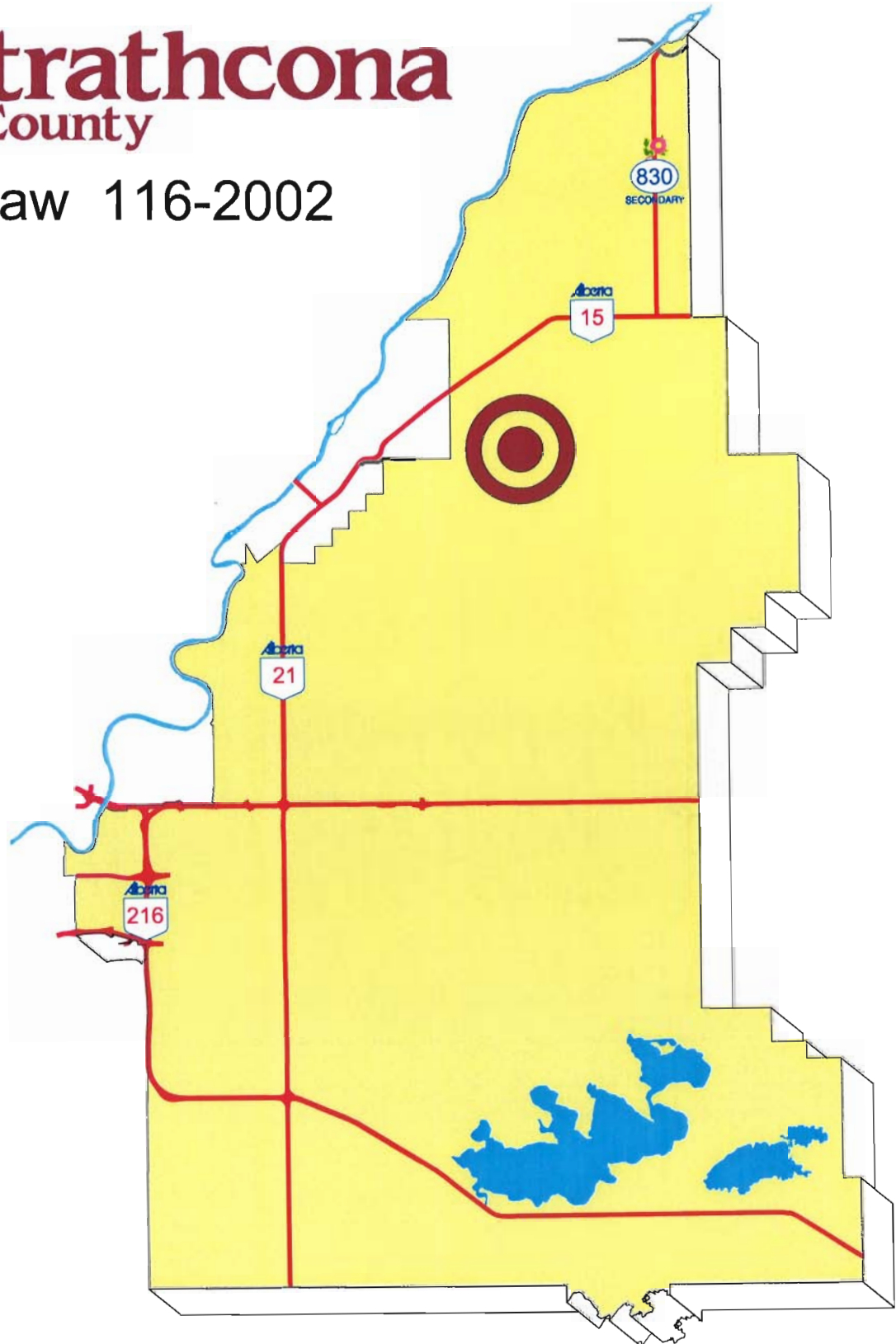


Strathcona County

Bylaw 116-2002



Hamlet of Josephburg Area Structure Plan

D41H0037

September, 2002

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PART I
CONCEPT AND POLICIES

1.0 INTRODUCTION

The Josephburg Area Structure Plan is a two-part document including: 1) a future development concept plan and policy statements, as well as a 2) background report. The concept was developed based on the technical findings of the background report to this document, and input received through the public consultation process with local residents and Steering Committee. The goals in Section 2.0 of this document are based on desired ideals for the Hamlet. The policy statements in Section 3.0 provide specific direction toward the potential realization of the Plan's goals. The future Development Concept illustrates the types of land use activities within the community and their location.

1.1 Purpose of the Plan

The Strathcona County Municipal Development Plan requires that an Area Structure Plan be prepared for all Hamlets. The primary purpose of this Area Structure Plan is to identify a framework for the future development and growth within the Josephburg plan area. The general direction for growth is established through a development concept plan which identifies the proposed land use pattern, the general location of major transportation routes, water/sewer lines, utilities, the sequence of development within the plan area and projected population densities.

Josephburg's geographic location within the northern part of the County and its proximity to employment opportunities in the Heartland make it potentially very attractive to development. It is important, therefore, that the Hamlet have a policy framework in place so that it is able to respond to future subdivision and development proposals in an orderly and economic manner over the next 20 to 25 years.

1.2 Existing County Land Use Policy

Municipal Development Plan – The Strathcona County Municipal Development Plan (MDP), sets out guidelines for orderly growth in the County. The MDP designates Josephburg as a growth Hamlet where select municipal and institutional (i.e. educational) services and facilities, and highway commercial uses may be included. The Hamlet Policy Area of the MDP also requires that Hamlets are appropriately planned rural communities with residential, commercial, industrial and other support uses with a high level of water and sewer services. It is intended that Josephburg will continue to perform its traditional role as a residential, farm service and retirement centre as well as a service centre for the northern part of the County.

Land Use Bylaw – Lands within the Hamlet boundary are currently distriected RH – Hamlet District which provides for residential development and a wide range of discretionary uses which are appropriate within a Hamlet. The remaining lands within the plan area are predominantly AG – Agriculture: General with the exception of a lagoon site and former land fill site that is located on the west side of the plan area and is distriected PU Utilities District. The airport lands located in N ½ 5-55-21-4 are distriected as A Airport District as shown on Figure 5.0 in the background report.

2.0 GOALS OF THE AREA STRUCTURE PLAN

The goals of the Area Structure Plan incorporate County policies, site influences, as well as the views of the residents of Josephburg as expressed through the public participation process. These goals reflect a wide range of land use, social, community and environmental issues and opportunities. Policy direction is guided by the spirit and direction expressed in the following goals:

1. to retain the rural character and ambience of the traditional community;
2. to encourage interconnectivity between existing and new areas within the plan area;
3. to encourage development in locations and at densities which can be efficiently and economically serviced;
4. to provide the residents of Josephburg with a formal and effective means of participating in the future development of the Hamlet through the Area Structure Plan process;
5. to provide for a proper transition of land uses between existing and future land uses; and
6. to maintain a balanced land use plan that will allow for growth in residential, commercial, light industrial, institutional and recreational activities with the minimum of land use conflicts.

3.0 Development Concept

The development concept for Josephsburg is guided by the goals of the Area Structure Plan as identified in Section 2.0 of this Plan. The development concept plan took into consideration the physical opportunities and constraints to development, local input and the policies of the Municipal Development Plan. Detailed consideration was also given to the efficiency of servicing, growth potential and sound planning and urban design principles.

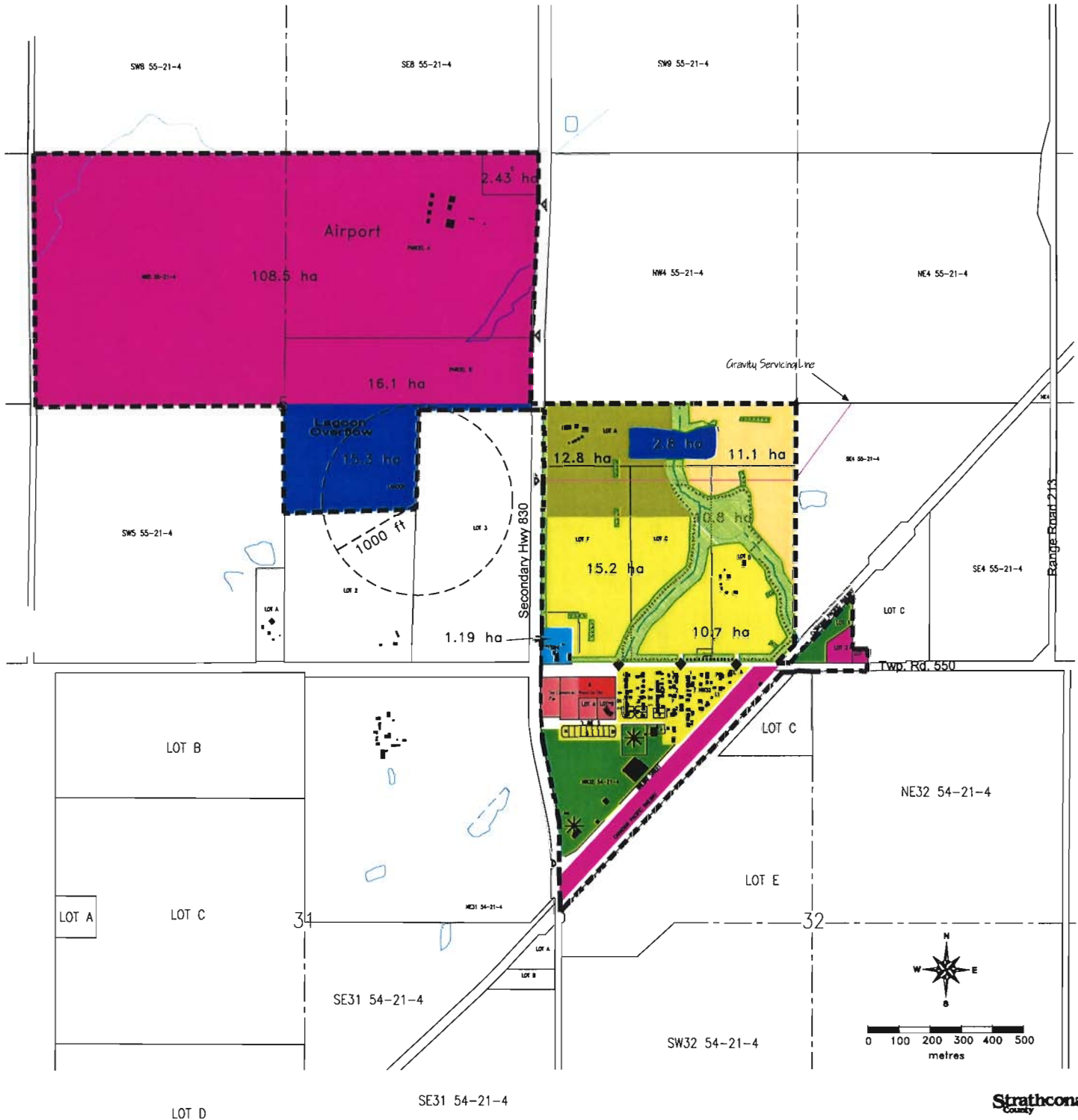
Input from the residents of Josephsburg and surrounding area indicated a preference for managed growth in order to maintain the rural character of the Hamlet. The majority of the residents preferred the larger lot sizes, which are indicative of a smaller municipality.

The Development Concept Plan for Josephsburg is illustrated in Figure 3.0. The concept provides for a variety of lot sizes which represents a sensitive transition between the Hamlets current development and future development areas. The various residential areas are separated by open space areas which provides for a natural physical separation between the various lot sizes. A Manufactured Housing subdivision development is also provided which is intended to provide an alternative and affordable form of housing.

The Josephsburg Area Structure Plan is visually and physically fragmented by Secondary Highway 830 which is under the jurisdiction of Alberta Transportation. Because of the potential traffic volumes on SH 830, all the residential development is identified on the east side of SH 830 which would eliminate pedestrian traffic crossing this road to get to the central part of the Hamlet.

Initially two alternative sites have been identified for an elementary school site, however the school boards have indicated that new schools would not be warranted for Josephsburg and the students can be accommodated at other schools.

Development staging is efficient and cost-effective in terms of servicing. The development concept for Josephsburg provides for approximately 820 additional dwelling units within the plan area and an estimated population of 2419 persons which includes the existing 149 persons currently living in Josephsburg. The following sections identify in greater detail, the major land uses proposed within the development concept plan and their relationship to each other.



Strathcona
County

Legend

- Commercial
- Medium Density Housing
- Single Family Residential
- Suburban Estates
- Manufactured Housing
- Institutional
- Open Space/Recreational
- Business Service
- Public Utility
- ◆ All Directional Access
- ◆ "T" Intersection
- Bicycle/Walking Path
- * Possible Elementary School Location

--- Area Structure Plan Boundary

Hamlet of Josephburg Area Structure Plan

Figure 3.0 - Development Concept

Drawn by: P. Tsoukalas	Date: 10/09/02	Scale: as noted	DWG. NO.
Revised By: XX	Revision Date: dd/mm/yy	Revision No.: 9	D41H0040
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3.1 Residential Land Use

The distribution of residential land uses is illustrated in Table 3.0. The plan provides for a variety of lot sizes to ensure a sensitive transition between the Hamlets' more intensive urban residential area and the nearby proposed residential land uses. The proposed land use transition also maintains the semi-rural character of the plan area. The Josephburg area will accommodate three forms of single detached residential housing and a site for medium density seniors housing which will be located within the existing Hamlet core. The three forms of single detached residential housing include single family residential, suburban estate residential consisting of 1/3 acre lots, and a manufactured housing subdivision. The housing forms proposed provide diversity in lot sizes and offer a residential market choice within the plan area. In total, the gross developable residential area comprises approximately 41.93 ha (103.6) of land.

Single Family Residential

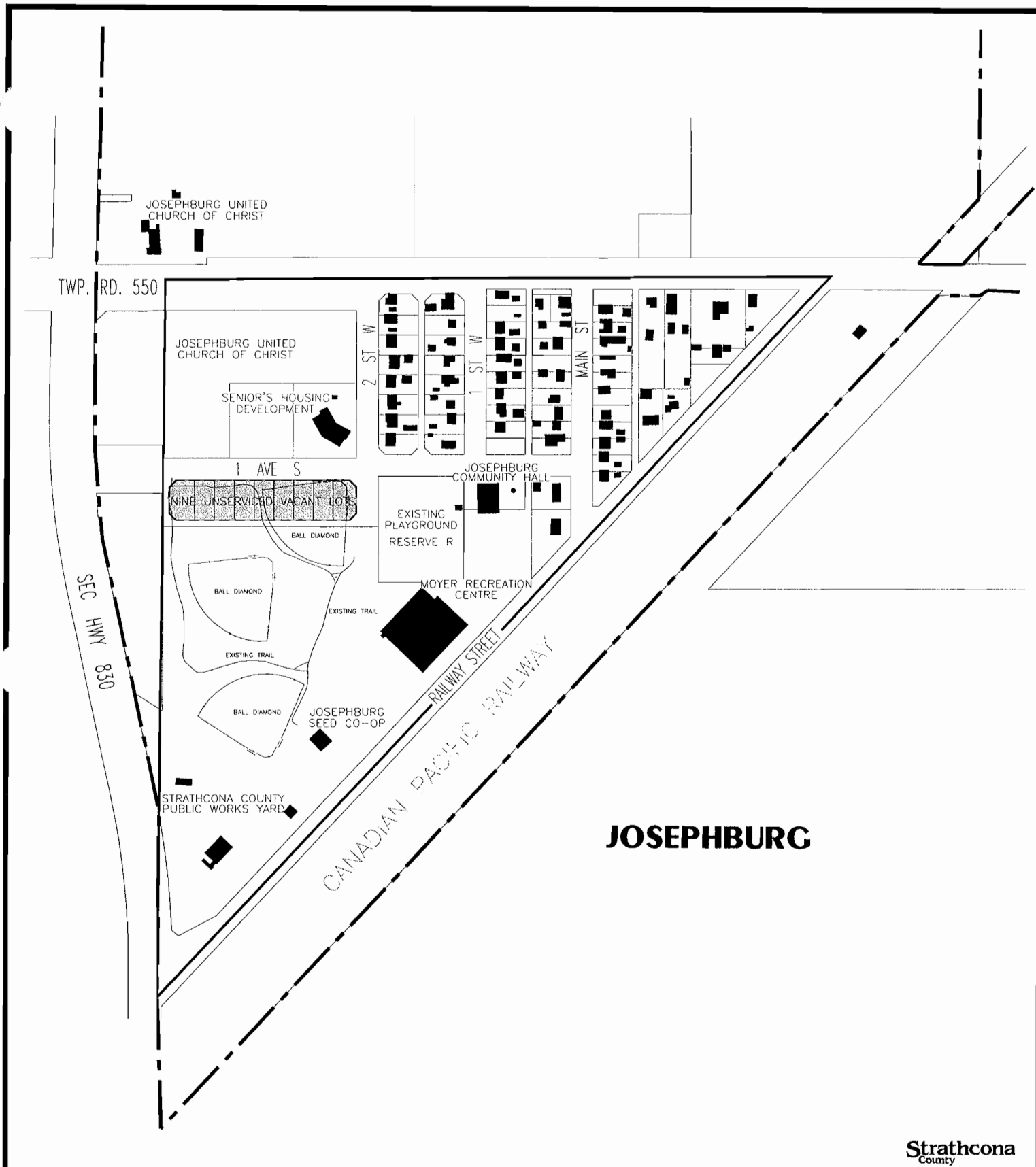
The single family residential area is located north of the existing Hamlet core in the SW4-55-21-W4M. The area in the central portion of the residential area contains a lower lying area that will be developed for park and pedestrian circulation purposes. This will provide an aesthetically pleasing residential neighbourhood with walkout basements backing onto the park area. These lands can be easily serviced with municipal services and will have good access from Township Road 550 and Secondary Highway 830. The area designated for single family residential development encompasses approximately 25.9 ha (64.0 acres) and will accommodate approximately 414 dwelling units when fully developed.

There are nine existing residential lots which are located within the existing Hamlet as shown on Figure 3.1. The lots are currently 18.3m (60') in frontage and 36.6m (120') in depth. It is intended to replot these 9 existing lots into 11 residential lots in order to make the lots more affordable. These lots are currently owned by Strathcona County and have been registered in 1965 but never developed. There is an existing ball diamond developed on some of the existing lots and a beautiful stand of spruce trees adjacent to the south boundary of 1st Avenue S. It is proposed to relocate the ball diamond and provide municipal services to these lots. In order to preserve the trees, it is proposed to have no front driveways and develop the rear lane for rear access to the lots. It is intended to sell the lots to prospective purchasers and implement a one year building time commitment. The revenue generated from the sale of these lots, less the servicing costs, may be used for the relocation costs of the existing ball diamond and redevelopment of the recreation area.

TABLE 3.0 LAND USE DISTRIBUTION

Land Use Type	Parcel Size	Gross Area Ha(Ac's)	Roads: Ha (Ac's)	Net Area Ha (Ac's)	Dwelling Units	Population
Single Family Detached	(500m ²)	25.9 (64.0)	5.18 (12.8)	20.7 (51.2)	414	1200
11 undeveloped lots (SF)	(669m ²)	.62 (1.53)		.62 (1.53)	11	32
Suburban Estate	(1,250m ²)	11.1 (27.4)	1.8 (4.4)	9.3 (23.0)	74	214
Manufactured Housing	(350m ²)	12.8 (31.6)	3.5 (8.6)	9.3 (23.0)	265	768
Medium Seniors Housing		1.99 (4.91)			56	56
Residential/ Existing Hamlet		4.69 (11.59)				149
Residential Subtotals		57.1 (141.0)	10.48 (25.8)	41.93 (103.64)	820	2419
Commercial		.79 (1.95)				
Institutional (churches)						
Recreation complex inclusive of sports fields, playground and parks						
· Existing		10.5 (25.9)				
· Proposed		10.8 (26.6)				
Business Service		135.09 (333.80)				
Public Utility		18.1 (44.7)				

- Projected population based on 2.9 persons per single detached dwelling unit.
- Medium density seniors housing will generally accommodate 15 dwelling units per acre and shall be of a form that is compatible with the adjacent dwellings.
- Suburban estate areas are comprised of 0.3 acre lots pursuant to Figure 3.0.



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- Existing Hamlet Boundary
- - - AREA STRUCTURE PLAN Boundary

HAMLET OF JOSEPHBURG AREA STRUCTURE PLAN

FIGURE 3.1 - EXISTING BUILDINGS

Drawn by: D. Leckie A.Sc.T.	Date: 26/05/97	Scale: as noted	DWG. NO.
Revised By: PPT	Revision Date: 11/09/02	Revision No.: 1	D41H0034
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Suburban Estate Residential

A suburban estate residential area is located in the north east portion of the Josephsburg plan area. The suburban estate residential lots will consist of 1/3 acre lots and will be separated from the other residential areas by a park area. This will provide an aesthetically pleasing residential neighbourhood with walkout basements backing onto the park area. These lands can be easily serviced with municipal services and will have good access to Township Road 550. The area designated for suburban estate residential development encompasses approximately 11.1 ha (27.4 acres) and will accommodate approximately 74 dwelling units. In the long term, the SE 4-55-21-W4 may be considered for future suburban estate residential development. An amendment to the ASP boundary will be required prior to development occurring on these lands.

Manufactured Housing Subdivision

The Manufactured Housing Subdivision is located north of the single family residential area in the SW 4-55-21-4. It is located adjacent to SH 830 and will be screened from SH 830 with a berm and fence. The majority of the site is located within the gravity sewer servicing line of the plan area and some fill will be required to develop the most northerly portion. Double wide, modular homes and single family detached dwellings will only be permitted in this area which will consist of a minimum parcel size of 350m² (3767.5 square feet). No single wide manufactured homes will be allowed. Architectural controls may also be implemented to create a pleasing subdivision. The area designated for the Manufactured Housing Subdivision encompasses approximately 12.8 ha (31.6 acres) and will accommodate approximately 265 dwelling units.

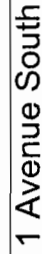
Medium Density Seniors Housing

Medium Density Seniors Housing with supporting commercial and an associated amenity area is proposed within the existing Hamlet core immediately west of the existing seniors housing complex and within close proximity to the Moyer Recreation Centre as shown on Figure 3.2. The area proposed for seniors housing is 1.99 ha (4.91 acres) in size. Medium Density Seniors Housing will generally accommodate 15 dwelling units per acre and shall be in various forms which is compatible with the adjacent dwellings. The various forms of housing as proposed on Figure 3.2 would consist of a medium care facility, ground level townhouse unit and a commercial/residential mixed use. The area designated for Medium Density Seniors Housing development encompasses 1.99 ha (4.91 acres) of land resulting in approximately 56 housing units.

