BYLAW 12-2006

A BYLAW OF STRATHCONA COUNTY IN THE PROVINCE OF ALBERTA, FOR THE PURPOSE OF ADOPTING THE THOMLINSON ESTATES AREA STRUCTURE PLAN.

WHEREAS it is deemed advisable to adopt the Thomlinson Estates Area Structure Plan.

NOW THEREFORE, the Council of Strathcona County, duly assembled, pursuant to the authority conferred upon it by the *Municipal Government Act, R.S.A. 2000* c.-*M-26* and amendments thereto, enacts as follows:

1. That Bylaw 12-2006 is to be cited as the "Thomlinson Estates Area Structure Plan".

2. That Schedule "A" attached hereto is hereby adopted as part of this Bylaw.

Read a first time this 21 day of March, 2006.

Read a second time this 21 day of March, 2006.

Read a third time and finally passed this 21 day of March, 2006.

Cathy Olsen
Mayor

Manager,
Legislative and Legal Services

Date Signed: March 24, 2006

Document #: PDRS Admin.4410.81437

THOMLINSON ESTATES

AREA STRUCTURE PLAN

IN THE

SE ¼ SEC. 4-53-22-W4M

STRATHCONA COUNTY

Prepared by:

HAGEN SURVEYS (1982) LTD.
8929 – 20th Street
Edmonton, Alberta.
T6P 1K8

February, 2005

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1.0 INTRODUCTION

This Area Structure Plan (ASP) has been prepared in accordance with Strathcona County's guidelines. The following document describes the sequence of development, the specific land uses, population densities proposed, environmental analysis, geotechnical analysis, future location of transportation routes, utilities and public open spaces.

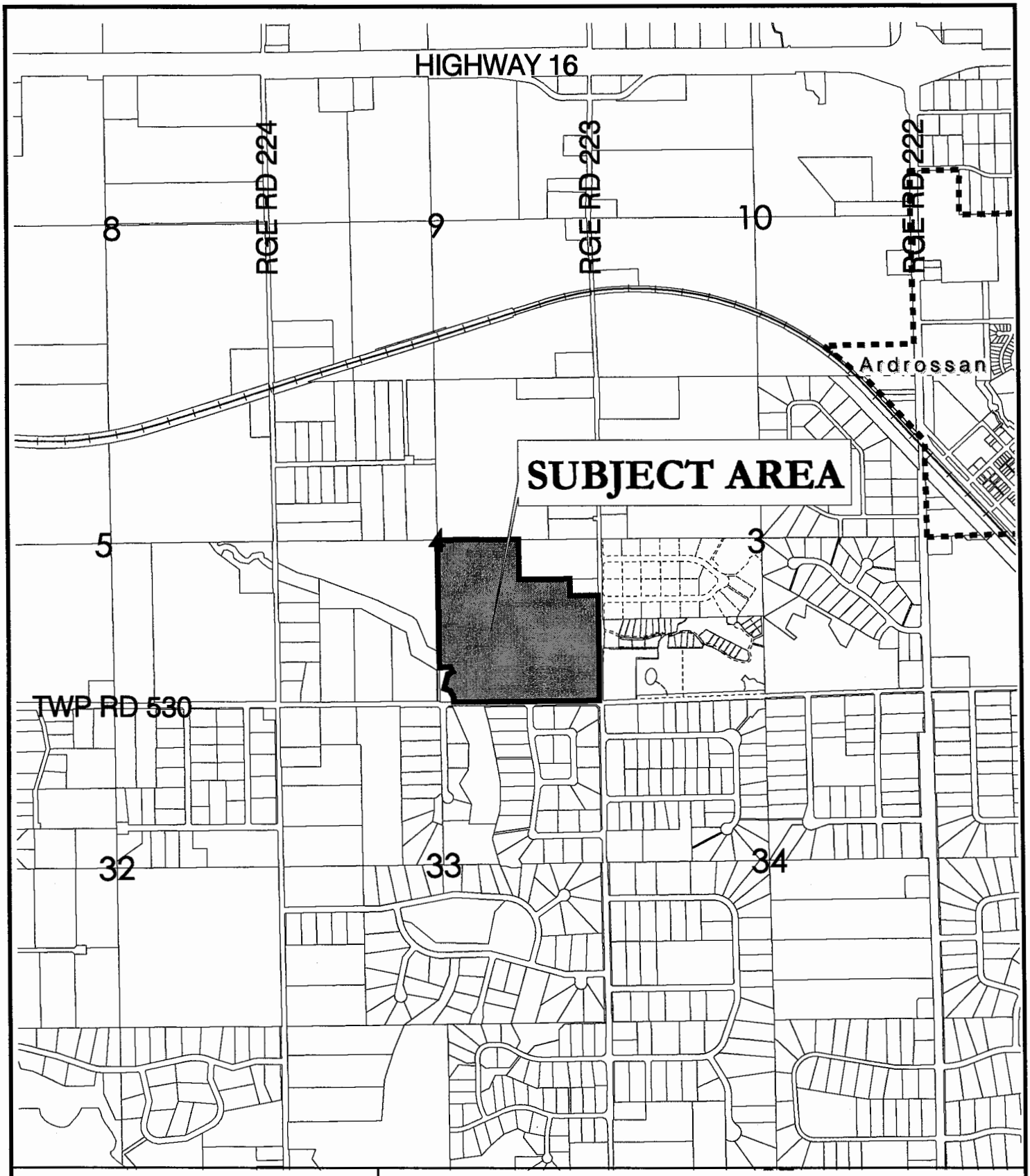
The subject property legally described as Pt. of the SE ¼ Sec. 4-53-22-W.4M. is located on the northwest corner of the intersection of Township Road 530 (Baseline Road) and Range Road 223. Refer to figure 1.0 for the site location plan. The property contains 54.5 hectares (134.5 acres) more or less.

