation locations, "A" through "J" as identified on the "Phase 1 – Art Work Locations" map attached to the report presented to Council on March 14, 2005."

Report Back to Council: No

Kelly Kloss
Manager

/chk

c Community Services Director
Culture Development Superintendent

Item No. 3

THE CITY OF Red Deer

DATE: **March 9, 2005**

TO: **Kelly Kloss, City Clerk**

From: **Greg Scott, Recreation, Parks & Culture Manager**
Jeff Graves, Recreation Facilities Superintendent

CC: **Colleen Jensen, Director of Community Services**
Rodney Burkard, Director of Corporate Services

Subject: **Kinsmen Community Arenas – "B" Dressing Room Project**

BACKGROUND

Since 2003 the Recreation, Parks & Culture Department has been developing a plan to renovate and add onto the dressing rooms at the Kinsmen "B" Arena. The scope of the project has remained unchanged from inception and includes: the expansion of 4 dressing rooms, an officials dressing room, and a female dressing room. This project has received Council approval and funding twice in the past:

1. In the 2004 Capital Budget, Council approved
   $100,000 funding from the Capital Projects Reserve
   $105,000 funding from a CFEP Grant
   $205,000 total funding

   A call for tenders was sent out in 2004 and came back over budget with only one construction bid of $307,566 plus $26,400 for Architectural fees. This project was put on hold until the 2005 Budget was presented to Council with a request for additional funds for the project.

2. In the 2005 Capital Budget an additional $70,000 was requested and approved by Council from the Capital Project Reserve. Within the Recreation, Parks and Culture Department's Minor Capital Budget $15,000 dollars has been identified to replace existing infrastructure (flooring and drains) to compliment the renovation. The addition of $70,000 was the projected additional funds the project architect felt was needed to complete the project.

DISCUSSION

Presently the Approved Budget Funding for the Dressing room addition project is as follows:
$170,000 Capital Project Reserve
$105,000 CFEP Grant
$275,000 Total Funding

Tenders for completion of the project closed on Friday February 25th, 2005 with three bids being received. The proposed cost of the project based upon the current-year prices, is as follows:

Base construction	$ 257,700
Fees and permits	26,400
Construction contingency – 5%	13,820
Total cost	**$ 297,920**

We have a shortfall of funding of $22,920.

Finalizing construction in this hot market continues to be a challenge. This bid is only available at its current rate until March 27, 2005. Based on the incremental costs of construction and the markets demand on construction based companies, we predict that the cost of construction will only escalate in the future.

We would appreciate your consideration of this request for additional funding so that we can advise the contractor if we are going ahead with this project in the spring.

RECOMMENDATION

That City Council approve funding the additional $22,920 for completion of the Kinsmen Community Arenas "B" Dressing Room Project from the Capital Projects Reserve fund.

Comments:

We concur with the recommendations of the Recreation, Parks and Culture Manager.

"Morris Flewwelling"
Mayor

"Norbert Van Wyk"
City Manager

THE CITY OF Red Deer

Council Decision – March 14, 2005

Legislative & Administrative Services

DATE: **March 15, 2005**

TO: **Greg Scott, Recreation, Parks & Culture Manager**

FROM: **Kelly Kloss, Legislative & Administrative Services Manager**

SUBJECT: **Kinsmen Community Arenas – "B" Dressing Room Project**

Reference Report:
Recreation, Parks & Culture Manager, dated March 9, 2005

Resolutions:

> *"Resolved* that Council of the City of Red Deer having considered the report from the Recreation, Parks & Culture Manager, dated March 9, 2005, re: Kinsmen Community Arenas – "B" Dressing Room Project, amends the 2005 Capital Budget by increasing the Kinsmen Community Arenas "B" Dressing Room Project, by $22,920.00, with the funding to come from the Capital Projects Reserve Fund."

Report Back to Council: No

Kelly Kloss
Manager

/chk

c Community Services Director
Director of Corporate Services
Recreation Facilities Superintendent
City Treasurer
MARY BOUAIK, FINANCIAL ANALYST

THE CITY OF Red Deer

Assessment and Taxation Services

DATE: **February 22, 2005**

TO: **Kelly Kloss, Legislative and Administrative Services Manager**

FROM: **Rod Risling, Assessment and Taxation Services Manager**

SUBJECT: **Intervener Status – Calgary's 2005 Equalized Assessment Appeal**

Background:
Prior to 1994, local school boards requisitioned The City directly for a portion of their operating budget. In 1994, the Provincial Government changed the funding format to one which was totally supported by Alberta Education. This funding program provides a standardized payment to all school boards based largely on pupil counts. If a school board chooses to seek additional funding, a plebiscite in that jurisdiction must be held. If successful, the school board then can requisition the municipality for additional funding which would be added to the tax notice of those property owners who support that specific board.

The Provincial Government receives funding for the education program based on equalized assessments. All assessment jurisdictions are required to annually report the total assessment base of their area. The Provincial Government then determines the assessment base of the entire province by adding all the assessment jurisdictions assessments together. The total amount required to fund the education program in Alberta is then divided by this total assessment. This calculation gives an equalized tax rate which is the basis for all property across the province. For example, a $100,000 residence in Edmonton will pay similar amount to fund education as a $100,000 residence in Red Deer. The equalized tax rate levels the funding burden of the provincial education system by subsidizing some municipalities with funding captured from those municipalities which have higher property values.

Discussion:
The City of Calgary appealed their equalized assessment to the Municipal Government Board. As Calgary contributes a significant portion of the funding for Alberta's educational requirements, any reduction in their assessments would have to be absorbed by all other municipalities. The Municipal Government Board has asked if The City of Red Deer wants intervener status in this appeal. Intervener status will allow The City the opportunity to present evidence at future hearings if desired. We have no details on the appeal; however, since the impact could be significant, it is important to protect our interests by applying for intervener status. To qualify for intervener status, Council must adopt a Resolution stating The City's intention.

For your information, in 2004, City Council approved intervener status for Calgary's 2004 Equalized Assessment Appeal. The appeal is still outstanding.

.../2

Recommendation:
That Council pass a resolution to allow Administration to pursue intervener status in the 2005 equalized assessment appeal for the City of Calgary.

Rod Risling
Assessment and Taxation Services Manager

Comments:

We concur with the recommendations of the Assessment and Taxation Services Manager.

"Morris Flewwelling"
Mayor

"Norbert Van Wyk"
City Manager

FILE

RESOLUTION PASSED
AT THE
MARCH 14, 2005
RED DEER CITY COUNCIL MEETING

"***Resolved*** that Council of the City of Red Deer having considered the report from the Assessment and Taxation Services Manager, dated February 22, 2005, re: Intervener Status – Calgary's 2005 Equalized Assessment Appeal, hereby agrees to be an intervener at the City of Calgary Appeal of their equalized assessment, pursuant to Section 508 of the Municipal Government Act."

Certified to be a true copy of a resolution passed at the March 14, 2005 Red Deer City Council Meeting.

Kelly Kloss
City Clerk

FILE

THE CITY OF Red Deer

Legislative & Administrative Services

Council Decision – March 14, 2005

DATE: **March 15, 2005**

TO: **Rod Risling, Assessment and Taxation Services Manager**

FROM: **Kelly Kloss, Legislative & Administrative Services Manager**

SUBJECT: **Intervener Status – Calgary's 2005 Equalized Assessment Appeal**

Reference Report:
Assessment and Taxation Services Manager, dated February 22, 2005

Resolutions:

> *"Resolved* that Council of the City of Red Deer having considered the report from the Assessment and Taxation Services Manager, dated February 22, 2005, re: Intervener Status – Calgary's 2005 Equalized Assessment Appeal, hereby agrees to be an intervener at the City of Calgary Appeal of their equalized assessment, pursuant to Section 508 of the Municipal Government Act."

Report Back to Council: No

Kelly Kloss
Manager

/chk

c Director of Corporate Services

PARKLAND
COMMUNITY
PLANNING
SERVICES

Suite 404, 4808 Ross Street
Red Deer, Alberta T4N 1X5
Phone: (403) 343-3394
FAX: (403) 346-1570
e-mail: pcps@pcps.ab.ca

DATE: March 3, 2005

TO: Kelly Kloss, Legislative and Administrative Services Manager

FROM: Martin Kvapil, Planning Assistant

RE: Land Use Bylaw Amendment No. 3156/D-2005
Portion of SE ¼ Sec. 3-38-27-W4M
Inglewood East – Phase 2
Melcor Developments Ltd.

Proposal

Melcor Developments Ltd. is proposing to develop Phase 2 of the Inglewood East neighbourhood. Phase 2 is located within the most northerly portion of the Inglewood East Neighbourhood Area Structure Plan. The applicant seeks to rezone approximately 9.695 ha (23.96 ac.) of land from A1 Future Urban Development District to R1 Residential Low Density District and P1 Parks and Recreation District in order to create forty-four (44) low density residential lots, two (2) municipal reserve lots, two (2) public utility lots, and a remainder.

Staff Recommendation

The proposal conforms with the Inglewood East Neighbourhood Area Structure Plan and therefore it is recommended that City Council proceed with first reading of Land Use Bylaw Amendment 3156/D-2005.

Martin Kvapil

/attach.

KLAND
COMMUNITY
PLANNING
SERVICES

Suite 404, 4808 Ross Street
Red Deer, Alberta T4N 1X5
Phone: (403) 343-3394
FAX: (403) 346-1570
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DATE: March 3, 2005

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Proposal

Melcor Developments Ltd. is proposing to develop Phase 2 of the Inglewood East neighbourhood. Phase 2 is located within the most northerly portion of the Inglewood East Neighbourhood Area Structure Plan. The applicant seeks to rezone approximately 9.695 ha (23.96 ac.) of land from A1 Future Urban Development District to R1 Residential Low Density District and P1 Parks and Recreation District in order to create one hundred forty-four (144) low density residential lots, two (2) municipal reserve lots, two (2) public utility lots, and a remainder.