Staging

The development concept supports the infilling of vacant lots within the Hamlet boundary to meet the Hamlet's short term housing needs. There are approximately three vacant privately owned lots and nine unserviced vacant lots that are owned by Strathcona County. The nine vacant lots which will be replotted into 11 lots and owned by Strathcona County are easily serviced with municipal sewer and water. Beyond the development of these lots, development is expected to proceed to the north and then to the east of Secondary Highway 830 as shown on the staging plan (Figure 3.3). The estimated costs to service the residential lots within the Area Structure Plan area is shown on appendix II and costs to service the 11 existing vacant lots is shown in appendix III.

The land distribution for the plan area is summarized in Table 3.0. Gross developable area is based on the assumption that 25% of the parcel will be consumed by roads, public utility lots and municipal reserve requirements. However, an example of a detailed subdivision design in the new growth areas, as shown on Figure 3.4, was prepared which calculates the roadway areas and municipal reserve areas that will be dedicated. The number of dwelling units was calculated based on the net areas of each residential node and divided by the area of the minimum parcel size for each residential district.



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- Fountain
Bench
Bike path/walking trail
Existing buildings
Patio/sidewalk
In / Right Out

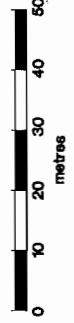
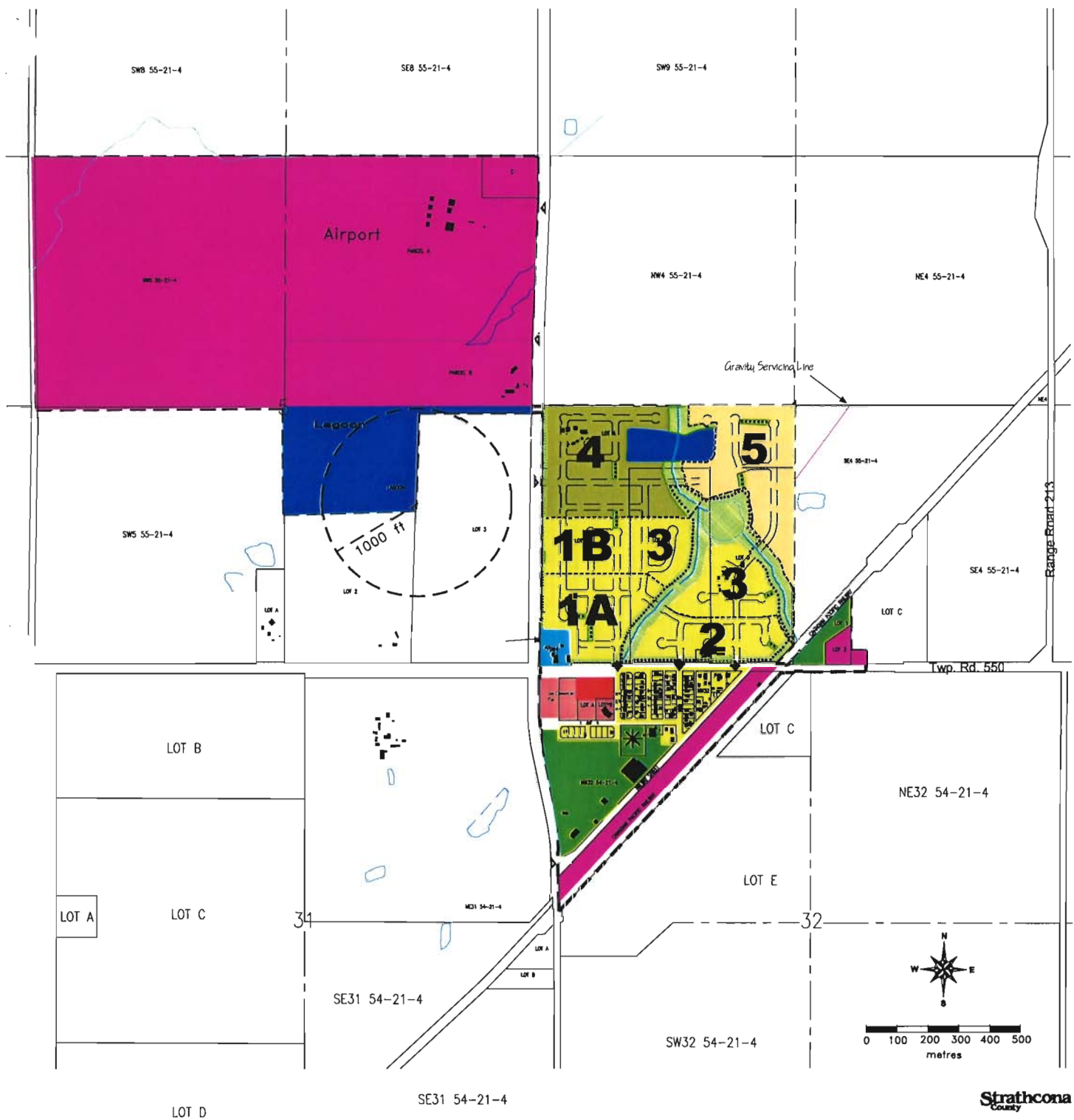


Figure 3.2 - Commercial/Mixed Use Site Plan

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Revised by:	Revision Date:	Revision No:	D' 0026F
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Legend

- Commercial
- Medium Density Housing
- Single Family Residential
- Suburban Estates
- Manufactured Housing
- Institutional
- Open Space/Recreational
- Business Service
- Public Utility
- ◆ All Directional Access
- ◆ "T" Intersection
- Bicycle/Walking Path
- * Possible Elementary School Location

Hamlet of Josephburg Area Structure Plan

Figure 3.3 - Staging Plan

Drawn by: M. Clarke

Date: 02/20/01

Scale: as noted

DWG. NO.

Revised By: PPT

Revision Date: 11/09/02

Revision No.: 8

D41H0036

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Residential Land Use Policies

1. Residential development shall be comprised of single family residential, suburban estate residential, manufactured housing, and medium density seniors housing as illustrated in Figure 3.0: Development Concept. The areas and minimum lot size is shown in Table 3.0: Land Use Distribution.
2. Infilling of vacant lots in existing developed areas is encouraged to meet the Hamlet's short term housing needs.
3. The 9 existing residential lots which will be replotted to create 11 lots and owned by Strathcona County within the Hamlet should be serviced and sold to individual owners. No front driveways will be allowed in order to preserve the trees adjacent to the north boundary and the laneway will be paved to provide for rear access. A one-year building time commitment should be enforced.
4. The manufactured housing subdivision shall consist of double wide manufactured homes, modular homes or single family detached dwellings. No single wide mobile homes will be permitted. Architectural controls may also be considered for this development.
5. The medium density seniors housing may consist of a medium care facility, ground level townhouse units and residential/commercial mixed use area. The development should consider such amenities as a community garden, fountains, park benches, and bike paths/walking trails.
6. Future residential development may be considered for the lands located in the SE 4-55-21-W4 with careful consideration being given to buffering from the CPR line. An amendment to the ASP boundary will be required if development is contemplated of these lands.

3.2 Commercial

The development concept identifies a .79 ha (1.95 acre) future commercial site at the southwest corner of Township Road 550 and 2nd Street West as shown on Figure 3.2. The site is well positioned to address the convenience and service needs of local residents as well as the travelling public. While the proximity to Fort Saskatchewan will lessen the ultimate commercial demand, residential growth will be the primary catalyst and commercial outlets will develop to serve the added population. The most appropriate types of services would include:

- grocery/convenience store
- café
- service station/repair shop
- beauty/barber shop
- hardware

A 0.4 ha (1.0 acre) site could likely accommodate the commercial needs identified; however, additional space in the same vicinity should be reserved in the event other uses materialize such as a medical clinic, doctor's office, library or civic office. This area could be developed as a mixed use area which would include seniors housing and commercial.

Commercial Land Use Policies

1. A .79 ha (1.95 acre) site shall be provided at the southwest corner of Township Road 550 and 2nd Street West.
2. Supporting commercial uses shall be developed in conjunction with the medium density seniors' housing development located on the same property.

3.3 Institutional Land Use

Institutional lands within the Plan Area include uses such as fire hall, a school, churches, and a health related facility.

The Heartland Fire hall has been completed in 2001 and is located 4.8 km north of Josephburg on SH 830. It is a major component of the Emergency Measures Program for the Heartland and it will also help protect Josephburg in an event of an emergency situation. Heartland Hall will be staffed 24 hours a day by a five member crew, all with fire and emergency medical service training.

Two alternative sites, if required, are proposed for an elementary school as shown on Figure 3.0. The first site is located directly north of the Moyer Recreation Centre where the second proposed site is proposed on the Public Works Yard site. Each area will consist of at least .8 ha (2.0 acre) in size and both proposed parcels are conveniently located in close proximity to the existing recreational facilities. If the northerly site is preferred, the existing playground located on Reserve Lot R will be relocated to the Public Works Yard Site when they are relocated. A projection of student generation for various population levels is illustrated in Appendix 1. It was recommended previously that a minimum student population of 350 students would be required to warrant the construction of a school. The maximum number of students generated from the concept plan would consist of 275 students in total which would include both public and separate students.

One of the most prominent existing land uses in Josephburg is the Josephburg United Church of Christ which is located in the northeast corner of the intersection of SH 830 and Township Road 550. The Church has been designated as a historic site by the Province and adequate measures should be taken to preserve the integrity of the Church as a historic site. Should an additional church be required in Josephburg to accommodate the projected population, a site within any of the residential areas or the Public Works site would be appropriate if a proposed school is not located there or required.

It is not anticipated that a health related facility would be required in Josephburg in view of the closeness to the City of Fort Saskatchewan. However, a medical office may be permitted within the commercial area of the Plan.

Institutional Land Use Policies

1. An elementary school site of approximately .8 ha (2.0 acres), as shown on figure 3.0, shall be considered by the County for the public/private school board, should future population warrant construction of a school.
2. Adequate measures shall be taken to preserve the integrity of the Josephburg United Church of Christ as an historic site.
3. An additional church site, if required, may be permitted within any of the residential areas or the Public Works site if a proposed school is not located there or required.
4. The Heartland Fire Hall will provide the necessary emergency services for Josephburg.

3.4 Recreation/Open Space System

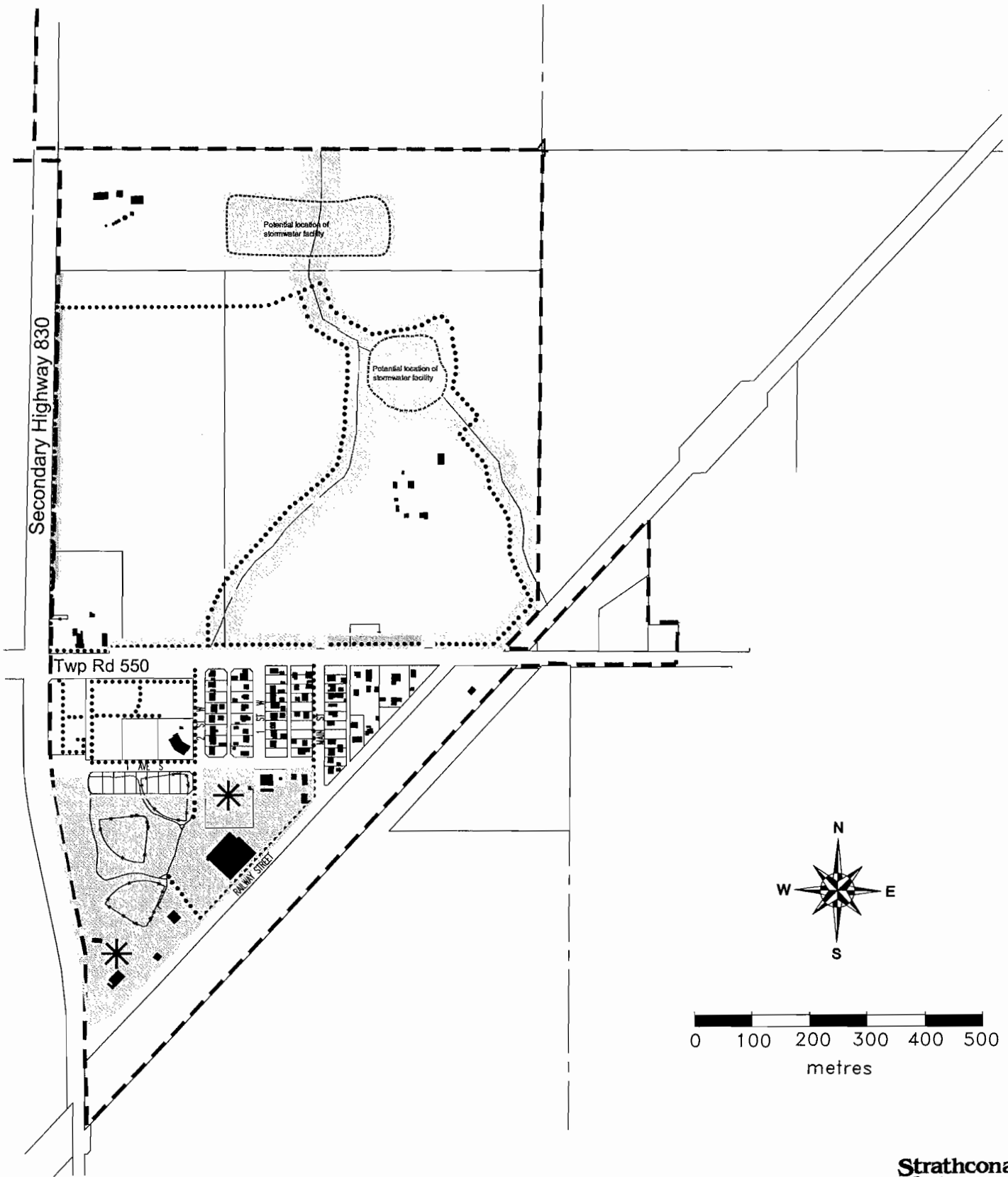
The recreational/open space system within the Josephburg Plan Area is comprised of both structured play fields and natural open space represented by storm water management facilities and future municipal or environmental dedication. Much of the developed open space within the hamlet is comprised of structured recreation including ball diamonds, and existing playground which account for approximately 10.5 ha (25.9 acres) of the entire Plan Area. Few passive recreational facilities have been developed within the Plan Area, although many opportunities exist for such development through the naturally occurring open space system.

The open space system occupies a vital position in the design and development of the Plan Area and enhances the overall recreational and cultural experience within the community. The Plan supports the development of passive recreational facilities utilizing the storm water management facilities to create a pedestrian circulation network as shown on Figure 3.5. This open space corridor provides an opportunity to effectively integrate the Hamlet, existing recreation facilities and future residential areas. The open space network will consist of a wood chip or gravel trail system that will be designed to provide pedestrian, cycling and cross-country ski access to all areas of the community. The land for trail or open space purposes will be acquired through the provision of 10% municipal reserve and environmental reserve dedication at the time of subdivision. The pedestrian trail network system is illustrated on Figure 3.5.

The existing recreation area consists of three well manicured ball diamonds which are located west of the Moyer Recreation Centre. One of the ball diamonds will be required to be removed since it is located on the existing vacant lots which are proposed to be developed for residential purposes. Since the ball diamonds are not utilized as extensively as before, it is proposed to retain two ball diamonds and develop two soccer fields on the site as shown on Figure 3.6.





Recreation/Open Space System Policies

1. The acquisition of land for trail or open space purposes is to be achieved through the 10% dedication of municipal reserves and environmental reserve dedication where applicable at the time of subdivision.
2. The Plan supports the development of passive recreational facilities utilizing storm water management facilities and future municipal/environmental reserves to create a pedestrian circulation network.
3. To enhance inter-connectivity within the Plan Area, the development of a trail system as illustrated in Figure 3.5: Open Space System will be encouraged. The trail system shall be developed as funding becomes available through levies, development agreements, donations or available funding.
4. The Plan supports the redevelopment of the existing ball diamonds site to create two soccer fields and retaining two ball diamonds.



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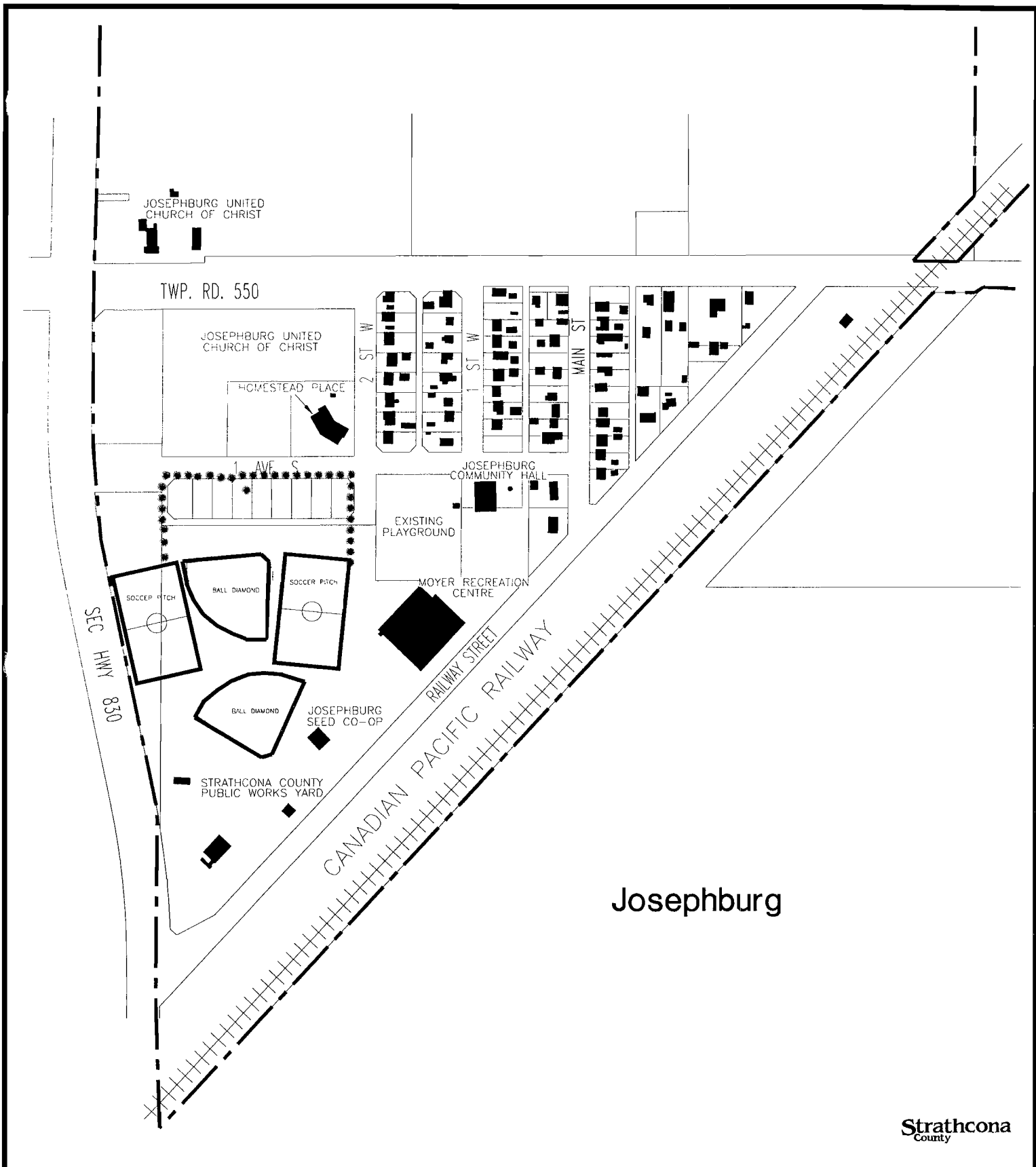
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-  Potential location of stormwater facility
-  Bicycle/Walking Path
-  Sports fields/Playground/Open Space
-  Possible school location

Hamlet of Josephburg Area Structure Plan

Figure 3.5 - Open Space System



Drawn by: D. Leckie A.Sc.T.	Date: 26/05/97	Scale: as noted	DWG. NO.
Revised By: PPT	Revision Date: 11/09/02	Revision No.:	D41H0032
Planning & Development Services			



Josephburg

Strathcona
County

Legend

-  Area Structure Plan Boundary
-  Tree

Hamlet of Josephburg Area Structure Plan

Figure 3.6 - Recreation Area Modification Plan

Drawn by: P. Tsoukalas	Date: 13/07/01	Scale: as noted	DWG. NO.
Revised By:	Revision Date:	Revision No.:	D41H0033
Planning & Development Services			

3.5 Business Service

The business service area would include the airport lands and the CPR lands which are located within the Hamlet boundaries. The area encompasses a total of 114.62 ha (283.2 acres) in area.

The Strathcona County Airport is located approximately 1.6 km north of the present Hamlet. The airport has a terminal building, a maintenance shop and a radio controlled airport lighting. There are a number of hangars on the site which are leased out to individuals who store private planes on site. The airport is used primarily for recreational flying, a flying school and one charter service operates from the airport.

