ACHESON INDUSTRIAL AREA STRUCTURE PLAN

Prepared by:
Planning Services
UMA Engineering Ltd.
Edmonton, Alberta

Prepared for:
Parkland County
Stony Plain, Alberta

BYLAW NO. 37-2011
PARKLAND COUNTY

BEING A BYLAW OF PARKLAND COUNTY FOR THE PURPOSE OF AMENDING THE ACHESON INDUSTRIAL AREA STRUCTURE PLAN (BYLAW NO. 20-97)

WHEREAS the Council of Parkland County has passed a Bylaw pursuant to Part 17, Section 633 of the Municipal Government Act, R.S.A. 2000, being Chapter M.26.1 of the Revised Statutes of Alberta, known as the Acheson Industrial Area Structure Plan (ASP) Bylaw No. 20-97 for the purpose of providing a framework for subsequent subdivision and development of lands within the Acheson Industrial Area Structure Plan area.

WHEREAS and pursuant to Part 17, Section 692 of the Municipal Government Act, R.S.A. 2000, being Chapter M.26.1 of the Revised Statutes of Alberta, the Council of a municipality is authorized to amend an Area Structure Plan;

WHEREAS Section 692 of the Municipal Government Act, being Chapter M.26.1 of the Revised Statutes of Alberta, requires the Council of a municipality to hold a public hearing and advertise such a Bylaw in accordance with Sections 203 and Section 606 of the Act respectively;

WHEREAS the Council of Parkland County has received an application to consider an amendment to Map 4.1 of Acheson Industrial Area Structure Plan Bylaw No. 20-97 to redesignate a portion of SE 33-52-26-W4M from Open Area/Agricultural to Commercial/Industrial.

NOW THEREFORE the Council of Parkland County duly assembled and under the authority of the Municipal Government Act, as amended, hereby enacts the following:

1. That Map 4.1:Land Use Concept Map of Bylaw No. 20-97, and amendments thereto, being the Acheson Industrial Area Structure Plan is amended:

   (a) by redesignating approximately 8.1 ha (20.0 ac) of land in the southwest corner of SE 33-52-26-W4M from Open Area/Agricultural to Commercial/Industrial; and

   (b) by re-staging approximately 32.3 ha (80.0 ac) of land in the south half of SE 33-52-26-W4M from Stage 4 to Stage 1C;

   as shown on Schedule "A", attached to and forming part of this Bylaw;

AND THAT this Bylaw shall come into force and have effect from and after the date of third reading and signing thereof.

READ A FIRST TIME this **31st** day of **January , 2012**. A.D.

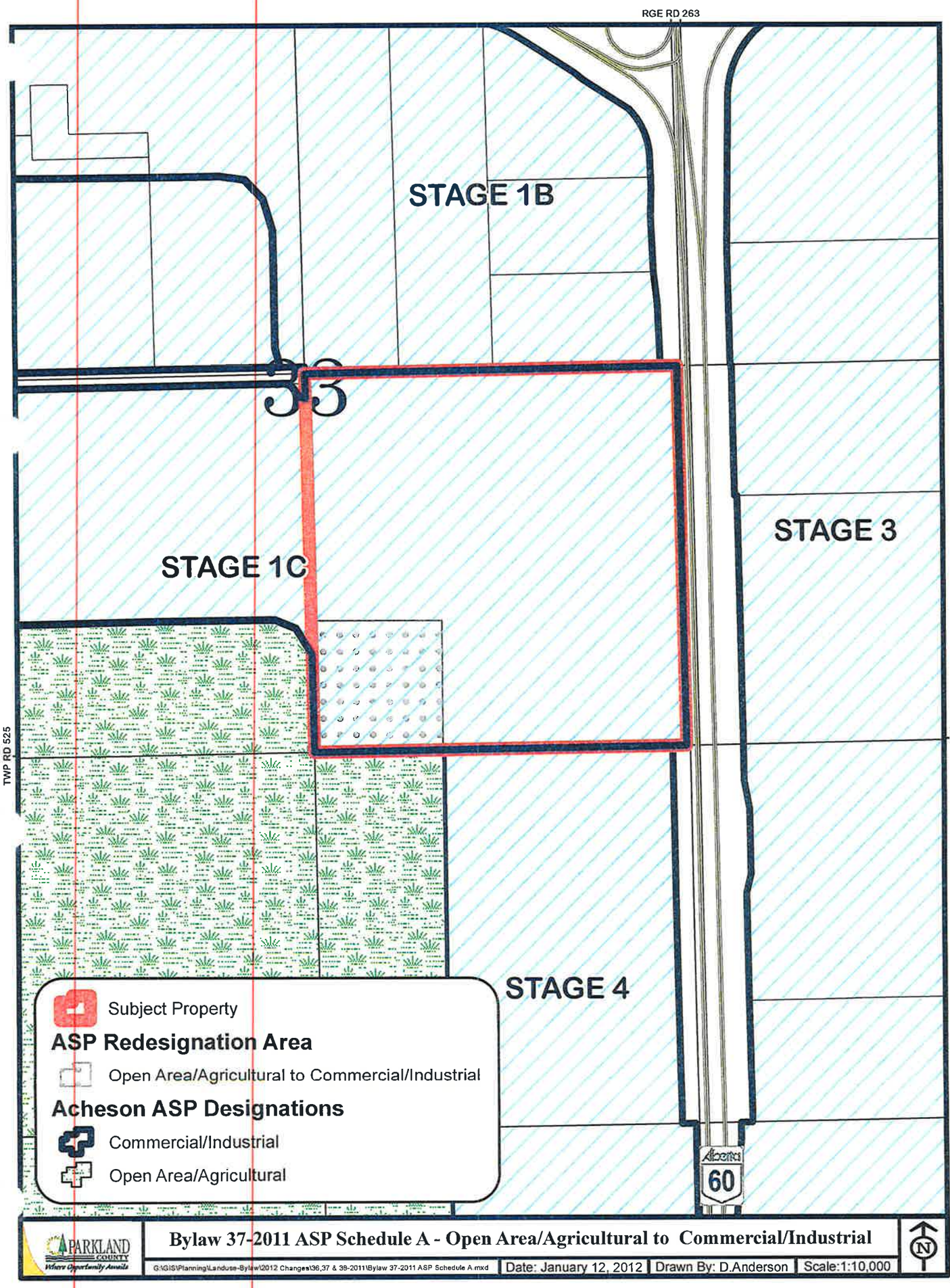
PUBLIC HEARING held this **28th** day of **February, 2012.** A.D.

READ A SECOND TIME this **28th** day of **February, 2012**. A.D.

READ A THIRD TIME AND FINAL TIME this **27th** day of **March, 2012**. A.D.

MAYOR

MANAGER,
LEGISLATIVE & ADMINISTRATIVE SERVICES


RGE RD 263
STAGE 1B
33
STAGE 3
STAGE 1C
TWP RD 525
TWP RD 525
STAGE 4
Subject Property
ASP Redesignation Area
Open Area/Agricultural to Commercial/Industrial
Acheson ASP Designations
Commercial/Industrial
Open Area/Agricultural
Alberta
60
PARKLAND COUNTY
Where Opportunity Awaits
Bylaw 37-2011 ASP Schedule A - Open Area/Agricultural to Commercial/Industrial
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Date: January 12, 2012
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BYLAW NO. 11-2009
PARKLAND COUNTY

BEING A BYLAW OF PARKLAND COUNTY FOR THE PURPOSES OF AMENDING THE ACHESON INDUSTRIAL AREA STRUCTURE PLAN

WHEREAS the Council of Parkland County has adopted the Acheson Industrial Area Structure Plan by Bylaw No. 20-97 and amendments thereto; and

WHEREAS the Acheson Industrial Area Structure Plan provides a framework for subsequent subdivision and development of lands within the Acheson Industrial area; and

WHEREAS the Council of Parkland County deems it appropriate to make an amendment to the Acheson Industrial Area Structure Plan to allow for an existing automotive service and repair business to continue on private sanitary sewer servicing on Block 1, Plan 902 2511, Pt. NE 35-52-26-W4M

NOW THEREFORE the Council of Parkland County duly assembled and under the authority of the Municipal Government Amendment Act, SA 1994 Chapter M-26.1, and amendments thereto, hereby enacts the following:

1. That Bylaw No. 20-97 and amendments thereto, being the Acheson Industrial Area Structure Plan, is amended by adding at the end of the paragraph to Section 4.2.1 (6) the following.

   "Notwithstanding the foregoing, an existing automotive service and repair business on Block 1, Plan 902 2511, Pt. NE 35-52-26-W4M may be serviced with private sanitary sewer servicing."

READ A FIRST TIME this 10th day of March, 2009

READ A SECOND TIME this 14th day of April, 2009.

READ A THIRD TIME and finally passed this 12th day of May, 2009.

Mayor

Manager, Legislative and Administrative Services

PROPOSED BY-LAW NO. 47-01
PARKLAND COUNTY

BEING A BY-LAW OF PARKLAND COUNTY FOR THE PURPOSES OF AMENDING THE ACHESON INDUSTRIAL AREA STRUCTURE PLAN

WHEREAS the Council of Parkland County has adopted the Acheson Industrial Area Structure Plan by By-law No. 20-97 and amendments thereto; and

WHEREAS the Acheson Industrial Area Structure Plan provides a framework for subsequent subdivision and development of lands within the Acheson Industrial area; and

WHEREAS the Council of Parkland County deems it appropriate to make an amendment to the Acheson Industrial Area Structure Plan to allow for the consideration of two Single Detached Dwellings as a discretionary use on Lot 11, Plan 3632 RS, Pt. NW 8-53-26-W4M and to allow for the consideration of Automotive, Equipment and Vehicle Services without municipal sewer and water servicing on Lot 11, Plan 3632 RS, Pt. NW 9-53-26-W4M;

NOW THEREFORE the Council of Parkland County duly assembled and under the authority of the Municipal Government Amendment Act, SA 1994 Chapter M-26.1, and amendments thereto, hereby enacts the following:

1. That By-law No. 20-97 and amendments thereto, being the Acheson Industrial Area Structure Plan, is amended by adding to Section 4.2.1 (4.) Industrial/Commercial Land Use the following:

   "Notwithstanding the foregoing, two Single Detached Dwellings may be considered as a discretionary use on Lot 11, Plan 3632 RS, Pt. NW 8-53-26-W4M."

2. That By-law No. 20-97 and amendments thereto, being the Acheson Industrial Area Structure Plan, is amended by adding to Section 4.2.1 (10.) Industrial/Commercial Land Use the following:

   "Notwithstanding the foregoing, Automotive, Equipment and Vehicle Services may be considered without connection to municipal sewer and water servicing on Lot 11, Plan 3632 RS, Pt. NW 8-53-26-W4M. The number of employees shall be restricted to four (including the applicants), the sales area shall be limited to four acres and the number of vehicles and equipment permitted on the subject property shall be limited to a maximum of thirty."

READ A FIRST TIME this 11th day of September, 2001

READ A SECOND TIME this 25th day of September, 2001.

READ A THIRD TIME and finally passed this 25th day of September, 2001.

MAYOR

COUNTY COMMISSIONER

BY-LAW NO. 45-00 (Revised)
PARKLAND COUNTY

BEING A BYLAW OF PARKLAND COUNTY FOR THE PURPOSES OF AMENDING THE ACHESON INDUSTRIAL AREA STRUCTURE PLAN.

WHEREAS Parkland County has adopted the Acheson Industrial Area Structure Plan by Bylaw No. 20-97 and amendments thereto; and

WHEREAS the Acheson Industrial Area Structure Plan provides a framework for subsequent subdivision and development of lands within the Acheson Industrial Area; and

WHEREAS the Council of Parkland County deems it appropriate to make an amend to the Acheson Industrial Area Structure Plan to allow for the consideration of a golf course as an interim land use in Pt. E½ 32-52-26-W4M;

NOW THEREFORE the Council of Parkland County dully assembled and under the authority of the Municipal Government Act, RSA 1994, and amendments thereto, hereby enacts the following:

1. That Bylaw No. 20-97 and amendments thereto being the Acheson Industrial Area Structure Plan is amended by replacing Figure 3 Proposed Land Use Concept with Figure 3 Proposed Land Use Concept prepared by Stantec dated October 2000.