1.1 Purpose

To facilitate the subdivision of the subject lands into 38 country residential lots ranging in size from 0.80 hectares (2.00 acres) to 1.77 hectares (4.37 acres). This plan provides a framework for the proposed country residential subdivision and development of the SE ¼ Sec 4-53-22 W.4.M.

1.2 Ownership

The subject quarter currently consists of 4 parcels being Lot A, Plan 1856 R.S. containing 8.09 hectares, Lot 1, Plan 822 2784 containing 1.21 hectares, Lot 8, Plan 792 2432 consisting of 0.845 hectares and the remainder of the quarter which is the proposed parcel to be subdivided, consisting of 54.5 hectares. The subject property is presently in the name of Kenneth Edward Thomlinson. The developer has a caveat re: purchase agreement in favour of 119463 Alberta Ltd. filed on the title to the subject lands.



KEY PLAN
SE 4-53-22-W4

N

PLANNING & DEVELOPMENT SERVICES

Drawn By:	C. Pullishy, C.P.T.	File No.:	4410-2005P003
Date Drawn:	19/04/05	Dwg No.:	N:\Arcview Projects\2005 Area Structure Plans\2005P003 2005P003 - Key Plan.mxd
Scale:	NOT TO SCALE		

Strathcona County

1.3 Rights of way/Constraints to Development

The title to the said property is subject to two utility rights of way; one in favour of Atco Gas and Pipelines Ltd. (instrument number 3543SB) and one in favour of Utilicorp Networks Canada (Alberta) Ltd. (instrument number 7568TH). The Atco Gas instrument refers to specific rights of way for gas pipeline purposes along the south side of the property at a width of 14.17 meters for a distance of 114.21 meters east from the southwest corner of Lot B, Plan 792 2432. The other Right of way instrument refers to a specific right of way for an overhead power line also along the south side of the property at a width of 14.63 meters (50 feet). The locations of the two Atco Gas lines and the Utilicorp Networks right of way are shown on the plans, which form part of this document.

2.0 STATUTORY PLAN COMPLIANCE

This Area Structure Plan (ASP) is consistent with the Strathcona County Municipal Development Plan (MDP) Bylaw 38-98 which designates the property as Country Residential Policy Area. The Country Residential Policy Area allows for the development of parcels as small as 0.8 hectares (2.0 acres) in size. Strathcona County Land Use Bylaw 8-2001 designates the property as (AD) Agricultural: Future Development District and therefore the Land Use Bylaw will require amendment to rezone the land from (AD) Agricultural: Future Development District to (RC) Country Residential District prior to subdivision approval. Since the RC district allows for country residential parcel sizes of 0.80 hectares (2.0 acres) and larger, this amendment is consistent with the MDP.

3.0 ENVIRONMENTAL ELEMENTS

The general analysis of the existing environmental elements and the impact of residential development is included within this ASP. The different aspects of environmental elements were evaluated by three different firms. The general conclusions of their evaluations are included in the following section.

Stantec Consulting Ltd. (Stantec) was retained to conduct a Biophysical Site Assessment on the said lands. The objective of the biophysical assessment was to determine the importance and conservation value of various natural areas located in the area with respect to residential development. Refer to Appendix A for Stantec's Biophysical Assessment.

Sabitini Earth Technologies Inc. was retained to conduct an evaluation of the soil conditions and shallow groundwater table conditions. Refer to Appendix B for Sabitini Earth Technologies Inc. report.

AMEC Infrastucture Limited (AMEC) was retained to design the storm water management system. This involved the completion of a hydrologic and hydraulic analysis. AMEC evaluated the existing surface drainage prior to proposing a storm management draft. Refer to Appendix C for the draft storm water management system brief.

3.1 Topography

Topographic relief on the property is rolling. Relief varies by about 20 metres (65.6 feet). The highest point is to the south of the parcel with an elevation of approximately 730 metres geodetic and the lowest point is the south west corner of the site with an elevation of approximately 710 metres geodetic. The rolling terrain is dotted with numerous peaks and depressions. Refer to figure 2.0 which depicts the existing site conditions which shows the contours, tree cover, pre-development drainage areas and improvements on the subject property.

3.2 Vegetation

Approximately 8% or 4.40 hectares of the subject property is tree covered. There are three significant treed areas on the subject property. One of the treed areas is located to the east side of the site, and consists of about 1.56 hectares of native poplar forest, a second area is located in the south west along Old Man Creek and consists of approximately 1.04 hectares. The third area is located in the north west corner of the property and contains approximately 0.98 hectares of tree cover.