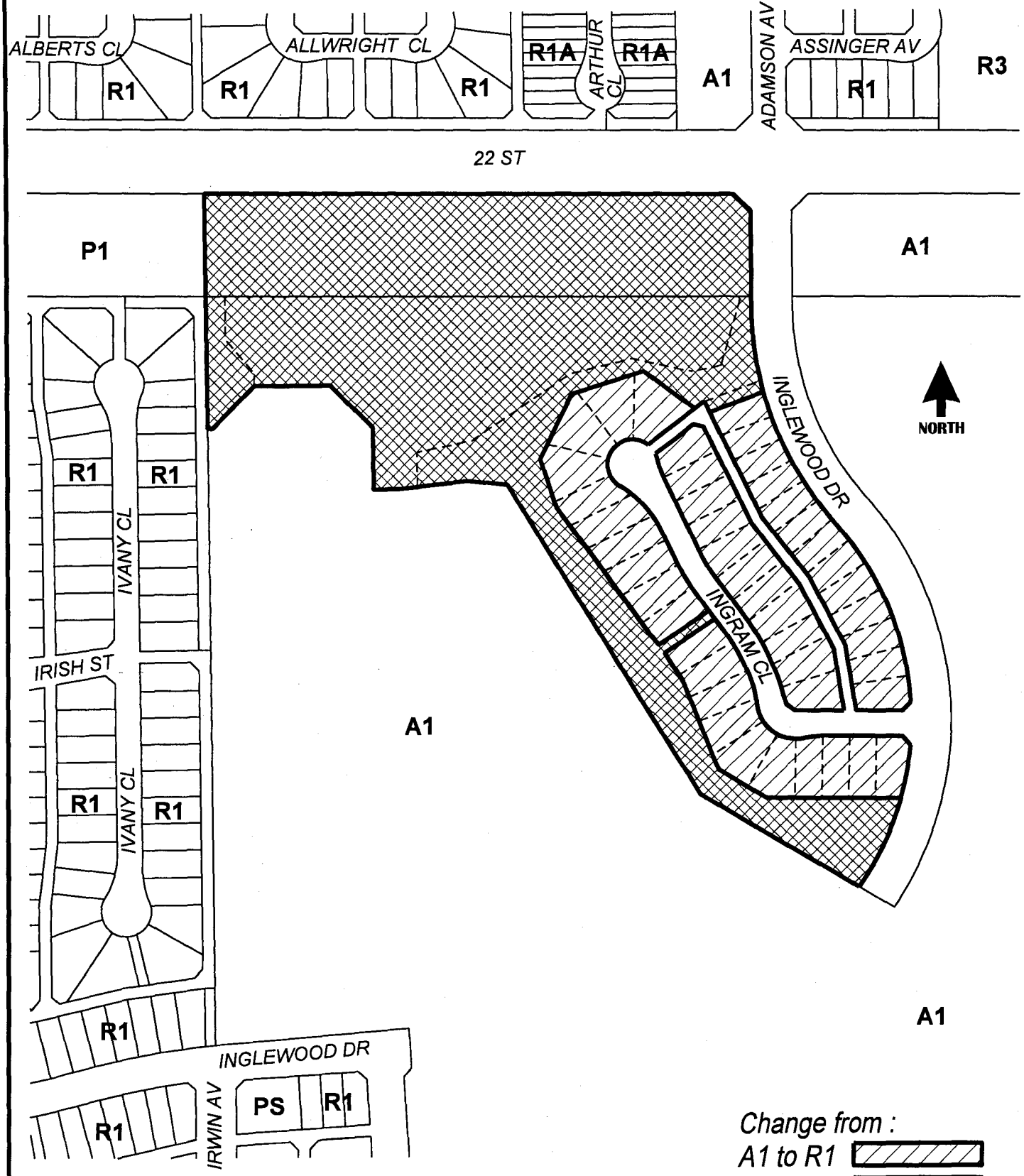
Staff Recommendation

The proposal conforms with the Inglewood East Neighbourhood Area Structure Plan and therefore it is recommended that City Council proceed with first reading of Land Use Bylaw Amendment 3156/D-2005.

Martin Kvapil

/attach.

The City of Red Deer *PROPOSED LAND USE BYLAW AMENDMENT*



Change from :

A1 to R1

A1 to P1

AFFECTED DISTRICTS:

A1 - Future Urban Development

R1 - Residential (Low Density)

P1 - Parks and Recreation

MAP No. 4 / 2005

BYLAW No. 3156 / D - 2005

Comments:

We concur with the recommendations of Parkland Community Planning Services that Council give first reading to the Land Use Bylaw Amendment. A Public Hearing would be held on Monday, April 11, 2005 at 7:00 p.m. in Council Chambers, during Council's regular meeting.

"Morris Flewwelling"
Mayor

"Norbert Van Wyk"
City Manager

LUB AMENDMENT
INGLEWOOD EAST – PHASE 2

DESCRIPTION: Redesignation from A1 Future Urban Development to R1 Residential (Low Density) District and P1 Parks and Recreation District to create 44 low density residential lots, two municipal reserve lots, two public utility lots and a remainder

FIRST READING: March 14, 2005

FIRST PUBLICATION: March 25, 2005

SECOND PUBLICATION: April 1, 2005

PUBLIC HEARING & SECOND READING: April 11, 2005

THIRD READING: ?

LETTERS REQUIRED TO PROPERTY OWNERS: YES ☑ NO ☐

DEPOSIT? YES ☑ $ 400.- NO ☐ BY: Melcar

ACTUAL COST OF ADVERTISING:

$ 299.20 X 2 TOTAL: $ 598.40

MAP PREPARATION: $ —

TOTAL COST: $ 598.40

LESS DEPOSIT RECEIVED: $ (400.-)

AMOUNT OWING/ (REFUND): $ 198.40

INVOICE NO.: 162444

(Account No. 180.5901)

THE CITY OF Red Deer

THE CITY OF RED DEER RECEIPT

RECEIVED FROM Tivelcar. Develop $ 400.00 05.04.04 (YY MM DD)

THE SUM OF 400/00 Dollars

DESCRIPTION Advert Deposit Log East 2

	Account Number (Business Unit. Object. Subsidiary)	Subledger	T	Asset ID No.	Amount
G.L. DIST	59. 5901				400.00
G.L. DIST					
G.L. DIST					
G.L. DIST					
G.L. DIST					
G.L. DIST					
G.S.T.	2.3210				

GST Registration #R119311785

Not Valid Unless Machine Printed

REMITTANCE ADVICE

DATE			PAYEE	CITY OF RED ER	AMOUNT	400.00	AGE	1
23	3	2005	BANK	LD Canadian Imperial Bank of Commerce			NUMBER	112616

DOCUMENT DATE			DOCUMENT NUMBER	DOCUMENT AMOUNT	BALANCE	GROSS AMOUNT	DISCOUNT	NET PAYMENT
23	3	2005	ING.EAST2	400.00		400.00	0.00	400.00
				400.00		400.00	0.00	400.00

DETACH THIS PORTION BEFORE DEPOSITING

FILE

March 23, 2005

«Prime_Owner_Name»
«Owner_Address_1»
«Owner_Address_2»
«Owner_Address_3»
«Owner_Address_4»

Dear Sir/Madam:

Re: Rezoning Inglewood East Neighbourhood – Phase 2
Land Use Bylaw Amendment 3156/D-2005

Council of the City of Red Deer is considering a change to the Land Use Bylaw that controls the use and development of land and buildings in the city. As a property owner in the Inglewood East area you have an opportunity to ask questions about the intended use and to let Council know your views.

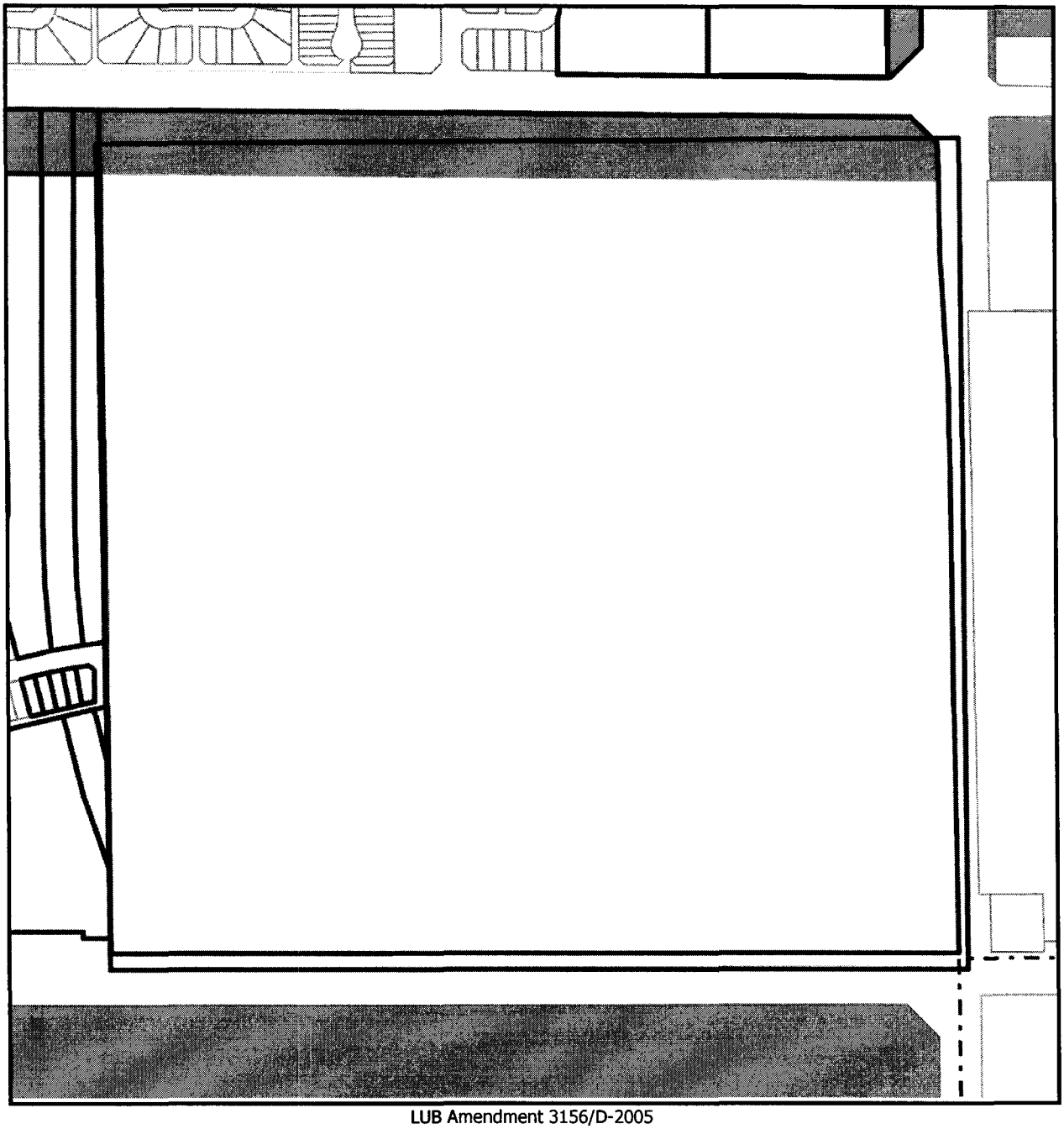
City Council proposes to pass **Land Use Bylaw Amendment 3156/D-2005,** which provides for the rezoning of approximately 9.695 hectares (23.96 acres) of land from A1 Future Urban Development District to R1 Residential (Low Density) District and P1 Parks and Recreation District to create 44 low-density residential lots, two municipal reserve lots and two public utility lots. The proposed bylaw may be inspected by the public at Legislative & Administrative Services, 2nd Floor of City Hall during regular office hours or for more details, contact the city planners at Parkland Community Planning Services 343-3394.

City Council will hear from any person claiming to be affected by the proposed bylaw at a Public Hearing on **Monday, April 11, 2005** at 7:00 p.m. in Council Chambers, 2nd floor of City Hall. If you want your letter or petition included on the Council agenda you must submit it to our office by **Tuesday, April 5, 2005.** Otherwise, you may submit your letter or petition at the Council meeting or you can simply tell Council your views at the Public Hearing. Any submission will be public information. If you have any questions regarding the use of this information, please contact Legislative & Administrative Services at 342-8132.

Yours truly,

Kelly Kloss
Manager, Legislative & Administrative Services

/bg
encl.