2. That Bylaw No. 20-97 and amendments thereto being the Acheson Industrial Area Structure Plan is amended by replacing paragraph 1. under Section 4.2.3 Recreation with the following words as shown in bold text below:

   "This land use designation recognizes the existing development of the Ranch Golf Course in the southeast sector of the study area. A golf course may also be considered, as an interim land use, in Pt. E1/2 32-52-26-W4M. This interim land use allows for the development of a golf course until such time as a portion of the land is more appropriately developed for commercial/industrial uses. There are no other lands that require designation under this classification, although market conditions may warrant such reclassification in the future. If this were the case, lands in the vicinity of the Ranch Golf Course would be the most appropriate."

3. That Bylaw No. 20-97 and amendments thereto being the Acheson Industrial Area Structure Plan is amended by adding to the end of paragraph 10. under Section 4.2.1 Industrial/Commercial Land Use with the following words as shown in bold text below:

   "Notwithstanding the foregoing requirement, a golf course in Pt E1/2 32-52-26-W4M may be serviced with a water cistern filled by truck haul and pump-out sanitary holding tank."

READ A FIRST TIME this 8th day of November,2000.

READ A SECOND TIME this 9th day of January, 2001.

READ A THIRD TIME and finally passed this 9th day of January, 2001.

REEVE

MANAGER,
LEGISLATIVE & ADMINISTRATIVE SERVICES

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BY-LAW NO. 20-97
PARKLAND COUNTY

BEING A BY-LAW OF PARKLAND COUNTY FOR THE PURPOSE OF ADOPTING THE ACHESON INDUSTRIAL AREA STRUCTURE PLAN.

WHEREAS Section 633(1) of the Municipal Government Act RSA 1994 and amendments thereto authorize a council to adopt an Area Structure Plan for the purpose of providing a framework for subsequent subdivision and development of an area of land within a municipality; and

WHEREAS the Council of Parkland County deems it appropriate and desirable to prepare and adopt an Area Structure Plan for the Acheson Industrial Area (a defined planning area within the County);

NOW THEREFORE The Council of Parkland County duly assembled and under the Municipal Government Act RSA 1994 and amendments thereto, hereby adopts the Acheson Industrial Area Structure Plan.

READ A FIRST TIME THIS 27th DAY OF May, 1997

READ A SECOND TIME THIS 26th DAY OF August, 1997

READ A THIRD TIME AND FINALLY PASSED THIS 26th DAY OF August, 1997

REEVE

MUNICIPAL SECRETARY

g\bylaws\20-97

AMENDED
by By-law No. 45-00
and 47-01

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1.0 INTRODUCTION

1.1 Purpose

The purpose of an Area Structure Plan as established under Section 633 of the Municipal Government Act, 1994 is to describe the proposed land use, sequence of development, density of population and general location of major transportation routes and public utilities for the general area.

The purpose of the Acheson Industrial Area Structure Plan is to facilitate and direct the long term industrial/commercial development of lands within this regionally significant industrial/commercial area, while recognizing the integrity of other land uses within the area.

1.2 Amendment Area

The Acheson Industrial Area Structure Plan area occupies 16 square miles (10,240 acres or 4145 hectares) of land located at the eastern edge of Parkland County. Its centre is the intersection of Highways 16A and 60.

The plan area is defined by the following limits:

- Highway 16 on the north,
- Range Road 261 (Hillview Road / 231 Street) and the west limit of the City of Edmonton on the east,
- Stony Plain Indian Reserve No. 135 and Township Road 524 (79th Avenue) on the south, and
- Range Road 265 (Spruce Valley Road) on the west

The plan area comprises the following legally defined parcels:

- Sections 26, 27, 28, 29, 32, Township 52, Range 27, west of the 4th Meridian, and
- Sections 2,3,4,5,8,9,10 and 11, Township 53, Range 26, west of the 4th Meridian.

Figure 1.1 shows the Acheson Industrial Area Structure Plan's location and context relative to major transportation routes and neighbouring urban service areas.

1.3 Statutory Plan Context

General Municipal Plan

Parkland County adopted its first General Municipal Plan's in 1979. The Plan's Development Potential Map (p. 12) describes the entire area as "Industrial". The GMP specifies that this description is not regulatory, but descriptive, identifying "the ultimate potential of generalized areas of the County."

Policies relating to Industrial Commercial land use establish the following relevant principles:

- industrial and commercial development is encouraged relative to regional transportation routes (Policy 3.1)

- the planning rationale and costs for major industrial areas should be articulated in area structure plans (Policies 3.1 and 3.9)

- the creation of major industrial parks to allow for a broad range of services is encouraged (Policy 3.2)

- development adjacent to primary highways will require controlled access and must be coordinated with Alberta Transportation and Utilities (Policy 3.4)

- industrial and commercial development must be undertaken with regard to the environmental character and visual quality of the area (Policies 3.2, 3.5 and 3.8)

Adjacent Area Structure Plans

The Big Lake Area Structure Plan was adopted by Parkland County in 1991. Lands affected by the Big Lake ASP border the northern limit of the Acheson ASP. Its Future Land Concept proposes country residential land use for all lands to the north of the Acheson ASP, with the exception of two nodes proposed for Highway Commercial on each side of the interchange of Highway 60 and 16.

The Winterburn Area Structure Plan was adopted by Parkland County as By-law 34-79 in 1979.

It covers eight sections of land. Four sections are immediately to the east of the ASP area and have since been annexed into the City of Edmonton. The remaining four sections comprise the northeast quadrant of the ASP area, lying north of Highway 16A and east of Highway 60.

The Winterburn ASP established the following principles:

- the Winterburn area is ultimately suitable for industrial land use, however other viable alternative uses are not precluded;

- the rationale for industrial land use is influenced by accessibility to existing or proposed primary highways, including Highways 16, 16A and 60 and the future Outer Ring road; and

- two major east-west arterials are considered, one to the north and one to the south of the CN Main Line.

The Lewis Farms Area Structure Plan was first adopted as Bylaw No. 8733 by the City of Edmonton in 1988, and has subsequently been amended. It covers all lands to the east of the Acheson ASP area south of Highway 16A The Lewis Farms ASP proposes nine residential neighbourhoods between RR 261 (Hillview Road) and Anthony Henday Drive. An area of Business Industrial land is proposed along the south frontage of Highway 16A.

Related Studies

Two non-statutory planning reports are also relevant to the preparation of the Acheson Industrial Area Structure Plan.

The Feasibility Study for the Servicing of Winterburn West Industrial/Commercial Development Area, prepared in 1990 by GPEC Consulting Ltd., establishes transportation and land use parameters for the ASP area. The land use and circulation patterns developed for the study were established on the basis of servicing concepts, proposed for the entire 16 section planning area.

The Acheson Wastewater Sewer System Report, completed by UMA Engineering Ltd in 1995, provided Parkland County with capacity/flow analysis, routing analysis, system design and capital costs for the development of the system in the northwest sector and the northern regions of the southwest sector of the ASP area.

Summary

The three adjacent Area Structure Plans noted above define proposed land uses on the edge of the Acheson area as follows:

- primarily country residential development to the north.
- primarily industrial development to the east, north of Highway 16A.
- highway commercial and residential to the east, south of Highway 16A.

The proposed land uses outlined in the adjacent Area Structure Plans have been given due regard in the preparation of the Acheson Industrial Area Structure Plan. Figure 1.2 shows the region of influence the above noted Area Structure Plans encompass.

2.0 ASP AREA ANALYSIS

2.1 Physical Environment

Topography and Drainage

Much of the ASP area is a gently rolling to rolling pitted deltaic plain, lying between 700 and 720 metres above sea level. The highest elevation reached is above 725 metres in the south central portion of the ASP area. See Figure 2.1.

The northwesterly portion slopes to the north towards Big Lake. The lowest portion is in the extreme northwestern corner where a small portion of the land lies below the 670 metre contour. Thus there is an overall elevation difference of more than 55 metres from south to north.

In the vicinity of the many kettle depressions which characterize the landscape, slopes can be quite steep. These depressions are the result of the ice-blocks melting in place during post-glacial times. A few of these depressions are permanent water bodies; many others fill with water seasonally.

Much of the drainage on the higher lands is internal to the kettle depressions. However, on the sloping lands northwest of Sherwin-Ellis park, there are several creeks which drain water through the low-lying, poorly drained lands in the northwest corner and ultimately to Big Lake.

Surficial Deposits

The Acheson ASP area is located on the southern bank and the plain above the pre-glacial Beverly River Valley which flowed eastward approximately where the current Atim Creek and Big Lake are located.

The surficial geological deposits are classified as pitted deltaic deposits from the inlet waters to glacial Lake Edmonton. These deposits are variable and consist of sands, silts and some clays with surface pits or depression resulting from large stranded ice blocks melting. The general soil stratigraphy consists of surficial silts and clays to depths of 4 to 8 m where silts and sands

are encountered. The bedrock surface is 30 to 40 m below the ground surface. There are occasional small areas with depths of peat greater than 1 m but these are generally confined to the poorly drained northwestern portion of the ASP area.

Soils

The soils formed on the deltaic deposits have moderate to good capability for agriculture. Most of the plan area comprises a mixture of Winterburn, Rimby and Carvel Loam with capability ratings varying from Class 1 to Class 4. The soils rated Class 1 are in the southeast region of the ASP area while the lowest class soils are in the northeast region.

Soils in the low-lying, poorly drained soils in the northwestern corner of the plan area are classified as 'O' Organic soils. These soils have limited agricultural value and suitability for development. However, the area sustains an ecosystem of diverse and rare plant species.

Subsurface conditions in the balance of the Acheson area provide the foundation/base for any development in the Acheson study area. The soil conditions are considered good for roads and moderate size buildings. Foundations for large buildings or structures may be difficult due to the lack of any shallow capable soil bearing strata. Underground utilities may encounter variable conditions and perched water tables which may moderately increase costs.

Hydrogeology

The regional hydrogeology maps indicate that groundwater flows through the sandy aquifers above the bedrock in a northerly direction from most of the study area. The exception is the southeast corner and extreme south portions of the study area which flow easterly. The regional groundwater table is relatively deep, in the sands above the bedrock, however there are some wet soils near the surface probably as a result of localized, perched water tables.

The major issues or constraints to developments are the ice block depressions and the need to minimize impact on the Wagner Natural Area. The low lying, ice block, depressions are expected to contain soft soil conditions and possible steep or marginally stable sideslopes and should generally be avoided.

Vegetation

The Acheson area is located within the Aspen Parkland Ecoregion of Alberta. This ecoregion is distinguished by its Chernozem (black) soils formed under interspersed grassland and forest plant communities.

Much of the original vegetative cover has been removed through agricultural and other development. A number of bluffs of forest are scattered throughout the Acheson area. The largest single area of relatively undisturbed forest cover is in the northwest area adjacent to the Wagner Natural Area.

Wagner Natural Area

The Wagner Natural Area is located adjacent to and partially within the northwest corner of the ASP area. It comprises a rich and diverse array of fauna and flora. Its distinctiveness is due, in part, to the mineral springs which flow year round at a relatively constant temperature, creating a microclimate which favours plants and animals which are unique to the area. These springs are fed by the regional groundwater aquifer which is recharged by infiltration to the lands to the south of the Wagner Natural Area.

The Wagner Natural Area is a prime example of a boreal spring fen, one of perhaps 10 such peatlands found in Alberta, and its marl ponds are a characteristic feature of the area. A number of orchid species are present. Upland plant and animal communities add to the diversity of the natural area. The peatlands extend well beyond the formally defined Natural Area.