The treed area to the east of the site is considered an ephemeral wetland area and is dominated by aspen and balsam poplar with the undergrowth consisting of mature willows, sedge tussocks, and grass species. The area located in the northwest corner of the site is considered to be wetlands and upland forest. The area is covered by mature willow species and upland vegetation dominated by balsam poplar with aspen interspersed throughout. The treed area to the south west is dominated by aspen and balsam poplar interspersed with some white spruce. Oldman Creek meanders through a small portion of the site. A narrow band of trees and shrubs have also established along the west property line along an existing fence. [Stantec Consulting Ltd.(2005) Biophysical Assessment for SE 4-53-22 W4M]

The remainder of the property is mainly cleared land which is currently being cultivated. A majority of the property is growing tame grass for hay and cereal crop. Refer to Appendix A for Stantec Consulting Ltd.(2005) Biophysical Assessment for SE 4-53-22-W4M report.

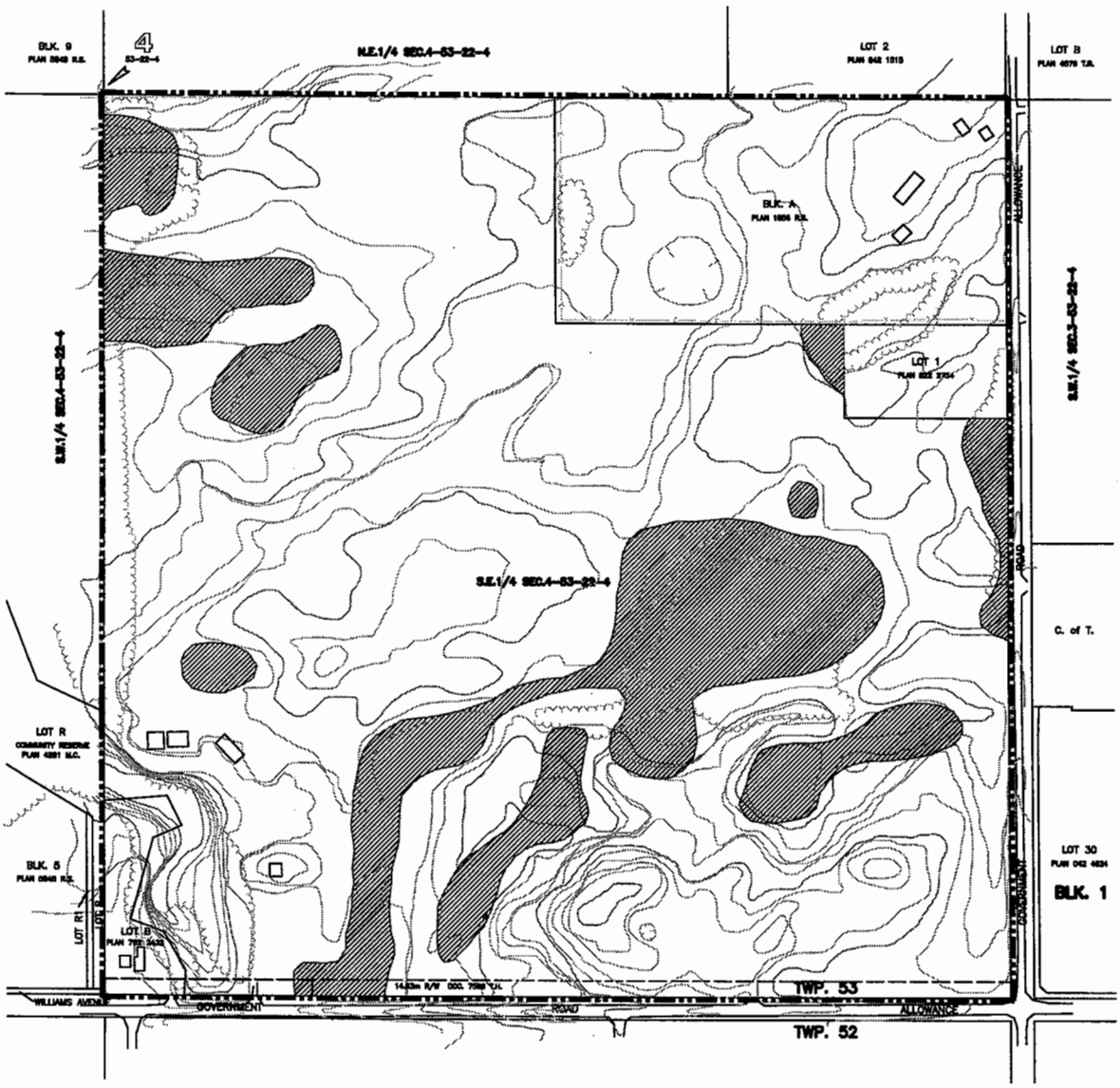
3.3 Surficial Geology

The surficial geology of the site is classified, according to published surficial geology reports, as stagnation moraine glacial deposits of uneven thickness. The terrain consists of local water-sorted material up to 30 meters thick. Within the general area, the topography is defined as hummocky with irregularly shaped and poorly defined knobs and kettles and is classified as moderately to weakly developed. [Stantec Consulting Ltd.(2005) Biophysical Assessment for SE 4-53-22 W4M]