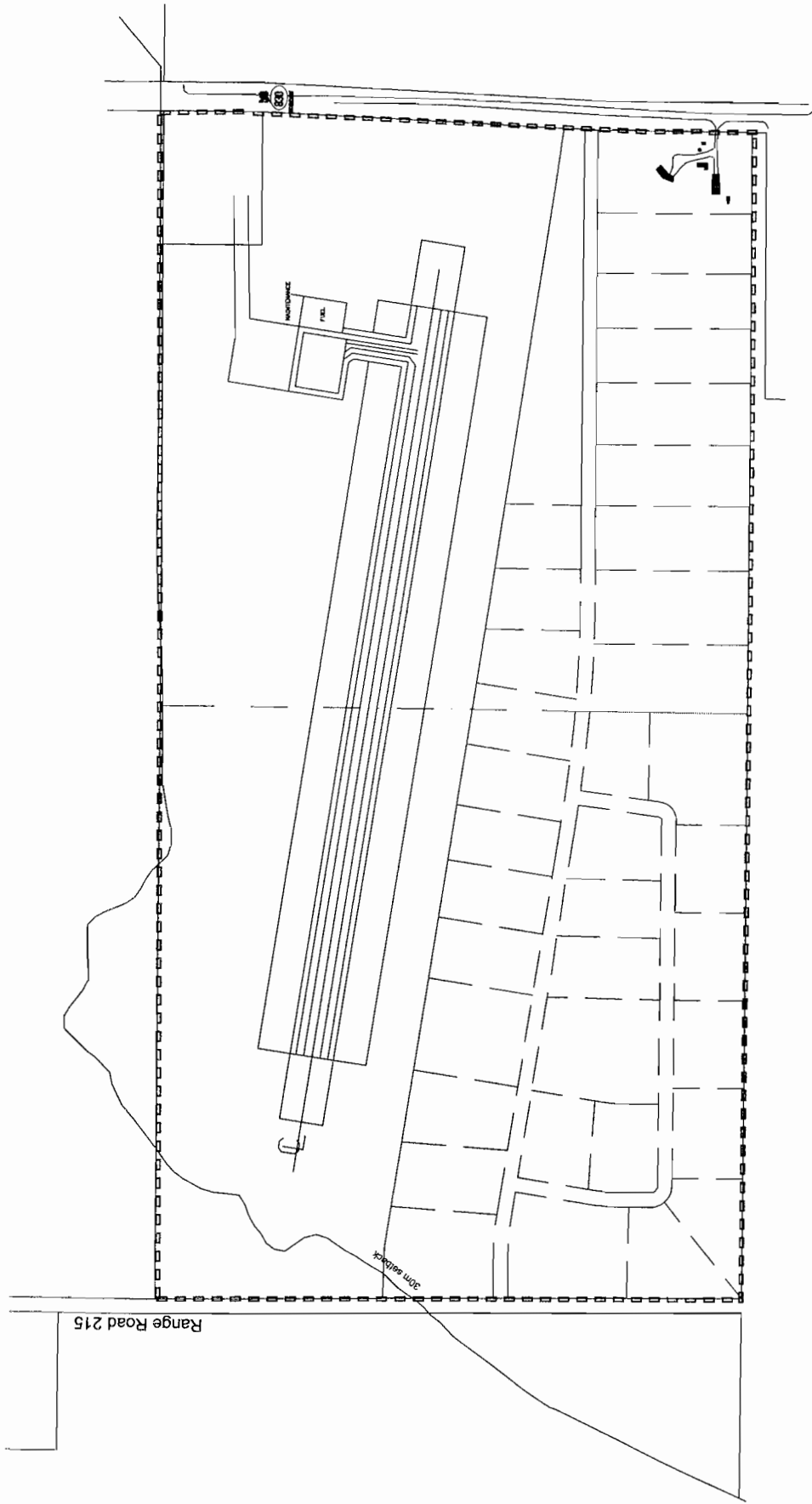
The airport contains an existing runway of approximately 914.4m (3,000 ft) and has the potential for a 1,524m (5,000 ft) runway which could accommodate commercial jets to land at this site if necessary. The Plan does not jeopardize the possible runway expansion or the integrity of the airport; however, funding and future expansion plans of the runway and facility is beyond the scope of this study. There is a large area south of the airport which is currently undeveloped and has tremendous opportunity to accommodate future compatible business service/light industrial development providing the height of buildings does not interfere with the existing airport and any potential future expansion plans of the airport. The height restrictions for any development in this area will be implemented by the Land Use Bylaw which districts this area as "A" Airport District.

A potential subdivision design has been prepared for this area south of the airport as illustrated in Figure 3.7. Some of this area consists of high water table and appropriate construction techniques such as slab on grade construction will be required. The types of uses anticipated for this area would include warehousing and storage, limited contractors, recycling depot and light industrial type of uses. All of these lands can be serviced with a low pressure sanitary sewer system and municipal water.

In addition, the CPR lands adjacent to the existing CPR main line within the Hamlet could accommodate similar type of development. A higher standard of development and landscaping is encouraged in this area because of the close proximity to existing residential development.

Business Service Policies

1. Non-offensive light service industrial/commercial uses intended to meet the service needs of northern Strathcona County shall be encouraged to locate on the surplus airport lands and CPR lands.



Strathcona
County

Hamlet of Josephburg Area Structure Plan

Figure 3.7 - Josephburg Airport Business Park Concept Plan



Legend

Josephburg Airport Boundary

Drawn by: M. Clarke	Date: 02/07/01	Scale: as noted	DWG. NO.
Revised by: M. Clarke	Revision Date:	Revision No.: 1	D41H0031
Planning & Development Services			

2. Business services uses with a higher standard of building and landscaping treatment and limited traffic shall be encouraged to locate on the CPR lands.
3. Any development within the airport lands shall strictly conform to maximum height restrictions as identified in the Land Use Bylaw 8-2001.

3.6 Transportation

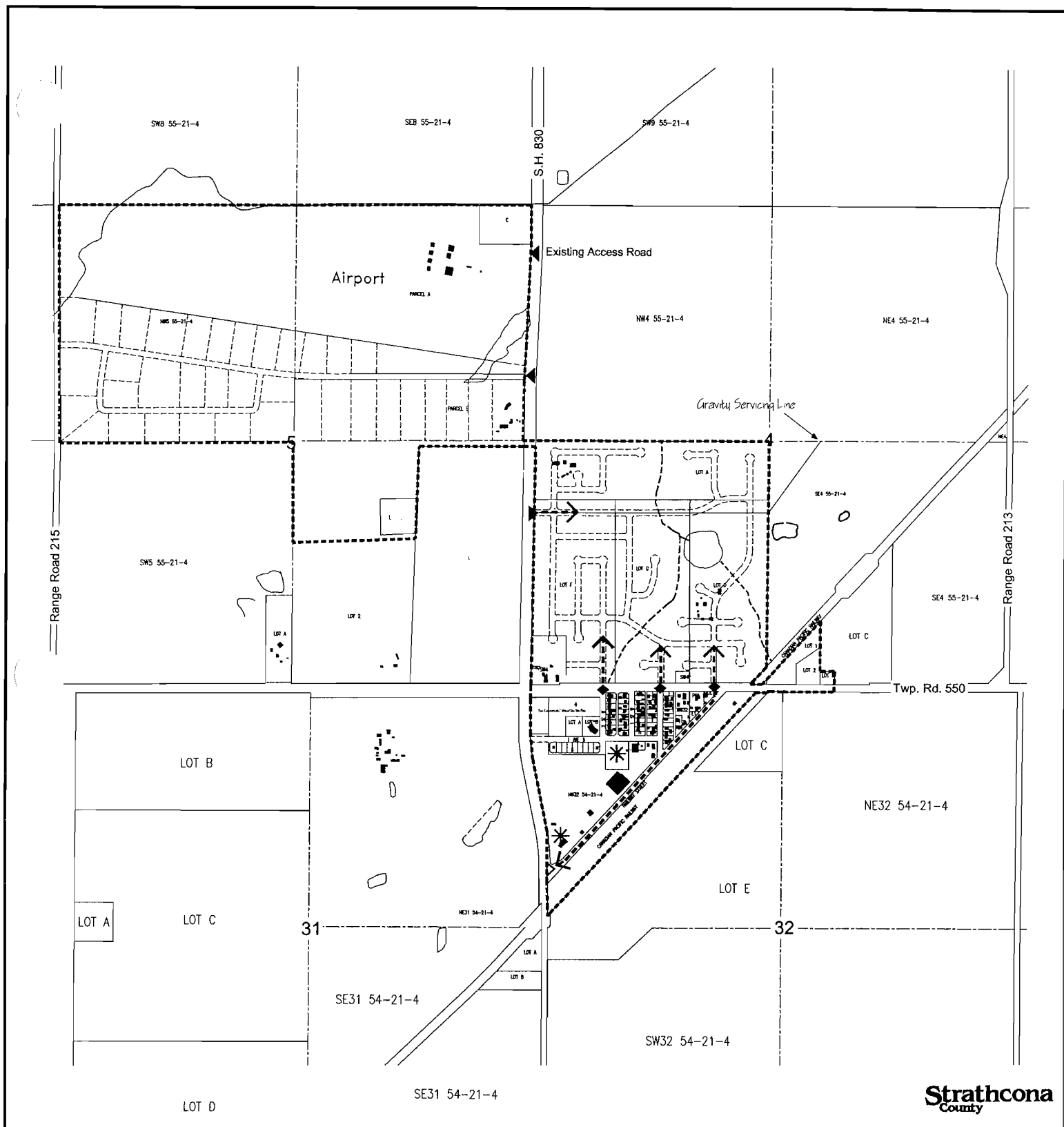
The proposed transportation circulation and access system for the Josephburg plan area is illustrated in figure 3.8: Transportation Network. The transportation network has been designed to address safety issues associated with access to and from Secondary Highway 830 and Township Road 550 and to enhance interconnectivity within the plan area. Alberta transportation will become the road authority for SH 830 effective September 1, 2001.

Four major accesses are proposed along SH 830 within the plan area as shown on figure 3.8. Alberta Transportation has approved these access locations which include four T-intersections. The plan proposes one access from SH 830 to the residential area, one access to the airport lands at the north and one access to the business park. It is proposed to retain the existing access at the south end of the area just north of the CPR railway line crossing. It is also proposed to provide a right in/right out access to the commercial site from Township Road 550.

A number of all directional accesses are proposed to Township Road 550 to accommodate the residential area north of Township Road 550. It is proposed that the existing access onto Township Road 550, just west of the CPR railway line, be relocated slightly to the west and a cross intersection be constructed, as shown on Figure 3.8.1. It is proposed to eliminate all the driveway accesses into Township Road 550, and implement a service road concept to address this issue. To accommodate the service road, road widening will be required from the properties to the north to reroute Township Road 550.

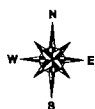
Figure 3.8.2 illustrates one alternative to providing access to the Josephburg United Church of Christ from an internal road and eliminating the existing access onto SH 830 and Township Road 550. In addition figure 3.8.3 illustrates an improvement of the internal road through the Moyer Recreation site.

In new residential areas County roadway standards require that a 30m(100ft) right-of-way be constructed for all new roadways in Hamlets with a rural road cross-section. The County may require a lesser right-of-way width, where the developer can demonstrate that equivalent engineering standards, drainage and carriage way objectives can be



Legend

- Possible collector road
- All directional intersection
- T- Intersection
- ASP Boundary

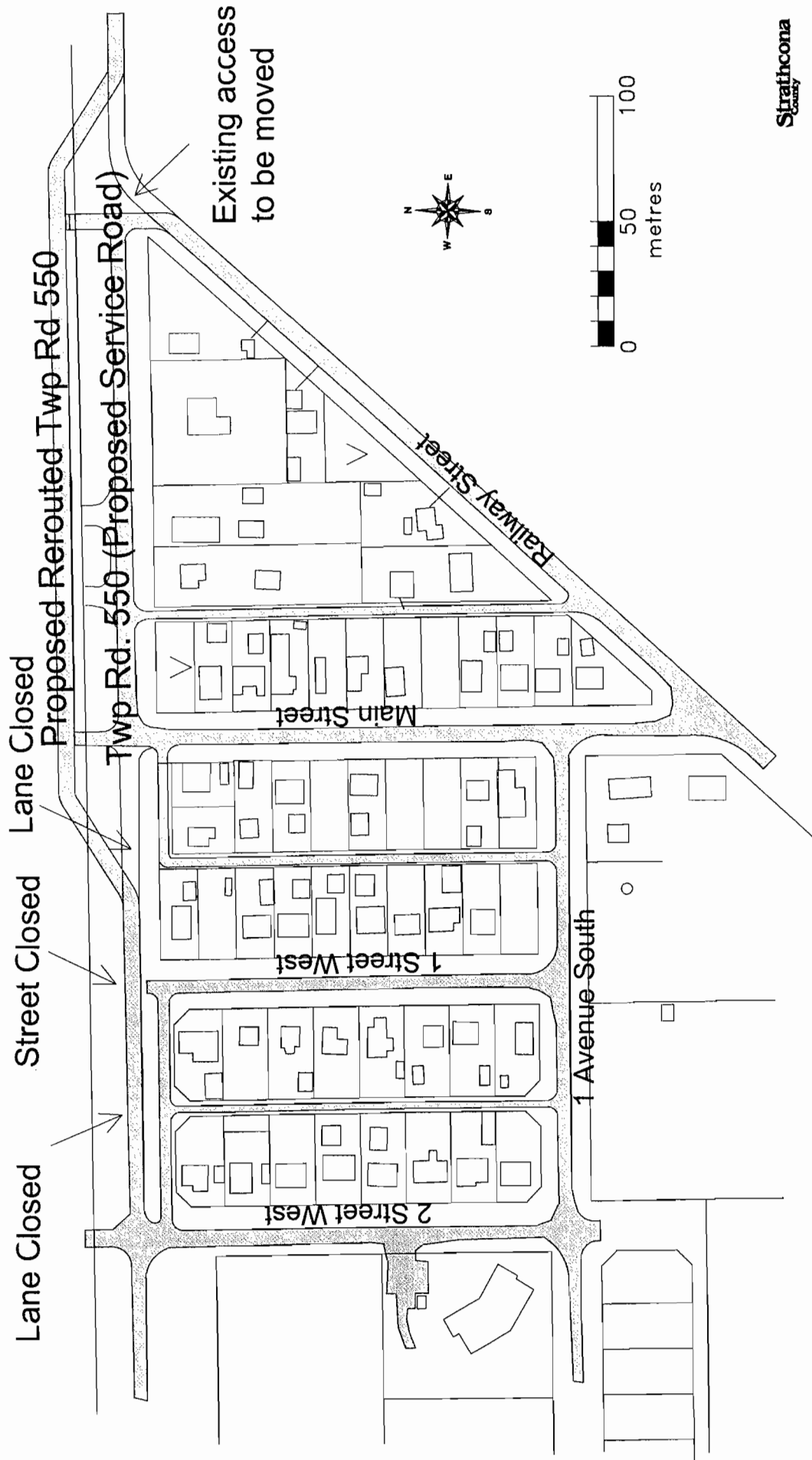


0 100 200 300 400 500
metres

Hamlet of Josephburg Area Structure Plan

Figure 3.8 - Transportation Network

Drawn by: M. Clarke	Date: 07/16/01	Scale: as noted	DWG. NO.
Revised By: PPT	Revision Date: 11/09/02	Revision No.: 1	D41H0035
Planning & Development Services			



Strathcona
County

Legend

Proposed Street and
Lane Connections

Hamlet of Josephburg Area Structure Plan

Figure 3.8.1 - Proposed Internal
Traffic Pattern Changes

Drawn by: M. Clarke	Date: 05/24/01	Scale: as noted	DWG. NO.
Revised by: M. Clarke	Revision Date: June 19, 2001	Revision No.: 2	D 0029
Planning & Development Services			

Secondary Highway 830

Lot E
Plan 892 0245

ATCO Regulating Station Site
(3014 KS)

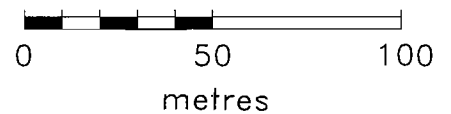
Access
to close

Utility R/W
(1311 EO)

Gas Pipeline R/W

Twp Rd 550

Access
to close



Strathcona
County

Legend



Josephburg United Church

Hamlet of Josephburg Area Structure Plan

Figure 3.8.2 - Josephburg United Church Site Development Potential

Drawn by: M. Clarke

Date: 06/18/01

Scale: as noted

DWG. NO.

Revised By: M.C.C.

Revision Date: 06/18/01

Revision No.: 1

D41H0028

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County

Legend



Proposed Road Extension



Possible School Location



Fence

Hamlet of Josephburg Area Structure Plan

Figure 3.8.3 - Potential Road Extension

Drawn by: M. Clarke

Date: 06/18/01

Scale: as noted

DWG. NO.

Revised By: M.C.C.

Revision Date: 06/18/01

Revision No.: 1

Planning & Development Services

D41H0030

achieved. The plan also requires the construction of an asphalt surface where new roads are required.

Transportation Policies

1. New roadways shall be paved with an asphalt surface.
2. All roads shall be design and constructed to standards approved by Strathcona County.
3. A noise impact assessment, satisfactory to the County Engineer shall be required for all residential development to be developed adjacent to SH830 and Township Road 550.
4. The existing lanes and private driveways which access directly onto Township Road 550 should be eliminated as per figure 3.8.1. Similarly the existing accesses from the Josephburg United Church of Christ to SH 830 and Township Road 550 should be eliminated and access will be via an internal roadway.
5. Road widening will be required from the adjacent northerly properties to implement the rerouting of Township Road 550 and the service road concept.
6. Walking/Bicycle paths shall be built interlinking the local roads, the open space network, and the recreation area.

3.7 Municipal Services**3.7.1 Sanitary Sewer Collection & Treatment System**

The existing sanitary sewer collection system, comprised of 200mm diameter gravity mains, has adequate capacity to serve the existing Hamlet, including infill and additional lots within the existing Hamlet boundaries.

A condition assessment of the sanitary sewer collection system identified sections of less than minimum grade and other areas requiring replacement and repair due to their present condition. As maintenance costs go up for these sections of sanitary sewer and prior to any long term road surface improvements, identified repairs and replacements should be performed.

The existing sanitary sewer system functions entirely by gravity. This is one of the criteria used in establishing the boundaries of the future service area within the Area Structure Plan.

The existing wastewater treatment facility consists of two anaerobic holding cells and a storage cell. Based on the current Alberta Environment standards and a licensed discharge of twice a year, this facility is deemed to have capacity for 200 people. Initial discussions with Alberta Environment have indicated that they may grant approval for an expansion of the existing lagoon, provided it can be demonstrated that there will be zero discharge from this area. At the present time, discharges from the lagoon flow into adjacent wetland areas. It is understood that there is no release from these wetlands when the lagoon is discharged.

It is proposed to obtain approval from Alberta Environment to expand the existing lagoon to serve a population of approximately 500 people. The actual population will depend upon the wetlands retention capacity.

Beyond the horizon population, it is proposed that the wastewater would be disposed of into the Alberta Capital Region Wastewater Sewage Commission system. The closest point of connection is via the Ross Creek trunk sanitary sewer on the east side of Fort Saskatchewan. Appropriate approvals will be required from the City of Fort Saskatchewan as well as the Wastewater Disposal Agreement with the Alberta Capital Region Wastewater Commission.

It is proposed that the Single Family, Suburban Estates lands and the Manufactured Housing Development within the Area Structure Plan will be serviced by conventional gravity sanitary sewer system.

A portion of the manufactured home site designated along the north boundary of the Area Structure Plan will require approximately 1.0 m of fill, for a length of approximately 450 metres. When these lands are ready to be developed they will be tied into the Alberta Capital Region Wastewater Sewage Line.

The commercial and business serviced lands proposed in the vicinity of the existing airport would be serviced by a low pressure sanitary sewer system.

Future servicing within the existing Hamlet boundary can be achieved with the existing sanitary sewer system.

The “Josephburg Water, Wastewater and Drainage Infrastructure Study”, prepared by Associated Engineering in conjunction with the Area Structure Plan, provides a detailed assessment of the existing sanitary sewer system and concepts for upgrading the existing systems as well as servicing of the lands identified in the Area Structure Plan.

3.7.2 Water Supply, Storage, and Distribution System

The Hamlet of Josephburg is currently supplied water by the County through the Josephburg Water Co-op System. The water Co-op receives treated water from the City of Edmonton. The current system is not designed to supply water for adequate fire protection and water reservoir and pumphouse upgrades would be required.

The existing water supply off the Josephburg Water Co-op is projected to be adequate to serve approximately 1000 people in the Hamlet. This is based on the original allocation for Josephburg. As Josephburg grows (and other demands off the Josephburg Water Co-op system increase), the capacity and allocation will be monitored. If Josephburg’s allocation off the Co-op System cannot be increased, the most viable resource of increased supply is from the Capital Region Vegreville Corridor Water Services Commission (CRVCWSC) pipeline at Scottford.

A supply from the CRVCWSC pipeline would involve approximately 6.5 km of pipeline.

To achieve Strathcona County, Urban Service Area Servicing Standards, additional storage and pumping capacity is required. Upgrades to the existing water distribution system are also required. It is proposed to apply Urban County Servicing Standards for the existing community and lands designated as Single Family, Suburban Estates, Manufactured Housing, Commercial and Business Service.

A new reservoir and pumphouse are proposed on the south side of 1st Avenue, east of Highway 830. This location allows filling from the existing Co-op supply line. A feeder main into the existing distribution system can be constructed along 1st Avenue, in conjunction with lot servicing along 1st Avenue.

Additional storage is proposed to serve various horizon populations. The first stage proposed is a 2000 m³ reservoir, to serve a population of 500+. A second stage, 1000 m³ reservoir, constructed between a population of 500 and 1000 will serve the Hamlet to 1500 people beyond.

In order to satisfy fire flow requirements a 190 L/s fire pump is proposed. This capacity is necessary to serve the Commercial/Business Service areas with an adequate fire flow. Distribution pumping capacity will be sized to meet 10-year horizon population projections.

The “Josephburg Water, Wastewater and Drainage Infrastructure Study”, prepared by Associated Engineering in conjunction with this Area Structure Plan, provides a detailed assessment of the existing water distribution system and concepts for upgrading the existing system as well as serving the lands identified in the Area Structure Plan.

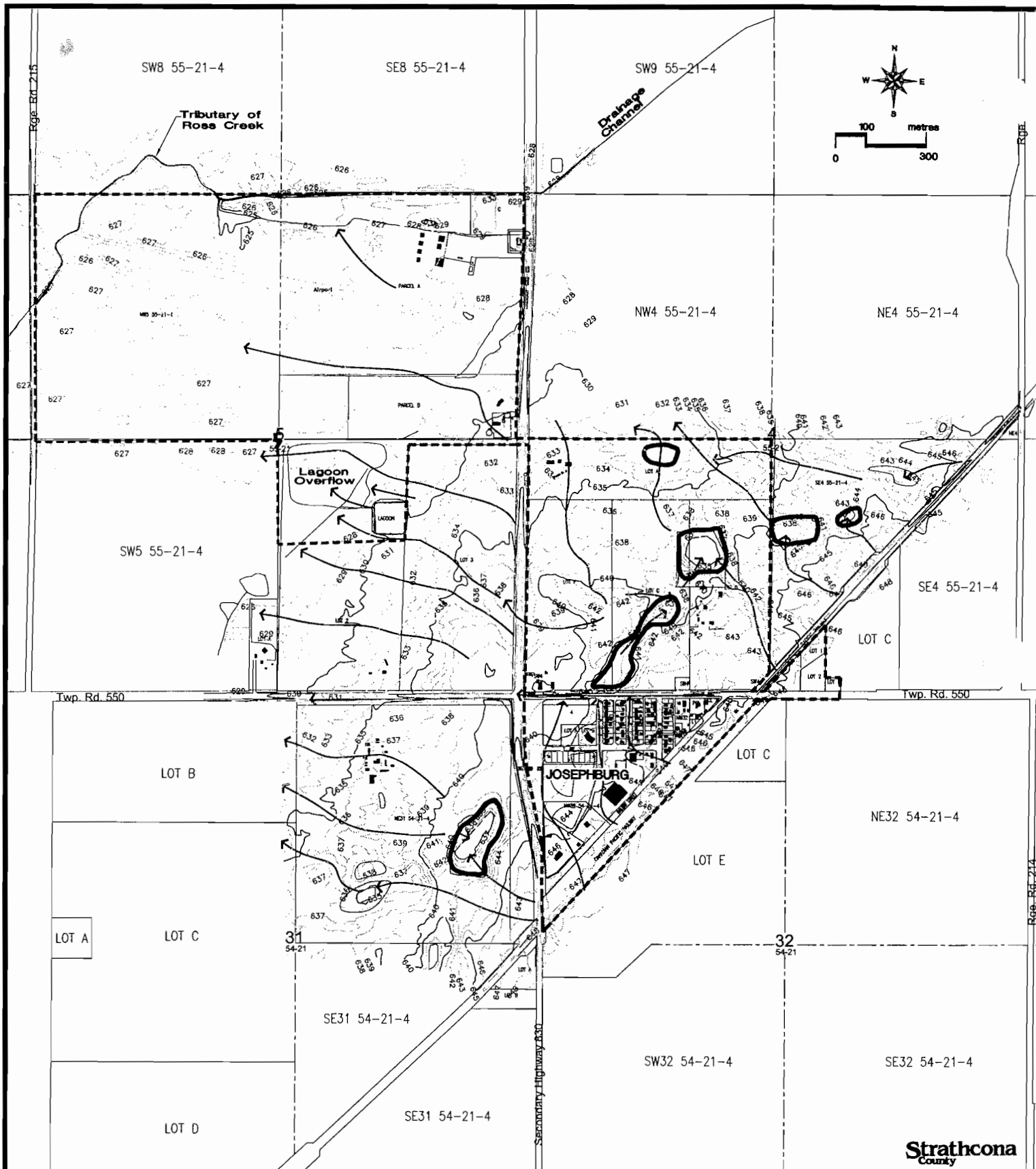
3.7.3 Stormwater Management System

Drainage from the plan area after development will continue to be directed to the tributary of Ross Creek via a system of surface ditches, culverts and new stormwater lines, so as to limit discharge to the pre-development rate thereby maintaining the tributaries existing flow regime.