The Wagner Natural is a valuable scientific, educational and tourism resource which has received international interest. It provides a living laboratory for information on natural and human-induced change to the environment. Its protection and conservation are a significant issue for this Area Structure Plan.

The threats to this fragile environment come from encroachment by various forms development and from irrevocable changes within its watershed and groundwater recharge area. Some portions of the west half of the ASP area are potential recharge zones for the springs in the

Wagner Natural Area. Additional groundwater use and reduced surface infiltration, which may result from the development of these same areas, have the capacity to reduce the available groundwater in the regional aquifer. To avoid a decrease in groundwater recharge and flows, new development within the groundwater recharge area should have piped water service, while stormwater runoff should be retained on-site, as much as is possible to minimize changes within the watershed area.

2.2 Land Use Patterns

The following section provides a cursory review of the existing land use patterns within the Plan area. See Figure 2.3.

Agriculture and Open Lands

Despite the industrial focus of the area, agriculture use and tree cover remain as the predominant land use, especially south of Highway 16A. In addition to conventional field crops there are several operations specializing in fruit crops or nursery stock. Nearly half of the quarter sections in the Acheson area have not been subdivided other than for utility or transportation rights of way.

There are a number of residential farmsteads scattered throughout the ASP area.

Industrial/Commercial Land Use

Clustered Industrial Use

Currently industrial land use occupies about 10 per cent of the total land area, concentrated mainly in the Sherwin-Ellis Industrial Park.

The Ellis and Sherwin industrial parks form the core of the industrial land within the Acheson area. They are bordered by the CNR line to the north, Highway 60 to the east and Highway 16A to the south. Despite this exposure to major highways, there is currently only one official access point to the park, at the eastern limits, onto Highway 60.

Lot sizes in both parks range from 0.4 - 3.0 ha, and there are three Municipal Reserve lots dedicated within the Ellis park. About 50 per cent of Sherwin-Ellis is currently occupied. There is a wide variety of businesses represented including contractors shops, lumber yards, farm implement dealers and others.

The Sherwin Ellis Industrial Park now has full water and sewer service, dust-abated roads on a rural cross-section and surface drainage. With the completion of the sanitary sewer system in 1995, Sherwin-Ellis now has a comparable level of servicing to competitive areas within the Edmonton region.

Industrial land use has moved into adjacent properties as well. Canadian National Railways also has a major yard facility located north of the Ellis Industrial Park, immediately west of Highway 60. Immediately north of the CNR main line and west of Highway 60 is the Transalta Utilities warehouse distribution facility and a commercial farm implement dealership adjacent to Highway 60.

There are several other commercial operations located along Highway 60 which are near but not within Sherwin Ellis Industrial Park , including a truss factory and lumber products.

Finally, a large recreational trailer park occupies an 11 ha. site south of Highway 16A, opposite Sherwin Ellis Industrial Park. Its access is a service road running parallel to Highway 16A.

Dispersed Industrial Uses

A number of industrial and commercial land uses have developed as individual sites. These are located mainly in the northeastern portion of the Acheson Area.

Two businesses selling recreational vehicles have been established southwest of the intersection of Highways 16 and 60. The exposure and accessibility of these two sites were factors affecting their location.

Further east, a large auction facility occupies a 12 ha site along RR 262 (Bevington Road), north of the CNR main line. A lumber yard operation is in the process of expanding its operations on the west side of Bevington Road and a mobile home sales operation has been established along Highway 16, at RR 262 (Bevington Road).

Also in the northeast sector is the Chevron gas plant located on RR 262 (Bevington Road) near the centre of a sizeable oil and gas field. This plant produces both solution and non-solution gas from the Acheson and Acheson East fields (see following section).

Two extensive dry landfill sites are located to the north and south of Highway 16A, both sites are former sand or gravel pits.

There is one additional dispersed industrial site - a sawmill located on the north side of 79th avenue in an otherwise agricultural area. This location was selected in anticipation of the upgrading of 79th Avenue, a project which has yet to materialize.

Oil and Gas Development

The eastern half of the Acheson area lies within the Acheson oil and gas field. The field is characterized by dense well spacing of up to 16 wells per section, associated flow lines and pipelines and access roads. There are at least 80 well sites, the majority of which are oil wells (Figure 2.4). The oil produced within the Acheson field contains small concentrations of so-called "sour gas" containing of hydrogen sulphide (H2S) (ERCB, 1983).

The life of the field is uncertain, as their is potential for the development of zones above the current producing pools. However, Chevron personnel suggest that production will continue for at least another 15 years.

The production of gas and oil is highly regulated by the Alberta Energy and Utilities Board (AEUB), formerly the Energy Resource Conservation Board., whose mandate is to ensure the safe and efficient development of energy resources in Alberta The risk to public health and safety posed by sour gas is regulated by a combination of high technical and operating standards and separation distances between sour gas facilities and places of public residence or assembly. These setbacks vary between 100 and 1500 metres, depending on four different "levels" of gas release and the surrounding population density.
It is understood that the Chevron Gas Plant has been given a "level" 1 rating which requires a separation distance of 100 metres from residential and other development.

These safety separation distances are reinforced through the *Subdivision and Development Regulation (AR 212/95)* under the *Municipal Government Act (S.A. 1994, M-26.1).* The *Regulation* requires all applications for subdivision and development permits which are within 1.5 kilometres of a sour gas facility be submitted for comments with regard to appropriate setbacks. It would appear that the gas processing plant would be considered a sour gas facility.

AEUB regulations also require the preparation and approval of an Emergency Response Plan to cover the Emergency Planning Zone (EPZ). Such a plan has been put in place by Chevron Resources Canada Ltd. The plan covers the entire east half of the ASP area. Safety procedures have been developed to deal with emergency events affecting the gas processing plant.

The presence of oil and gas development and the presence of sour gas raises questions of compatible land use in the interim period before the oil and gas field is fully depleted. Oil and gas present a constraint to development which would introduce permanent residency or accommodation into areas adjacent to sour gas facilities. The constraint is threefold, consisting of :

- the separation distances surrounding sour gas facilities;
- the infrastructure of flow lines and pipelines which would complicate and increase the costs of municipal infrastructure; and
- the service roads and traffic which are needed for the operations and maintenance of wells and batteries.

Residential Land Use

Small Parcel Country Residential

The main residential component within the Acheson area is the Osborne Acres development in the northwestern quadrant of the area. Osborne Acres comprises approximately 35 well established country residential lots, ranging in size from 1.5 - 2.0 ha. There are two Municipal Reserve lots within the Osborne Acres subdivision, both of which are north of the local road running east-west through the development.

North of Osborne Acres are two vacant, treed lots, with a total size of approximately 60 ha which are designated for Country Residential Development by the Land Use Bylaw.

Large Parcel Country Residential/Smallholdings

There are three distinct areas of large country residential parcels, formed by the subdivision of quarter sections into 16 ha (40 acre) parcels, or in some instances smaller parcels. The first is located between Highway 16 and Township Road 531A in the northwest quadrant of the plan area. The second is located along the east side of RR 265 (Spruce Valley Road) in the southwest quadrant of the area. The third area is located along the west side of RR 261 (Hillview Road) along the east limit of the area.

Recreational Land Use

The Ranch Golf Course occupies a 64 ha (160 acre) site in the southeast quadrant of the Acheson area. It has access to Highway 16A by RR 262 (Pinchbeck Road).

The Glowing Embers commercial trailer park, south of Highway 16A opposite the Sherwin Ellis Park, is the other recreational facility, already described above under industrial/commercial uses.

A small portion of the Wagner Natural Area is included within the northwest portion of the Acheson ASP area. Formally designated as Open Space under the Land Use Bylaw, this area is managed by the Wagner Natural Area Society for preservation and conservation purposes.

Municipal Reserves

Under the *Municipal Government Act,* Municipal Reserve (MR) lands are dedicated at the time of subdivision for the purpose of a public park, public recreation area, school or separation of differing land uses.

There are two MR parcels in the Acheson area; in the Osborne Acres country residential development. The two parcels fulfill a valuable function in providing open space for conservation and extensive recreational purposes.

Land Use Issues

A number of issues became evident through the land use analysis and the public participation program which was an integral part of the plan preparation process.

- the uncertainty created by the extensive industrial zoning designation for the entire study area

- appropriate buffers of transitional open area surrounding current residential, recreational and natural areas

- the direction, extent and staging of future industrial/commercial development related to transportation and infrastructure considerations

- the avoidance of any negative effects of development on the Wagner Natural Area, in terms of groundwater, surface water, noise, traffic increase or encroachment on the area

- the significance and extent of land use constraints posed by gas and oil extraction, especially in the northeast and southeast sectors of the plan area

- the conversion of the existing commercial campground into a permanent residential facility

2.3 Transportation

General

The Acheson Area is crossed or bordered by three major east-west transportation routes; Highway 16 the Yellowhead route across western Canada; Highway 16A, the former Yellowhead; and the Canadian National Railways main line. In addition, Highway 60 has an increasing function as an alternate north-south route within the metro Edmonton area and also serves as a major arterial and service area between Highways 16 and 16A. Secondary

Highway 794 also has a major north-south function, becoming Township Road 531A south of its intersection with Highway 16 and subsequently proceeding east and intersecting with Highway 60. On the southern boundary of the Plan area, Township Road 524 (79th Avenue) functions as an alternate east-west route to Highways 16 and 16A. See Figure 2.3.

The internal road network of the Acheson area is made up of local municipal roads, serving industrial, residential, recreational and agricultural areas.

The Acheson area has excellent external transportation linkages and these are a significant advantage in developing its industrial/commercial base. The future highway network, as it becomes fully developed, may also have a great effect on the use of land adjacent to highways. Planned interchanges and road closures should enhance the development opportunities of some properties and diminish that of others. A major purpose of this Area Structure Plan is to anticipate the effect of network modifications and enhancements and ensure safe and convenient movement of vehicles both within and through the ASP area.

The Highway Network: Planned Improvements

As the primary highway network is the responsibility of the Province of Alberta, through the Department of Transportation and Utilities (AT&U), a brief review of preliminary plans for the network is in order. This is based on the approved Parkland County Transportation Plan and on a written communication from AT&U, to be used expressly as transportation planning input to this Area Structure Plan. The following sections are paraphrased directly from a brief submitted by J. Berzanski of AT&U, dated August 16, 1996.

Highway 16A is classified as a freeway. Over time, all access will be through grade-separated interchanges. Within the Acheson study area, access at Range Road 264 has been closed and the access at RR 262 (Bevington Road) will eventually be removed and alternate access provided. The current at-grade intersection of RR 261 (Hillview Road) and Highway 16 will be replaced by a future interchange.

Highway 16 is planned as a high standard expressway. Although at-grade intersections may be permitted, the number of access locations could be limited to maintain a reasonably high level of service and safety. Within the plan area interchange locations are suggested at RR 265 (Spruce Valley Road) and RR 261 (Hillview Road). However, AT&U has not made a firm

commitment to construct interchanges at these locations. Ultimately, the decision to build these interchanges will be based on a comparison of traffic operations and safety relative to costs.

A number of local access points may be closed in the future, with alternate access provided through service roads to the nearest intersection/interchange or through the internal road system.

Highway 60 is planned as an expressway with a combination of at-grade intersections and grade separated interchanges. Eventually, it is planned that Highway 60 be twinned to four lanes on the west side, north of the CNR rail line, and on the east side south of the CNR line. The four lanes would require 90 metres of total highway right-of-way. A grade separation is planned for the existing railway crossing between Highways 16 and 16A. The current at-grade intersections at Acheson Drive and at Township Road 531A are to be maintained. However, the current at-grade intersection at Northview Road may eventually be closed and replaced with a road link to Township Road 531A.

South of Highway 16A, at-grade intersection locations should be maintained a half mile and one mile south of the intersection of Highways 16A and 60. The at-grade intersection at Township Road 524 (79th Avenue) may be maintained, with the possibility of a future interchange at that location. In that event, the alignment of Township Road 524 (79th Avenue) may be shifted to accommodate an interchange.