LUB Amendment 3156/D-2005

Redgis

THE CITY OF Red Deer

Parcel Fabric
Legal Fabric
Bridge
City Boundary
Island
Lake
River
Creek
Parks

Scale 1 : 6001

Prime Owner Name	Owner Address 1	Owner Address 2	Owner Address 3	Owner Address 4
INGLEWOOD COMMUNITIES INC	900-10310 JASPER AVE	EDMONTON, AB T5J 1Y8		
JOHN MOSSE YOUNG	5239 76 ST	RED DEER, AB T4P 2J4		
ALTALINK MANAGEMENT LTD.	C/O AEC VALUATIONS WESTERN	SUITE 300 HIGHFIELD PLACE	EDMONTON, AB T5J 3L8	
SETH ANDERS	PO BOX 399	RED DEER, AB T4N 5E9		
ARON MAXSON & LYNN JACOBS	120 INGLEWOOD DR	RED DEER, AB T4R 3N1		
MELCOR DEVELOPMENTS LTD	900 10310 JASPER AV	EDMONTON, AB T5J 1Y8		
CLUB SIERRA RETIREMENT RESID	C/O MASTERPIECE INC	37 RICHARD WAY SW APT 302	CALGARY, AB T3E 7M8	
JIM PATTISON DEVELOPMENTS LT	16TH FLR 1055 W HASTINGS ST	VANCOUVER, BC V6E 2H2		

INGLEWOOD EAST Phase 2
Land Use Bylaw Amendment

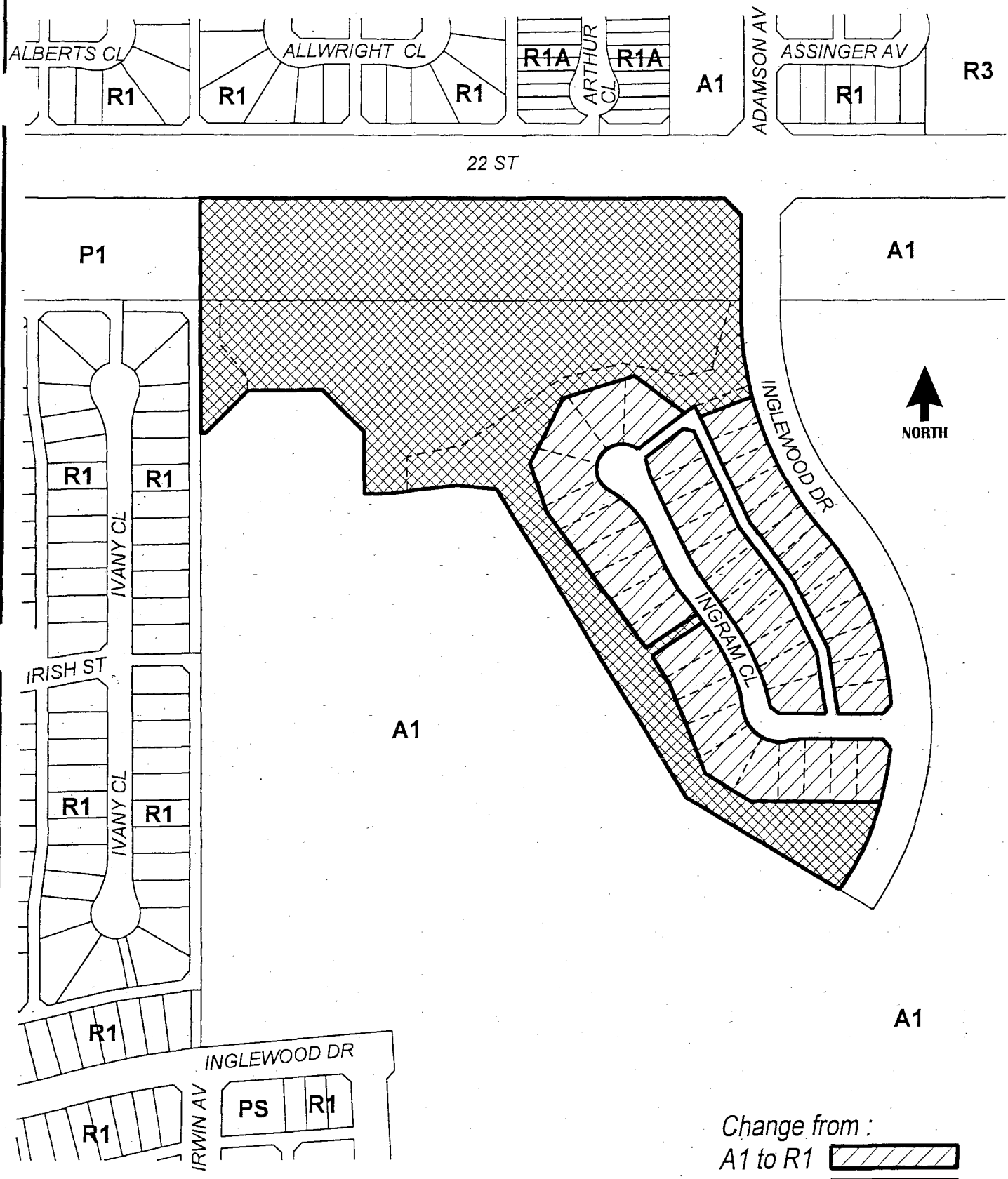
City Council proposes to pass **Land Use Bylaw Amendment 3156/D-2005**, which provides for the rezoning of approximately 9.695 hectares (23.96 acres) of land from A1 Future Urban Development District to R1 Residential (Low Density) District and P1 Parks and Recreation District to create 44 low density residential lots, two municipal reserve lots and two public utility lots. The proposed bylaw may be inspected by the public at Legislative & Administrative Services, 2nd Floor of City Hall during regular office hours or for more details, contact the city planners at Parkland Community Planning Services 343-3394.

"Map"

City Council will hear from any person claiming to be affected by the proposed bylaws at a Public Hearing on **Monday, April 11, 2005** at 7:00 p.m. in Council Chambers, 2nd floor of City Hall. If you want your letter or petition included on the Council agenda you must submit it to the Manager, Legislative & Administrative Services by **Tuesday, April 5, 2004**. Otherwise, you may submit your letter or petition at the Council meeting or you can simply tell Council your views at the Public Hearing. Any submission will be public information. If you have any questions regarding the use of this information please contact the Manager, Legislative & Administrative Services at 342-8132.

(Publication Dates: Mach 25 & April 1, 2005)

The City of Red Deer *PROPOSED LAND USE BYLAW AMENDMENT*



Change from :

A1 to R1

A1 to P1

AFFECTED DISTRICTS:

A1 - Future Urban Development

R1 - Residential (Low Density)

P1 - Parks and Recreation

MAP No. 4 / 2005

BYLAW No. 3156 / D - 2005

THE CITY OF
Red Deer

LEGISLATIVE & ADMINISTRATIVE SERVICES

March 15, 2005

Fax: 343-7510

Mr. G. Pelletier
Melcor Developments Ltd.
502, 4901 – 48 Street
Red Deer, AB T4N 6M4

Dear Mr. Pelletier:

Land Use Bylaw Amendment 3156/D-2005
Inglewood East – Phase 2

Red Deer City Council gave first reading to *Land Use Bylaw Amendment 3156/D-2005* at the City of Red Deer's Council meeting held Monday, March 14, 2005. For your information, a copy of the bylaw is attached.

Land Use Bylaw Amendment 3156/D-2005 provides for the rezoning of land to develop Phase 2 of the Inglewood East Neighbourhood. Approximately 9.695 ha (23.96 ac) of land will be rezoned from A1 Future Urban Development District to R1 Residential Low Density District and P1 Parks and Recreation District to create 144 low density residential lots, 2 municipal reserve lots, 2 public utility lots and a remainder.

Council must hold a Public Hearing before giving second and third readings to the bylaw. This office will now advertise for a Public Hearing to be held on Monday, April 11, 2005 at 7:00 p.m. in Council Chambers of City Hall during Council's regular meeting.

According to the *Land Use Bylaw*, The City requires a deposit before public advertising. An amount equal to the estimated cost of advertising, which in this instance is $400, is required by Wednesday, March 23, 2005. You will be invoiced for or refunded the difference once the actual cost of advertising is known.

Please call me if you have any questions or require additional information.

Sincerely,

Kelly Kloss
Manager
/attach.
c Parkland Community Planning Services
C. Adams, Administrative Assistant

THE CITY OF Red Deer

Council Decision – March 14, 2005

Legislative & Administrative Services

DATE: **March 15, 2005**

TO: **Martin Kvapil, Parkland Community Planning Services**

FROM: **Kelly Kloss, Legislative & Administrative Services Manager**

SUBJECT: **Land Use Bylaw Amendment 3156/D-2005**
Portion of SE ¼ Sec. 3-38-27-W4M
Inglewood East – Phase 2
Melcor Developments Ltd.

Reference Report:
Parkland Community Planning Services, dated March 3, 2005

Bylaw Readings:
Land Use Bylaw Amendment 3156/D-2005 was given first reading. A copy of the bylaw is attached.

Report Back to Council: Yes
A Public Hearing will be held on Monday, April 11, 2005 at 7:00 p.m. in Council Chambers during Council's regular meeting.

Comments/Further Action:
Land Use Bylaw Amendment 3156/D-2005 provides for the rezoning of land to develop Phase 2 of the Inglewood East Neighbourhood. Approximately 9.695 ha (23.96 ac) of land will be rezoned from A1 Future Urban Development District to R1 Residential Low Density District and P1 Parks and Recreation District to create 144 low density residential lots, 2 municipal reserve lots, 2 public utility lots and a remainder. This office will now proceed with the advertising for a Public Hearing. Melcor Developments will be responsible for the advertising costs in this instance.

Kelly Kloss
Manager

/chk
/attach.
c Director of Development Services
Inspections & Licensing Manager
Land & Economic Development Manager
C. Adams, Administrative Assistant
B. Greter, Clerk Steno

BYLAW NO. 3156/D-2005

Being a bylaw to amend Bylaw No. 3156/96, the Land Use Bylaw of the City of Red Deer.

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

1. That "Use District Map J4" contained within "Schedule B" of the Land Use Bylaw is hereby amended in accordance with Land Use District Map No. 4/2005 attached hereto and forming part of the bylaw.

READ A FIRST TIME IN OPEN COUNCIL this	14th	day of	March	2005.
READ A SECOND TIME IN OPEN COUNCIL this		day of		2005.
READ A THIRD TIME IN OPEN COUNCIL this		day of		2005.
AND SIGNED BY THE MAYOR AND CITY CLERK this		day of		2005.

MAYOR

CITY CLERK

THE CITY OF
Red Deer

LEGISLATIVE & ADMINISTRATIVE SERVICES

FILE

March 15, 2005

Fax: 343-7510

Mr. G. Pelletier
Melcor Developments Ltd.
502, 4901 – 48 Street
Red Deer, AB T4N 6M4

Dear Mr. Pelletier:

Land Use Bylaw Amendment 3156/D-2005
Inglewood East – Phase 2

Red Deer City Council gave first reading to *Land Use Bylaw Amendment 3156/D-2005* at the City of Red Deer's Council meeting held Monday, March 14, 2005. For your information, a copy of the bylaw is attached.

Land Use Bylaw Amendment 3156/D-2005 provides for the rezoning of land to develop Phase 2 of the Inglewood East Neighbourhood. Approximately 9.695 ha (23.96 ac) of land will be rezoned from A1 Future Urban Development District to R1 Residential Low Density District and P1 Parks and Recreation District to create 144 low density residential lots, 2 municipal reserve lots, 2 public utility lots and a remainder.

Council must hold a Public Hearing before giving second and third readings to the bylaw. This office will now advertise for a Public Hearing to be held on Monday, April 11, 2005 at 7:00 p.m. in Council Chambers of City Hall during Council's regular meeting.

According to the *Land Use Bylaw*, The City requires a deposit before public advertising. An amount equal to the estimated cost of advertising, which in this instance is $400, is required by Wednesday, March 23, 2005. You will be invoiced for or refunded the difference once the actual cost of advertising is known.

Please call me if you have any questions or require additional information.

Sincerely,

Kelly Kloss
Manager
/attach.
c Parkland Community Planning Services
C. Adams, Administrative Assistant

FILE

THE CITY OF Red Deer

Council Decision – March 14, 2005

Legislative & Administrative Services

DATE: **March 15, 2005**

TO: **Martin Kvapil, Parkland Community Planning Services**

FROM: **Kelly Kloss, Legislative & Administrative Services Manager**

SUBJECT: **Land Use Bylaw Amendment 3156/D-2005**
Portion of SE ¼ Sec. 3-38-27-W4M
Inglewood East – Phase 2
Melcor Developments Ltd.

Reference Report:
Parkland Community Planning Services, dated March 3, 2005

Bylaw Readings:
Land Use Bylaw Amendment 3156/D-2005 was given first reading. A copy of the bylaw is attached.