Two distinct areas, in the northeast and southwest have been identified as having the potential to accommodate surface run off in retention ponds, as shown in figure 3.9. Retention or “wet” ponds always hold a certain amount of water, and can be integrated attractively into the development scheme. Detailed stormwater management plans prepared at the time of the subdivision should respect the existing topography as much as possible and minimize the amount of land to be disturbed. It is proposed that some new storm water lines may be installed within the Hamlet to control drainage.

Municipal Services Policies

1. The existing Hamlet sewage collection system, which is approximately 39 years old should be upgraded prior to any long term road surface improvements.
2. The County should assess an offsite levy charge for eventual upgrading of the sewage lagoon and the installation of a major sewer trunk line to tie into the Alberta Capital Region Wastewater Commission. Available funding (grants) should be the main source of revenue.
3. The condition of the existing Hamlet water lines must be assessed prior to using them to service growth areas.
4. The County should assess an offsite levy charge for securing additional water supply, and the construction of a new water reservoir and pumphouse..
5. A detailed Stormwater Management and Drainage Plan shall be prepared for each drainage basin before any development proceeds. Some stormwater drainage lines may be required within the Hamlet to improve drainage.
6. Developers shall be responsible for the construction of all infrastructure required to service their developments at their own cost. Development agreements with the County will be required.
7. If the County constructs any infrastructure, they will do so on a full cost recovery basis from the benefiting areas.
8. Any existing storm or sanitary sewer upgrades within the existing hamlet boundaries will not be borne by the existing residents.



Legend

-  Drainage direction
-  Contours (1 meter intervals)
-  Potential location of stormwater facility

Hamlet of Josephburg Area Structure Plan

Figure 3.9 - Stormwater Management System

Drawn by: D. Leckie A.Sc.T.	Date: 03/06/97	Scale: as noted
Revised By: PT	Revision Date: 15/02/01	Revision No.: 4
Planning & Development Services		

DWG. NO.

D41H0004

3.8 Plan Implementation

1. Land Use Bylaw Amendments.

- (a) The Strathcona County Land Use Bylaw should be amended to redistrict the area within the existing hamlet boundary to the appropriate districts. The districts would draw a clear distinction between residential and non-residential land uses within Strathcona County Hamlets.
- (b) Continued development in the plan area will require redistricting, subdivision approval, and the preparation of a development agreement.

2. Municipal Development Plan

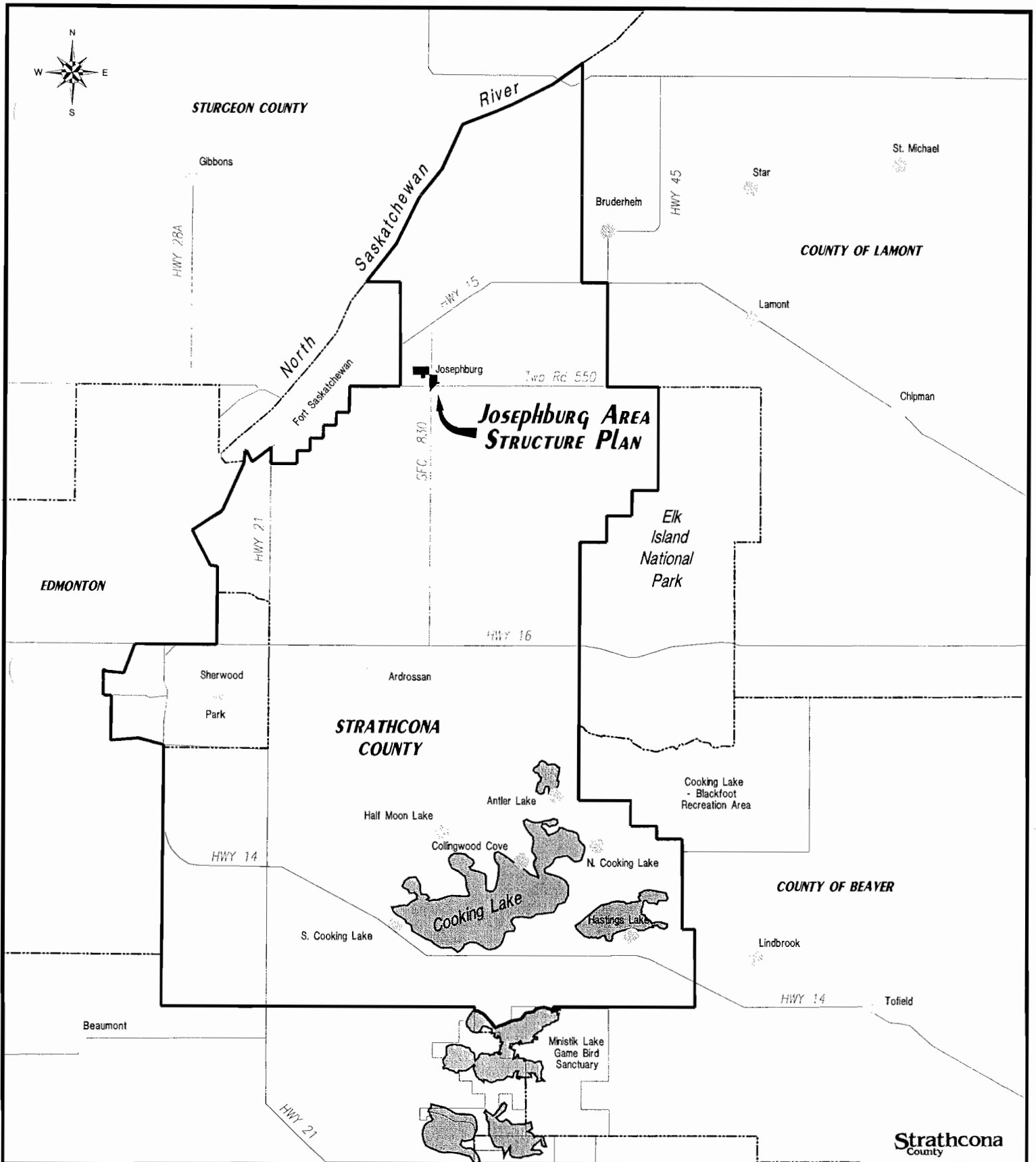
- (a) The existing Hamlet boundary shall be amended to incorporate those lands outside the current Hamlet boundary as illustrated in figure 3.0.

PART II
BACKGROUND REPORT

4.0 Plan Context**4.1 Location**

Figure 4.0 provides a regional context for the Josephburg Area Structure Plan. The Hamlet of Josephburg is located in the northern portion of Strathcona County. The Hamlet comprises part of the NW 32-54-21-W4th and the easterly Ptn. of the NE 31-54-21-W4th. It is approximately 30 km northeast of Sherwood Park, 38 km northeast of Edmonton and 6 km directly east of Fort Saskatchewan. The Hamlet is situated at the southeast corner of the intersection of Secondary Highway 830 and Township Road 550 and is located immediately northwest of the Canadian Pacific Railway main line. It is conveniently located within a short distance of Alberta's Industrial Heartland Area.

The lands within the plan area are illustrated in Figure 4.1. The plan area includes the present Hamlet of Josephburg located in the NW 32-54-21-W4, and its immediate environs that have potential for community development. This area includes that portion of the north half of Section 5-55-21-W4, Pt of SE 5-55-21-W4, and the SW 4-55-21-W4. It is intended to minimise the amount of good agricultural land for urban type development and create a compact community.



LEGEND



AREA STRUCTURE PLAN STUDY AREA BOUNDARY

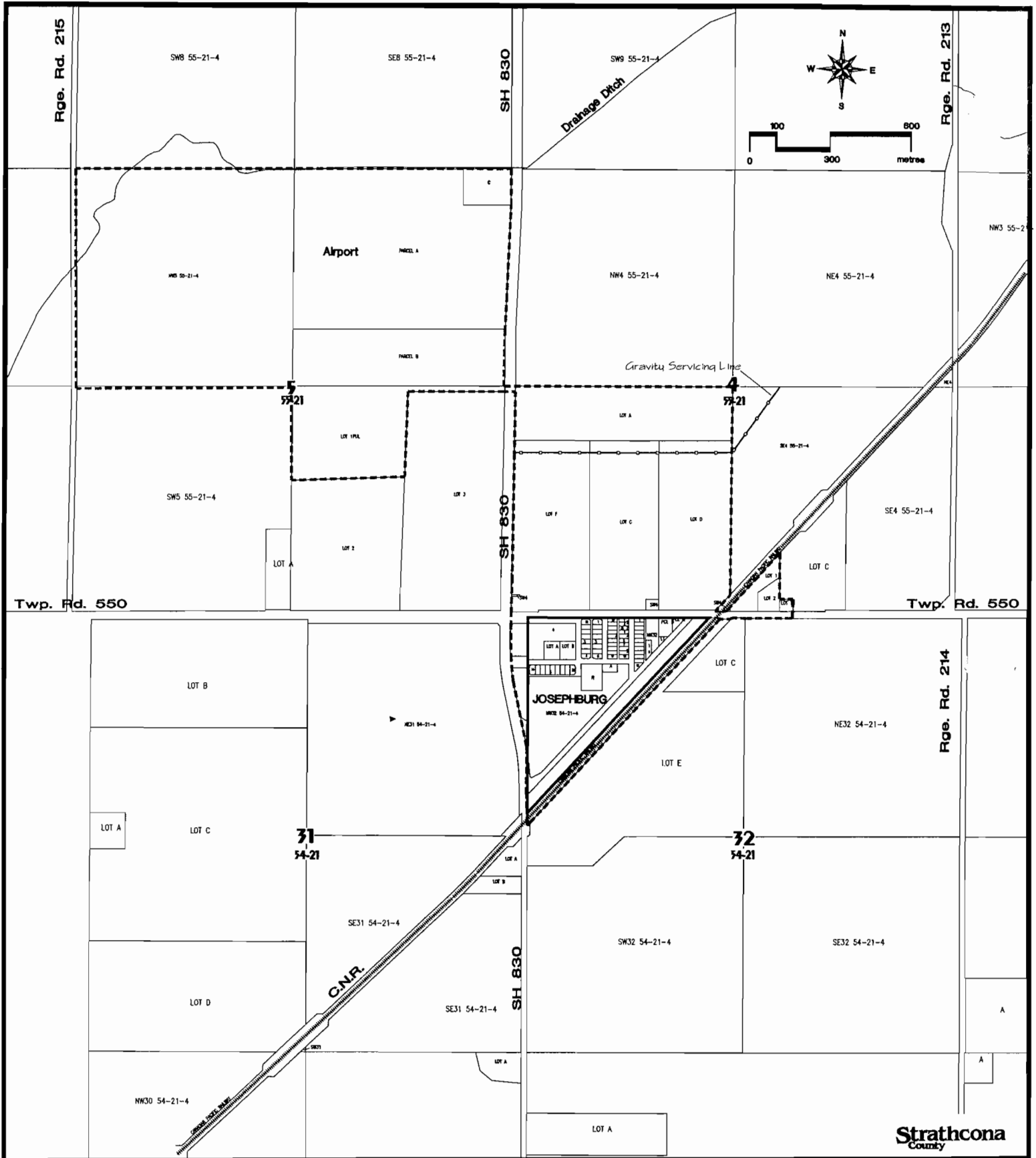


STRATHCONA COUNTY BOUNDARY

HAMLET OF JOSEPHBURG AREA STRUCTURE PLAN

FIGURE 4.0 - REGIONAL CONTEXT

Drawn by: P. Tsoukalas	Date: 02/02/01	Scale: as noted	DWG. NO.
Revised By: PT	Revision Date: 16/02/01	Revision No.: 1	D41H0008
Planning & Development Services			



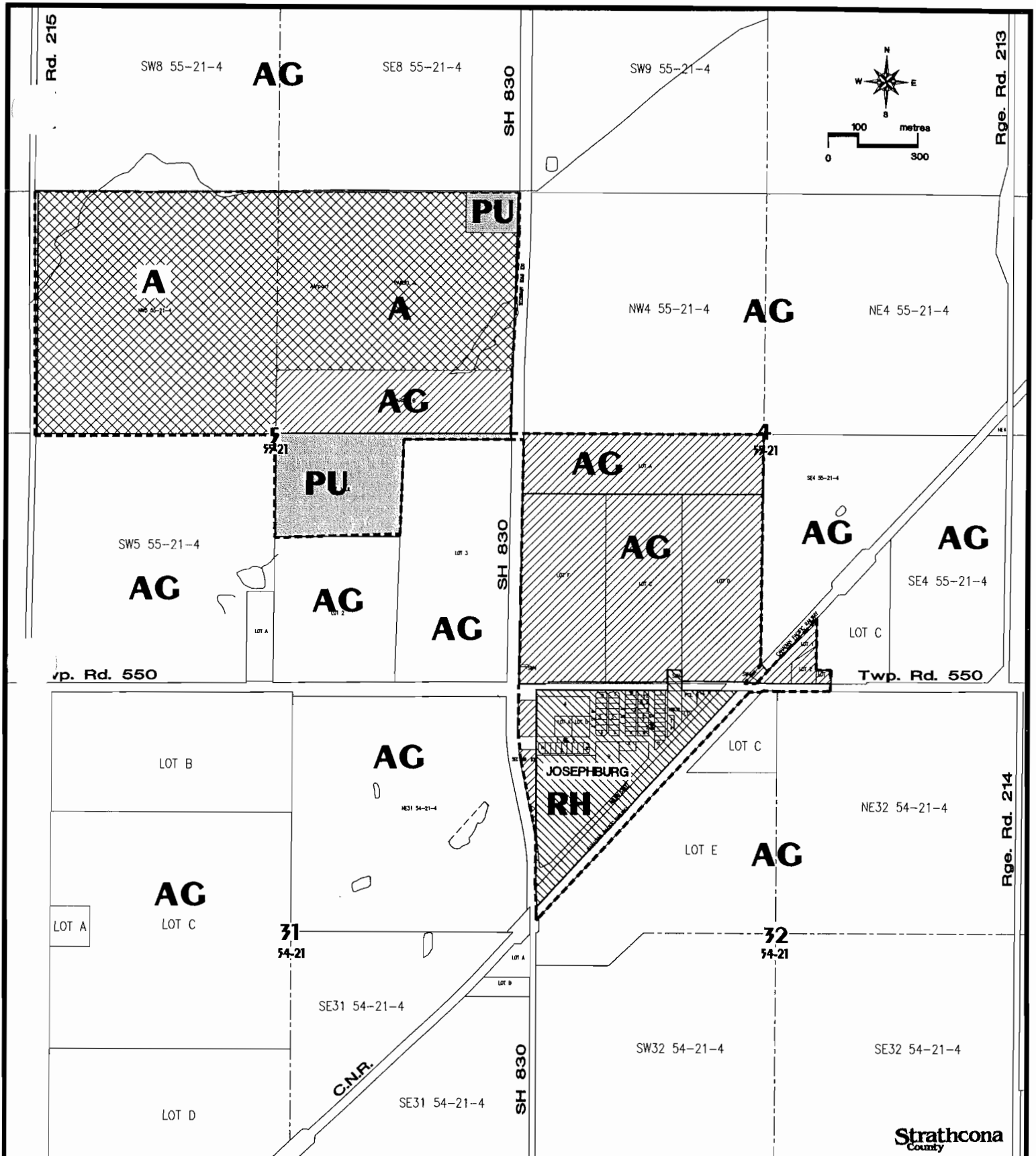
LEGEND

- EXISTING HAMLET BOUNDARY
- AREA STRUCTURE PLAN STUDY AREA BOUNDARY

HAMLET of JOSEPHBURG AREA STRUCTURE PLAN

Figure 4.1 - PLAN AREA

Drawn by: D. Leckie A.Sc.T.	Date: 25/02/96	Scale: as noted	DWG. NO.
Revision Date: 13/07/01	Revision No.: 2		
Planning & Development Services			D41H0000



5.1 Distribution of Land Uses Within Hamlet Boundaries

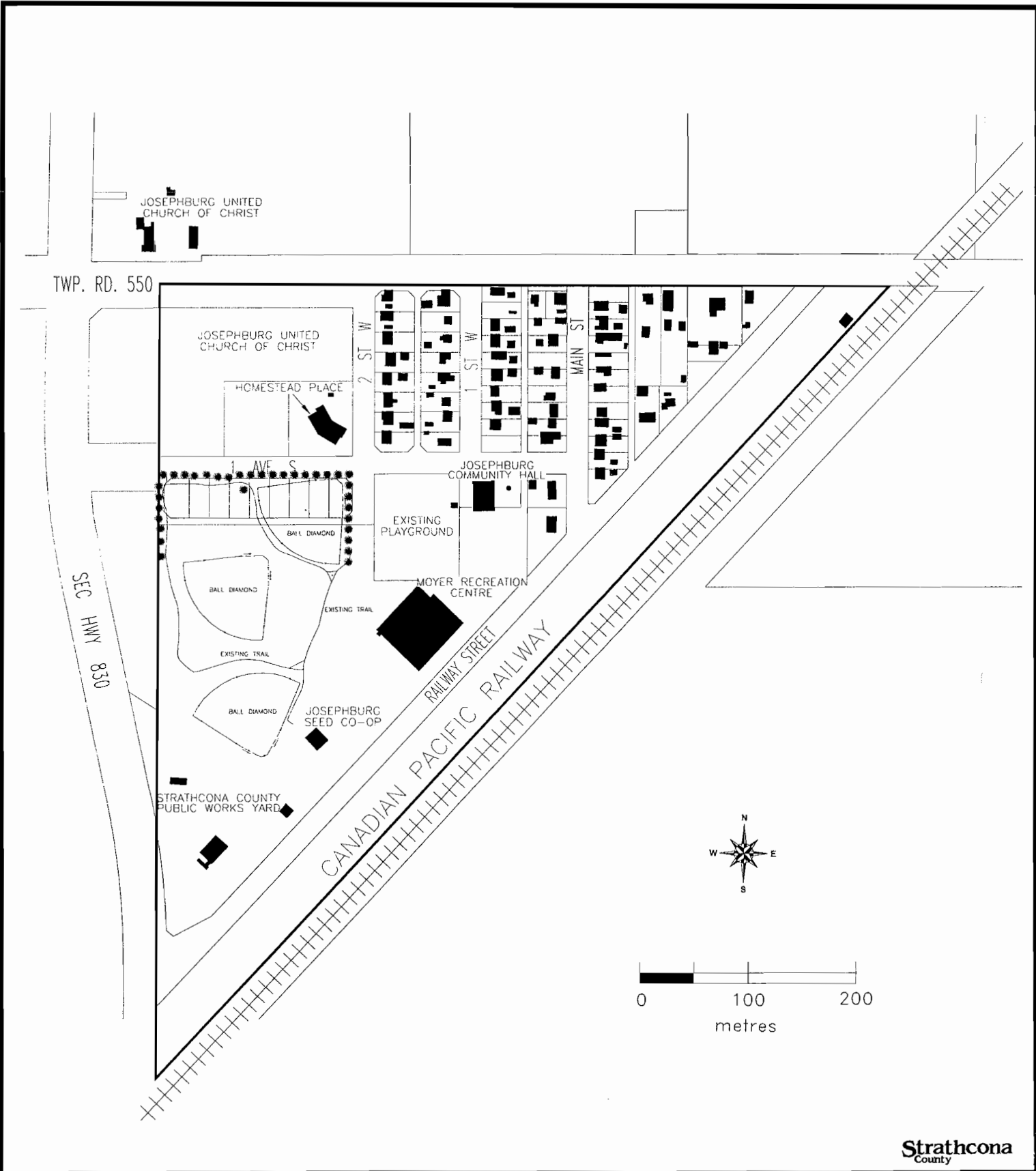
The Hamlet encompasses 24.87 ha (61.38 ac.) within its current boundary as illustrated in Table 5.0: Land Use Distribution Within Hamlet Boundaries. Lands used for recreational purposes account for approximately 30 percent of the land use. Residential land use is the other predominant land use in terms of land area within the Hamlet and accounts for almost 19% of the total lands within the Hamlet. There are two industrial or quasi-industrial uses within Josephsburg. The County maintenance yard is located in the south-west corner of the Hamlet as shown in Figure 5.1. Immediately to the east is the Josephsburg Seed Co-op. Approximately 6.75 ha (16.7 ac.) of land are currently vacant within the Hamlet boundary for future residential, commercial or senior housing purposes. Lands located along the northwest side of the CPR mainline may also be available for future business service development.

At present there are two residential housing forms within the Hamlet including conventional single detached residential and medium density seniors housing. There are 66 residential lots within the hamlet boundary of which 13 lots are vacant. Nine of the unserviced vacant lots which are owned by Strathcona County, are located south of 1st Avenue South and west of 2nd Street West. The single detached residential lots range in size from 560 m² - 650 m² (6027 ft² - 7000 ft²) in size and are at least 18.3 m (60ft) in frontage. The medium density senior's development (Homestead Place) is centrally located within the existing town centre between the Josephsburg United Church of Christ and Moyer Recreation Centre and comprises eight self-contained one bedroom units.

The most significant facility within the Hamlet is the Moyer Recreation Centre consisting of an arena, auditorium and major catering facility. There is also a tennis court, a basketball court, three baseball diamonds and a children's playground as part of the complex. In general terms, this facility is very much underutilized and could meet the needs of a much greater population. The Community Hall, located north-east of the Moyer Centre, serves as a Senior Citizens' drop-in-centre for residents in the northern half of the County. In addition to these facilities, the Josephsburg Gymkhana Grounds, located approximately two miles east, contain a ball diamond, playground, picnic area and gymkhana facilities.