Transportation Issues

The major transportation issues within the study area relate to the timing of major highway improvements, the creation of an efficient internal road system and the provisions for alternate access to properties adjacent to major highways.

2.4 Infrastructure

Water Supply

The Acheson ASP area has access to the Capital Region Parkland Water Services Commission (CRPWSC) pipelines, which run north of and parallel to Highway 16A. There are two steel

pipelines (300 mm, 600 mm) providing water to the Acheson Industrial area, to other users along the pipeline, and to the communities of Spruce Grove and Stony Plain.

The CRPWSC has indicated that the pipelines have approximately a 42% surplus capacity at present. No limitations to additional use of the supply lines are anticipated, as long as water is available from the CRPWSC. A 500,000 gallon reservoir is located within the Ellis Industrial Park and a piped water is distributed throughout Sherwin-Ellis Industrial Park.

All large, future developments connected directly to the CRPWSC lines will require their own storage facilities for fire fighting purposes and peak flows. A metre vault and a pressure reducing valve will be requinic at all connections, regardless of size, as the pressure in the line can vary from 40-200 psi.

Wastewater Collection and Disposal

The Capital Region Sewage Commission (CRSC) has a trunk sewer flowing to the east, located just north of Highway 16. All large developments will require a wastewater collection system connected to the Capital Region Sewage system.

In 1995, a trunk sewer and collection system was completed from the Sherwin/Ellis Industrial area to the CRSC pipeline. This trunk sewer forms the basis for a collection system which could be extended to service an area extending from just south of Highway 16A to the south side of Highway 16 and from Highway 60 in the east to Range Road 265 in the west.

The CRSC has indicated there is capacity for additional wastewater flows in its regional trunk line. It is their mandate to improve the system as necessary to accommodate growth. The current limiting factor on the system capacity is the lift station at Big Lake. However, its capacity can be increased when required.

The eastern portions of the ASP area can potentially be serviced by extending trunks south from the regional sewer line. Alternately, it may be possible to service some of the eastern sections of the areas from the City of Edmonton wastewater systems. The City has completed a West Edmonton servicing study, with a number of alternatives for servicing a large area up to the City's westerly limits. In general, the existing Edmonton trunk sewers are not designed to handle flows from additional areas. A system of new trunk sewers or a network of large

facilities to accommodate wet weather flows prior to discharge to the existing system are being considered. It is possible that Parkland areas adjacent to the City limits could share in facilities but due to limited City capacities, the costs could be excessive.

Storm Drainage

There is minimal storm sewer infrastructure within the ASP area. The only storm sewer system is in the western limits of the Ellis Industrial Park and extends through the Sherwin park. The system consists of a storage pond located in the southwest corner of the Ellis park, immediately east of RR 264, north of Highway 16. This pond acts as a catchment facility for overland flows originating in both parks and discharges through a 900 mm line running northwest, under Spruceland Millworks, into the water course within the southeast quarter of Section 5.

The remainder of the northern half of the Plan area has its storm flow contained and directed northward in roadside ditches toward Big Lake. Generally, the southeast and southwest sectors of the study area have internal drainage patterns with low lying areas serving as holding ponds. Any new industrial or commercial developments will require careful drainage planning to control drainage and direct it to appropriate ponds or drainage channels.

Pipelines and Utilities

The Acheson ASP area is crossed by a number of oil and natural gas pipelines. A major facility is the series of high pressure lines operated by Northwest Utilities, which runs northwest, from the intersection of Highway 16 and RR 262 (Bevington Road), through Sections 3 and 9 of the northwest sector of the ASP area. This alignment is also continued southeast through Section 35, south of Highway 16. Another series of high pressure lines continues southward from the intersection of Highway 16 and RR 262 (Pinchbeck Road), generally following the alignment of RR 262. See Figure 2.4.

A network of smaller flow and feeder lines occupy the landscape, with the highest concentration of infrastructure in the region of the Chevron plant and the numerous battery sites.

TransAlta Utilities supplies power to the Acheson area and the Sherwin/Ellis Industrial Park has access to 3-phase power as do businesses along RR 262 (Bevington Road).

The entire ASP area is serviced by Northwest Utilities Ltd for gas and Telus for telephone systems. Telus also supplies fibre optics services to the Sherwin Ellis park from its main optics

cable running along Highway 16A. The extension for fibre optics into the park is made at Range Road 264.

2.5 Economic Development

Acheson has been recognized, in conjunction with the Winterburn Industrial Area, as one of six major industrial areas in Metropolitan Edmonton by the former Edmonton Metropolitan Regional Plan. It is the main industrial area within Parkland County. The entire planning area is designated for industrial/commercial use under Parkland County's General Municipal Plan, adopted in 1979.

The strength of the Acheson Industrial Area lies in its strategic location and proximity to major transportation corridors. The combination of transportation routes, highway frontage, proximity to The City of Edmonton, Edmonton International Airport and other major facilities and Parkland County's business tax policy put the Acheson Industrial Area in a very competitive position relative to other commercial/industrial developments in metro Edmonton. With the completion of the sewage facility, Acheson can offer fully-serviced properties at very reasonable rates.

The combination of servicing capability, locational advantages, transportation linkages and favourable costs, provide opportunities for a variety of businesses in transportation, distribution and storage, manufacturing and fabricating, resource service and supply and related industries.

3.0 ISSUES AND OBJECTIVES

The issue identification process revealed a number of points, which are presented according to five general categories. A set of objectives have been developed in response to these issues to guide preparation of the plan.

3.1 Economic Development

Issues

- how to achieve the full development potential of the Acheson area
- how to obtain economies of scale for economical servicing
- improved access to Sherwin/Ellis Industrial Park

Objectives

1. ***To build on the Acheson Industrial Area's location and infrastructure advantages to become a leading industrial/commercial location in metropolitan Edmonton.***

2. ***To accommodate a variety of business/commercial/industrial opportunities including major distribution and shipping warehouses, resource industry supply and services, light manufacturing and assembly, transportation and related uses.***

3. ***To ensure that the Acheson Industrial Area continues to remain competitive in key areas of land costs, taxation, servicing and accessibility.***

4. ***To provide a staging plan that will result in economical and orderly expansion of basic infrastructure.***

3.2 Land Use

Issues

- the need for greater certainty about the short and long term use of land.
- the balance between expanding industrial/commercial, resource development, residential, recreational and conservation land uses
- contiguous, orderly development compared to dispersed development
- appropriate locations and densities for residential development

Objectives

1. ***To accommodate existing non-industrial/commercial (agricultural, residential, recreational) land uses within the Acheson area and to create greater certainty as to intended long-term use of lands for all users.***

2. ***To create and maintain appropriate separation distances between existing uses and long-term industrial/commercial use.***

3. ***To balance the designation of land for industrial/commercial purposes with a realistic expectation of the timing of such development.***

4. ***To avoid the development of major permanent residential areas, within areas intended for industrial/commercial use.***

5. ***To avoid further dispersed, scattered industrial development.***

6. ***To achieve compatible land use with surrounding areas.***

3.3 Transportation

Issues

- future plans for upgrading the primary highway network, and their impact on adjacent land use, especially with regard to interchange locations, access closure, creation of alternative access

- the eventual upgrading and widening of Highway 60, particularly between Highways 16 and 16A, and development of grade separated crossing of CN Rail line

- additional access to Sherwin/Ellis Industrial Park

- future internal circulation patterns within all portions of the study area and linkages to external areas

- the potential upgrading of 79th Avenue to arterial status

Objectives

1. ***To provide for the continued safe, efficient and convenient movement of traffic on the major highway system.***

2. ***To promote the upgrading of significant segments of the highway system, especially Highway 60 between Highway 16 and 16A.***

3. ***To create a staged internal road system that reflects planned access closures, highway upgrades and service road development to maximize access to existing properties.***

4. ***To promote and maximize the access provided by the Acheson Industrial Area to the Canadian National Railway main line.***

3.4 Servicing/Infrastructure

Issues

- the most economical and logical extension of the basic infrastructure to facilitate economic development
- the future staging of servicing to facilitate development
- the cost of extending services to various areas
- limiting post-development overland water flows to pre-development levels

Objectives

1. ***To develop servicing infrastructure in an orderly, efficient and cost-effective manner to facilitate industrial/commercial and other development.***
2. ***To maximize the benefits of existing investment in public infrastructure.***
3. ***To achieve "critical mass" or economies of scale of development so as to minimize infrastructure costs.***

3.5 Environmental

Issues

- the protection of the Wagner Natural Area within the plan area
- identification and acknowledgement of dispersed depressions and ponds which support wetlands, and forested areas and drainage courses which provide wildlife corridors
- to preserve and sustain the groundwater recharge area of the Wagner Natural Area
- the constraints associated with oil and gas infrastructure (including sour gas production) in the eastern sections of the plan area

Objectives

1. *To recognize the Wagner Natural Area as a significant environmental resource and protect it from the potential negative effects of development.*

2. *To recognize and maintain, where possible, all other areas identified as natural features such as wetlands, forested areas and drainage courses*

3. *To promote continued public health and safety in the operation of the sour gas facilities of the Acheson field and to avoid incompatible development in the vicinity until production is completed.*

4.0 DEVELOPMENT CONCEPT

4.1 Introduction

The Development Concept responds to the issues and objectives outlined in the previous section and is based on a number of factors including:

- information received through the public consultation process
- an evaluation of existing conditions within the plan area
- a technical evaluation of the opportunities and constraints relating to transportation facilities and utility infrastructure
- the provision and staging of servicing systems
- a consideration of planning principles relating to long-term future land use

The Development Concept comprises three components: a Land Use Concept, a Transportation Concept and a Servicing Concept. A brief outline of each concept is provided below:

- the **Land Use Concept**, includes definitions of the future land use types within the planning area, general development policies to reflect the future land use patterns, an outline of the staging patterns for future development with regard to industrial/ commercial lands, specific development policies for areas within the plan where land use conflicts may arise, general policies regarding wetland and drainage course protection, and policies outlining the consideration that is required for development of lands with municipal or environmental reserve dedication issues;

- the **Transportation Concept**, outlines major highway initiatives, as identified by Alberta Transportation and Utilities, for the plan area, access control initiatives of AT&U, and a preliminary internal road network, to be established in more detail as future development is realized; and

- the **Servicing Concept**, details the water, wastewater and stormwater servicing requirements and implementation policies for the plan area, based on existing facilities and staging considerations.

4.2 Land Use Concept

1. The Development Concept recognizes that a variety of land uses occupy the landscape within the Acheson Industrial Area. It seeks to provide clarity and distinction between land uses.

2. Four distinct land use categories have been defined for the Acheson planning area. They are:

   - **Industrial/Commercial**, which refers to a variety of light and medium industrial uses including, but not limited to, general industrial manufacturing/processing operations, industrial storage and warehousing companies and natural resource extraction/processing firms, as well as general commercial uses which may include, but not be limited to retail, contractor, automotive, recreational, business support, health care, commercial training and professional ventures. Utility and community services may also be located within lands designated Industrial/Commercial.

   - Open Area/Agricultural, which may include but not be limited to, agricultural small holdings, residential, utility services and recreational uses. This land use shall, in all instances, act as the buffer between land uses, which by their nature, may conflict.

   - Country Residential refers to the existing multi-parcel residential development at Osborne acres in the northwest quadrant of the plan area.

   - Recreation refers to the existing development at the Ranch Golf Course in the southeast quadrant of the plan area. Future recreational opportunities may include community recreation services, indoor and outdoor participant recreation services and spectator sport establishments

3. Recognition, in the form of general policy statements, is given to wetland and drainage course lands and lands which may be considered for municipal or environmental reserve dedication.

4. The Land Use Concept Plan is presented on Figure 4.1, showing the designation of land into land use types and the staged development of industrial/commercial uses.