Report Back to Council: Yes
A Public Hearing will be held on Monday, April 11, 2005 at 7:00 p.m. in Council Chambers during Council's regular meeting.

Comments/Further Action:
Land Use Bylaw Amendment 3156/D-2005 provides for the rezoning of land to develop Phase 2 of the Inglewood East Neighbourhood. Approximately 9.695 ha (23.96 ac) of land will be rezoned from A1 Future Urban Development District to R1 Residential Low Density District and P1 Parks and Recreation District to create 144 low density residential lots, 2 municipal reserve lots, 2 public utility lots and a remainder. This office will now proceed with the advertising for a Public Hearing. Melcor Developments will be responsible for the advertising costs in this instance.

Kelly Kloss
Manager

/chk
/attach.
c Director of Development Services
Inspections & Licensing Manager
Land & Economic Development Manager
C. Adams, Administrative Assistant
B. Greter, Clerk Steno

BYLAW NO. 3156/D-2005

Being a bylaw to amend Bylaw No. 3156/96, the Land Use Bylaw of the City of Red Deer.

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

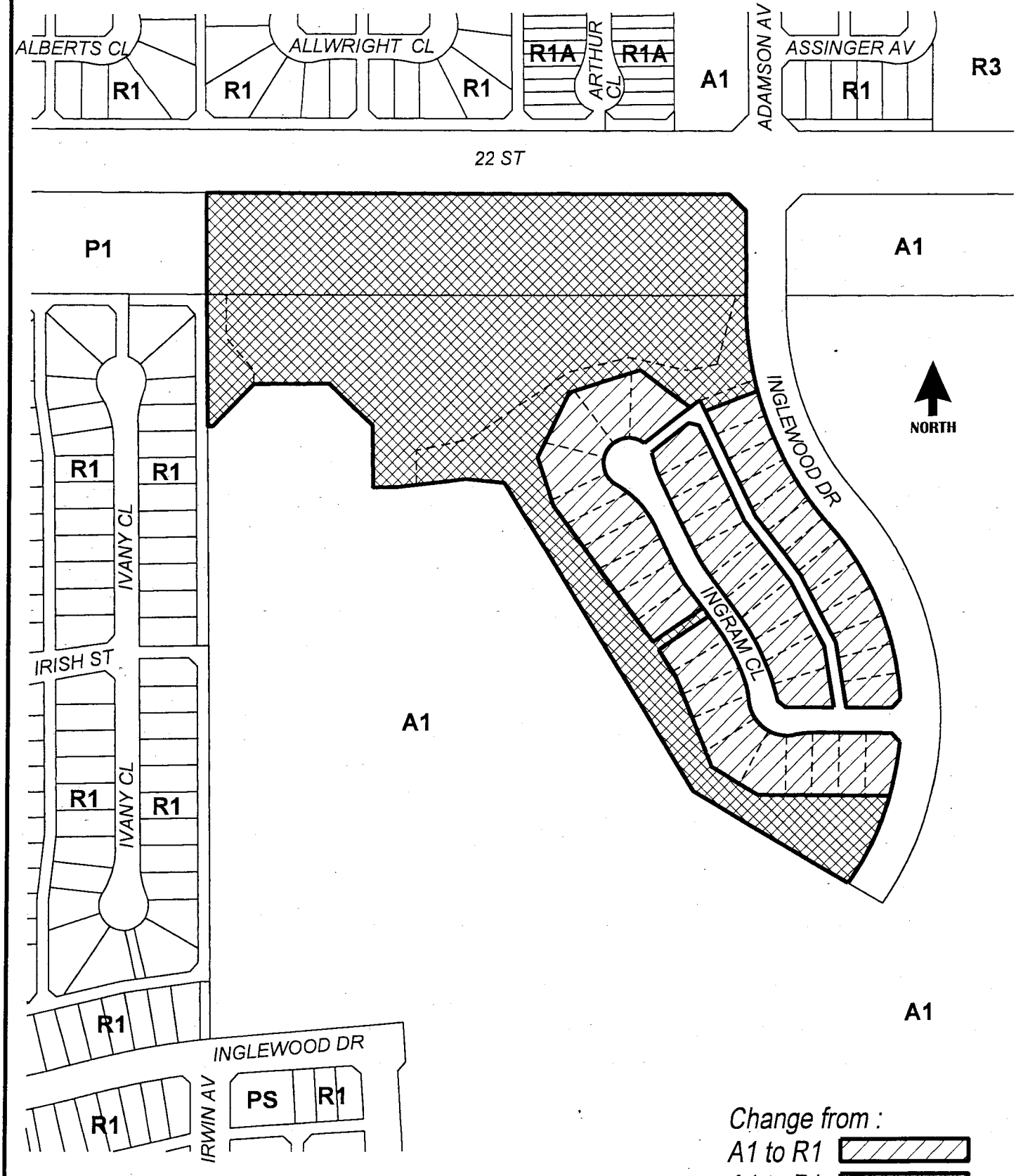
1. That "Use District Map J4" contained within "Schedule B" of the Land Use Bylaw is hereby amended in accordance with Land Use District Map No. 4/2005 attached hereto and forming part of the bylaw.

READ A FIRST TIME IN OPEN COUNCIL this	14th	day of	March	2005.
READ A SECOND TIME IN OPEN COUNCIL this		day of		2005.
READ A THIRD TIME IN OPEN COUNCIL this		day of		2005.
AND SIGNED BY THE MAYOR AND CITY CLERK this		day of		2005.

MAYOR

CITY CLERK

The City of Red Deer *PROPOSED LAND USE BYLAW AMENDMENT*



Change from :

A1 to R1

A1 to P1

AFFECTED DISTRICTS:

A1 - Future Urban Development

R1 - Residential (Low Density)

P1 - Parks and Recreation

MAP No. 4 / 2005

BYLAW No. 3156 / D - 2005

BYLAW NO. 3217/F-2004

Being a bylaw to amend Bylaw No. 3217/98, the bylaw adopting the neighbourhood area structure plans as a bylaw of the City of Red Deer

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

That Bylaw No. 3217/98 is hereby amended:

1. By substituting the revised and updated text pages and maps, attached hereto and forming part of the bylaw, in the West Park Extension Neighbourhood Area Structure Plan [i.e. pages 12 to 17 and Figures 4, 8, 9, 16, 17, 20, 21, 22].

READ A FIRST TIME IN OPEN COUNCIL this 14th day of February , A.D. 2005.

READ A SECOND TIME IN OPEN COUNCIL this day of , A.D. 2005.

READ A THIRD TIME IN OPEN COUNCIL this day of , A.D. 2005.

AND SIGNED BY THE MAYOR AND CITY CLERK this day of , A.D. 2005.

MAYOR

CITY CLERK

townhouse site are provided as either a response to a particular residential market niche or a specific land use or site issue.

The concept plan also provides opportunities for walkout basements. The potential locations are identified in ***Figure 4***.

The proposed land use allocation is illustrated in ***Table 1.***

TABLE 1 LAND USE ALLOCATION

	Acres± (Ha±)	Percentage
Total Neighbourhood Area	**156.26 (63.24)**	-
Environmental Reserve	11.19 (4.53)	-
Developable Area	**145.07 (58.71)**	**100.00**
Land Use		
Single Family – Large Lots	8.08 (3.27)	5.57
Single Family – Standard Lots	60.07 (24.31)	41.40
Multi - Family – Townhouse	8.20 (3.32)	5.65
Single Family – Narrow Lot	8.18 (3.31)	5.64
Secondary Suite Lots	1.19 (0.48)	0.82
Municipal Reserve	16.56 (6.70)	11.42
Streets and Lanes	33.63 (13.61)	23.18
Public Utility Lots	7.86 (3.18)	5.42
Church Site	1.00 (0.40)	0.69
Social Care Site*	0.30 (0.12)	0.21

* Social Housing/Day Care/ Retirement Home/R2

Traffic will move efficiently and safely through the neighbourhood on a curvilinear road network that emphasizes cul-de-sac access to single family residences. The road network is supported by a complete rear lane system. Connections to the existing West Park and its local road network are strategically located to optimize efficiency of movement and safety, and to minimize through traffic.

A significant natural area along the western boundary is provided for recreation purposes and buffering of highway noise. Similarly, the existing natural wetland found at the southern end of the site is protected as habitat but is also upgraded for stormwater detention purposes.

It should be noted that the smaller wetland and associated park area located to the east of the 60th Avenue alignment is not within the site boundaries, even though each of these contribute to the neighbourhood. As such, they have not been included in the Neighbourhood Structure Plan area.

4.1.1 Single Family Detached

There are five single family detached lot types being proposed, all of which fall under the City of Red Deer's Residential Low Density District (R1) and Residential Narrow Lot District (R1N). Each of the lot types is described below.

Standard A: The typical and minimum widths of standard A lots are 15.2 metres ± (49.9 feet ±) and 12.8 metres ± (42.0 feet ±) respectively. Standard A lots account for 364 of the 692 (approximately 53 percent) dwelling units anticipated on the site, the highest proportion of any residential land use. They are found throughout the neighborhood

Secondary Suite: Similar in lot dimensions to Standard A, these lots are located in Phases 5 of the subdivision. These lots account for 7 of the 692 dwelling units anticipated on the site.

Standard B: At 16.8 metres ± (55 feet ±) wide standard B lots are wider than standard A lots. They are found along the neighborhood's eastern boundary where they back onto lots with similar dimensions in the adjoining established neighbourhood. They are intended to enhance compatibility and cohesiveness between existing and future residential development.

Large: Large lots are characterized by a 22.9 metre ± (75 feet ±) width, and lot depths of 48.8 metres ± (160 feet ±) and 40 metres ± (132 feet ±) . Located along

the south side of Cronquist Drive these lots are intended to enhance compatibility with larger suburban lots located on the north side of the road.

Narrow: Narrow lots are characterized by a minimum lot width of 10.4 metres (34.1 feet) and rear drive garages. They are located near the center of the neighbourhood in close proximity to major neighbourhood roads and park and natural areas.

4.1.2 Townhouses

A single, 3.32 gross hectare ± (8.21 acre ±) medium density townhouse site is strategically located in close proximity to a park / natural area and the internal collector road network. Townhouse units will be a maximum two stories high. They are intended for a range of potential homebuyers.

4.2 Development Density

As noted in Section 3.1 maximum density for new residential areas in the City of Red Deer is 45 persons per gross hectare. Based upon the existing policy and given a total neighbourhood development area of 63.24 hectares ± (156.26 acres ±), a maximum population of 2846 persons could be accommodated in the West Park Extension area.

The proposed development concept, however, is well below the maximum, as the estimated population density is 36.97 persons per hectare. This is based upon an estimated build-out of 692 dwelling units, City of Red Deer occupancy factors and a population of 2338 persons.

The population density calculation is summarized in ***Table 2.*** Table 2 also shows the estimated number of dwelling units and associated population for each of the residential land uses when the neighbourhood is fully developed. Single family Standard A lots account for the majority of dwelling units (494) and population (1679) as compared to the other residential land uses.

TABLE 2 ESTIMATED POPULATION DENSITIES

Land Use	Lot Width (m±)	Number of Dwelling Units	Number of Persons/ Unit	Total Population (Maximum)	Density Persons/Ha
Single Family, Large Lot	22.9	30	3.4	102	-
Single Family, Standard A Lots	12.8	494	3.4	1679	-
Single Family,Standard B Lots	16.8	14	3.4	48	
Single Family, Narrow Lots	10.4	81	3.4	275	
Single Family, Secondary Suite Lots	12.8	7	5.1	36	-
Multiple Family, Townhouse	*8.21 ac@8upa*	66	3.0	198	-
Total ***(With church and social care site)***		**692**	-	**2338**	**36.97**
Multiple Family, Townhouse ***(Additional- no social care site)****	*0.30 ac@8upa*	2	3.0	6	
Single Family, Standard Lot A (***Additional- no church)***	*12.9*	5	3.4	17	
Total ***(No church or social care site*)***		**699**	-	**2361**	**37.33**

** Social Housing /Daycare /Retirement Home /R2*

The relatively low estimated population density can be attributed to the amount of park and natural areas that are provided and the quantity of lower density single family detached development.