Table 5.0: Land Use Distribution within Hamlet Boundary

Land Use	Area (ha)	Area (Ac.)	% of Total Area
Residential	4.69	11.59	18.9
Reserve R, Plan 6043KS	0.77	1.90	3.1
Moyer Site	7.54	18.6	30.3
Community Hall	0.17	0.42	.7
Roadways	4.95	12.23	19.9
CPR Lands	4.14	10.23	16.6
Undeveloped:			
Residential (unserviced lands owned by Strathcona County)	0.62	1.53	2.5
Lot A, Plan 802 0378 (Bunn)	0.40	0.99	1.6
Vacant lands owned by Church	1.59	3.93	6.4
Total	24.87	61.38	100.0



Strathcona
County

Legend

-  Existing Hamlet Boundary
-  County Owned Lots
-  Tree

Hamlet of Josephburg Area Structure Plan

Figure 5.1 - Existing Buildings & Vacant Lots

Drawn by: D. Leckie A.Sc.T.	Date: 26/05/97	Scale: as noted	DWG. NO.
Revised By: PPT	Revision Date: 26/06/01	Revision No.:	D41H0024
Planning & Development Services			

5.2 Distribution of Land Uses Within the Plan Area

The allocation of land uses outside the Hamlet boundary and within the Plan Area are summarized in Table 5.1: Land Use Distribution Within the Plan Area. Within the Plan Area overall, there is an additional 222.72 ha (667.4 acres) of land over and above the land encompassed by the Hamlet boundary. With the exception of the lagoon site and airport lands, which is located within Sec 5-55-21-W4th, all lands are under agricultural production. The expansion area contains four residences and associated farm buildings.

Lands outside the Hamlet boundary, located east of Secondary Highway 830 encompass 69.5 ha (171.7 acres) and are presently designated for agricultural use. Four residences are located within this area, one of which includes the Josephburg United Church manse. The Josephburg United Church of Christ and manse are located within the northeast corner of Secondary Highway 830 and Township Road 550. The old fire hall and cemetery are located outside the Hamlet boundary on the east side of the Canadian Pacific Railway line.

Lands located west of Secondary Highway 830 encompass 141.88 ha (350.58 acres) and are presently designated for agricultural, airport and utility use. The Strathcona County Airport is located on the north half of Section 5-55-21-4. There is one residence and associated farm buildings located in this area west of Secondary Highway 830.

Table 5.1: Land Use Distribution Within the Plan Area			
Land Use	Area (ha)	Area (Ac.)	% of Total Area
Owned by Strathcona County:			
Lot 2, Plan 962 4337	0.86	2.12	0.4
Lot 3, Plan 962 4337	0.79	1.95	0.4
Strathcona County (Airport Lands)	110.48	272.99	49.6
Lot 2, SE 4-55-21-W4M	0.81	2.0	0.4
Lot D, SE 4-55-21-W4M	0.23	0.57	0.1
SW 4-55-21-W4M	0.21	0.52	0.1
PU – Public Utility	15.3	37.81	6.9
Agricultural Lands	81.0	200.1	36.4
United Church	3.35	8.27	1.5
Roadways	9.69	23.9	4.2
Total	222.72	667.4	100.0

5.3 Land Ownership

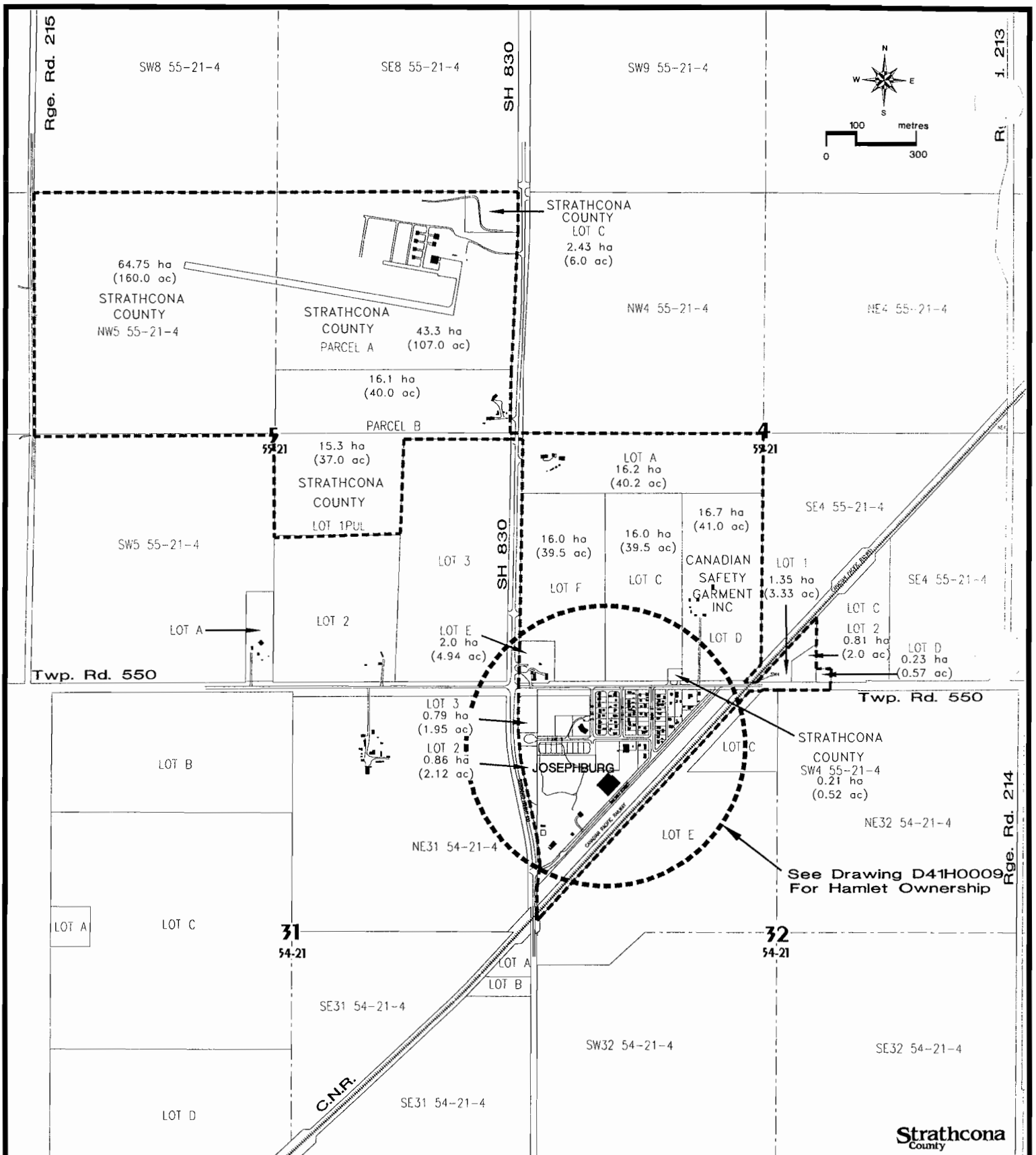
The amount of land held by individual landowners and Strathcona County located outside the current Hamlet boundary is illustrated in Table 5.3: Land Ownership within Plan Area. The total Plan Area encompasses 247.59 ha (611.8 acres) of land. Of this total area, Strathcona County owns approximately 128.68 ha (317.16 acres) of land which represents of the total land holdings within the total Plan Area including the Hamlet.

The existing Hamlet encompasses 24.87 ha (61.38 acres) of land as shown in Figure 5.3. Within the current Hamlet boundaries, there is restricted opportunity for growth with only 6.75 ha (16.7 acres) of vacant land available for infill development. This would include the CPR lands, the County unserviced residential lots and lands in the northwest section of the Hamlet.

The extent of land fragmentation and conflicting land uses is minimal. There are a number of choices for future Hamlet growth. The expansion lands within the Plan Area are controlled by six landowners including the County owned lands. The N½ 5-55-21-W4th and Pt of the SE 5-55-21-W4th are controlled by two landowners and the SW 4-55-21-W4th are owned by five landowners as shown on Figure 5.2.

Table 5.3 Land Ownership within Plan Area		
Owner	Legal	Parcel Size
Strathcona County	NW 5-55-21-W4th	64.75 ha (160 ac)
	Parcel A, NE 5-55-21-W4th	43.30 ha (107 ac)
	Lot 1 PUL	15.30 ha (37.0 ac)
	Lot 3 NE 31-54-21-W4th	0.79 ha (1.95 ac)
	Lot 2, NE 31-54-21-W4th	0.86 ha (2.12 ac)
	Lot C, NE 5-55-21-W4th	2.43 ha (6.0 ac)
	SW 4-55-21-W4th	0.21 ha (0.52 ac)
	Lot 2, SE 4-55-21-W4th	0.81 ha (2.0 ac)
	Lot D, SE 4-55-21-W4th	0.23 ha (0.54 ac)
		128.68 ha (317 .16 ac)
Resident	Lot A, SW 4-55-21-W4th	16.2 ha (40.2 ac)
Resident	Lot C, SW 4-55-21-W4th	16.0ha (39.5 ac)
	Lot F, SW 4-55-21-W4th	16.0 ha (39.5 ac)
		32.0 ha (79 ac)
Canadian Safety Garment	Lot D, SW 4-55-21-W4th	16.7 ha (41.0 ac)
Josephburg United Church	Lot 1, SE 4-55-21-W4th	1.35 ha (3.33 ac)
	Lot E, SW 4-55-21-W4th	2.00 ha (4.94 ac)
		3.35 ha (8.27 ac)
Resident	Parcel B, NW 5-55-21-W4th	16.1 ha (40.4 ac)
Roadways		9.69 ha (23.9 ac.)
Hamlet		24.87 ha (61.38 ac)
Total Area		247.59 ha (611.8 ac.)

Source: Strathcona County, Planning Services Branch, 2001



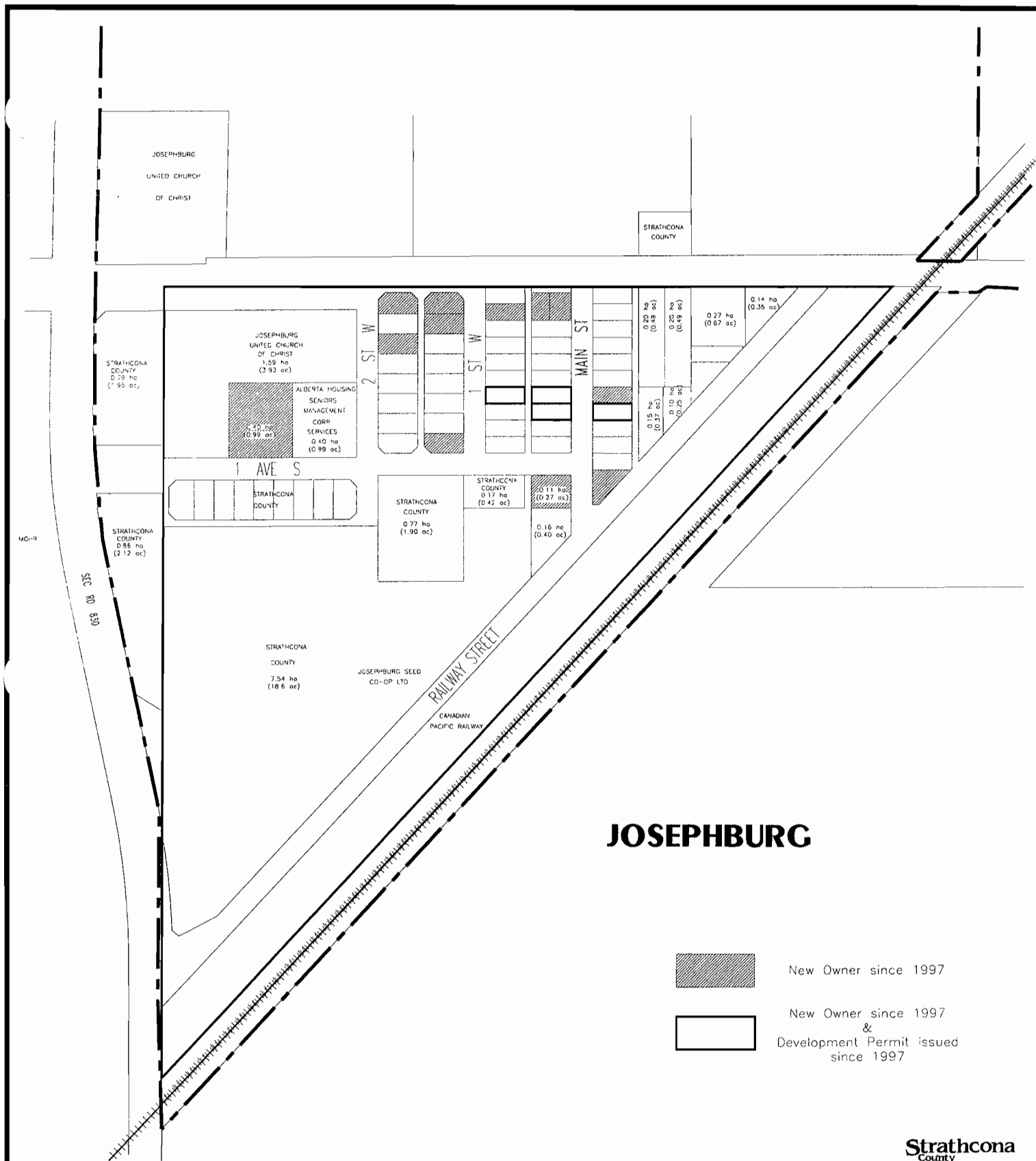
LEGEND

----- AREA STRUCTURE PLAN BOUNDARY

HAMLET OF JOSEPHBURG AREA STRUCTURE PLAN

FIGURE 5.2 - LAND OWNERSHIP

Drawn by: D. Leckie A.Sc.T.	Date: 21/05/97	Scale: as noted	DWG. NO.
Revised By: PPT	Revision Date: 11/09/02	Revision No.: 4	D41H0007
Planning & Development Services			



Strathcona
County

LEGEND

- Existing Hamlet Boundary
- AREA STRUCTURE PLAN Boundary

HAMLET OF JOSEPHBURG AREA STRUCTURE PLAN

FIGURE 5.3 - HAMLET LAND OWNERSHIP

Drawn by: D. Leckie A.Sc.T.	Date: 26/05/97	Scale: as noted	DWG. NO.
Revised By: PPT	Revision Date: 11/09/02	Revision No.:2	
Planning & Development Services			D41H0009

6.1 Housing

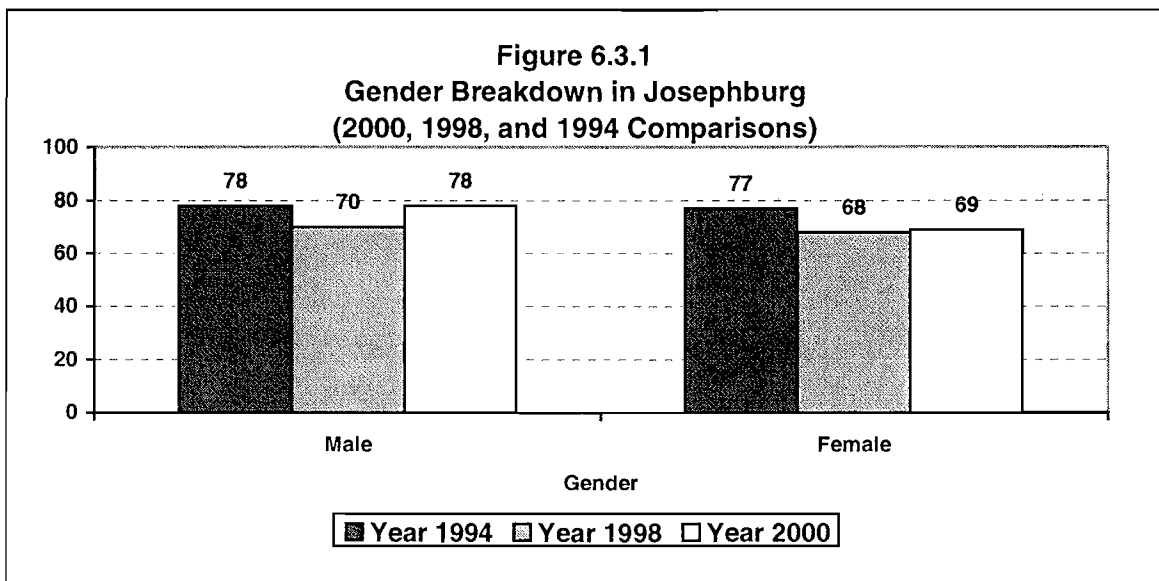
Single family dwellings have historically met the housing needs within the Hamlet of Josephburg, though the Hamlet also has an eight-unit seniors' complex called Homestead Place. The supply of housing in the hamlet is estimated at 52 single detached dwellings. According to Strathcona County assessment records, 11 (or 21%) of the 52 dwellings are 57 years of age or older. Twenty-eight residences (54%) were constructed in the 1950's and 1960's. The remaining 13 dwelling units were constructed between 1970 and 2000. Within the Hamlet, there are 13 residential lots that are still undeveloped.

6.2 Overall Population Trends

According to the 2000 municipal census, there are 149 people living in the Hamlet of Josephburg. Historically, the population for this hamlet is quite stable, and corresponds identically to the recorded population recorded in 1984. Between 1984 and 1996, there was a 3% decline in the population, as the population level had dropped to 144 people. Between 1994 and 2000, however, this trend has now reversed itself as the population has increased back to 149 people (an increase since 1994 of 3%).

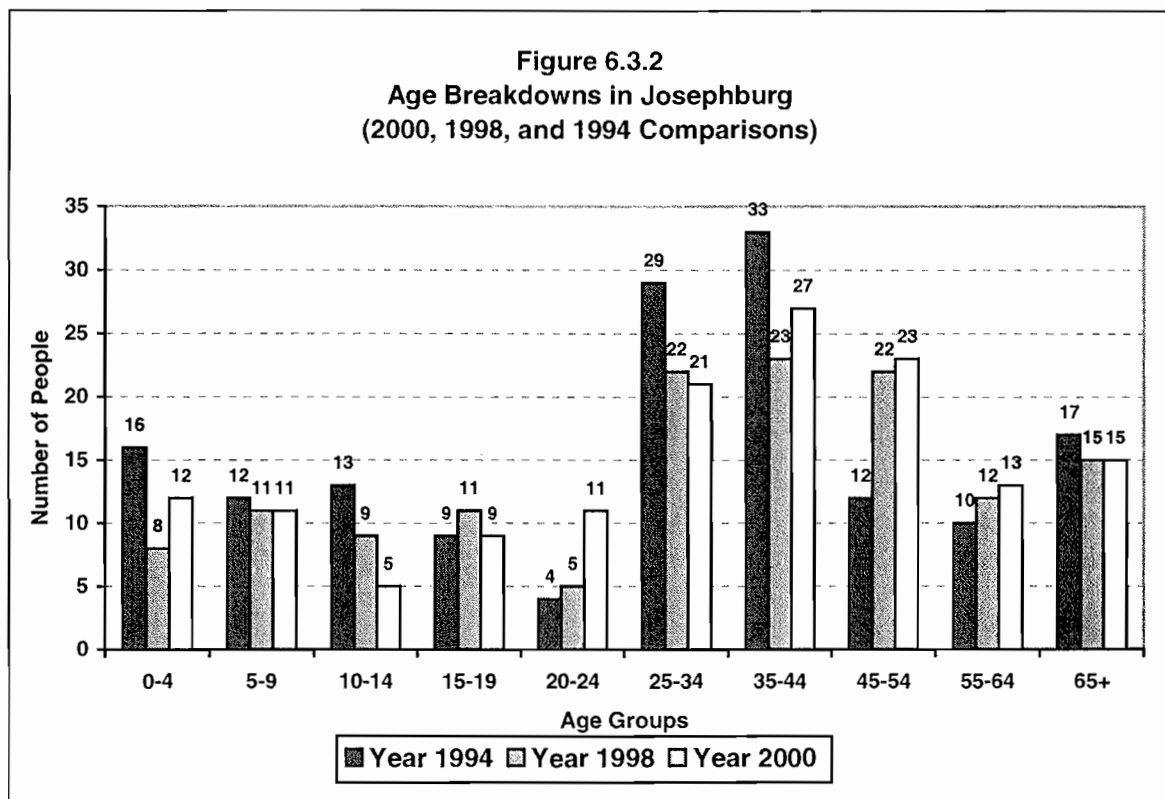
6.3 Age and Gender Composition

It can be seen in Figure 6.3.1 that as of the year 2000, there are more males than females living in Josephburg. The number of males in the hamlet has decreased between 1994 and 1998 but increased again between 1998 and 2000. Among females, the number took a sharp decline between 1994 and 1998, but has increased by 1 between 1998 and 2000.



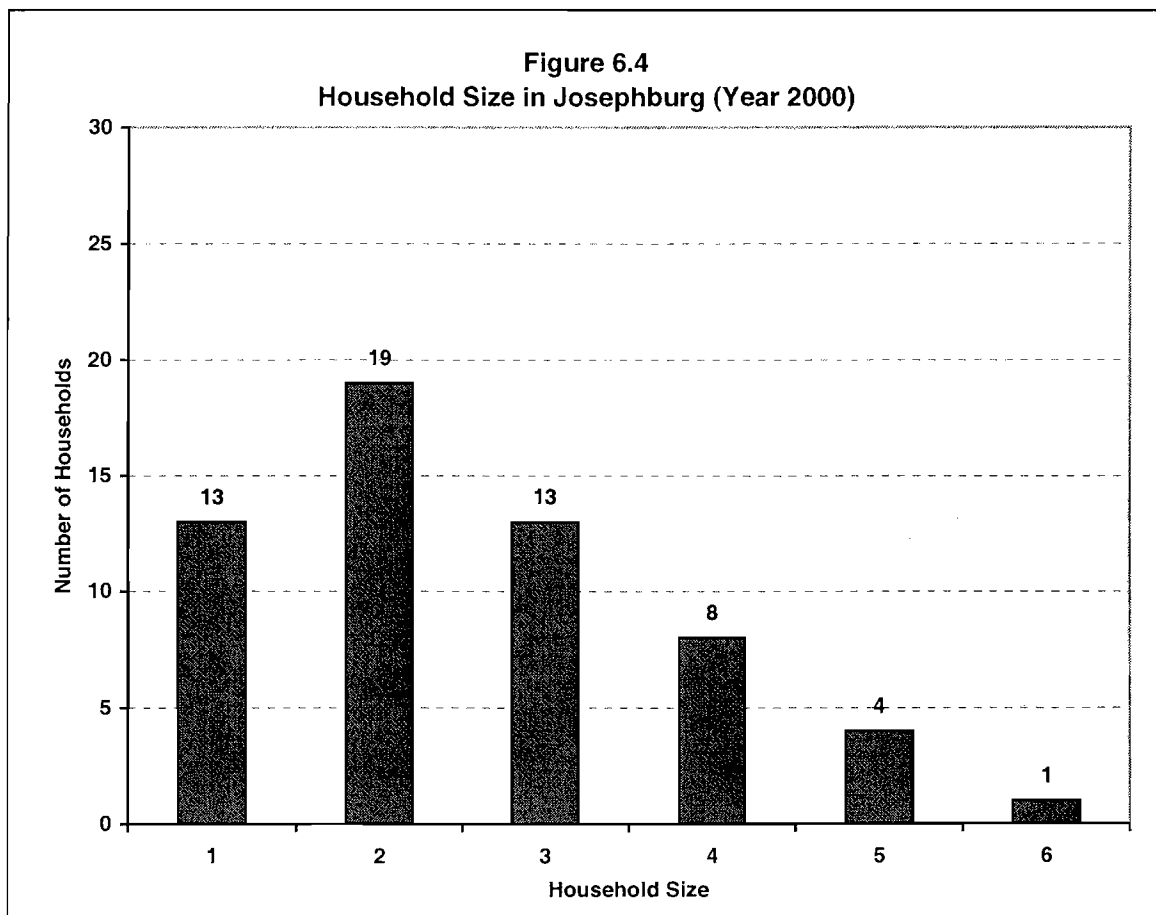
A breakdown of the population by age groups for the year 2000, along with historical data from 1994 and 1998 is shown in Figure 6.3.2. There have been some shifts between age groups over this six-year period. Among young people, there continues to be a decrease in children aged 10 to 14 (which has been steadily declining since 1994) and some minor fluctuation in the 15-19 age group.