AREA STRUCTURE PLAN

SHOWING PROPOSED COUNTRY
RESIDENTIAL SUBDIVISION
S.E. 1/4 SEC. 4-53-22-4
STRATHCONA COUNTY

Fig. 5
EXISTING CONDITIONS



ASP BOUNDARY
WATER TABLE BELOW 2.0 m
WATER TABLE ABOVE 2.0 m
BUILDINGS
730 CONTOUR LINES

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FEBRUARY, 2005

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3.4 Soils

The soil on the entire site is shown on the Soil Survey of the Edmonton Sheet as Angus Ridge Loam (an eluviated black chernozemic soil developed on glacial till). The surficial loam is approximately between 20 centimetres and 60 centimetres deep according to the results of the shallow water table boreholes drilled by Sabatini Earth Technologies Inc. on August 20th, 2004. The evaluation of a majority of the boreholes showed that below approximately 20 centimetres there was clay present and below approximately 3.0 metres there was clay till present.

Under the Canada Land Inventory Soil Capability for Agriculture Index the soil on the subject site is classified as Class 2 with adverse topography. The Class 2 designation reflects soil with moderate limitations that restrict the range of crops and require moderate conservation practices.

3.5 Surface Drainage

AMEC included an analysis of the existing surface drainage patterns and characteristics in the draft storm water management system brief. The following is an excerpt from AMEC's report:

The development is located in a small drainage basin tributary to the Oldman Creek. The small drainage basin is depicted in Figure 1. Oldman Creek is a well-defined watercourse and drains northwest into the North Saskatchewan River, approximately 10 km away.

The existing land use in the basin includes an existing farmstead, farmland, and isolated wooded areas.

The site contains generally clay and clay till soil conditions.
The land has undulating topography but generally slopes at an average gradient of 3% to existing wetlands that provide natural runoff storage.

Twp. Rd. 530 (Baseline Road) and Range Road 223 generally define the south and east drainage basin boundaries. The development area is divided into smaller sub –drainage basins as depicted in Figure 2.

The east - southeast sub-drainage basin drains into a large existing wetland. The biophysical assessment completed by Stantec identified this wetland as a high priority area for preservation. The proposed post-development drainage and stormwater management system will utilize this natural wetland. This approach would contribute to the potential sustainability of the wetland by directing storm runoff to it.

The northwest sub-drainage basin drains into a smaller existing wetland area. The biophysical assessment completed by Stantec identified this wetland as moderate to high priority area for preservation. The proposed post-development drainage and stormwater management system will utilize this natural wetland. This approach will contribute to the potential sustainability of the wetland by directing storm runoff to the south one.

[AMEC Infrastructure Limited, 2005, "Draft Storm Water Management System Brief"]