It should be noted that the calculations are based on the assumption that the church and community care sites would be developed for these intended purposes. Should the two sites be developed for residential purposes, the estimated population density for the entire neighbourhood would marginally increase to 37.33 persons per hectare (15.11 persons per acre). This is well within the 45 persons per hectare limit stipulated in the City of Red Deer *Municipal Development Plan.*

4.3 Parks and Open Space

The parks and open space system includes several different types of parks and an extensive pedestrian / cycling trail system connecting parks and neighbourhoods. The park and trail systems represent important community amenities and focal points for new West Park Extension residents as well as those from neighbouring communities. Approximately 10 per cent of the site is provided as municipal reserve, satisfying the *Municipal Government Act* and City of Red Deer requirements. It is comprised of a balance of natural areas, local play areas, buffer and linear parks. The percentage increases to 21 per cent when the environmental reserve areas and public utility lots such as the storm detention facility are included.

4.3.1 West Area Park

The neighbourhood's largest and most significant park is the linear park that runs the length of neighbourhood's western boundary. It includes a 3.58 hectare ± (8.87 acre ±) natural park located at approximately the midway point along the boundary (see ***Figure 8***). A "play area", complete with a elementary playground facilities and a open green space are integrated into the natural area park. The final location and layout of the play area will be determined in cooperation with the City of Red Deer Recreation Parks and Culture Department. The western linear park system connects the northern and southern detention ponds to form a

corridor of public use open space encompassing the entire western and southern boundaries of the neighbourhood.

The western boundary park serves several important purposes by offering excellent outdoor amenity and recreation opportunities to the community, protecting important tree stands and wildlife habitat, and acting as a noise and visual barrier to Highway 2. An approximately 30 metre (100 ft.) wide, landscaped berm complete with sound attenuation faculty, will be constructed adjacent to portions of the highway right-of-way for added noise and visual abatement. The design details of the berm are illustrated in ***Figure 9***.

4.3.2 East Area Park

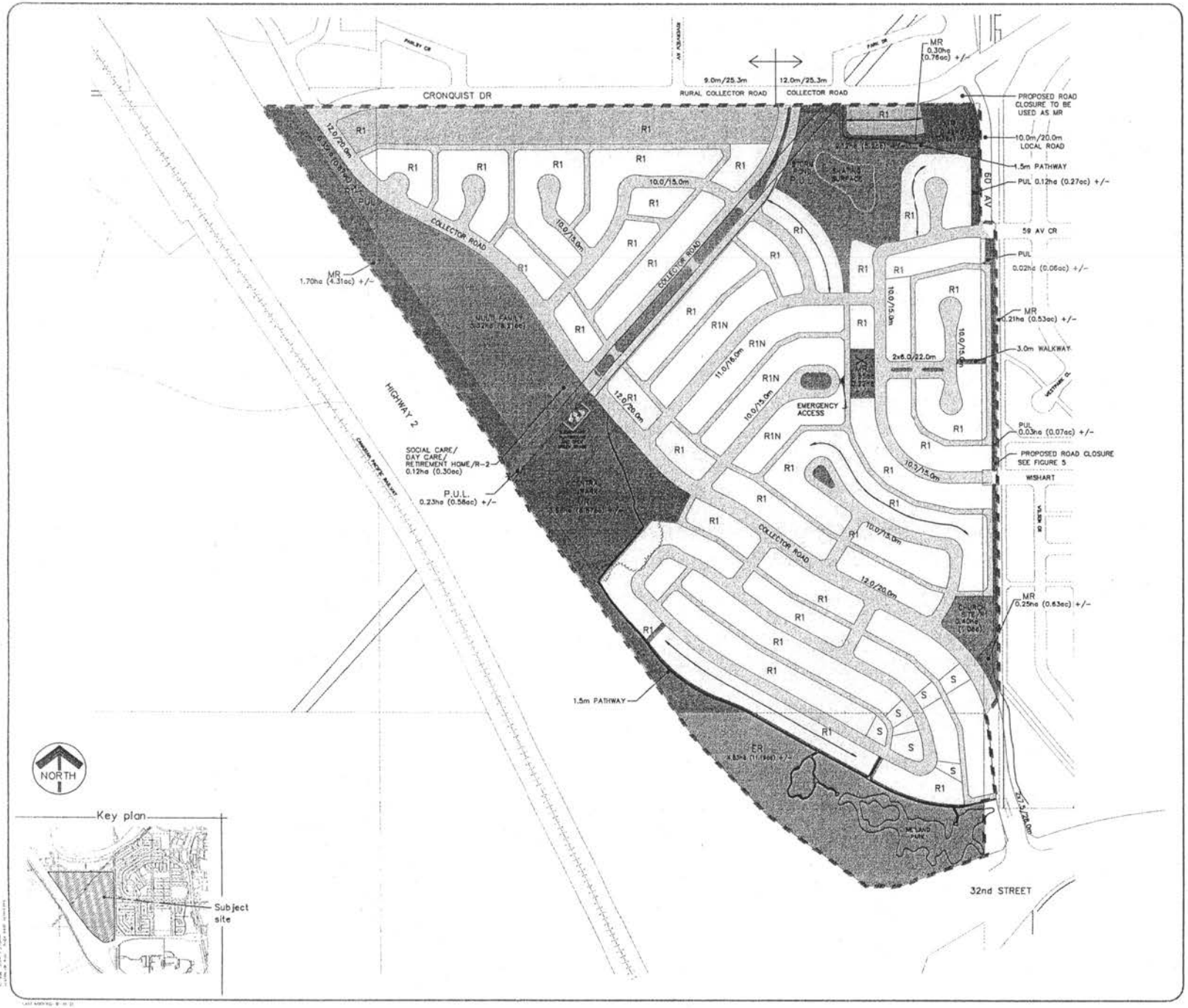
A second linear open space incorporating a 2.5 metre regional path will be created along the 60th Avenue alignment (see ***Figure 6***). It connects the historical northeast feature park at the intersection of Cronquist Drive and 60th Avenue in the north to the combination wetland / storm detention pond found in the south. The school site monument is the focus of the northeast feature park. This park and monument site will be enhanced with paved walking areas and seating facilities as illustrated in ***Figure 10***. The feature park is also connected to the storm detention facility located to the southwest and ultimately to the Grand Boulevard.

4.3.3 Grand Boulevard

The high-tension power line corridor has been integrated into the neighbourhood park and open space system by serving as a median for the main entry road (see ***Figure 7***). Special design treatments, such as extensive landscaping are intended to improve its visual and aesthetic quality and establish the Grand Boulevard as a neighbourhood gateway.

4.3.4 Local Parks

A 0.22 hectare ± (0.55 acre ±) "tot lot" in the east central area (see ***Figure 10***) is provided as a local play and amenity area.



West Park Extension

in Red Deer

Neighbourhood Structure Plan

Within:
Section 7, Township 38, Range 27, W of 4

Prepared for: Trademark Western Properties.

Plan Statistics	Acres ±	Hectares ±	%
Total Area	156.26	63.24	
Environmental Reserve	11.19	4.53	
Total Developable	145.07	58.71	
Single family Large Lots	8.08	3.27	5.57
Single family Std. Lots	60.07	24.31	41.41
Single family Narrow Lots	8.18	3.31	5.64
Multi family – Town House	8.20	3.32	5.65
Secondary Suite Lots	1.19	0.48	0.82
Street and Lanes	33.63	13.61	23.18
Public Utility Lots	7.86	3.18	5.42
Church Site/R1	1.0	0.40	0.69
Social Care Site (Social Housing/Day Care/ Retirement Home/R2	0.30	0.12	0.21
Municipal Reserve *	16.56	6.70	11.42
Net Developable Area	145.07	58.71	100.0

* Municipal Reserve Summary	Acres ±	Hectares ±
Cental Park	8.87	3.58
Highway 2 Buffer	4.19	1.70
Buffer – Existing Community	1.16	0.47
Tot Lot	0.55	0.22
Feature Park	1.03	0.42
N.E. Storm Pond	0.76	0.31
Total Area for Municipal Reserve	16.56	6.70

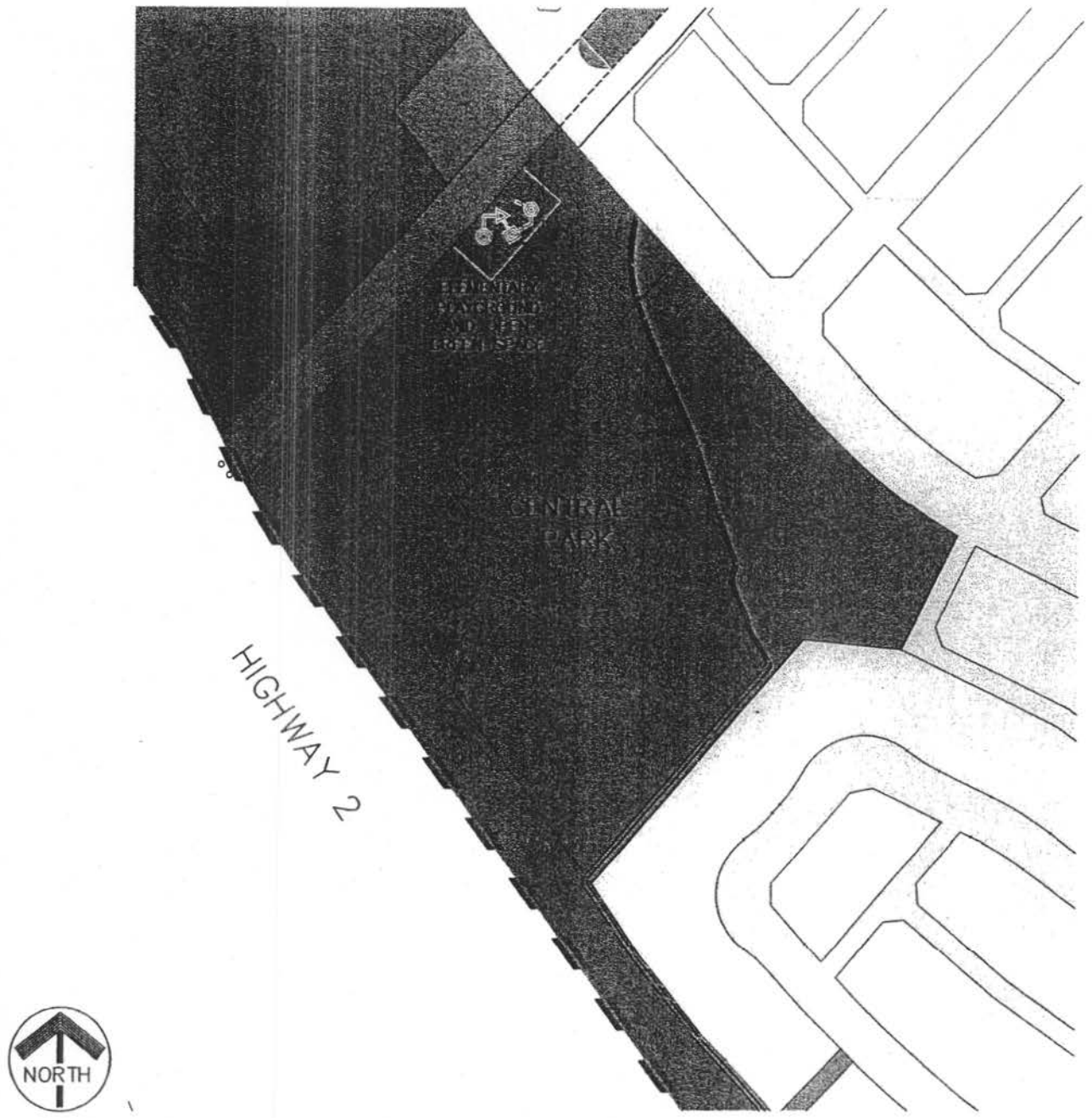
Legend

- Neighbourhood Structure Plan Boundary
- Existing Power Poles
- Proposed 1.5m Pathway
- Proposed Walkway
- Existing Tree Cover
- Children Play Area
- Potential Walkout lots
- Landscaped Medians
- Proposed 2.5m Regional Pathway
- Existing Contours