Most notably, compared to 1994, there has been a drop in the number of people between the ages of 25 and 34. However, there is a considerable increase in the number of people between the ages of 20 and 24, as well as people aged 45-54. There has also been a slow but steady increase among those aged 55 to 64. The older population of age 65 or older has stayed relatively unchanged since 1994.



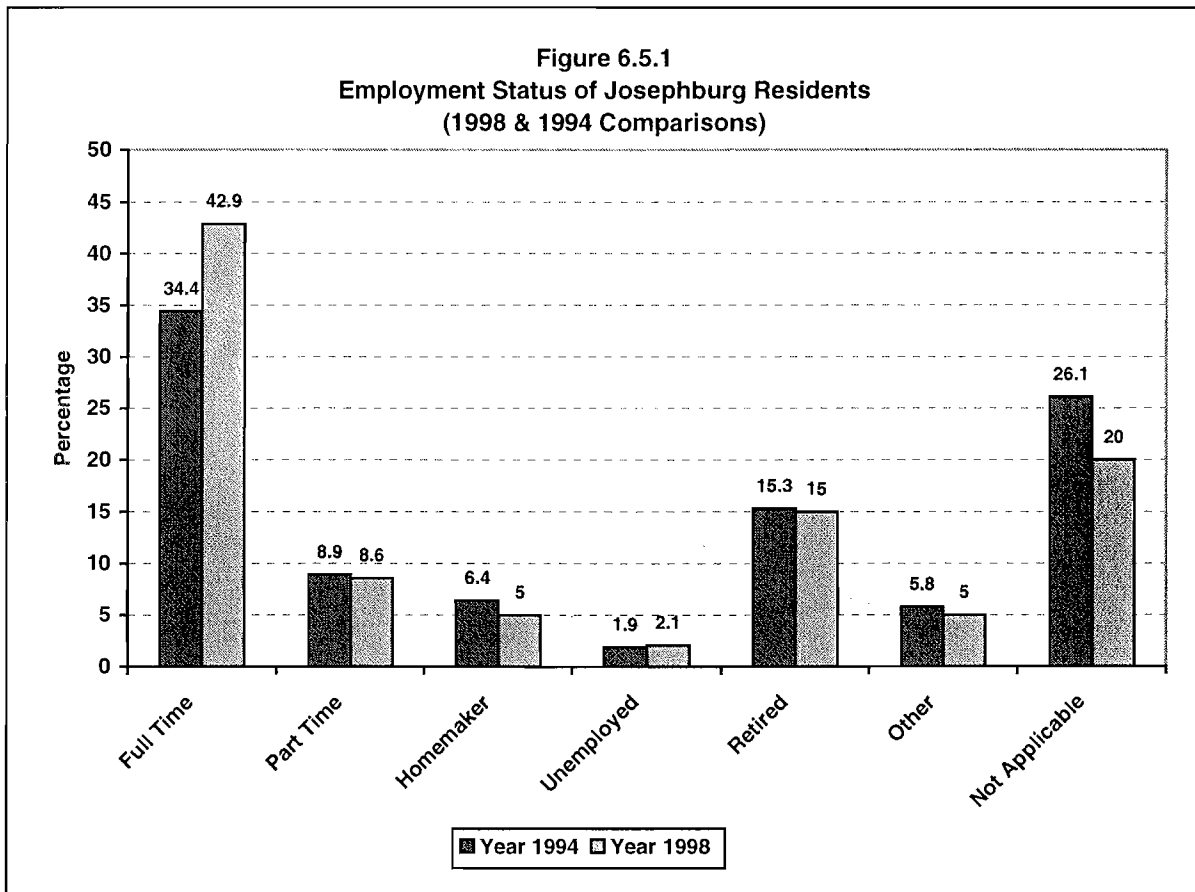
6.4 Household Characteristics

The average number of people in a household is 2.09 people. However, since it is impossible for a household to actually be this size (i.e. you cannot actually have “a portion of a person”), Figure 6.4 gives a visual depiction of the household sizes in this community. It can be seen that the most frequent household size is 2 people as 19 households in the community have 2 people in them. This represents 33% of all households in Josephburg.



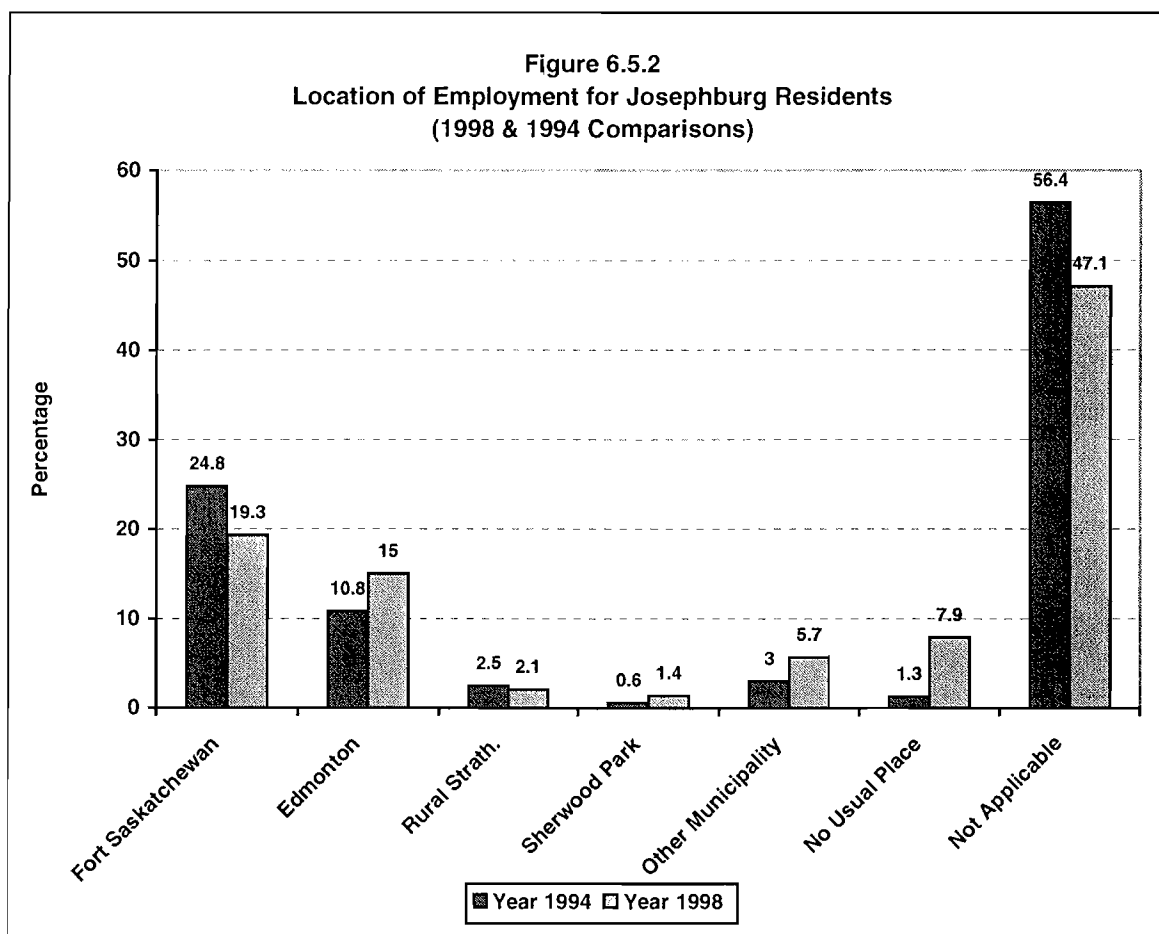
6.5 Employment Status and Location

Figure 6.5.1 presents an overview of the employment status¹ of residents living in Josephsburg for 1998 and 1994. In 1998, the majority of residents were employed on a full time basis (42.9%). This figure is higher than what was seen in 1994. Percentage breakdowns within the remaining categories are very similar for 1994 and 1998. The “not applicable” category is comprised of residents who were students under 15 years of age.



¹ Employment status and location of work were not measured in the 2000 municipal census.

Figure 6.5.2 depicts the employment destinations for those living in Josephburg. Fort Saskatchewan is the prominent destination for most working residents in both 1994 and 1998 though less people are employed there in 1998 compared to 1994. The percentage of Josephburg residents who work in Edmonton has increased between 1994 and 1998. Please note that the “not applicable” category includes students, as well as those residents who are retired, unemployed or homemakers.



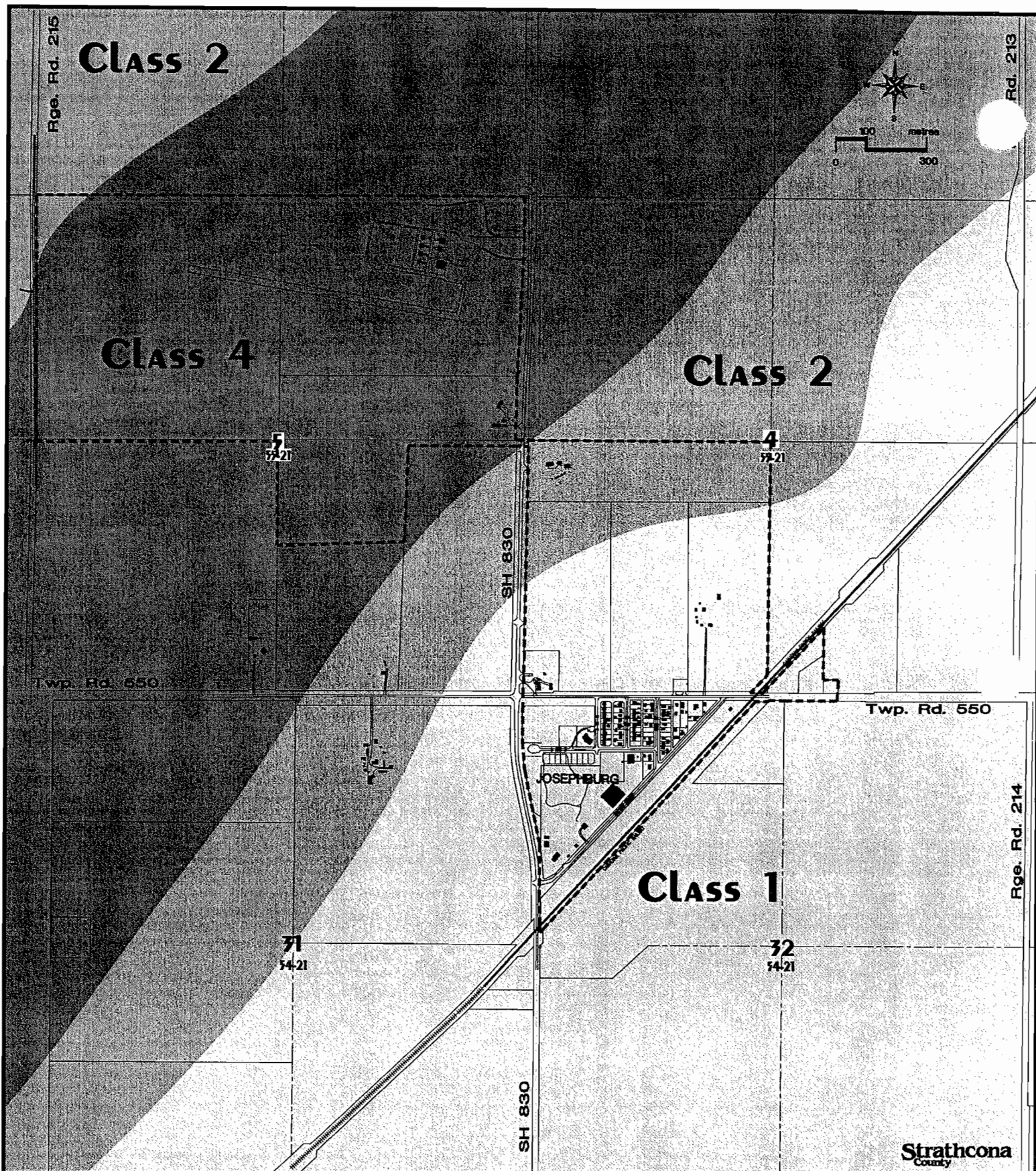
7.1 Landforms, Topography, Eco-region, Soils and Climate

The Josephburg Area Structure Plan area is within the Eastern Alberta Plains Physiographic Region, and is located in the Lake Edmonton Plain District. The Lake Edmonton District is a low relief plain surrounding Edmonton developed by glaciolacustrine deposits of superglacial and impounded lake sediments (Glaciolacustrine deposits are materials deposited by glacial lakes and streams carrying glacial meltwater). Its topography is characterized by gently undulating to rolling surface (Pettapiece, 1986).

The plan area falls within the Aspen Parkland Eco-region which is an ecological transition zone between the Boreal Forest and the grassland environments. Increased moisture availability in the late summer and this area's distinct vegetative character distinguish this area from adjoining eco-regions. The native vegetation community is intermixed aspen forest and rough fescue grassland. Presently, less than five percent of the plan area remains in natural Aspen Parkland habitat.

Dark brown and black chernozems are the typical soils on both grassland and the upland shrub sites in this area. The Aspen Parkland represents one of the most productive agricultural zones in Alberta and as such is extensively cultivated for annual cereal crops or subject to cattle grazing on rough terrain. The Canada Land Inventory Soil Capability Map classifies more than half of the study area as Class 1, having no significant limitations for crop use. The northwestern portion is rated Class 2 and Class 4 with moderate limitations for crop use. Figure 7.0: Soils shows the C.L.I. Soil Capability Map for the plan area.

Climatically, this eco-region shows a continental influence having temperatures with large yearly and daily ranges. Mean monthly temperatures are - 8.7° C from November through February with a mean minimum temperature of - 14° C and a mean maximum of - 3.7° C. The mean monthly temperature from May through August is 14.4° C with a mean minimum temperature of 7.7° C and a mean maximum of 20.9° C. The area receives a total annual precipitation of 412 mm with July being the month of the highest precipitation. Potential evapo-transpiration in the summer is approximately 50 mm (W.L. Strong, 1992)



Legend

- AREA STRUCTURE PLAN Boundary
- CLASS 1 Soils
- CLASS 2 Soils
- CLASS 4 Soils

HAMLET of JOSEPHBURG AREA STRUCTURE PLAN

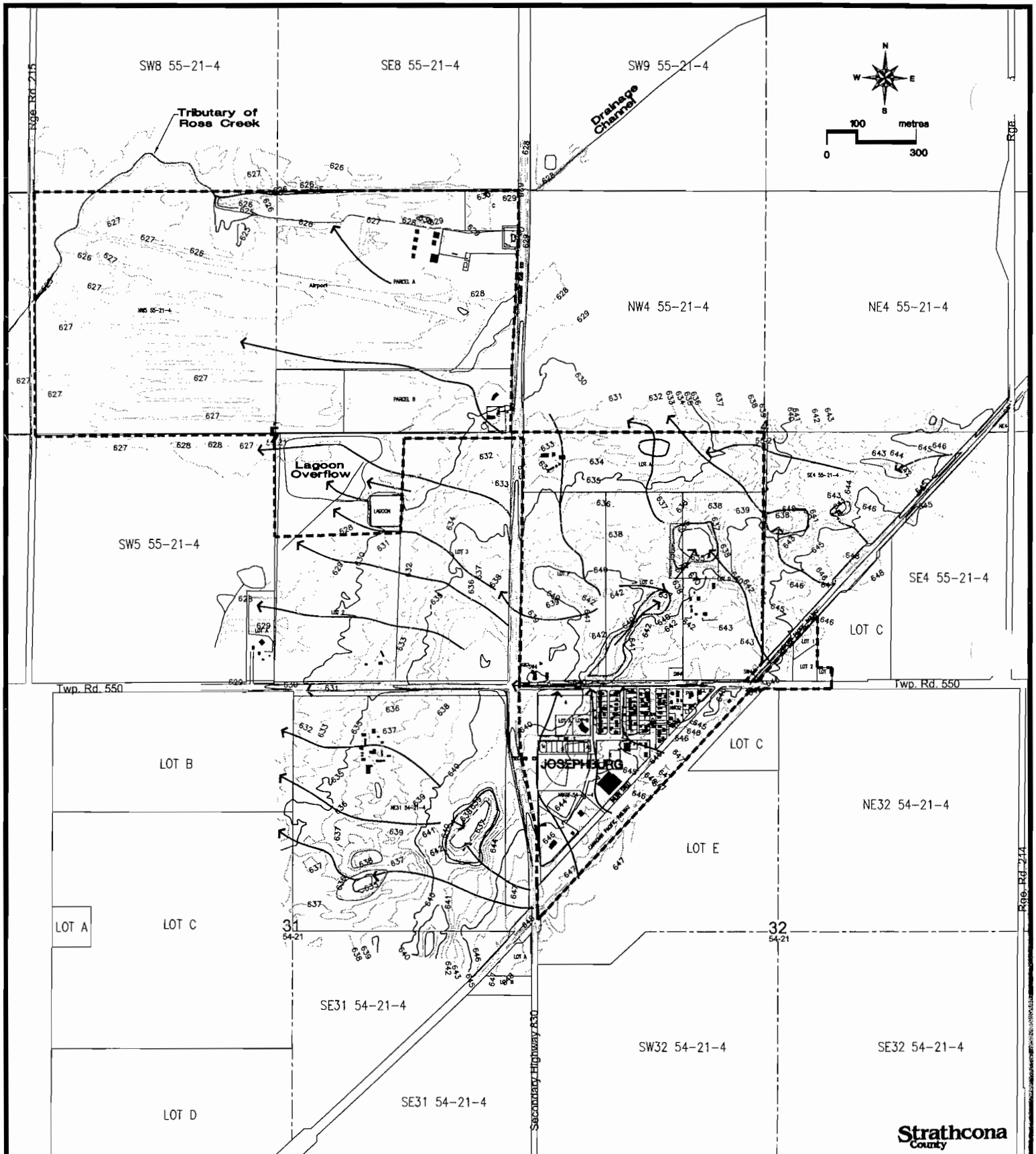
FIGURE 7.0 - Soils

Drawn by: P. Tsoukalas C.E.T.	Date: 9/06/97	Scale: as noted	DWG. NO.
Revised By: PT	Revision Date: 11/09/02	Revision No.: 2	
Planning & Development Services			D41H0014

7.2 Topography and Drainage

Figure 7:1 illustrates the topography and drainage patterns within the plan area. The plan area generally slopes from the southeast to the northwest toward a tributary of the Ross Creek System. The point of highest elevation within the Plan Area is located in the southeast corner where there is an elevation of 648 m. This tributary enters the Plan Area in the northeast corner, runs west along the north boundary, takes a turn to the southwest, and exits out of the plan area along the west boundary. The tributary continues in a westerly direction until it joins the main channel of Ross Creek within the limits of the City of Fort Saskatchewan and ultimately drains to the North Saskatchewan River. Water flow in this tributary is intermittent with flow initiated by spring snow melt and periods of high precipitation. Generally, the plan area can be described as relatively flat in the northern portion rising gently to the southeast, into a rolling surface with a few pronounced hummocks. Slopes associated with the Lake Edmonton Plain are 2 to 5 percent. The total relief for the area is 22 metres between the highest point of 648 metres above sea level (a.s.l.), located along the south boundary and the lowest point of 626 m a.s.l. located along the north boundary of the plan area.

Slopes within the plan area do not pose significant constraints to development, however a setback from the top-of-bank of the tributary should be maintained to avoid natural hazards such as flooding or slope instability.



Legend

- Drainage direction
- Contours (1 meter intervals)

Hamlet of Josephburg Area Structure Plan

Figure 7.1- Topography & Drainage

Drawn by: D. Leckie A.Sc.T. Date: 03/06/97 Scale: as noted

Revised By: PT Revision Date: 15/02/01 Revision No.: 4

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D41H0004

7.3 Hydrology

Surface Water

Surface water features in the plan area include the Ross Creek tributary, several small permanent wetlands, and localized depressional areas subject to seasonal water accumulation. Water levels within these features fluctuate from year to year depending on the amount of annual precipitation. A sewage lagoon located in the SE 5-55-21-W4th discharges into a constructed swale which flows in a northeast direction to the ditch along Range Road 214 into the Ross Creek tributary.

Ground Water

The quantity and quality of the groundwater within the Plan Area was determined from well driller reports and a AGRA Earth & Environmental Ltd. assessment of the Josephburg area which was conducted in 1998. The groundwater quality is generally moderately mineralized, which can be expected from within surficial gravel aquifers. The groundwater quality appears to have been impacted with slightly elevated concentrations of total nitrogen (nitrate, TKN and ammonia) and an elevated chemical oxygen demand. The groundwater quality does not exceed the Canadian Drinking Water Quality Guidelines (CDWQG).

In any event, any future development will be serviced by the Josephburg Water Co-op which obtains treated water from the City of Edmonton.

7.4 Geotechnical Assessment

A Geotechnical Investigation of the Plan Area, excluding the airport lands, was completed by AGRA Earth & Environmental Ltd. in 1998. Although some portions of the Plan Area were observed to have a relatively high groundwater table, particularly around the sewage lagoon site, the geotechnical conditions are generally favourable for residential development.

It is envisioned to develop a portion of the undeveloped airport lands as a business service/light industrial area where development would consist of slab on grade construction which would not be affected by high water table levels.