3.6 Water Table

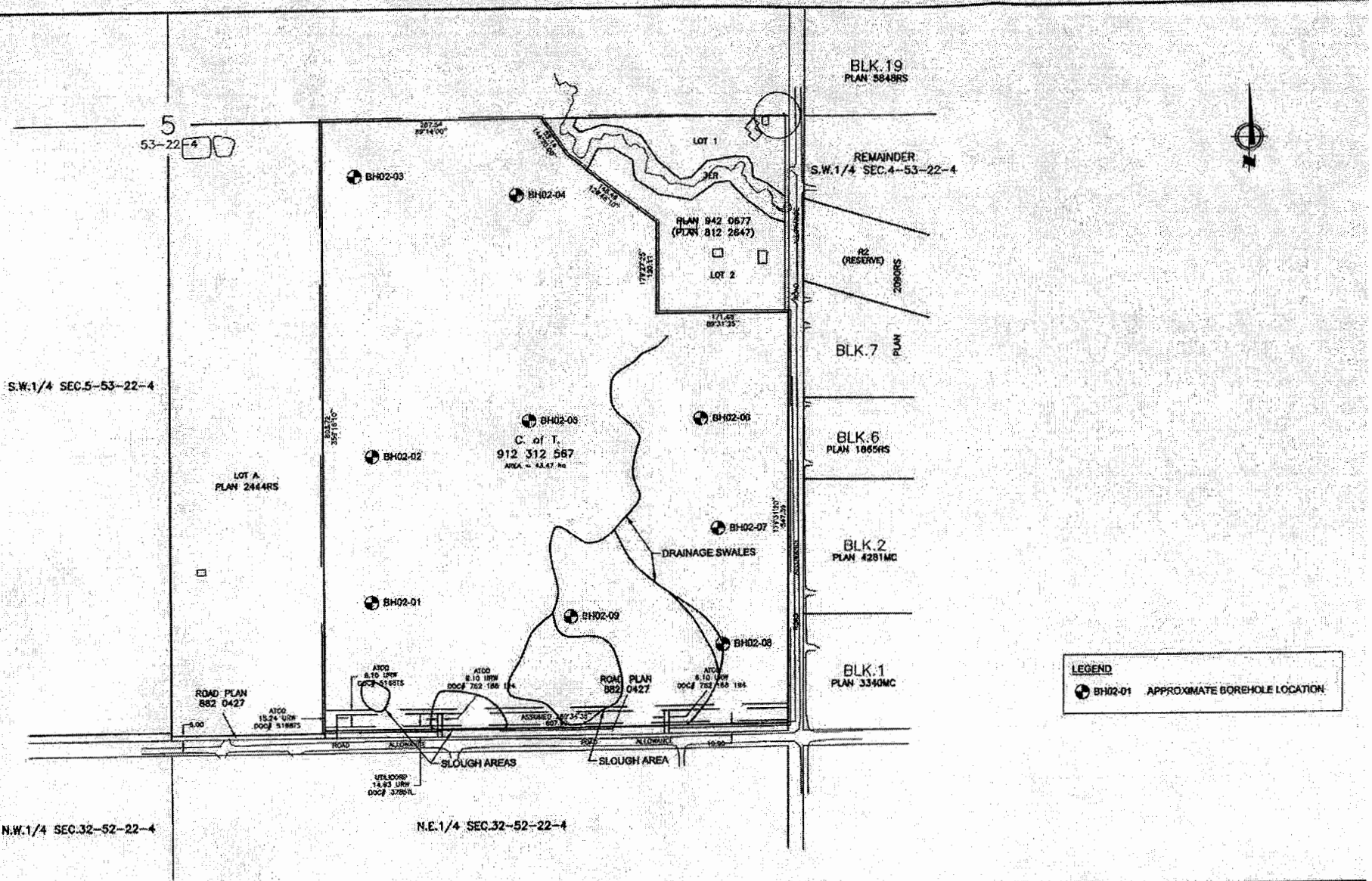
Water table testing was done by Sabitini Earth Technologies Inc. on August 20th of 2004 to determine developable areas (Refer to Appendix B for a copy of the report submitted by Sabatini Earth Technologies Inc.). Twenty-five test holes were drilled to depths of 6.0 metres below the ground surface and were measured at drilling completion, 9 days, 17 days and 23 days following drilling completion. A groundwater level criterion of 2.5 meters (8.2 feet) below ground surface was utilized on the site because of the dry years of 2002 and 2003. Refer to figure 3.0 for a sketch included in Sabitini Earth technologies Inc. report showing the locations of the boreholes and location of the 2.5 meter or higher water table. A high water table is defined by Alberta Environmental Protection as any area where the water table is within 1.8 meters (6 feet) below the ground surface during the frost-free period until the end of August and within 2.4 meters (8 feet) below the ground surface during the remainder of the year. [Sabitini Earth Technologies Inc.(2004) "Soil and Shallow Groundwater Table Testing Report, Portion of SE1/4 4-53-22-W4M]

The results of the water table testing showed that a majority of the subject site is developable with approximately 30% to 35% of the lands being low and wet. Groundwater table within 2.5 metres of the surface was present in 10 of the 25 test holes.

Only 3 of the 25 test holes showed water levels below 1.80 meters. The remaining 15 test holes were dry or had water at depths between 2.81 and 5.95 metres. [Sabitini Earth Technologies Inc.(2004) "Soil and Shallow Groundwater Table Testing Report, Portion of SE1/4 4-53-22-W4M]

Sabitini Earth Technologies Inc. concluded that geotechnical conditions are considered to be generally favourable for residential development. It was recommended that the low wet areas be incorporated into the subdivision design such that each proposed lot has at least 0.40 hectares of high and dry land.

Figure 3.0 shows the areas with a water table less than 2.5 metres and the majority of the area covers the lands east in the portion of the site in which Stantec Consulting Ltd. considered to be ephemeral wetland area. The remainder of the areas are smaller pockets dispersed throughout the site. This information was used in the design of the Area Structure Plan to ensure that all lots contain at least 1 acre of developable land to meet Strathcona County standards as shown on the developable areas map enclosed as Figure 4.0.



DRAWING REFERENCE:
HAGEN SURVEYS LTD. FILE 02S0187 DATED 2002-04-05

CLIENT:	AMEC INFRASTRUCTURE LTD.
	AMEC Earth & Environmental Limited
DWN BY:	OGS
CHKD BY:	DJB
SCALE	1:5000
DATE:	JULY, 2002