Planning Team
InterPlan Strategies Inc.
Al-Terra Engineering Ltd.
Lim Associates Inc.
Finn Transportation Consultants
Westhoff Resources Engineering Inc.
McElhanny Consulting Services Ltd.
Group 2 Architects

Prepared By
InterPlan strategies inc.
Land Planning Services

Date	Scale	Figure
Nov, 2001	0 20 50 100m	4
Rev JAN 24/05 (ALT)		

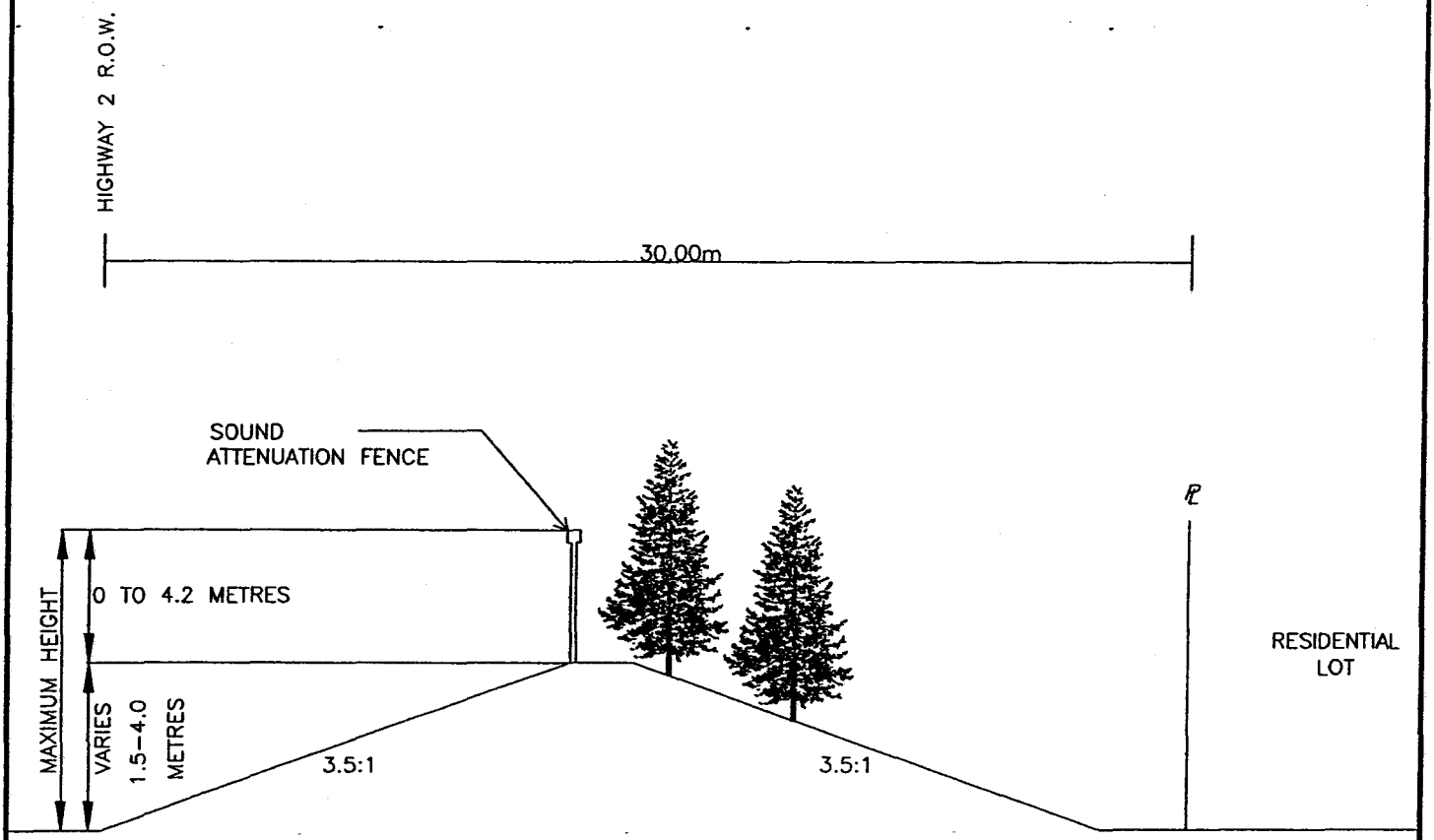


West Park Extension
Central Nature Park Concept Plan

Al-Terra Engineering Ltd.

FIGURE 8

HIGHWAY BERM DETAIL

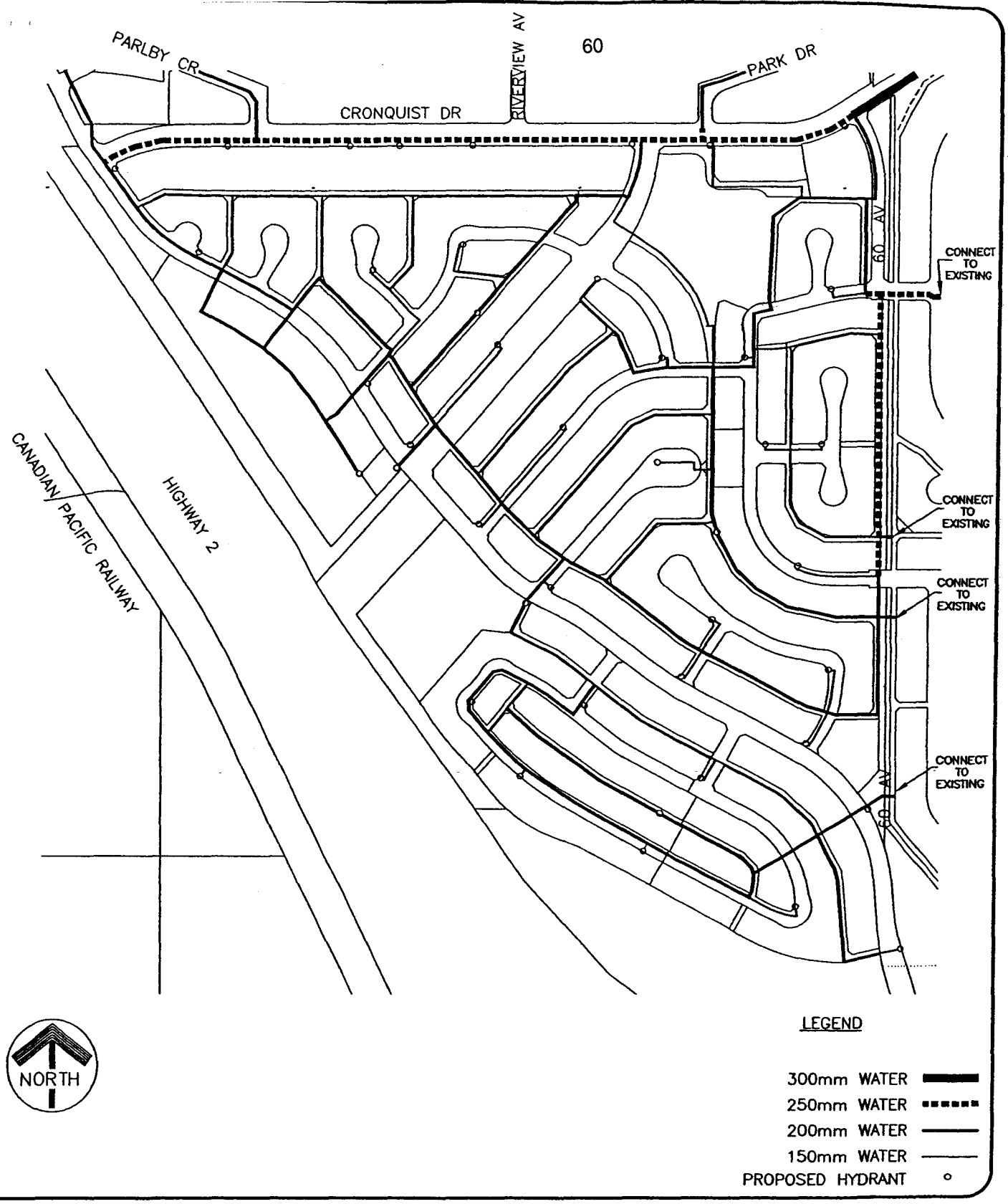


NOTE: –ALL DIMENSIONS ARE IN METRES
–BERM TO BE CONSTRUCTED A MIN HEIGHT OF 2.5m ABOVE HIGHWAY ELEVATION

West Park Extension
HIGHWAY BERM
DETAIL

Al-Terra Engineering Ltd.

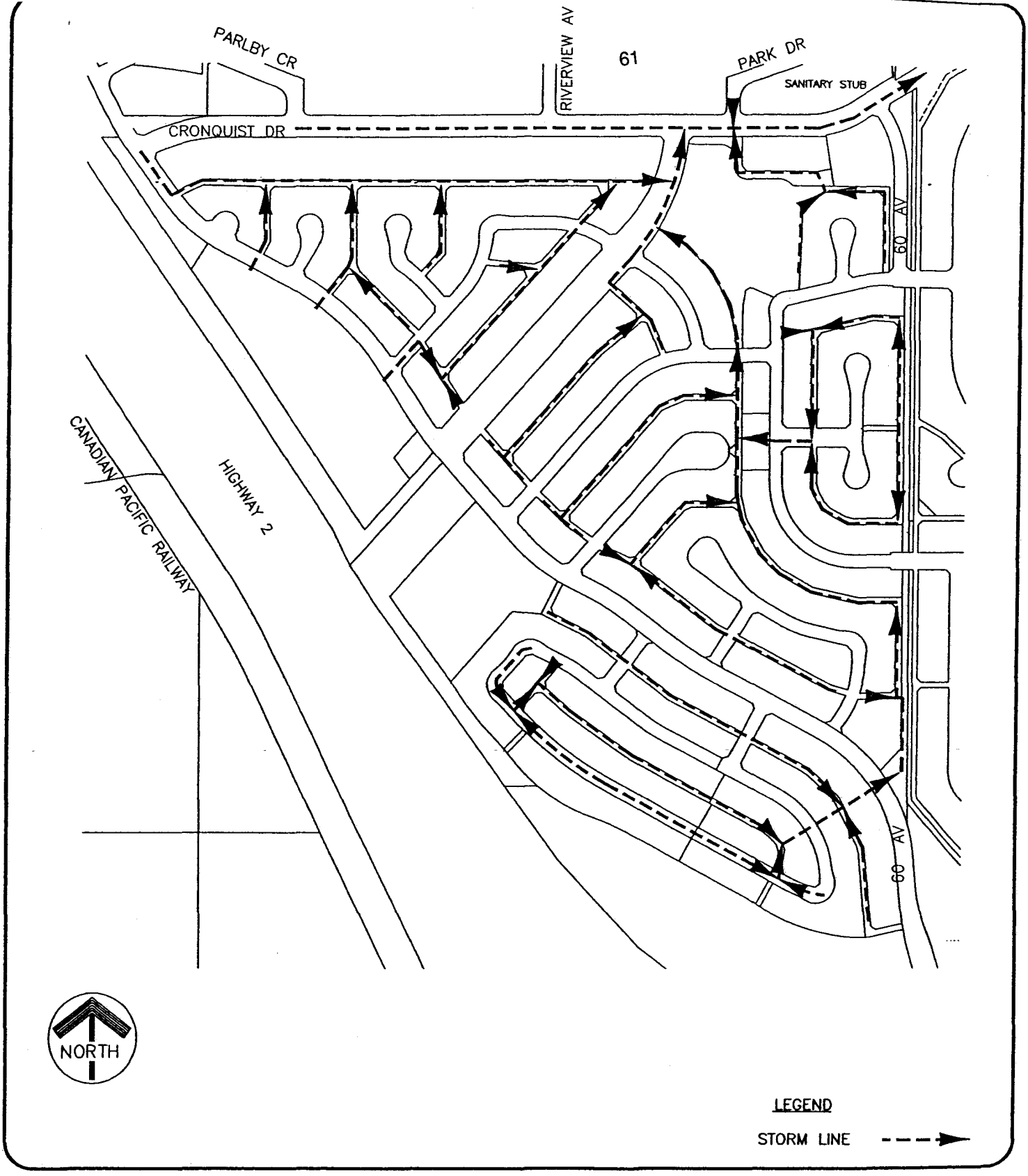
FIGURE 9



West Park Extension
Proposed Water Main

Al-Terra Engineering Ltd.