4.2.1 Industrial/Commercial Land Use

General Policies

1. The Acheson Industrial ASP area is designated as predominantly an industrial/commercial area. The main concentration of this land use type will be in the northern half of the plan area, with development staged in sequence with the implementation of water and sewer servicing. The total area designated for industrial/commercial development has been reduced from the almost 100 per cent to approximately 70 per cent of the entire area.

2. The rationale for continued industrial/commercial development includes consideration of the following factors:

   - access to major transportation routes;
   - serviceability by major piped services;
   - compatibility with adjacent land uses;
   - reasonable expectation of development given current and future market conditions; and
   - avoidance of high quality agricultural lands.

3. The boundary of the industrial/commercial designation will be a minimum of 200 metres from the Osborne Acres subdivision. The intervening area is given a designation of 'Open Area/Agricultural' in order to provide adequate noise attenuation and visual screening.

4. Existing residential developments within the designated industrial/commercial area may continue as non-conforming uses. However, no re-districting, subdivision or development permit which will increase permanent residency or residential densities will be permitted within the designated industrial/commercial area, in order to protect the existing and potential industrial/commercial land base.

5. All proposals for subdivision outside the built-up Sherwin-Ellis Industrial area will require, that the proponent submits a detailed outline plan for the balance of the quarter section, or portion of the quarter section deemed adequate by Parkland County.

   Outline plans shall have regard for the integration of the proposed subdivision into the surrounding land use and transportation pattern and shall show proposed lots and proposed road rights-of-way. The proposal shall also address the proposed servicing for the proposed outline plan area and requirements for municipal reserve and/or the disposition of any natural areas.

6. Industrial/commercial development on individual parcels of land with independent servicing systems will not be permitted in any stage, in order to maximize the use of existing and potential servicing systems.

Staging

7. Industrial/commercial development will proceed on a strategically staged basis, starting with the existing developed areas, then moving outwards along the lines of serviceability and transportation routes.

   Development should occur according to the hierarchy of staging established on Figure 4.1. Stage 1A should be the priority area for development after the existing infill of Sherwin Ellis, with due consideration given concurrently to Stage 1B and subsequently Stage 1C, should demand dictate. The timing of development in these latter two stages will depend on the timing for provision of water and sanitary sewer services.

8. Infill and re-development of the existing Sherwin-Ellis Industrial Area will be encouraged at a priority level equal to or higher than Stage 1 development, recognizing that users requiring large parcels not available within the existing Industrial Park may choose or require other nearby locations.

9. Stage 1 of development comprises the areas which can be serviced by sanitary sewer from the existing trunk sewer system.

   Stage 1A includes lands south of Highway 16 and along Highway 60, which can be serviced by a branch sewer system extending east and south from the existing trunk line, south of Highway 16.

Stage 1B includes lands to the west of Sherwin-Ellis and across Highway 16 to the south, which can be serviced by sanitary sewer from the existing system.

Stage 1C includes lands to the north, west and south of Stage 1B which will likely require an additional sanitary sewer extension from the sanitary trunk at Range Road 264. The boundaries between Stages 1B and 1C may change, depending on the willingness of land owners to develop and avail themselves of existing capacity in the existing sewer system.

Stage 1 comprises a total area of slightly more than 800 ha (2000 acres). This should be more than adequate to meet the needs of the County and the metropolitan Edmonton Region within, at the least, a 15 year time horizon.

10. New industrial/commercial development within Stage 1 shall be serviced through connections with the existing piped water and wastewater systems.

11. A variety of lot sizes should be provided through the subdivision process to meet the requirements of the market place.

12. Stage 2 of industrial/commercial land use comprises the northeastern quadrant of the ASP area. This area will be developed following the substantial development of Stage 1 and the decommissioning of the Acheson oil and gas field. Transportation and servicing considerations for Stage 2 are presented in Sections 4.7 and 4.8.

13. The boundary between Stages 1 and 2 is shown at approximately 800 metres east of Highway 60 and will be determined by the limits of servicing from the Stage 1 servicing systems.

14. Stage 3 industrial/commercial lands are designated along the south frontage of Highway 16 and along the east frontage of Highway 60. They will be developed at some future time subject to the extension of services either from Stage 1 or Stage 2. Stage 3 is defined by proximity to highway frontage, maintaining a separation distance from the Ranch Golf Course and high quality agricultural land in the southeast corner of the ASP area.

15. Stage 4 industrial/commercial lands are designated along the west frontage of Highway 60 and south of Stage 1C. It will also extend west along 79th Avenue to include the

existing sawmill.

This Stage is oriented to future access from Highway 60 and its southern and western boundaries defined by existing agricultural and residential land uses.

This is a long-term stage, which will be facilitated by the extension of services either from Stage 1 or Stage 3. In the interim, the current predominantly rural character of the landscape should be maintained.

16. The long-term planning horizon for Stages 3 and 4 does not preclude earlier, serviced development in these areas, concurrently with higher priority stages, if it can be shown that future service provision can be made.

Specific Area Policies: Osborne Acres and Vicinity

17. The Area Structure Plan establishes a number of measures to address potential land use conflicts between Industrial/Commercial development and the existing residential development of Osborne Acres in the northwest quadrant of the ASP area.

18. An Industrial/Commercial Overlay designation is established for lands within an approximate 1.0 km radius of Osborne Acres and along a 200 m wide area on the south east sides of the Industrial Commercial Expansion area.

19. Within the Industrial/Commercial overlay designation, site development standards shall be higher than other areas of the ASP amendment area. These standards will be established through the Land Use Bylaw, and may include, but not be limited to, the following matters:

- limitations on the height of on-site light standards and the intensity of lighting
- building height restrictions
- limitations on the generation of noise and emissions
- standards for landscaping of the perimeter site areas and/or requirements for landscaping of a certain percentage of the total site area

- requirements for on-site visual buffering of the edge of properties visible from Osborne Acres or the Ranch Golf Course, through the use of fencing, plant materials and berming, to be incorporated into buffer strips along the back property line.

20. A 200 m wide area of Open Area/Agricultural designation provides spatial separation between Osborne Acres and Industrial/Commercial development as shown on the Land Use Concept (Figure 4.1).

21. In the lands south of Osborne Acres, Stage 1C Industrial/Commercial is designated in a strip along the north edge of the CNR line, with an intervening distance of approximately 200 metres of Open Area/Agricultural lands from Osborne Acres as shown on Figure 4-1. Only one road/utility crossing of the drainage course will be permitted. The existing drainage courses and associated woodland areas will be protected from development by designation as Environmental Reserve, Municipal Reserve or conservation easement at the time of subdivisions, or by conservation easement in advance of subdivision.

22. Industrial/Commercial lands to the north of Osborne Acres will be separated from the residential development by 200 m of lands designated Open Area/Agricultural lands between Township Road 531A and Osborne Acres.

23. Industrial/commercial lots backing onto the separation areas, adjacent to Osborne Acres, or in the south east part of the industrial commercial expansion area, shall be large enough to incorporate any required on-site buffering measures, in addition to conventional site development requirements so as to further mitigate any land use conflict with Osborne Acres.

24. At the time of industrial/commercial development, immediately east of Osborne Acres, Northview Road shall be terminated east of Range Road 264, and RR 264 shall be terminated south of the present intersection with Northview Road.

25. The Area Structure Plan recognizes that all future development must be sensitive to the prevailing environmental characteristics and conditions within the plan boundaries. This is especially important for the Lands north of Osborne Acres and west of Range Road 264 which are designated Industrial/Commercial Overlay as shown on Figure 4.1. Due to the distinct and diverse terrain conditions of this area, special consideration shall be given to the particular requirements for development.

26. The north west portion of the plan area provides a unique opportunity to demonstrate how development can be integrated into an environmentally sensitive site, with due consideration to its environmental situation with regard to vegetation, topography, drainage and soil conditions. Because of its visibility from Highway 16X, the site offers an opportunity to provide a showpiece of sensitive environmental planning. Potential uses which have a specific environmental focus would be preferred.

27. Future development in the far north west portion of the planning area north of Township Road 531A and west of Range Road 264 area shall be based on the provision of a comprehensive outline plan and site plans and shall have due regard for the unique drainage characteristics of the area. Methods utilized to provide suitable drainage conditions for development, including filling of low lying areas, must not adversely effect the Wagner Natural Area. All future development in this area shall provide onsite stormwater retention and shall be serviced by piped water and sanitary sewer services.

4.2.2 Country Residential

1. Country Residential lands refer specifically to the Osborne Acres development in the northwest sector of the study area.

   No other multi-parcel country residential developments will be permitted in the Acheson ASP planning area at this time, as there are ample opportunities for country residential development in other regions of Parkland County, as the sour gas field in the southeastern portion of the planning area poses a constraint, and as there are areas of high quality agricultural land (Class 1-3) within the planning area.

4.2.3 Recreation

1. This land use designation recognizes the existing development of the Ranch Golf Course in the southeast sector of the study area. Presently, there are no other lands that require designation under this classification, although market conditions may warrant such reclassification in the future. If this were the case, lands in the vicinity of the existing recreational designation would be the most appropriate.

4.2.4 Open Area/Agricultural

1. The second largest land use designation within the Plan, Open Area/Agricultural lands, is predominantly in the southern half of the plan area. This land use designation acknowledges the predominantly agricultural characteristics of the southwest and southeast portions of the plan area. These areas are, for the most part, outside the limits of cost-efficient water and sanitary sewer servicing.

2. This designation is used to define separation distances between future industrial/commercial land uses and residential/recreation/environmental areas such as Osborne Acres, the Wagner Natural Area and the Ranch Golf Course.

4.3 Wetland and Drainage Course Protection

1. Natural areas, including such features as kettle depressions, overland drainage courses, established wetlands and recognized groundwater recharge area, as indicated in Figure 2.1 of this Plan, should be identified at the outline plan stage and proposals established for the management and protection of these areas and their disposition within the proposed plan of subdivision. Particular attention should be given to areas either in the vicinity of, or within the groundwater recharge region, of the Wagner Natural Area.

2. In the case where there is doubt as to the significance of these natural area, Parkland County may require the proponent to undertake hydrological, geotechnical and/or environmental assessments of the lands to determine the potential consequences of development along with appropriate mitigating measures.

3. Wherever possible, depressional areas shall be used to retain stormwater flows onsite, so that off-site flows are kept to pre-development levels, and in order to recharge the groundwater regime.

4. Natural areas may be protected through designation as Municipal Reserve or as Environmental Reserve at the time of subdivision.

5. Parkland County will investigate the use of Conservation Easements to achieve the conservation of wetland, woodlands or drainage courses. If this approach proves to be viable, the County may require Conservation Easements at the time of subdivision, or encourage their application prior to subdivision to protect natural areas.

4.4 Municipal Reserve

1. Where no Municipal Reserve is required for protection of natural areas and where there is no other reason for the dedication of Municipal Reserve, Parkland County may require money in place of Reserve dedication under Section 666(1) of the Municipal Government Act.

4.5 Transportation and Circulation

1. Major highway facilities will incorporate links to an internal circulation network and are to be established with Highways 16, 16X and 60 in accordance with the best known plans of AT&U at this time. These plans are reviewed in Section 2.3 of this ASP.