PROPOSED RURAL RESIDENTIAL SUBDIVISION
COUNTY OF STRATHCONA
SE 1/4 SEC 5-53-22-W4M
BOREHOLE LOCATION PLAN

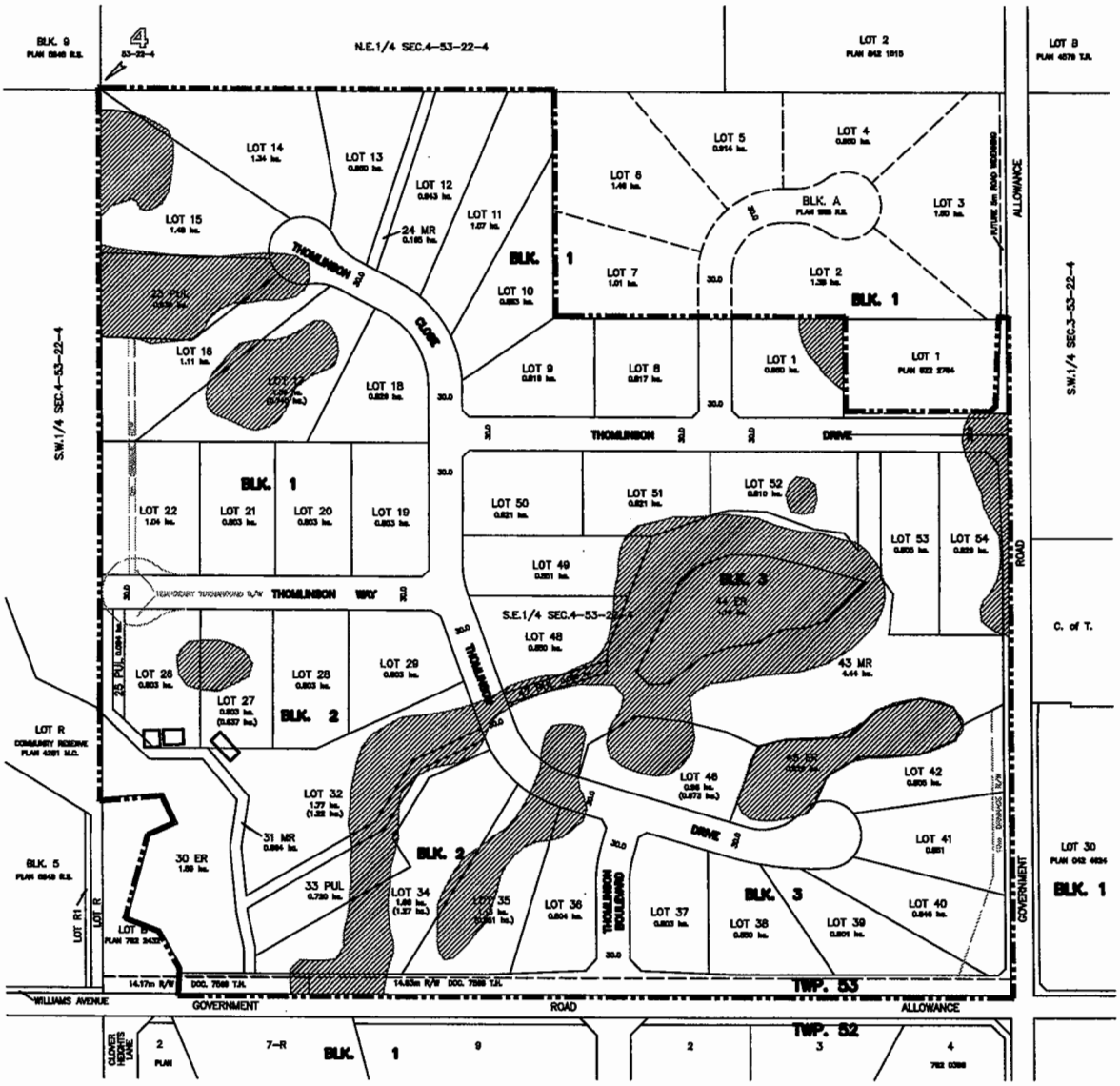
AMEC PROJECT NO: EG08848
REV. NO.: -
FIGURE 1

S:\CADD\Geo\EG08800\EG08848\EG08846-001.dwg — Figure 1 — Jul. 11, 2002 10:23am — owen.salova

AREA STRUCTURE PLAN

SHOWING PROPOSED COUNTRY
RESIDENTIAL SUBDIVISION
S.E. 1/4 SEC. 4-53-22-4
STRATHCONA COUNTY

Fig. 4
DEVELOPABLE AREAS



ASP BOUNDARY
DEVELOPABLE AREA (WATER TABLE BELOW 2.5 m)
UNDEVELOPABLE AREA (WATER TABLE ABOVE 2.5 m)
1.10 ha. TOTAL LOT AREA
(0.576 ha.) DEVELOPABLE LOT AREA

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4.0 LAND USES

The current land uses in the quarter section proposed for development and surrounding area were analyzed. Country residential subdivisions are being developed or have previously been developed within the immediate area of the subject lands. Residential and agricultural lands also exist within the immediate area of the proposed subdivision.

4.1 Existing Land Uses

The subject property is presently used for agricultural purposes with an existing farmyard site residence and outbuildings located in the south west corner adjacent to Oldman Creek (All existing buildings on the subject lands will be destroyed prior to development of the residential lots). A majority of the site is under cultivation, both hay and cereal crop. The Biophysical Assessment conducted by Stantec concluded that

- No rare plants or animals were observed during the site reconnaissance.
- Potential negative environmental impacts on natural areas due to potential development include loss of biodiversity, a change in the hydrologic regime and the potential loss of ecosystem form and function; and
- Potential positive environmental impacts due to retaining natural habitats include increased human awareness of natural systems and increased aesthetic values.

.[Stantec Consulting Ltd.(2005) Biophysical Assessment for SE 4-53-22 W4M]

An existing overhead power line runs parallel with the south boundary of the site just inside the south property line within a 14.6 m. (48 ft.) right of way. This is not an impediment to development as it is located well within the 40 m. building setback under the Land Use Bylaw.

4.2 Adjacent Land Uses

The surrounding land uses are Country Residential and Agricultural in nature. The subject site is bounded on the west by 55 acres of pasture or crop land north of Oldman Creek. The remainder of the quarter section south of Oldman Creek has been subdivided into 10 parcels ranging in size from 1.13 hectares (2.79 acres) to 22.08 hectares (54.57 acres).