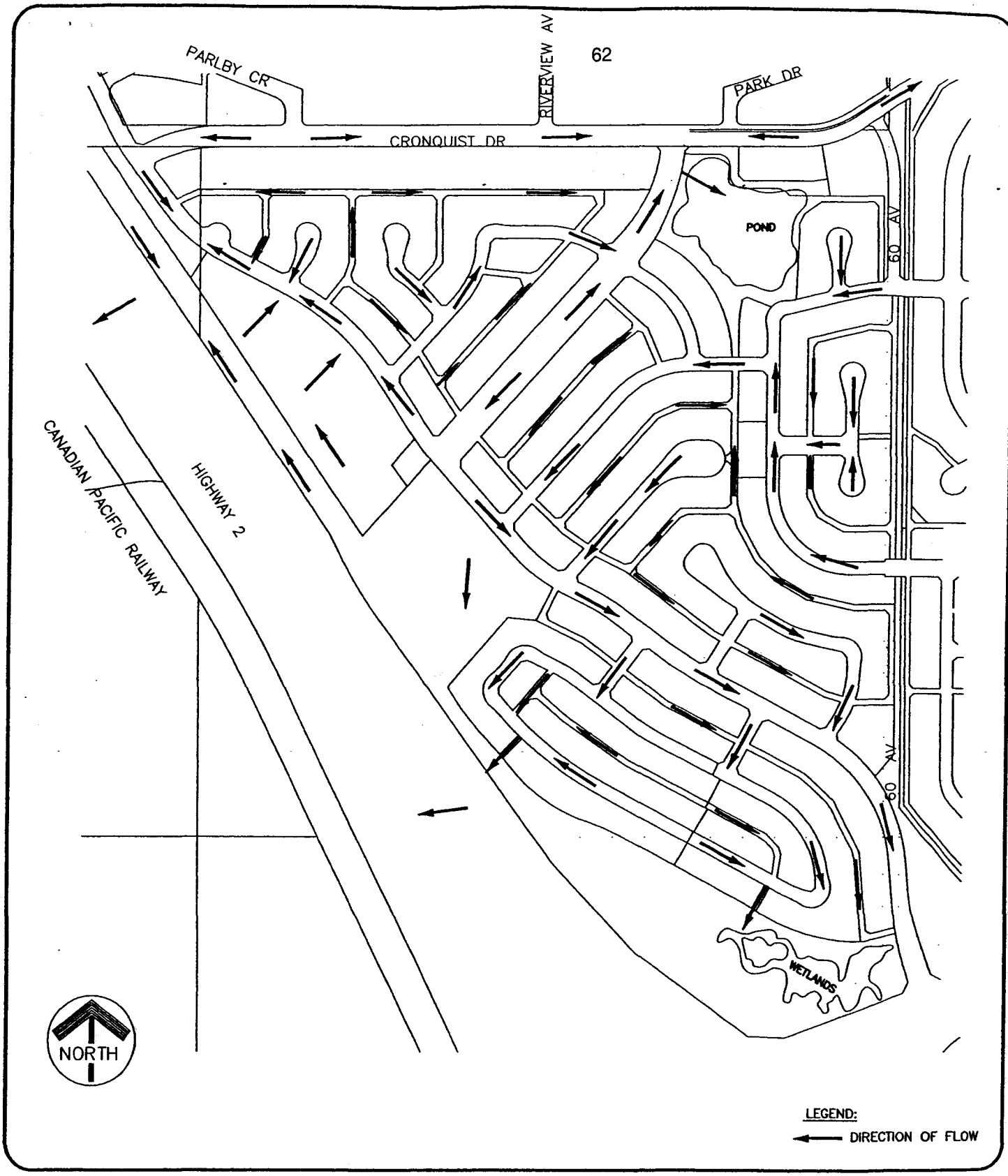
FIGURE 16



West Park Extension
Proposed Sanitary Sewer

FIGURE 17

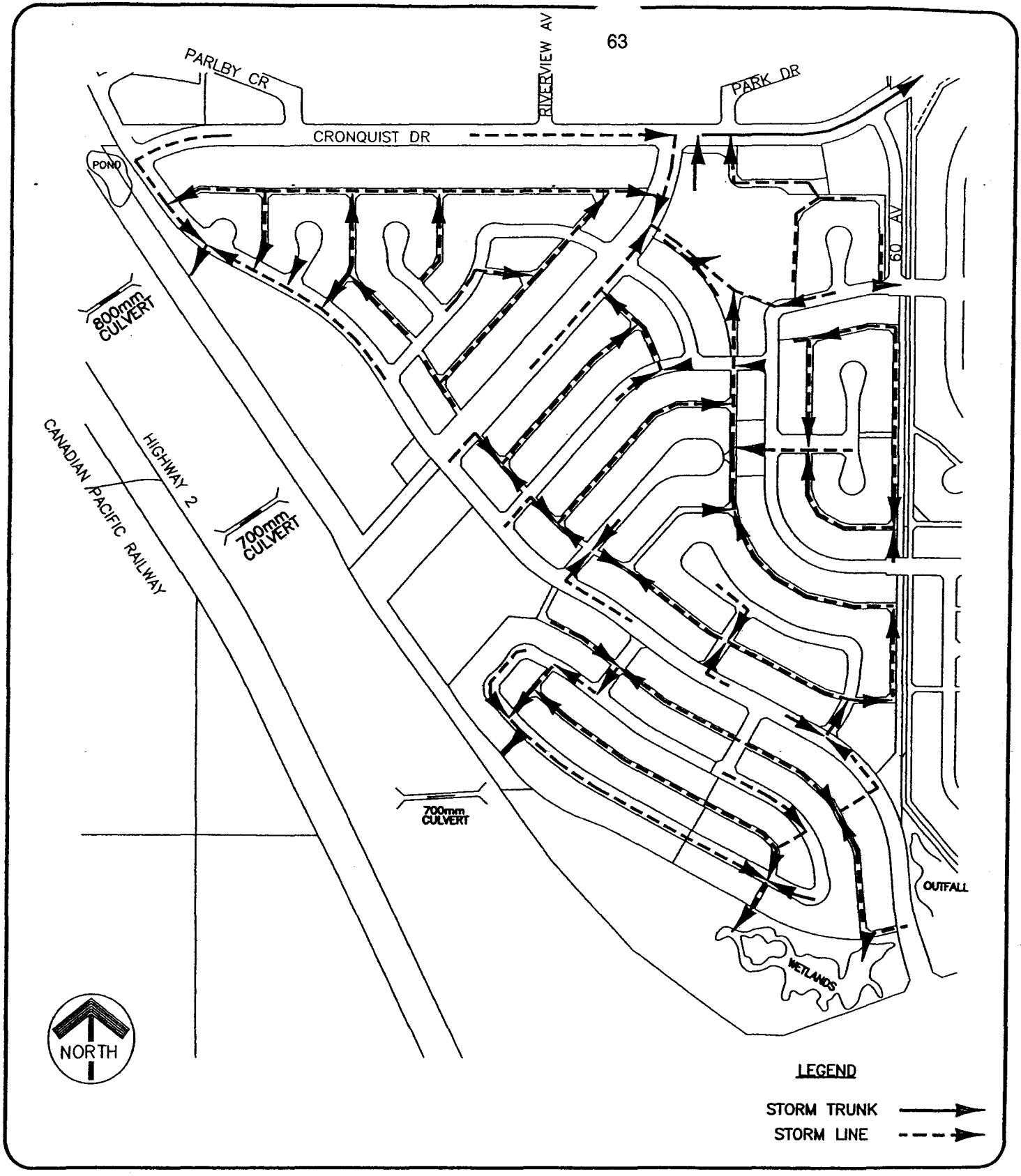
Al-Terra Engineering Ltd.



West Park Extension
Proposed Overland Drainage

Al-Terra Engineering Ltd.

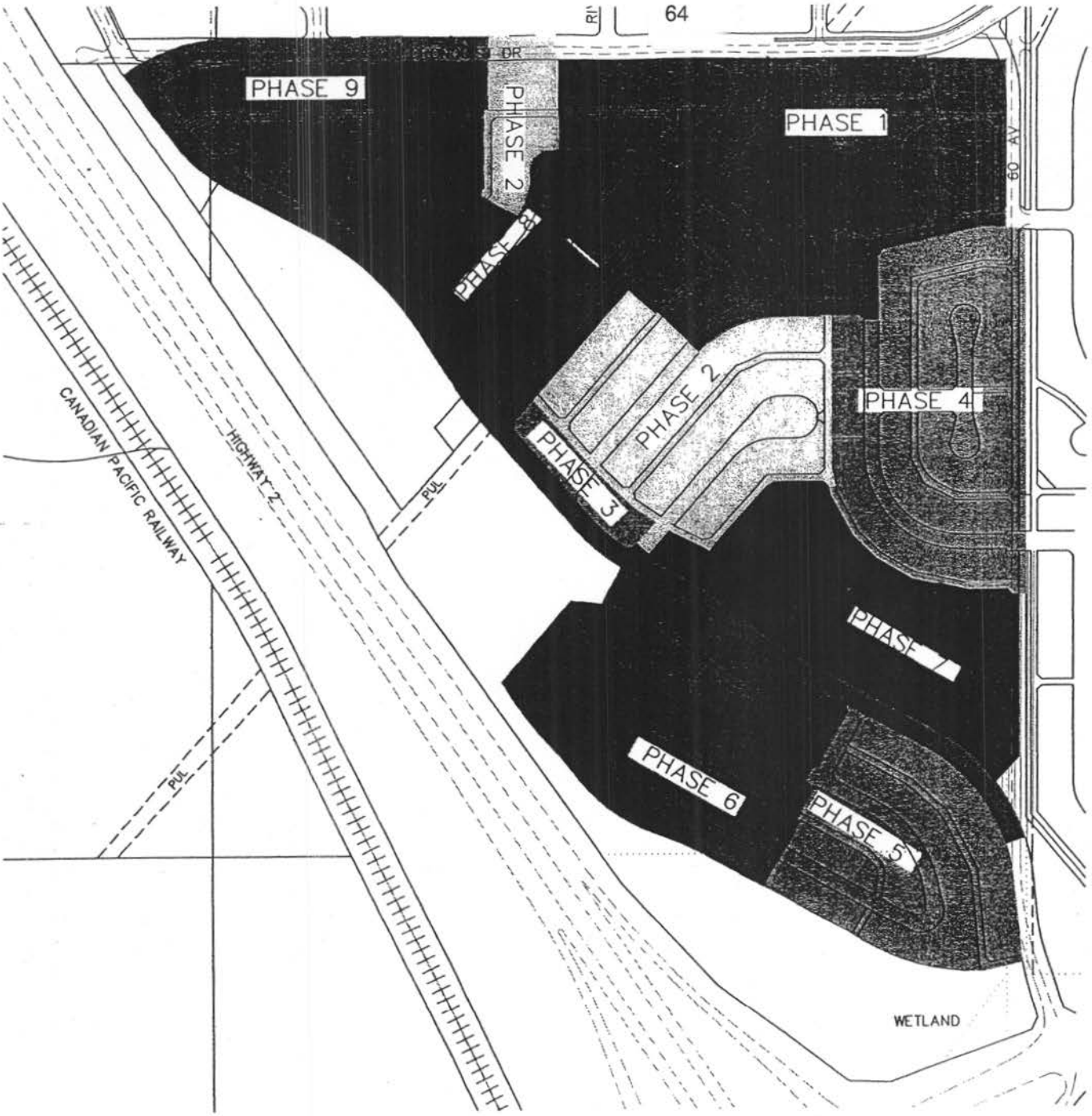
FIGURE 20



West Park Extension
Proposed Storm
Sewer

Al-Terra Engineering Ltd.