2. A review of the major facility initiatives is as follows:

Highway 16

- closure of access at Range Road 264
- closure of access at Range Road 262 (Bevington Road)
- at-grade access at Range Road 261 (Hillview Road) - future interchange location

Highway 60

- widening of right-of-way to 90 metres, north of CNR on the west side, south of CNR on east side, in order to accommodate a 4 lane divided highway
- at-grade intersection at Township Road 531A
- grade separation at CNR crossing
- at grade intersection at access to Sherwin/Ellis Industrial Park
- interchange of Highways 60 and 16 to be upgraded
- at-grade intersection 800 metres south of interchange of Highways 60 and 16
- at-grade intersection 1600 metres south of same interchange
- at-grade intersection at 79th Avenue - possible future interchange location with possible alignment shift to 79th Avenue

Highway 16A

- at-grade intersection at RR 265 (Spruce Valley Road) - possible future interchange location
- closure of access 800 metres east of RR 265 (Spruce Valley Road)
- on/off ramps at 1600 metres east of RR 265 (Spruce Valley Road) to be maintained
- interchange of Highways 60 and 16 to be upgraded
- eventual closure of existing north and south accesses of RR 262 (Bevington Road & Pinchbeck Road)
- at-grade intersection at RR 261 (Hillview Road) - possible interchange location

3. The future transportation and internal circulation network is illustrated on Figure 4.2 - Transportation Plan.

4. There will be only one access point along Highway 60, between the CNR right-of way and Highway 16 once Highway 60 has been twinned. This access will be at the current intersection of Range Road 531A and Highway 60. The closure of the current Northview Road access onto Highway 60, will require the development of alternate access to fronting properties as part of Stage 1A development. This will be provided by either a front or rear service road, parallel to Highway 60. Properties adjacent to

the east side of Highway 60 will have a front or rear service road developed in conjunction with provision of direct access Highway 60 is removed. In both instances, highway access will link to internal road networks as outlined in Figure 4.2.

Northwest Sector

5. In the northwest sector, a road connection from Township Road 531A will be developed to the south of Osborne Acres to provide a direct link to RR 265 (Spruce Valley Road). This will be undertaken in conjunction with the development of the land between Osborne Acres and the CN Rail line.

6. Township Road 531A, between Highway 60 and Secondary Highway 794 may be upgraded as warranted by traffic flows.

7. In conjunction with Section 4.2.1(18) of the Area Structure Plan, there will be no access to Range Road 264 from Northview Road once substantial development occurs in Stage 1A, immediately east of the Osborne Acres residential area. Northview Road will terminate east of the intersection with Range Road 264. Range Road 264 will also terminate south of the present intersection with Northview Road at this time.

8. Acheson Drive will be extended west from Sherwin-Ellis Industrial Park to RR 265 (Spruce Valley Road) as part of Stage 1B and 1C development. The intersection of this arterial and RR 265 (Spruce Valley Road) should be set back sufficiently far from Highway 16 so as not to compromise a future grade-separated interchange, but also far enough south of the CN Rail line to provide sufficient queuing distance.

9. South of the CN line, Acheson Drive will be extended eastwards to create an arterial link with the City of Edmonton in conjunction with Stage 2 development. It may ultimately connect with 111th Avenue and thereby provide an access to the Anthony Henday Freeway via the proposed 111th Avenue/Anthony Henday interchange. There may also be an opportunity to link Acheson Drive with 105th Avenue and the industrial areas east of Anthony Henday via the proposed 105th Avenue flyover.

Northeast Sector

10. In the northeast sector, an internal circulation system will be established that is consistent with development patterns for Stage 2 and the access requirements for Highways 16 and 16A. These requirements include the future closure of RR 262 (Bevington Road) at its intersections with Highway 16 and 16A and the development of a future interchange at Hillview Road and Highway 16.

11. Township Road 531A will be the major east-west arterial road within the northeast sector. Its development will occur in conjunction with the closing of at-grade access to Highway 16 at RR 262 (Bevington Road). Ultimately, it may continue eastward into the City of Edmonton to link with 114th Avenue and possibly, via a CN crossing, with 111th Avenue and the Anthony Henday Freeway.

Southwest Sector

12. Internal circulation within the southwest sector of the ASP area (Stages 1B and 1C) will be consistent with staged development patterns. The existing frontage service road along the south side Highway 16A will continue to be used with no change in access. This service road may be extended west to RR 265 (Spruce Valley Road), before or in connection with development along the south side of Highway 16A, with the intersection set back far enough to accommodate a potential interchange with Highway 16A.

Two at-grade intersections will be established along Highway 60. One shall be maintained at the existing location south of the Highway 16A interchange and one at a point 1600 metres south of the Highway 16A interchange.

Southeast Sector

13. The southeast sector of the ASP area will include a service road, either fronting Highways 60 and 16A, or providing rear access to lots, and will extend along the west and north boundaries of this quadrant. Access to Highway 60 will be provided at the existing location, 800 metres south of the Highway 16A interchange, at 1600 metres south of Highway 16A, or at 79th Avenue. Access to Highway 16 will be at RR 262 (Pinchbeck Road) and RR 261 (Hillview Road). The internal road network for this sector will be contingent on future development patterns of Stage 3.

14. Within the City of Edmonton, 79th Avenue is being planned and developed as an ultimate freeway, with plans for a future interchange at Hillview Road. While 79th Avenue within Parkland County is designated as an arterial road by the County's Transportation Plan, the City of Edmonton has suggested that 79th Avenue could ultimately be a multi lane freeway, east and west of Highway 60.

4.6 Utility Servicing

4.6.1 Water Supply

1. The existing Acheson Water Pumphouse and Reservoir withdraws water from the 300 mm CRPWSC line and flow is currently limited to 337 lpm. It is likely that, when required, higher flow rates will be available from the regional line.

2. It is possible to service the entire proposed Acheson Industrial Area from the existing Ellis Water System with the necessary upgrades and expansions as required. The existing fire pumping capability at the Ellis Pumphouse is approximately 2,500 igpm for a 2.5 hour duration (11,700 lpm), utilizing a storage reservoir of 500,000 gallons (2,270 m^3). The suggested fire flow for industrial areas by the "Fire Underwriters Survey" is 3,000 igpm for a 3 hour duration.

3. The existing Ellis Pumphouse and Reservoir capacity is only slightly below the recommended levels and is probably adequate for the existing development. Any upgrading to the facility or expansion to the system should consider both increased pumping capacity (to 3,000 igpm) and increased storage to provide for both domestic demand and a fire flow duration of 3 hours.

4. Figure 4.3 outlines a possible future network of water feeder mains in the northern area of the ASP. As additional development occurs, expansion to the storage and pumping facilities will also be required, and preliminary location for these are outlined. Some interconnections between the Acheson water system and the Big Lake area to the north could also be considered in the future.

5. Due to the elevation differences, the northern sections of the ASP area will require a separate pressure zone of approximately elevation 690. Based on a static pressure of 55 psi at Ellis, the static pressure at elevation 690 m will be approximately 85 psi, which is considered the upper limits for domestic or industrial water supply. Pressure reducing valves will be required at elevations lower than this and the approximate zone separation line is shown on Figure 4.3.

6. A looped system of 300 mm and 350 mm water feeder mains are required to provide industrial fire flows to the proposed development areas of Acheson.

7. Provisions can also be made for the connection of the Acheson water feed system to the County residential areas north of RR 262 (Bevington Road) and Highway 16X. A pressure reducing vault in the vicinity of Highway 16X would be required to have acceptable pressures in areas to the north.

4.6.2 Wastewater Collection and Disposal

1. Developments east of Highway 60 and outside the service area of the Sherwin/Ellis Sewer System, will require a new trunk sewer to the CRSC. This would likely occur in the area just west of RR 262 (Bevington Road). The elevations are conducive for a gravity sewer system capable of servicing most of the area along RR 262 (Bevington Road) and west to Highway 60 without the requirement for lift stations.

2. Figure 4.3 shows the general direction of drainage and the likely location of major lift stations and connection points. We suggest a network of systems directed towards the CRSC trunk sewer is the most feasible wastewater system for the future needs of the Acheson area. There are a number of kettle depressions throughout the southeast region of the Plan area and these will require careful planning, grading and/or small lift stations to accommodate a wastewater collection system

4.6.3 Stormwater Retention

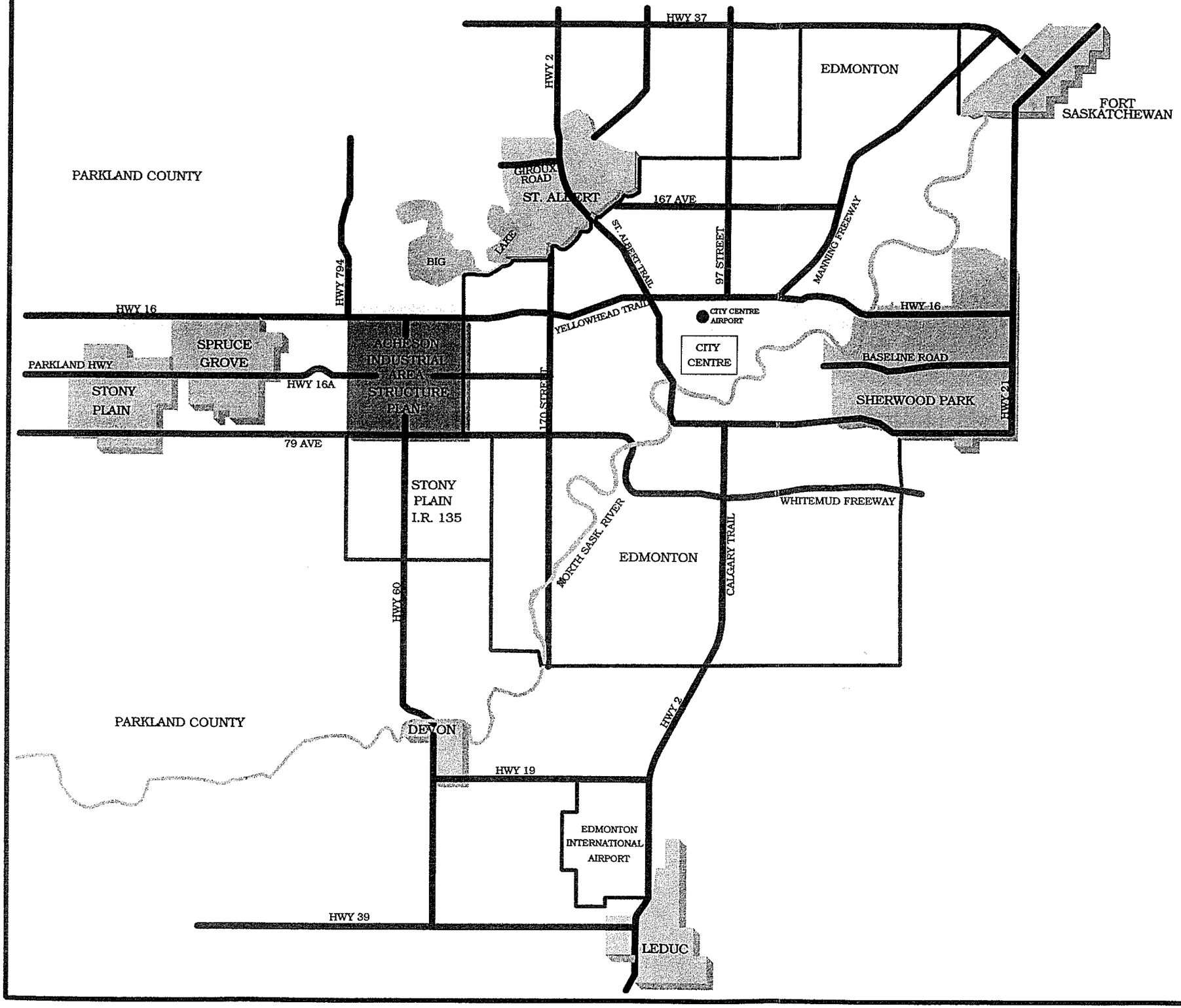
5.3 Approval of Minister of Transportation and Utilities

Section 14 of the *Subdivision and Development Regulation,* prevents a subdivision authority from approving an application for subdivision of land within .8 kilometres of a highway where the posted speed is 80 kilometres, unless the land is, among other things, *"contained and permitted within an area structure plan satisfactory to the Minister of Transportation and Utilities."*

This Area Structure Plan is intended for approval for the Minister of Alberta Transportation and Utilities, to enable Parkland County subdivision authority to approve subdivisions within the vicinity of the primary highway network.