7.5 Vegetation

The clearing of land for agricultural use, transportation/utility corridor, institutional and residential land use has left less than 5% of the plan area in a naturally vegetated state. Native grasslands vegetation is poorly represented and occurs mainly in unimproved pastures, marginal wetlands along fence lines, and the CP railway corridor and road right-of-ways. The Ross Creek tributary channel has been diverted from its natural course and

supports little riparian habitat typical of less disturbed drainage courses within Strathcona County.

The remnant forest stands are generally associated with lands that was unsuitable for agriculture or development as a result of poor drainage, localised poor soil conditions and flood prone areas. The microsite conditions created by man-made disturbances along with low variability in moisture and exposure gradients found in the plan area reduce the diversity of natural vegetation.

Tree cover is dominated by Balsam Poplar in moist areas and Aspen on better drained sites. Depressional areas, which are ungrazed and unaltered, support a dense herbaceous surface cover and may also be surrounded by willows.

Disturbed areas including residential, institutional and agricultural lands have been planted with non-indigenous plant species including Colorado Spruce, Mountain Ash, MayDay, and Manitoba Maple. Within the Hamlet a number of spruce trees have been planted years ago along the south boundary of 1 Avenue south and west of 2nd Street West and adjacent to the east boundary of the ball diamonds.

7.6 Heritage Resources

The Archaeological Survey of Alberta requires that a historic and archaeological assessment be undertaken at the subdivision approval stages and appropriate measures be applied to protect any significant features which may be found.

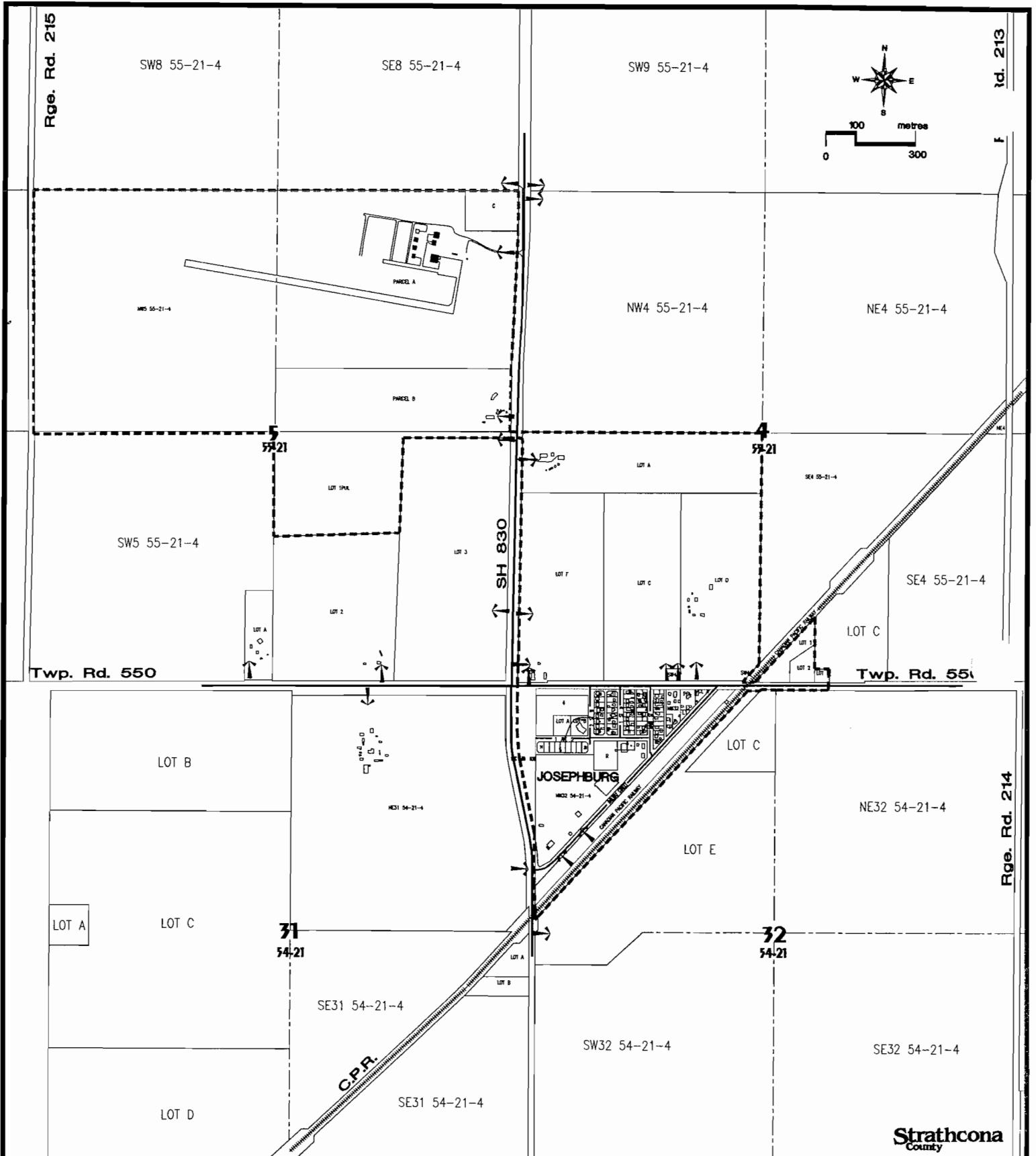
8.1 Transportation Network

The transportation network for the Hamlet of Josephburg is illustrated in Figure 8.0. The principal road access serving Josephburg is Township Road 550 which forms the current northern boundary of the Hamlet. Township Road 550 connects Josephburg to Fort Saskatchewan and Highway 15 to the west. Secondary Highway 830 forms the western boundary of the existing Hamlet and provides north/south access to Highway 15 and 16 and other locations within and outside the County. Traffic levels along that portion of Township Road 550 located west of the Canadian Pacific Rail (CPR) line are in the range of 1,096 - 1,361 vehicles per day, dropping to approximately 740 vehicles per day east of the CPR line (see Table 8.0 - Traffic Counts). Traffic levels north and south of Josephburg along S.H. 830 are in the range of 682 to 815 vehicles per day. Given the potential for future industrial development in the northeast portion of the County, it is possible that traffic levels between Highway 15 and Josephburg may increase slightly. Township Road 550 west of Josephburg to Highway 15 is identified for future upgrading to a two lane rural arterial standard.

The local roads within the Hamlet are asphalted with ditches (rural cross section roads). At present there are four roads, 3 lanes and seven private driveways that access directly onto Township Road 550 within the Plan Area boundaries. There are eight private driveways that have direct access to S.H. 830. It is noted that traffic conflict along Township Road 550 located within the Plan Area could become an issue, if vehicular access is not properly controlled through future design within the plan area. Also the road network system around the Moyer Recreational Centre could be improved.

The Canadian Pacific Railway mainline forms the south-eastern limit of the Hamlet and was a principal reason for the community's location and historical development. All of the original four grain elevators serving the farming community have been demolished. It is anticipated that with development and expansion of the Alberta Heartland Area, use of the railway line will increase.

8.0 Josephburg Area : Traffic Counts	
Location:	
SH 830 north of Twp Road 550	682
SH 830 south of Twp. Road 550	815
Twp Rd. 550 west of the CPR line	1096 - 1361
Twp Rd. 550 east of the CPR line	740



LEGEND

- EXISTING TRANSPORTATION NETWORK
- ➔ EXISTING ACCESS POINTS
- AREA STRUCTURE PLAN BOUNDARY

HAMLET of JOSEPHBURG AREA STRUCTURE PLAN

Figure 8.0 TRANSPORTATION NETWORK

Drawn by: D. Leckie A.Sc.T. Date: 20/05/97 Scale: as noted

Revised By: PT Revision Date: 11/09/02 Revision No.: 3

Planning & Development Services

DWG. NO.

D41H0006

8.2 Water System

The existing municipal water system for Josephburg is illustrated on figure 8.1: Municipal Water System. The existing distribution system is approximately 39 years old. The mains are constructed of ductile iron and experience approximately one break per year. As the pipe ages and maintenance costs increase, replacement with minimum 200mm diameter mains is recommended.

The County, through the Josephburg Water Co-op System, supplies the Hamlet of Josephburg with water that is received from the City of Edmonton. Water from the Josephburg Water Co-op System is supplied via a 100 mm diameter transmission fill line which connects with the reservoir. Connection to the transmission fill line is not available. The Co-op supplies the Hamlet with treated water to a maximum capacity of 4.0 litres/second at a minimum pressure of 15 P.S.I. Water supply from the reservoir is distributed to the community via a series of 100 mm and 150 mm diameter distribution lines.

Water supply for fire protection within the Hamlet can not be met as the present system is not designed to supply water for fire protection. Reservoir and pumphouse upgrades would be required to provide fire protection through the three fire hydrants within the community. These hydrants function primarily as flushing points. As system upgrades are undertaken, hydrants need to be added also, to provide proper coverage and a County/Urban Standard of fire protection. At present fire trucks get their water supply directly from the reservoir.

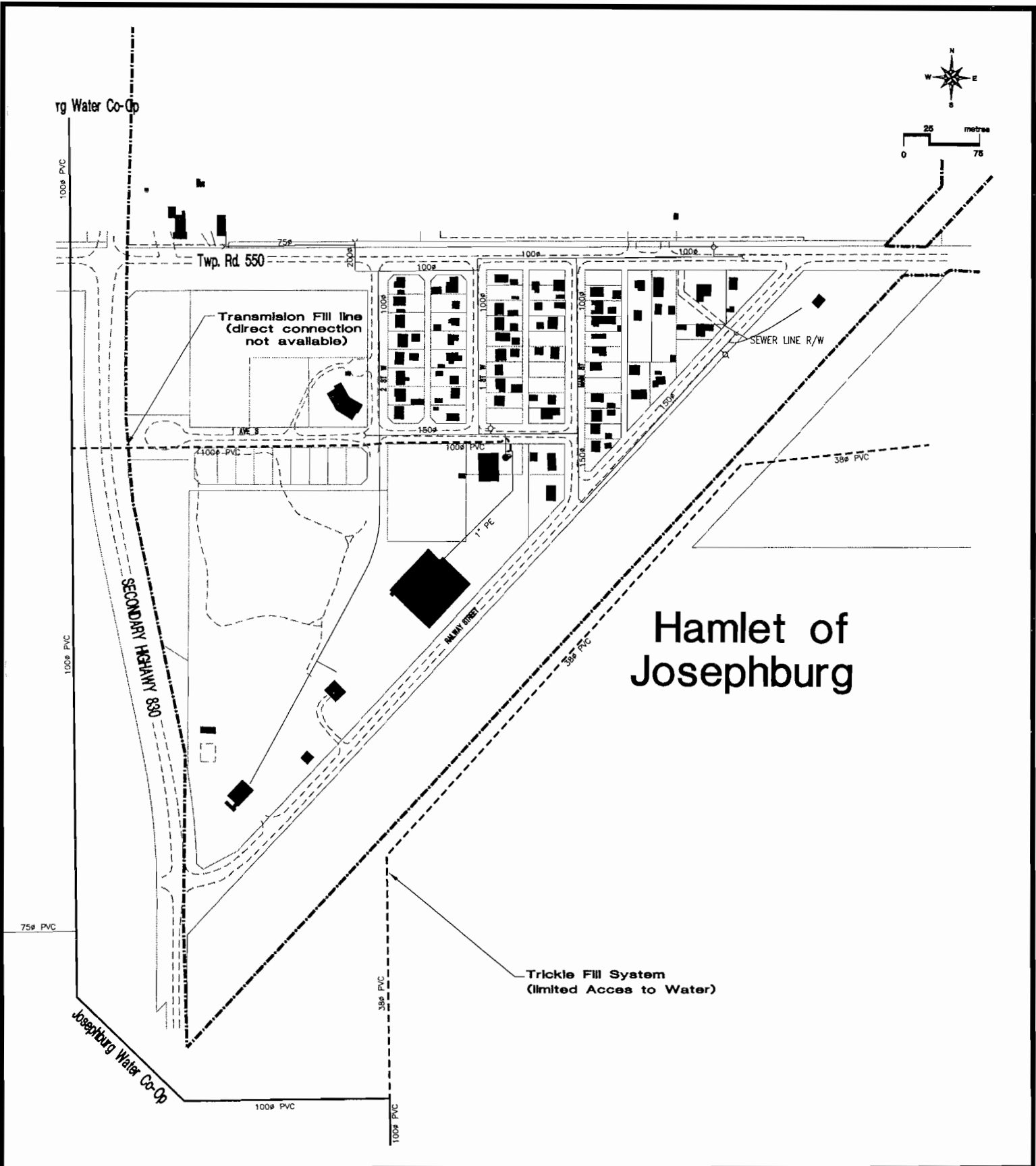
In addition to the line serving the Hamlet, Josephburg Co-op also provides treated water to farms, small holdings and acreages within the area via a separate 38 mm diameter trickle fill system. The trickle fill line connects with the 100 mm diameter Co-op supply line and runs parallel to the Canadian Pacific Rail line on the south side. These members of the Co-op receive treated water at a maximum fill rate of 2.0 ipgm (l/s) for farm members and 0.5 ipgm (l/s) for small holdings and acreages. Those using the trickle fill system provide their own on site storage to meet their own peak consumption requirements.

8.3 Sanitary Sewerage System

The existing sanitary sewerage system for Josephburg is illustrated on figure 8.2: Sanitary Sewerage System. The sanitary sewerage system consists of a 200 mm (8") diameter outfall sewer to a lagoon located approximately 700 meters (2,300') north-west of the Hamlet. The lagoon discharges into a wetland area located in the northwest corner of the SE-5-55-21-W4th.

Most manholes are less than 90 m (295') apart, the maximum spacing being 112 m (367'). This is well within the provincial standard of 120 m (394'). These sewers may be incorporated into an expanded future sewage collection system.

The existing lagoon was designed and constructed in accordance with Alberta Environmental Protection design parameters at the time, however the parameters have now changed and upgrades to the system would be required if flows to the lagoon were to increase.



LEGEND

- AREA STRUCTURE PLAN BOUNDARY
- EXISTING WATER LINES

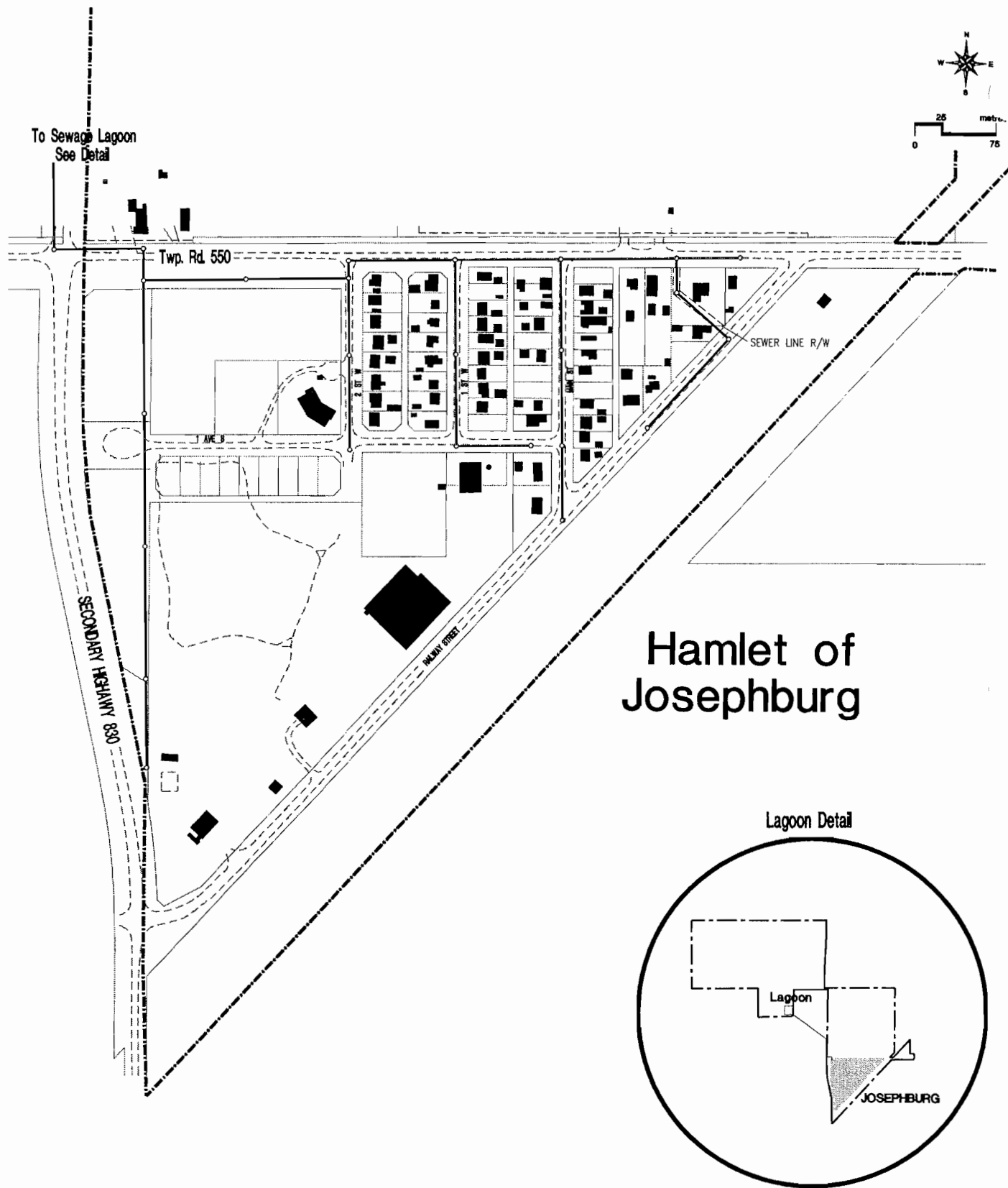
HAMLET of JOSEPHBURG AREA STRUCTURE PLAN

FIGURE 8.1 - MUNICIPAL WATER SYSTEM

Drawn by: P. Tsoukalas	Date: 02/02/01	Scale: as noted
Revised By: PT	Revision Date: 11/09/02	Revision No.: 4
Planning & Development Services		

DWG. NO.

D41H0012



LEGEND

- AREA STRUCTURE PLAN BOUNDARY
- EXISTING SANITARY LINES

HAMLET OF JOSEPHBURG AREA STRUCTURE PLAN

FIGURE 8.2 - SANITARY SEWERAGE SYSTEM

Drawn by: P. Tsoukalas	Date: 02/02/01	Scale: as noted	DWG. NO.
Revised By: PT	Revision Date: 11/09/02	Revision No.: 4	D41H0012
Planning & Development Services			

8.4 Storm Drainage System

Storm run-off in the Hamlet is handled by open ditches. Some measure of inconvenience has occurred during heavy rains or spring melt because of blockage by access roads or inadequate out flows. In accordance with Alberta Environmental Protection standards, it will be necessary to accommodate pre-development storm water flows within the Plan Area through the development of an appropriate stormwater management system.

There is external storm runoff entering the Hamlet at the southwest corner. Flows from south of the railway, cross the railway at this point and travel along the railway property to the Northeast corner of the Hamlet to Township Road 550. The flow then goes west to a defined, natural drainage course crossing Township Road 550 just west of 2nd Street West, as shown in figure 7.1

The surface drainage within the Hamlet is from the southwest to northwest, exiting the Hamlet at the above noted natural drainage course. The natural drainage course north of Township Road 550 flows in a northeasterly direction to a low area within SW 5-55-21-W4M

This low area has no defined outlet, but general drainage outflow is to the north across the NW¼ 5, intercepting the Mohr Drainage Channel. The Mohr Channel is an improved drainage course which traverses the northerly part of the Study Area, draining west, then southwest, forming a tributary to Ross Creek.

A small portion of the westerly part of the Hamlet drains north to the intersection of Secondary Highway 830 and Township Road 550, then drains west along Township Road 550, eventually releasing into Mohr Channel.

8.5 Shallow Utility System

The Hamlet of Josephburg is served by Northwestern Utilities for natural gas, Telus for telecommunications and TransAlta for electricity.

9.1 Site Factors Influencing Development

The potential constraints and opportunities for future development within the Plan Area are identified on Figure 9.0: Development Constraints. Most areas are satisfactory for the construction of conventional services, roadways and building foundations.

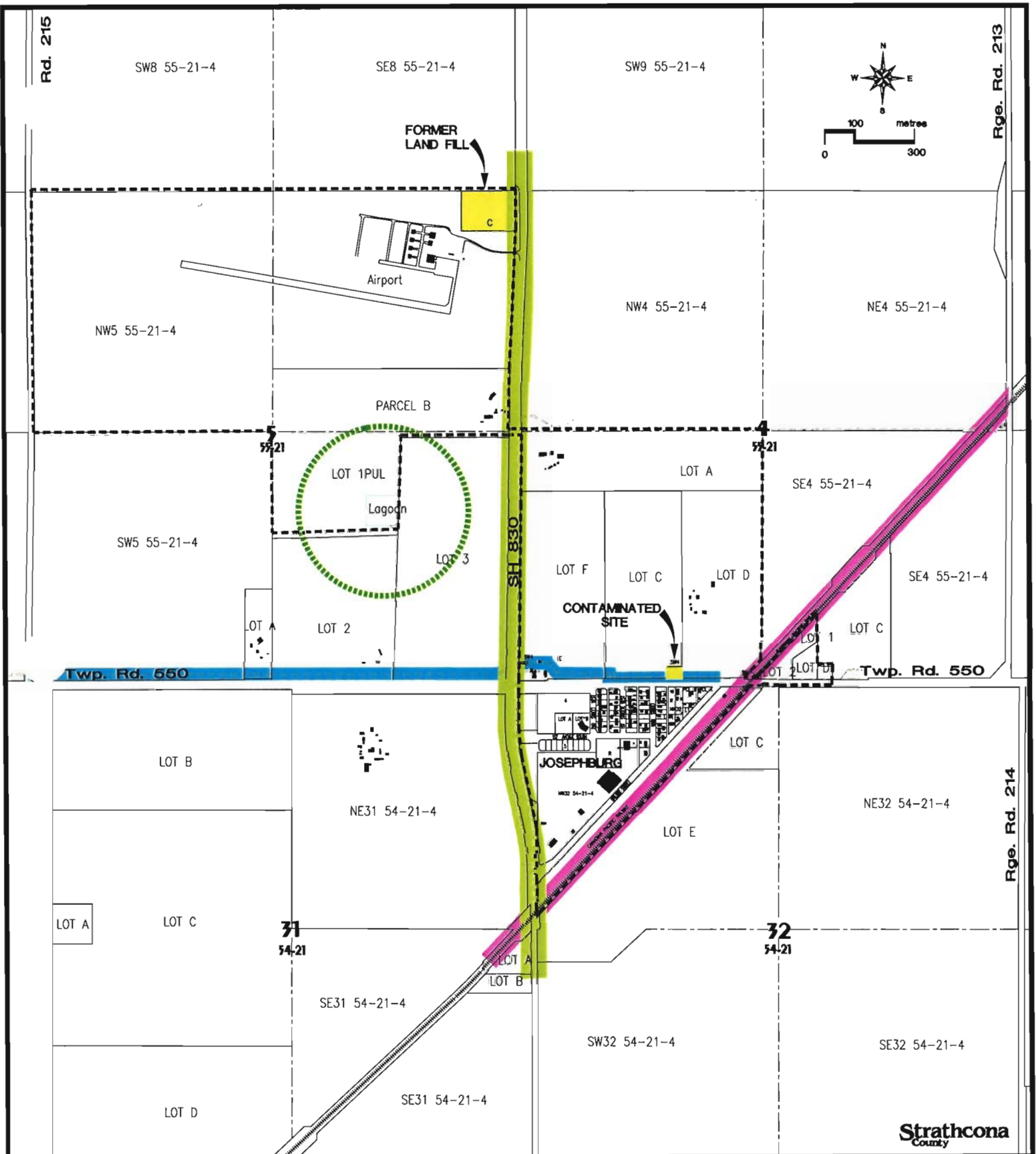
The areas that are most affected include those land uses within the immediate proximity of the sewage lagoon, the Strathcona County airport and the Canadian Pacific Rail line. Many of the issues associated with these locations can be addressed through providing for a proper transition of land uses, setbacks and/or buffering.