To the south of Baseline Road is the fully developed Beaver Brook Estates Country Residential subdivision with 34 parcels ranging in size from 1.21 hectares (3.00 acres) to 1.32 hectares (3.27 acres) with two reserve parcels, one which is 9.08 hectares (22.43 acres) and the other which is 5.57 hectares (13.77 acres).

In the north east corner of the subject quarter are two acreage parcels, shown as Lot 1, Plan 822 2784 and Block A, Plan 1856 RS which are 1.21 hectares (3.00 acres) and 8.09 hectares (20 acres) respectively. These lands are also within the same quarter section and have been included within the plan area of the Area Structure Plan. Block A contains several outbuildings and a residence while Lot 1 is undeveloped.

The property to the north is a 53.27 hectare (131.63 acre) farming operation (NE1/4 Sec.4-53-22-4). There are 4 country residential parcels subdivided from that quarter ranging in size from 2.26 hectares (5.58 acres) to 5.06 hectares (10.15 acres).

Directly to the east there are currently two developments under construction. The north half of the SW1/4 Sec.3-53-22-4 is Aspen Wood Estates, a country residential subdivision with 25 lots ranging in size from 0.81 hectares (2.0 acres) to 0.85 hectares (2.1 acres). The south half of the SW1/4 Sec.3-53-22-4 is Habitat Acres, a development that accommodates the cluster country residential and estate residential uses. The Habitat Acres development is designed with the intent of conserving environmental and open space features and to reduce municipal infrastructure capital, operating and maintenance costs. The development is a bareland condominium and will accomodate 29 units ranging in size from 0.2 hectares (0.5 acres) to 0.3 hectares (0.7 acres) with a large common area to be utilized jointly by the condo association's members.

5.0 PROPOSED LAND USES

The proposed land use is a high quality country residential development. Country lifestyle will be maintained and the development will correspond with the surrounding developments. The importance and conservation value of the natural areas located on the said lands were taken into consideration in the design of the development. The recommendations from the Stantec Biophysical Assessment were taken into consideration in the design process.

5.1 Plan Area

The plan area includes all lands within the SE ¼ 4-53-22-W4M, however, the lands being developed consist of 54.5 hectares (135 acres). (Figure 5.0 lists the existing uses and areas within the SE4 53-22-4).

Legal Description	**Existing Use**	**Hectares**	**Acres**	**%**
Pt. of SE 4-53-22-4	Undeveloped Cropland/Farmstead	54.56	134.81	84
Lot B, Plan 792 2432	Country Residential	0.845	2.09	1
Lot 1, Plan 8222784	Undeveloped/Pasture	1.21	2.99	2
BLK A, Plan 1856 R.S.	Farmstead	8.09	20	13
	TOTAL	64.7	160	100

Figure 5.0 – Existing uses and areas within the SE 4-53-22-4

5.2 Development Proposal

The ASP contemplates development of the subject land into 38 Country Residential lots, all of which will have a minimum parcel size of 0.8 hectares (2 acres). Section 10.30 (b) of the Municipal Development Plan provides for a maximum base development density of 0.772 parcels per gross developable hectare. According to the MDP, lands designated for road widening or for environmental reserve dedication shall not be included in the calculation of the gross developable area. Therefore, the anticipated parcel density for each existing lot is estimated by multiplying the density factor of 0.772 times the estimated gross developable area of the existing lots, and the estimated gross developable area and parcel density is calculated in Figure 6.0.

Pt. of SE 4-53-22-4	54.50 ha.
5 meter Road Widening	-0.62 ha.
ER dedication	-3.71 ha.
Gross Developable Area	50.17 ha.
GDA (50.17 ha.) * Density Factor (0.772) = 38.73 Parcels Rounding equals 39 Parcels	

Figure 6.0 – Gross Developable Area (GDA) calculations

The location and numbering of the proposed lots depicted on all Figures and schedules in this Area Structure Plan are conceptual in nature, lot lines and parcel sizes may be adjusted and confirmed for technical reasons at the subdivision stage in accordance with the following guidelines:

(a) All residential parcels shall conform to the minimum parcel size of the underlying Land Use Bylaw District. In this instance the RC country Residential District requires a minimum 0.80 ha.. (2.0 ac.) parcel size.

(b) All residential parcels shall conform to the minimum parcel width of the RC Country Residential District, which requires a minimum lot width of 45 metres., except in the case of an irregularly shaped lot such as a pie lot fronting onto and internal cul-de-sac the minimum lot width shall be 30 metres.

(c) All residential parcels shall have at least one contiguous acre (0.40 hectares) of developable land with a near surface groundwater table of not less than 2.0 metres (6.6 ft.) below the surface. Lands below the 1:100 year flood elevation shall not be considered as part of the developable land.

Refer to figure 7.0 for the proposed development concept plan.

5.3 Transportation

All internal roads will be built to Strathcona County standards. The development concept provides for a roadway consisting of two cul-de-sacs with a roadway linking the two cul-de-sacs and terminating on the west property line providing future roadway access to the lands to the west. A temporary third cul-de-sac will be constructed at the terminated road and removed once the lands to the west have been developed. Refer to Figure 7.0-(Development concept Plan) for a sketch showing the location of the internal roads.