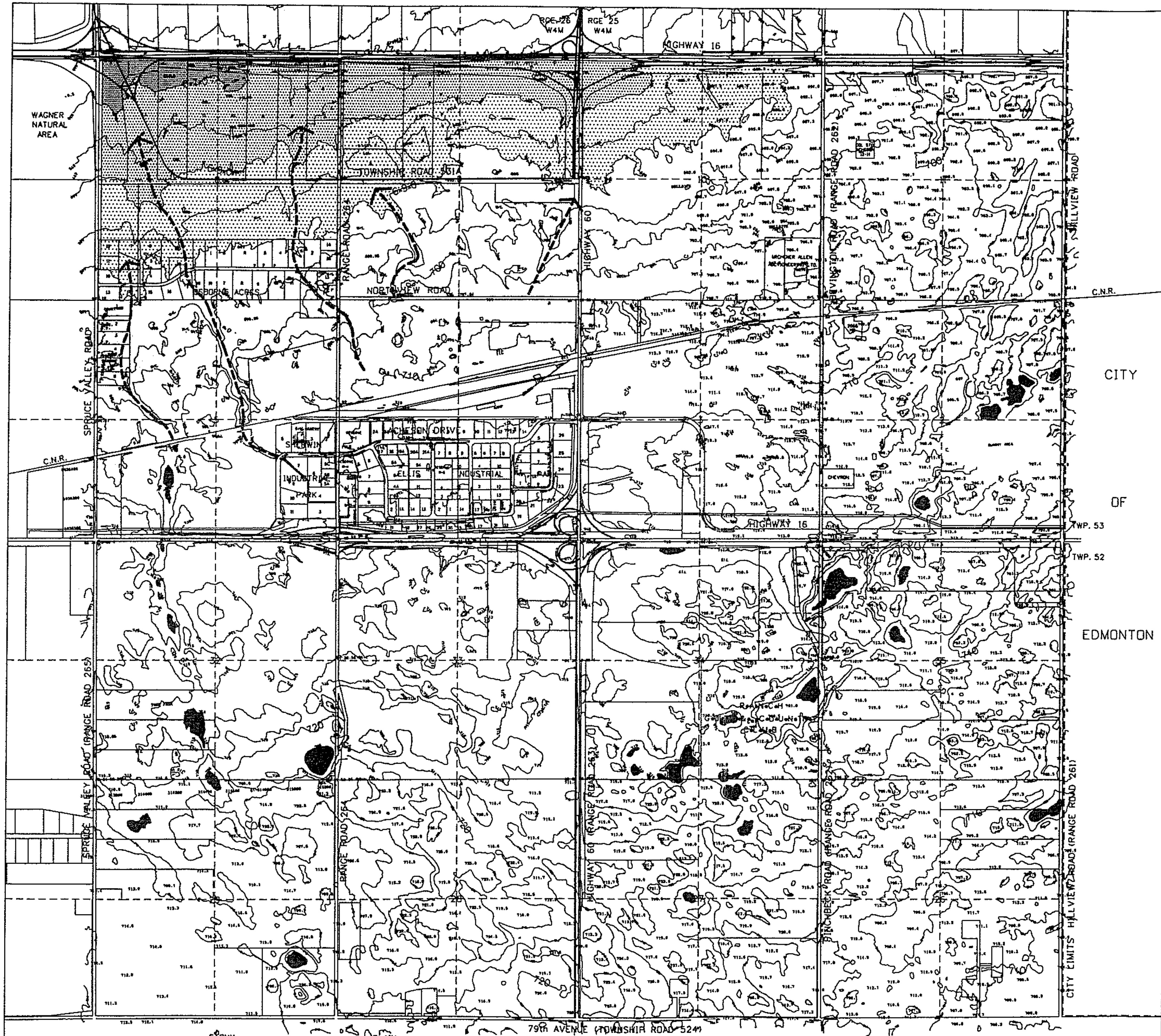
PARKLAND COUNTY

ACHESON INDUSTRIAL AREA STRUCTURE PLAN



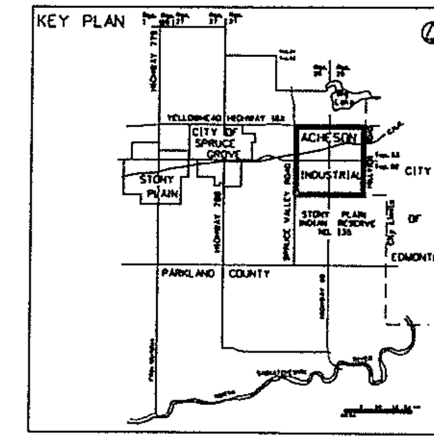
LOCATION PLAN

1.1



PARKLAND COUNTY

ACHESON INDUSTRIAL AREA STRUCTURE PLAN



LEGEND:

- DRAINAGE COURSES
- DEPRESSIONAL AREAS
- ≥ 670m
- 670 - 680m
- 680 - 690m
- ABOVE 680m

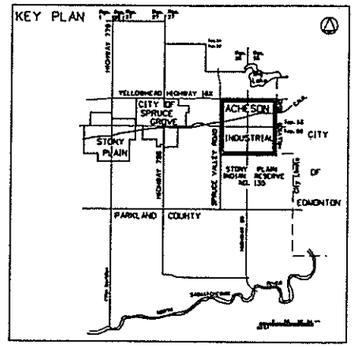
TOPOGRAPHY AND DRAINAGE

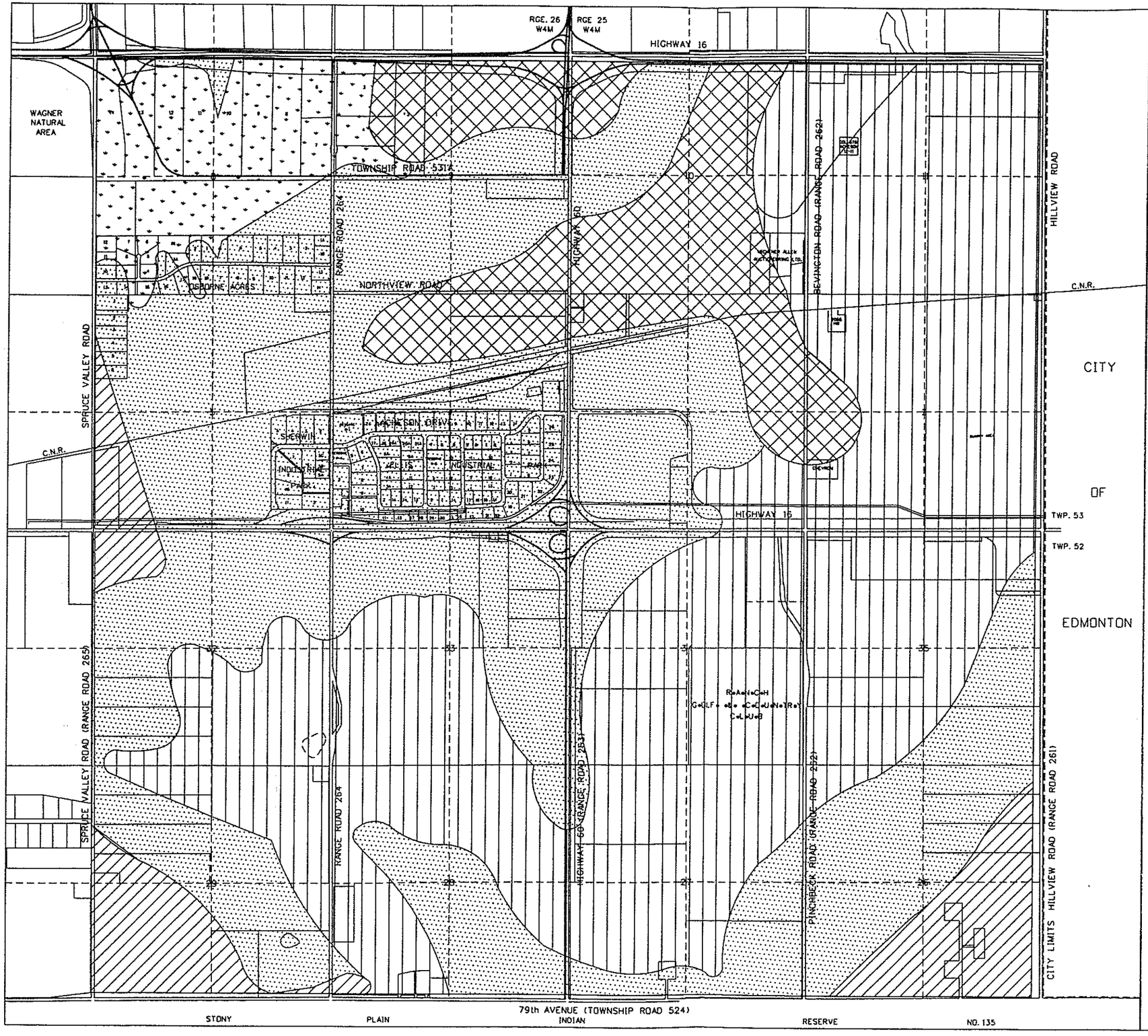
0 200 400 600m

2.1

PARKLAND COUNTY

ACHESON INDUSTRIAL AREA STRUCTURE PLAN





LEGEND:

- CLASS 1
- CLASS 2
- CLASS 3
- CLASS 4
- ORGANIC

SOIL CAPABILITY

SOURCE: Canada Land Inventory Soil Capability for Agriculture Edmonton 1:2000 Map Sheet 83H.

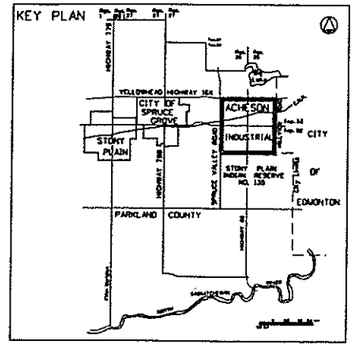
N

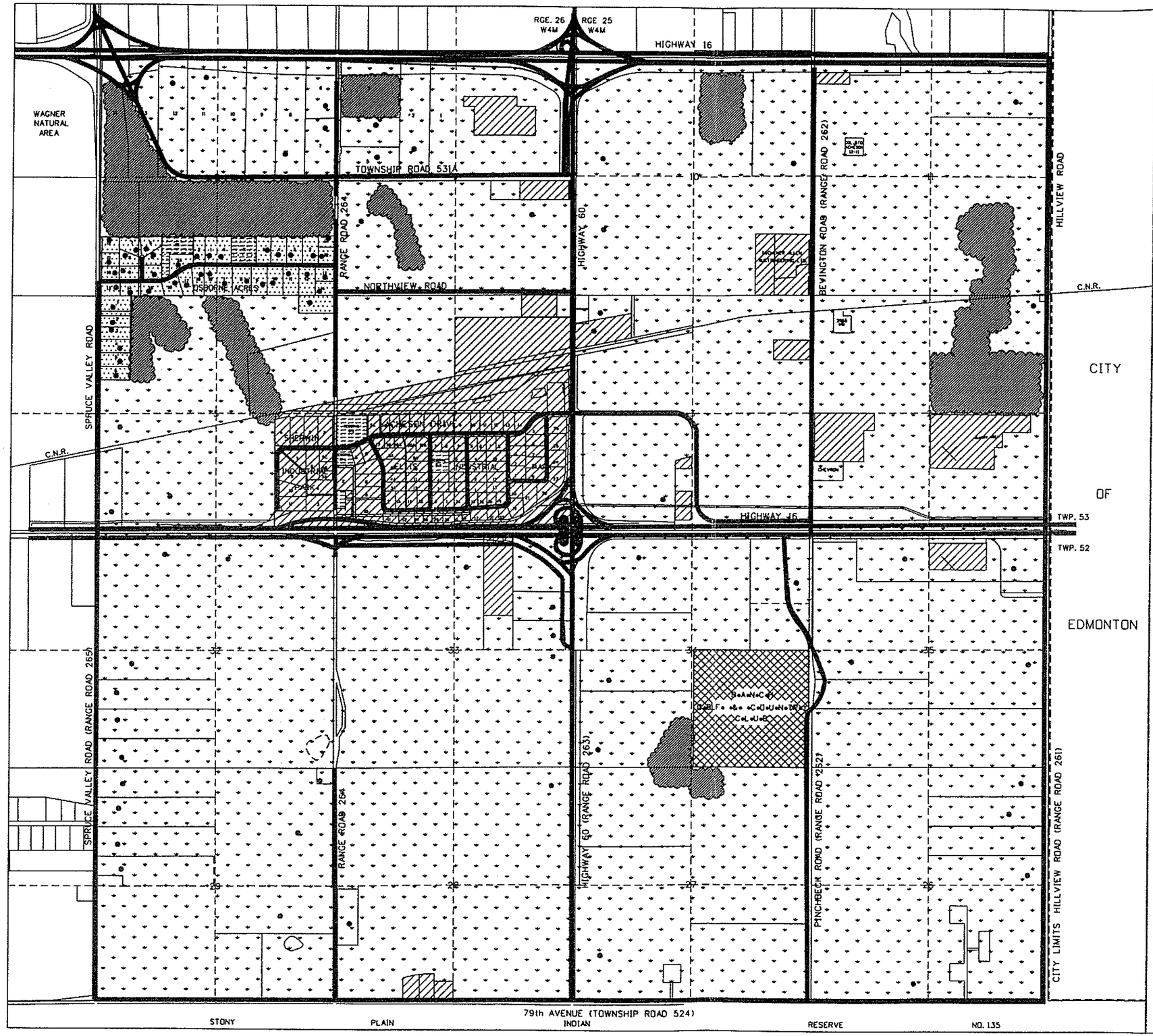
0 200 400 800m

2.2

PARKLAND COUNTY

ACHESON INDUSTRIAL AREA STRUCTURE PLAN





LEGEND:

- COUNTRY RESIDENTIAL
- COMMERCIAL / INDUSTRIAL
- OPEN AREA / AGRICULTURAL
- RECREATIONAL
- MUNICIPAL RESERVE
- WOODLANDS
- ROADWAYS
- RESIDENCE
- DRY LANDFILLS

CURRENT LAND USES AND TRANSPORTATION

N

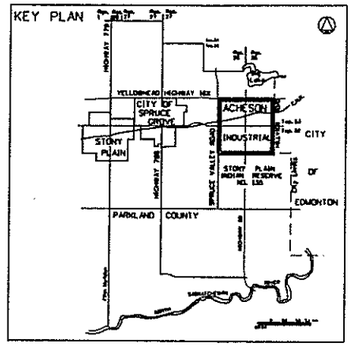
0 200 400 600m

2.3

PARKLAND COUNTY

ACHESON INDUSTRIAL AREA STRUCTURE PLAN

KEY PLAN



LEGEND:

- ACID GAS
- BATTERY
- OIL WELL / GAS WELL
- EMERGENCY PLANNING ZONE

PIPELINES AND INFRASTRUCTURE

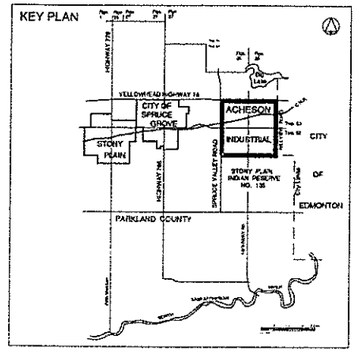
0 200 400 800m

2.4

PARKLAND COUNTY

ACHESON INDUSTRIAL AREA STRUCTURE PLAN

KEY PLAN



WAGNER NATURAL AREA

RGE. 26 W4M

RGE 25 W4M

HIGHWAY 16

STAGE 1A

TOWNSHIP ROAD 534

RANGE ROAD

HIGHWAY 60

OSBORNE ACRES

NORTHVIEW ROAD

SPRUCE VALLEY ROAD

C.N.R.

EXISTING INFILL

ACHESON DRIVE

SHERWIN INDUSTRIAL PARK

ELLIS INDUSTRIAL PARK

INDUSTRIAL/ COMMERCIAL

STAGE 2

BEVINGTON ROAD (RANGE ROAD 262)

HILLVIEW ROAD

C.N.R.

CITY

OF

EDMONTON

HIGHWAY 16A

TWP. 53

TWP. 52

STAGE 1B

STAGE 1C

STAGE 3

STAGE 4

RANCH GOLF & COUNTRY CLUB

SPRUCE VALLEY ROAD (RANGE ROAD 265)

RANGE ROAD 264

HIGHWAY 60 (RANGE ROAD 263)

PINGREECK ROAD (RANGE ROAD 262)

HILLVIEW ROAD (RANGE ROAD 261)

CITY LIMITS

79th AVENUE (TOWNSHIP ROAD 524)

STONY PLAIN INDIAN RESERVE NO. 135

LEGEND:

- RESIDENTIAL
- COMMERCIAL / INDUSTRIAL
- COMMERCIAL / INDUSTRIAL OVERLAY
- OPEN AREA / AGRICULTURAL
- RECREATIONAL

LAND USE CONCEPT

N

0 200 400 600m

200

4.1

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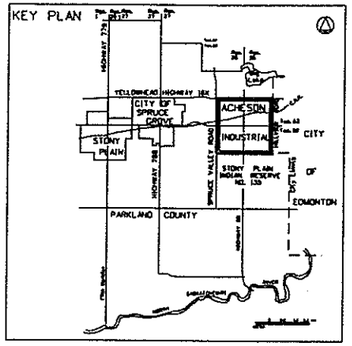
PARKLAND COUNTY

ACHESON INDUSTRIAL AREA STRUCTURE PLAN

KEY PLAN



RGE. 26 W4M
RGE 25 W4M
HIGHWAY 16
WAGNER NATURAL AREA
TOWNSHIP ROAD 531
RANGE ROAD 264
HIGHWAY 60
NORTHVIEW ROAD
OSBORNE ACRES
SPRUCE VALLEY ROAD
PROPOSED RAILWAY GRADE SEPARATION
BEVINGTON ROAD (RANGE ROAD 262)
FINAL ALIGNMENT TO BE DETERMINED
HILLVIEW ROAD
C.N.R.
CITY
ACHESON DRIVE
SHERWIN INDUSTRIAL PARK
ELLIS INDUSTRIAL
EXISTING INTERCHANGE TO BE UPGRADED
HIGHWAY 16
TWP. 53
TWP. 52
OF
EDMONTON
SPRUCE VALLEY ROAD (RANGE ROAD 265)
RANGE ROAD 264
PINCHECK ROAD (RANGE ROAD 262)
CITY LIMITS HILLVIEW ROAD (RANGE ROAD 261)
79th AVENUE (TOWNSHIP ROAD 524)
STONY PLAIN INDIAN RESERVE NO. 135

LEGEND:

- INTERCHANGE - FUTURE
- INTERCHANGE - POTENTIAL/POSSIBLE
- AT GRADE INTERSECTION
- AT GRADE INTERSECTION TO BE REMOVED
- EXISTING ROAD
- PROPOSED FUTURE ROAD
- TWINNING OF HIGHWAY 60
- PROPOSED ROAD CLOSURE

TRANSPORTATION

0 200 400 600m

4.2

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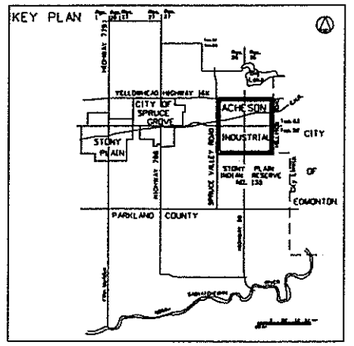
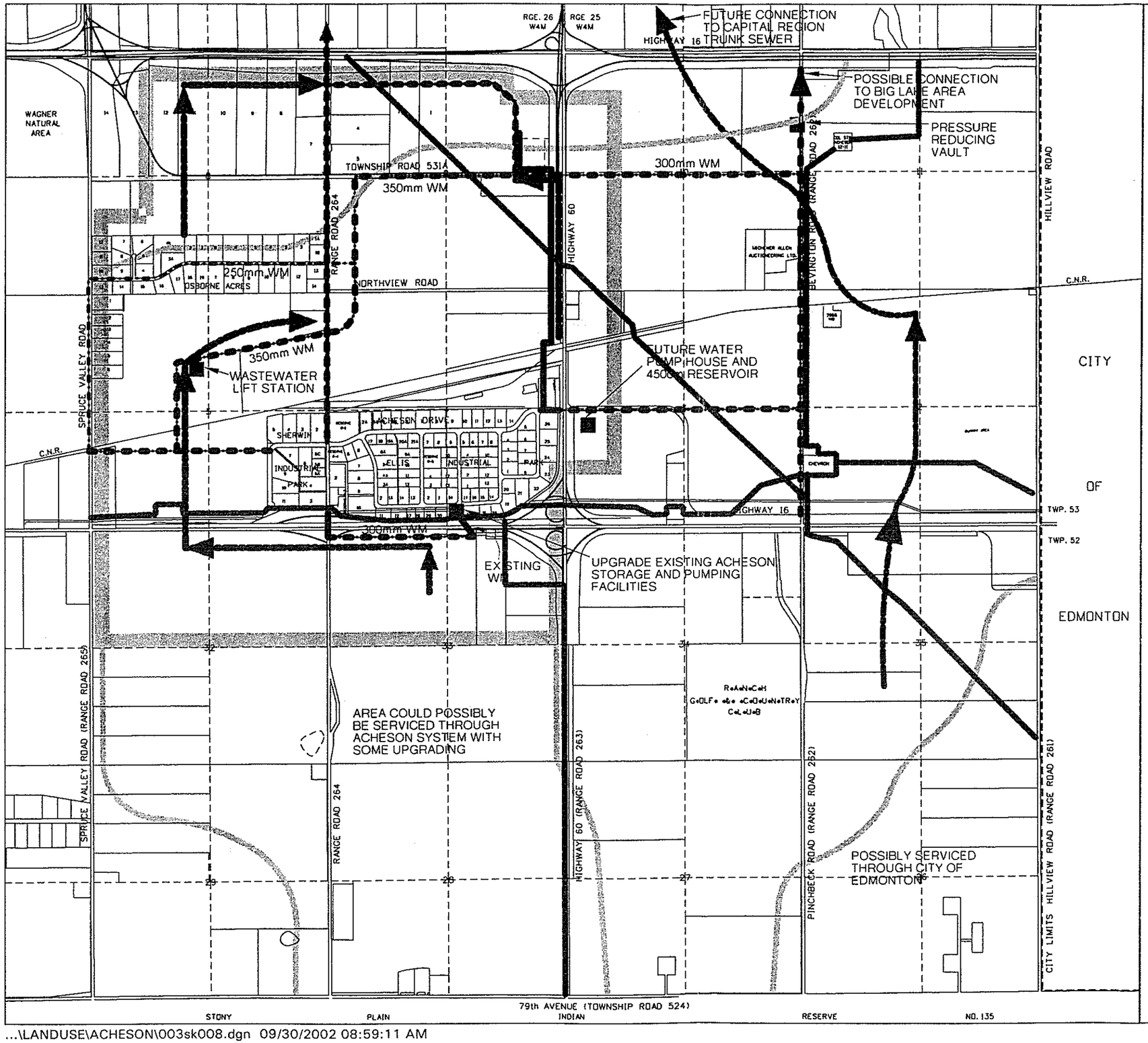
PARKLAND COUNTY

ACHESON INDUSTRIAL AREA STRUCTURE PLAN





LEGEND:

- EXISTING HIGH PRESSURE GAS LINE
- EXISTING ACHESON TRUNK SEWER
- POSSIBLE FUTURE TRUNK SEWER
- EXISTING ACHESON WATERMAIN
- POSSIBLE FUTURE WATERMAIN
- WATER PRESSURE ZONE LIMIT
- EXISTING ACHESON WASTEWATER SERVICE AREA
- POTENTIAL WASTEWATER SERVICE AREA

UTILITY SERVICING CONCEPTS

0 200 400 600m

4.3

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