FIGURE 21



West Park Extension
Phasing

FIGURE 22

Al-Terra Engineering Ltd.

Item No. 2

BYLAW NO. 3342/2005

Being a bylaw to close portions of road in the City of Red Deer, as described herein.

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

1 The following portions of roadway in the City of Red Deer are hereby closed:

"All that area lying within Road Plan 822-0501"

READ A FIRST TIME IN OPEN COUNCIL this	14th	day of	February	2005.
READ A SECOND TIME IN OPEN COUNCIL this		day of		2005.
READ A THIRD TIME IN OPEN COUNCIL this		day of		2005.
AND SIGNED BY THE MAYOR AND CITY CLERK this		day of		2005.

_____ _____

MAYOR CITY CLERK

Item No. 3

BYLAW NO. 3156/A-2005

Being a Bylaw to amend Bylaw No. 3156/96, the Land Use Bylaw of the City of Red Deer, as described herein

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

1. The "Land Use District Map D15" contained in "Schedule B" of the Land Use Bylaw is hereby amended in accordance with the Land Use Bylaw Amendment Map No. 1/2005 attached hereto and forming part of the bylaw.

READ A FIRST TIME IN OPEN COUNCIL this 14th day of February , A.D. 2005.

READ A SECOND TIME IN OPEN COUNCIL this day of , A.D. 2005.

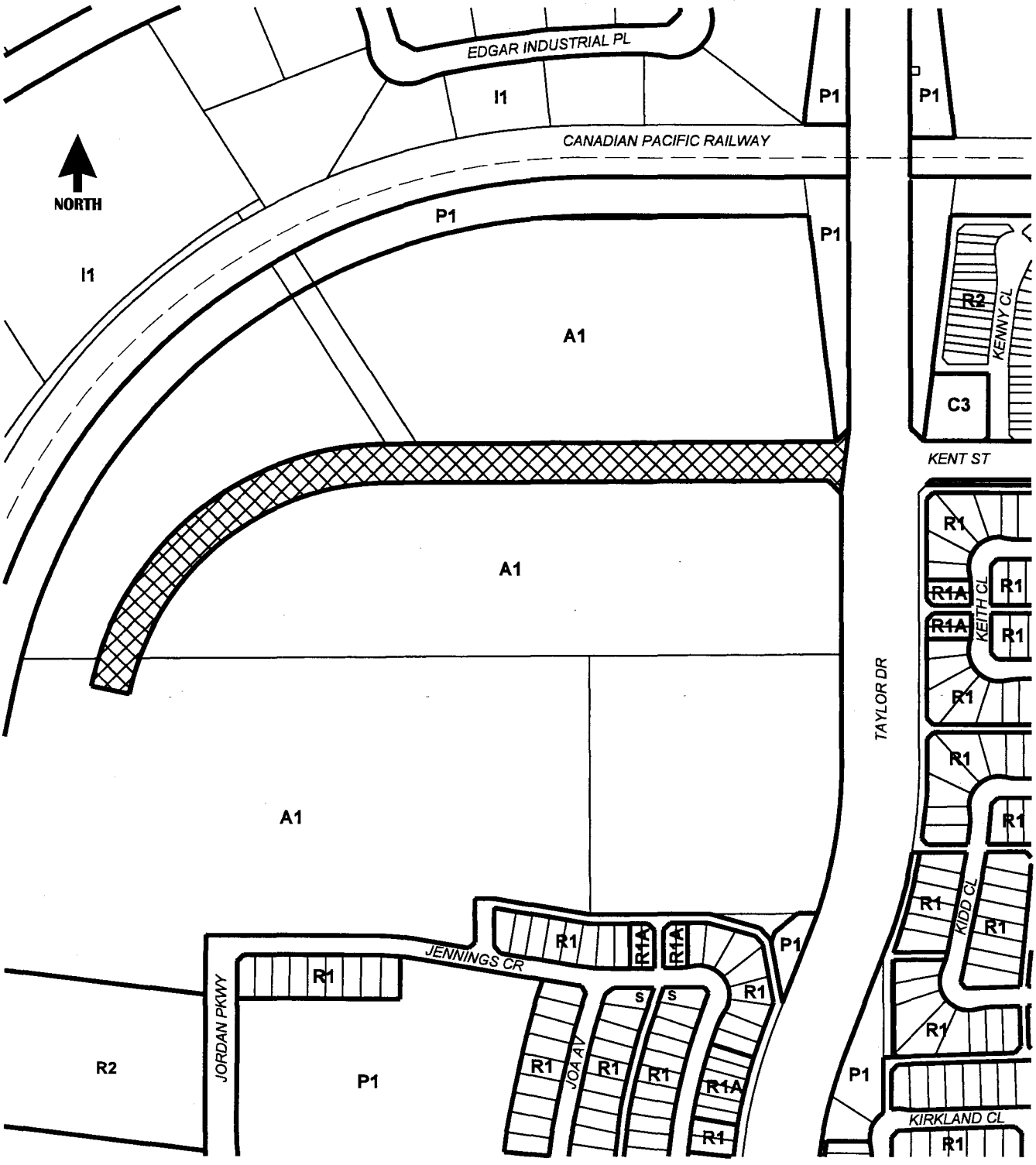
READ A THIRD TIME IN OPEN COUNCIL this day of , A.D. 2005.

AND SIGNED BY THE MAYOR AND CITY CLERK this day of , A.D. 2005.

MAYOR

CITY CLERK

The City of Red Deer *PROPOSED LAND USE BYLAW AMENDMENT*



AFFECTED DISTRICTS:
A1 - Future Urban Development

Change from :
Road to A1

MAP No. 1 / 2005
BYLAW No. 3156 / A - 2005

BYLAW NO. 3156/D-2005

Being a bylaw to amend Bylaw No. 3156/96, the Land Use Bylaw of the City of Red Deer.

COUNCIL OF THE CITY OF RED DEER, ALBERTA, ENACTS AS FOLLOWS:

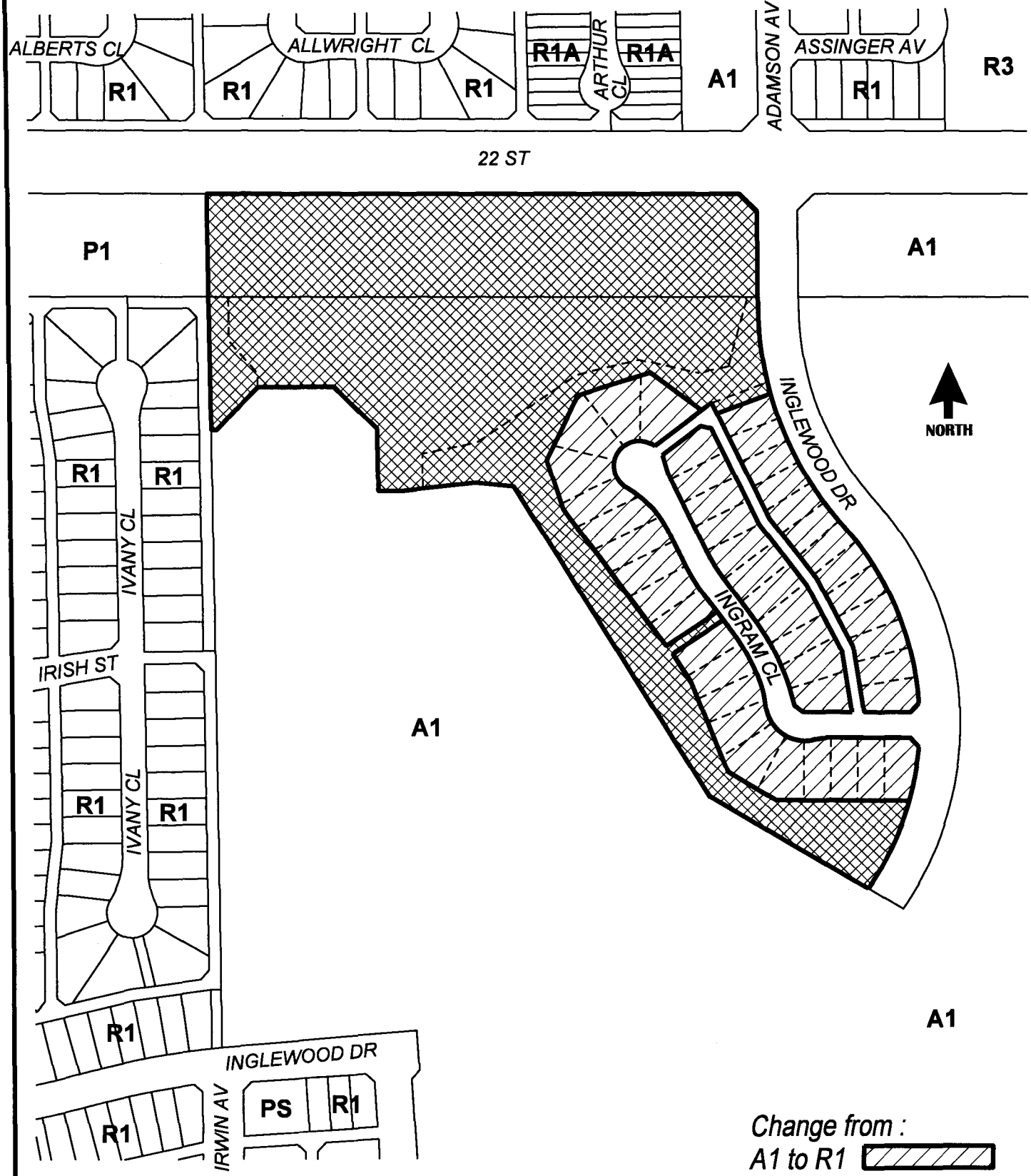
1. That "Use District Map J4" contained within "Schedule B" of the Land Use Bylaw is hereby amended in accordance with Land Use District Map No. 4/2005 attached hereto and forming part of the bylaw.

READ A FIRST TIME IN OPEN COUNCIL this	day of	2005.
READ A SECOND TIME IN OPEN COUNCIL this	day of	2005.
READ A THIRD TIME IN OPEN COUNCIL this	day of	2005.
AND SIGNED BY THE MAYOR AND CITY CLERK this	day of	2005.

MAYOR

CITY CLERK

The City of Red Deer *PROPOSED LAND USE BYLAW AMENDMENT*



Change from :
A1 to R1
A1 to P1

AFFECTED DISTRICTS:
A1 - Future Urban Development
R1 - Residential (Low Density)
P1 - Parks and Recreation

MAP No. 4 / 2005
BYLAW No. 3156 / D - 2005