A Phase I Environmental Site Assessment (ESA) was prepared by Stantec in 2000 for the former landfill site located in the north east corner of the airport lands. Based on the historical and regulatory information reviewed, site reconnaissance and interviews conducted as part of the Phase I ESA, the following potential environmental concerns were found.

- As this site was not manned and there were reports that some industrial sites used the facility for waste disposal there is a potential that waste material from the hazardous sites may have been dumped at this site.
- It was also reported that there is a high water table at this facility, there is a potential that the groundwater table had been impacted.
- There is potential for the groundwater to have been impacted from the storage of rinsed waste pesticide/herbicide barrels as the surficial soils were impacted.

Based on this information, a number of recommendations were made which would include drilling bareholes to determine the subsurface geology of the subject property and monitoring the quality of the groundwater both upstream and downstream of the waste cells. Also, four shallow bareholes should be drilled over the waste cells to determine the depth and geology of the cover material for the waste cells. It is proposed that the property remain undeveloped until property remedial action is taken.

A Phase I ESA was also conducted for the former UFA site which is located north of Township Road 550. The property is now owned by Strathcona County and has also been found to be contaminated in view of the number of gas spills on the property. Further remedial action will be required prior to the disposal of the property.



LEGEND

- RAILWAY SETBACK CONSTRAINT
- UTILITY SETBACK CONSTRAINT (15m)
- SECONDARY HIGHWAY SETBACK REQUIREMENT (40m)
- SEWAGE LAAGOON SETBACK (300m)
- CONTAMINATED SITE

HAMLET of JOSEPHBURG AREA STRUCTURE PLAN

FIGURE 9.0 - DEVELOPMENT CONSTRAINTS

Drawn by: D. Leckie A.Sc.T.	Date: 27/05/97	Scale: as noted
Revised By: PT	Revision Date: 11/09/02	Revision No.: 5
Planning & Development Services		

DWG. NO.

D41H0010

10.0 Risk Management

Josephburg is located in proximity to the heavy industrial area commonly referred to as the Alberta Industrial Heartland. The area contains a wide variety of petro-chemical facilities, including large scale oil refineries, chemical plants, regeneration plants and other similar facilities.

There is a low probability of safety hazards for those living within Josephburg. The industrial facilities area developed with stringent controls, safeguards and inspections in place, to ensure the risk of accident is minimised. The closest industrial plants are located approximately 5km of Josephburg. Strathcona Industrial Association (SIA) standards suggest a setback of 3km between heavy industrial zoned plant locations and residential dwellings. Future expansions or development of Josephburg would be well beyond that distance.

The Heartland Fire Hall, which was completed in 2001, is located about 4.8 km north of Josephburg. It is a major component of the Emergency Measures Program for the Heartland and it will also help protect Josephburg in an event of an emergency situation. Heartland hall will be staffed 24 hours a day by a five member crew, all with advanced fire and emergency medical service training.

A rail line also passes by Josephburg on the south east side of the community. The transportation of hazardous substances is regulated, hence the passage through any populated areas, including Josephburg, are subject to commonly applied transportation protocols. In the event of any accidents, emergency measures are applied to safeguard hazards to person and property, providing for measures such as evacuation in the event of extreme accidents occurring. Josephburg is no different than any other centres located along rail lines through which hazardous good are transported.

Josephburg appears to be suitably located to facilitate future modest growth as long as appropriate risk management measures remain in effect for:

- Rail transportation safety requirements
- SIA standards for separation distances between heavy industry and residential being no less than 3 km.
- Emergency measures plans being in effect.

11.0 Market Analysis

It is difficult to predict future demand for development in Josephburg, as there has been little growth in the Hamlet over the last number of years. The lack of detailed historical information and differences between Josephburg and other hamlets make trend analysis across individual communities in the County difficult.

However, with the increased activity and expansion projects within the Alberta's Industrial Heartland Area and the emphasis on petro-chemical processing, it is likely that Josephburg will have increased development pressures and opportunities. Within the foreseeable future, the most promising prospect for Josephburg is for further single family residential development with potential for local convenience commercial when population warrants. The most probable types of commercial development, over the long term would be a grocery/convenience store, cafe, service station and repair outlet, hardware and beauty/barber shop. Some additional development within the Hamlet boundary could be accommodated under the current municipal water and sewer system. It is noteworthy to note that there has been considerable interest expressed in the purchase of residential lots and development of commercial property since the ASP process began. Also, there has been considerable growth in residential development in the Edmonton Capital Region. Because Josephburg, like other nearby urban settlements such as Fort Saskatchewan, Sherwood Park and Ardrossan are within commuting distance of Edmonton (and they are all growing) it is likely that Josephburg will be perceived as an attractive location (with small town atmosphere) where people can live and still maintain employment in Edmonton.

It is conceivable that with further development in the northeast, one could potentially see an expansion of the existing airport and in conjunction with airport development some airport related light industrial development

12.0 Public Involvement

The public participation process conducted for the Josephburg Area Structure Plan provided residents and landowners with an opportunity to provide input into the type and extent of future development. At the onset of the study, a steering committee comprised of five residents and the area councillor was established. The primary responsibility of the steering committee was to deal exclusively with the planning process. This included arranging committee meeting dates, distributing information to residents and acting as a communication link between the County and the residents. Near the end of the process the steering committee acts as content expeditors by helping resolve issues. The steering committee worked with the County to coordinate the timing and number of meetings and to ensure that the process would involve as many residents of Josephburg as possible. There were several avenues for citizen involvement throughout the process which included the distribution of two community survey questionnaires, three public meetings/workshops and numerous steering committee meetings. This is in addition to the previous community questionnaire and two workshops that were held in 1997 when the project was initially started and deferred until 2000.

Student/Population Projections

Concept Map	No. of Lots	*Elementary Student Generation	
		Public .2640 per unit	Separate .0753 per unit
Existing Lots within Hamlet	66	17	5
Single Family Residential	414	109	31
Suburban Estate	74	19	5
Manufactured Home	265	69	20
Total	819	214	61

* Factors updated by Elk Island Public and Separate School Boards in year 2000.

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STRATHCONA COUNTY
Hamlet of Josephburg
Estimated Phase 1 Development Costs
(Total Population, Phase 1: 500 people)

	Total Est. Cost	Net After Grants	Dev. Charge Per S.F.R. Lot
OFF-SITE DEVELOPMENT COSTS			
X Reservoir and Pumphouse (cost shared by 55 hectares total; 15 lots/ha., 32 ha. - S.F.R.)	\$1,300,000	\$390,000	\$475.00
X Water Trunk Main (cost shared by 55 hectares; 15 lots/ha., 32 ha., - S.F.R.)	\$115,000	\$115,000	\$139.00
X Wastewater Treatment Facility (cost shared by 8 hectares, 15 lots/hectare - S.F.R.)	\$650,000	\$194,000	\$1,617.00
X Sanitary Trunk Main (cost shared by 55 hectares, 15 lots/ha., 32 ha., - S.F.R.)	\$115,000	\$115,000	\$139.00
Total Estimated Off-Site Charges	\$2,180,000	\$814,000	\$2370.00
	(say \$2400.00/lot)		
ON-SITE DEVELOPMENT COSTS: S.F.R.			
Water, Sanitary, Storm, Roadways			\$18,600.00
TOTAL ESTIMATED DEVELOPMENT COSTS	\$21,000 S.F.R. Lot		

X Plus: Allowance for land, franchise utilities, legal survey, solicitor, O/H and Profit			\$7,400.00
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STRATHCONA COUNTY

HAMLET OF JOSEPHBURG

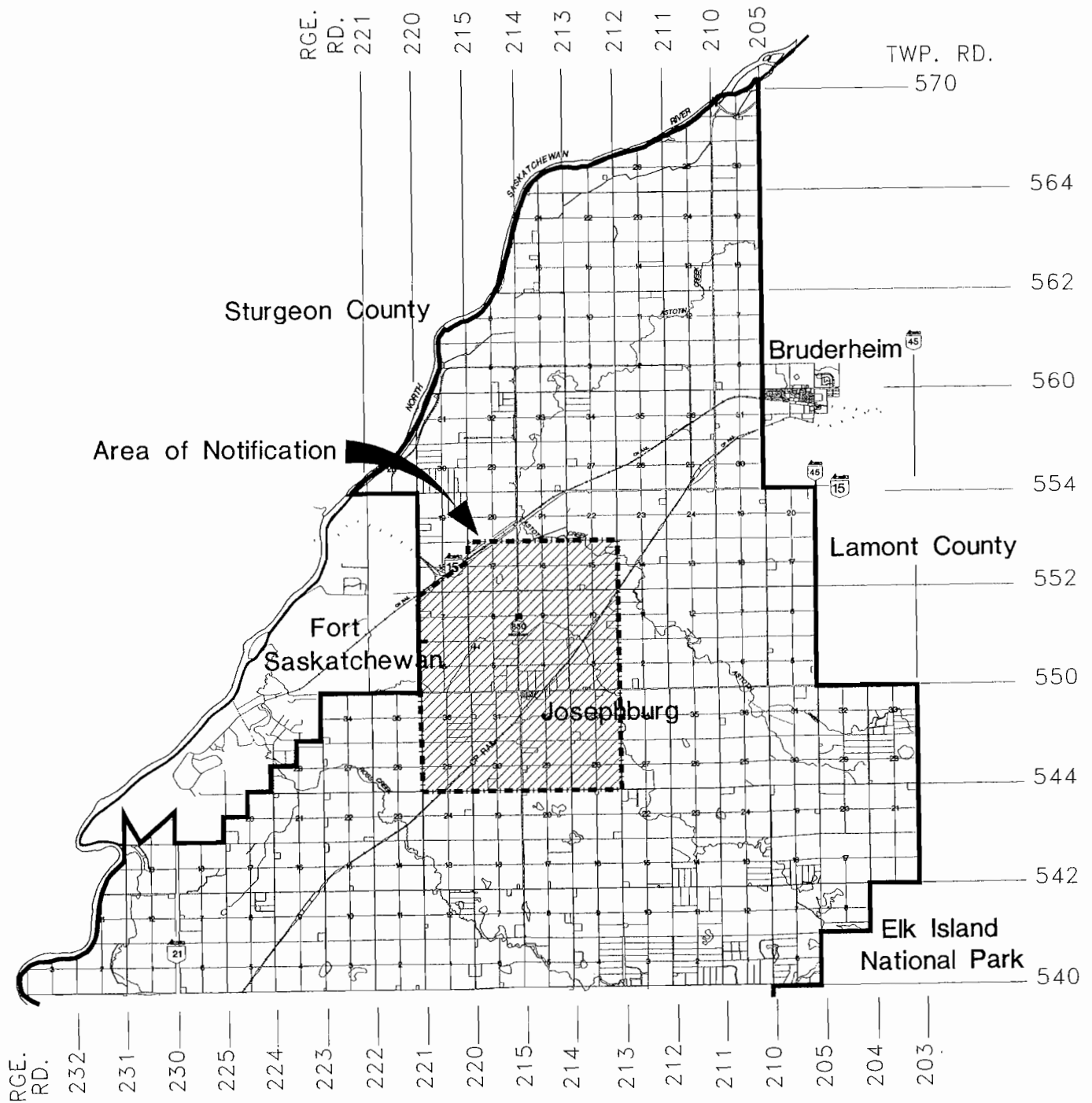
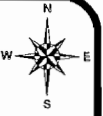
Lot Servicing Cost Estimates for 1st Avenue

<u>COST TO SERVICE 1st AVENUE</u>		<u>FRONTAGE OF LOTS (m)</u>	
SANITARY SEWER MAIN	\$36,000	NORTHWEST LOT	64.21
WATERMAIN	\$83,000	NORTH CENTRAL LOT	59.58
SERVICES (13 lots)	\$33,000	NORTHEAST LOT	58.8
ROADWAY	\$150,000	ELEVEN LOTS	172.2
LANE	<u>\$42,000</u>		
TOTAL	\$344,000	TOTAL FRONTAGE (m)	354.79
COST PER METRE	\$969.59		

COST PER LOT

NORTHWEST LOT	\$63,000.00
NORTH CENTRAL LOT	\$58,000.00
NORTHEAST LOT	\$58,000.00
ELEVEN LOTS	\$16,000.00

- Includes: Allowance for Construction, Engineering Materials Testing and Contingency
300 mm Watermain on 1st Avenue
Mono. Sidewalk, curb and gutter on south side of street only
Augered water and sanitary sewer services to 9 lots
200mm Sanitary Sewer main (Note: no storm sewer)
10 m paved carriageway on 1st Avenue
5 m paved lane behind 9 lots
- Not Included: Land cost
Development levies
Franchise Utilities and Street Lighting
Legal Survey and Solicitor Fees
G.S.T.
- Note: No front driveway access



Notification Area for the Josephburg A.S.P.

Drawn by: Peter Tsoukalas C.E.T.

File No.:

Revised Date: dd/mm/yy

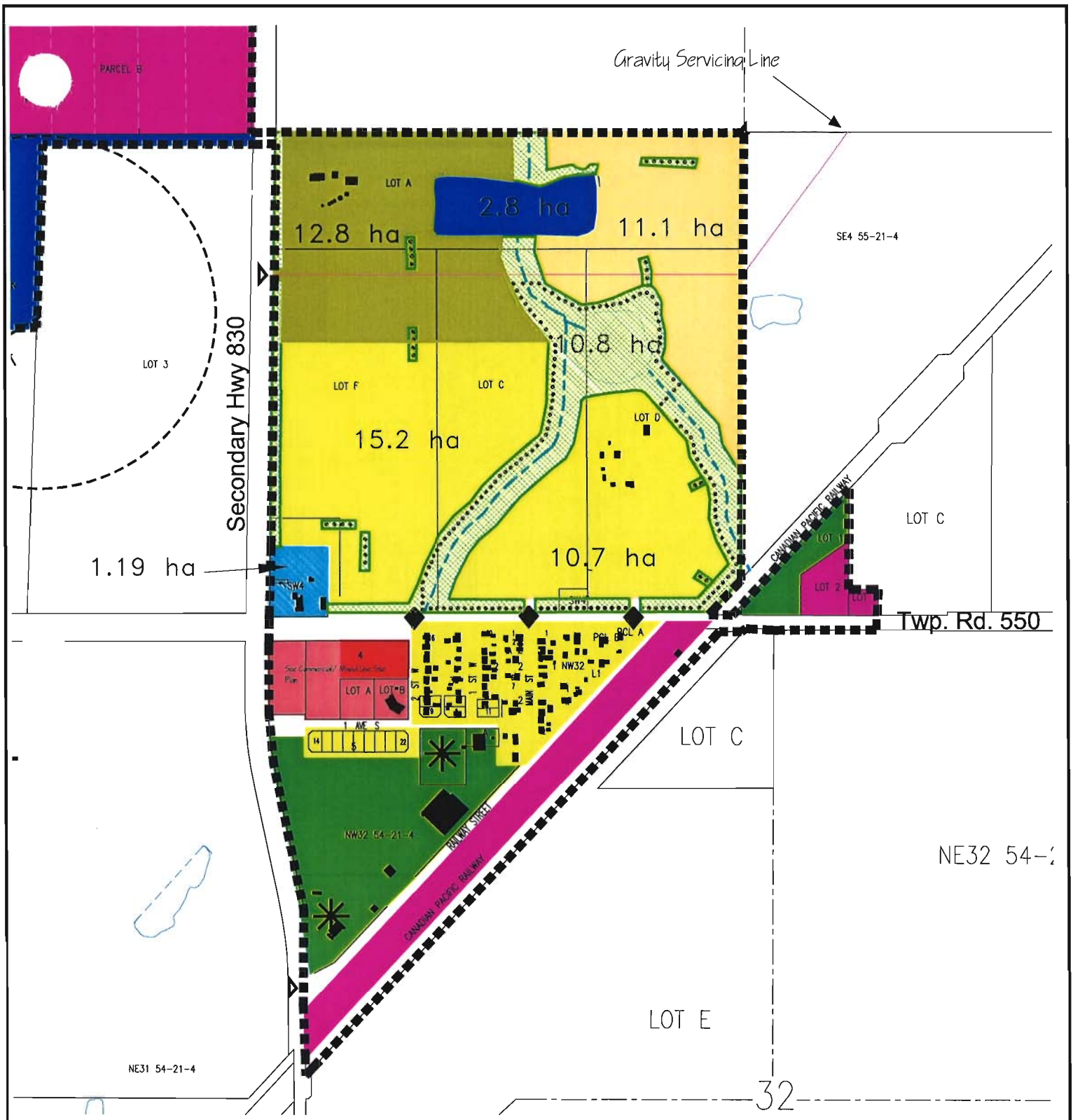
Revision No.

Date Drawn: 19/04/01

Scale: N.T.S.

DWG No.: P41F0003

PLANNING SERVICES BRANCH
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 County



Legend

- Commercial
- Medium Density Housing
- Single Family Residential
- Suburban Estates
- Manufactured Housing
- Institutional
- Open Space/Recreational
- ■ ■ Area Structure Plan Boundary
- Business Service
- Public Utility
- ◆ All Directional Access
- ▲ "T" Intersection
- Bicycle/Walking Path
- ✱ Possible Elementary School Location

Hamlet of Josephburg Area Structure Plan

Development Concept - Detail

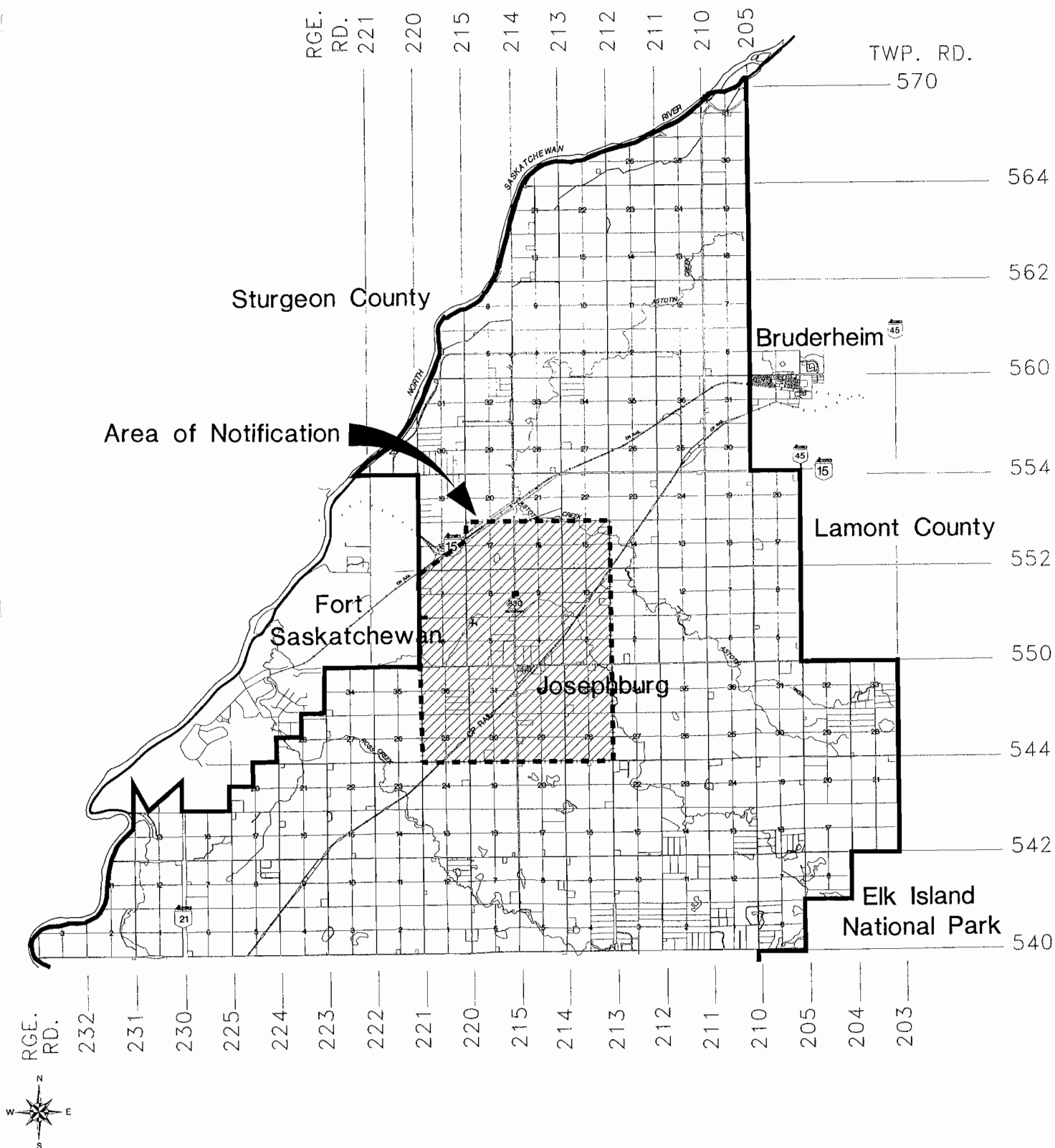
Drawn by: P. Tsoukalas Date: 10/09/02 Scale: as noted

Revised By: XX Revision Date: dd/mm/yy Revision No.: 9

Planning & Development Services

DWG. NO.

D41H0040



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Drawn by: Peter Tsoukalas C.E.T.

File No.:

Date Drawn: 11/09/02

Scale: not to scale

File No.: X

Revision Date: dd/mm/yy

Revision No. x

Dwg No.: P41F0003

PLANNING & DEVELOPMENT SERVICES

Strathcona
County