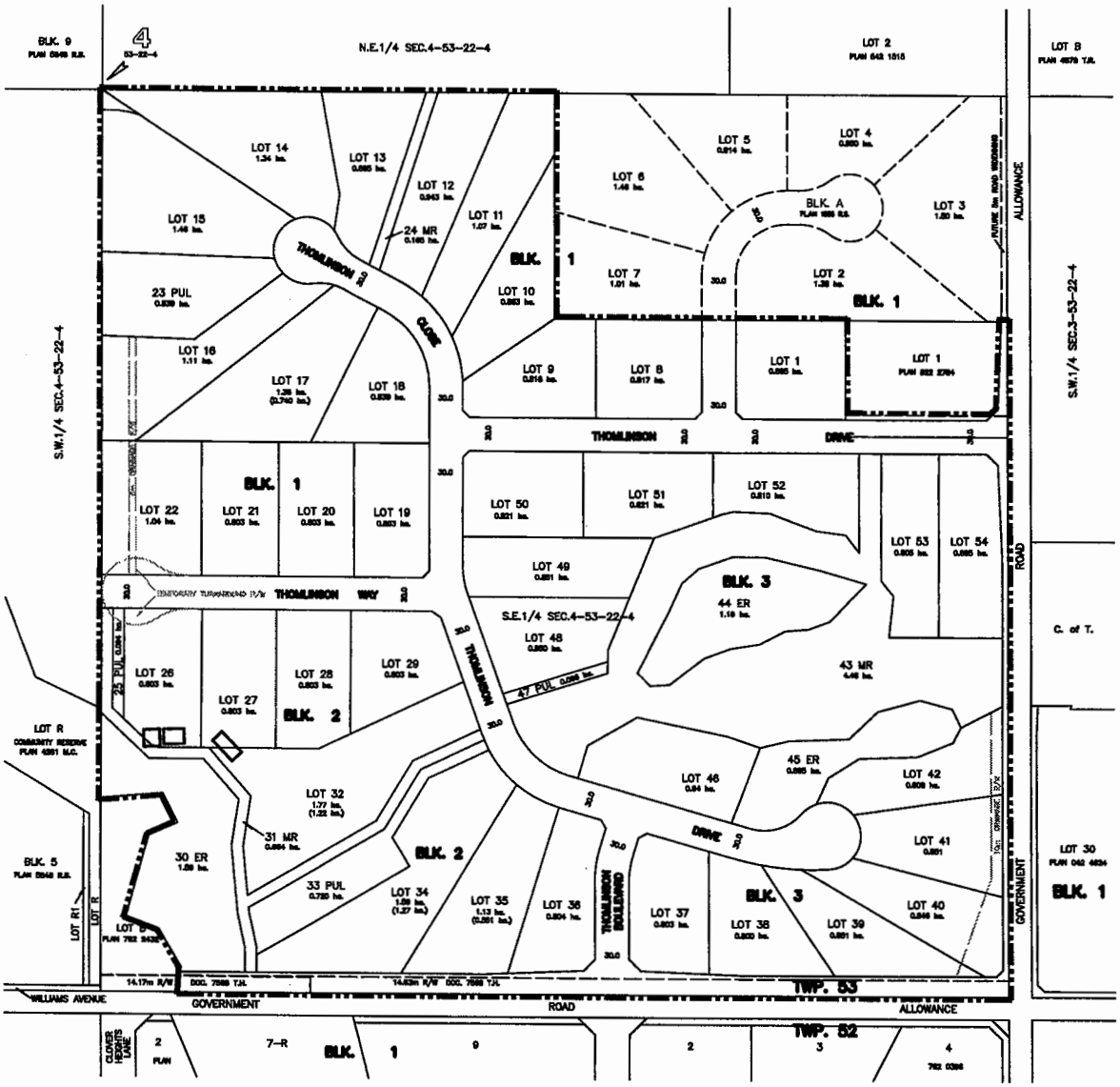
Access to the internal road system is provided from Range Road 223 and Baseline Road. All proposed lots have frontage and access to the internal roadway system. No new lots will have direct access to Range Road 223 or Baseline Road.

The major transportation routes in the area are the north/south Range Roads at one mile intervals and the east/west Township Roads at two mile intervals. Township Road 530 (Baseline Road) is situated along the south side of the property while Range Road 223 is situated along the east side of the property. The transportation routes are evident on Figure 1.0 of this document.

AREA STRUCTURE PLAN

SHOWING PROPOSED COUNTRY
RESIDENTIAL SUBDIVISION
S.E. 1/4 SEC. 4-53-22-4
STRATHCONA COUNTY

Fig. 7
DEVELOPMENT CONCEPT



ASP BOUNDARY

1.10 ha. TOTAL LOT AREA

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5.4 Municipal and Environmental Reserve

Two environmental reserve parcels totalling 2.12 ha. (5.24 ac.) are being provided in the east central portion of the site to preserve two natural wetlands. A third 1.59 hectare (3.93 acre) environmental reserve parcel is being provided in the southwest portion of the site to properly buffer Old Man Creek from the development and complement the existing Community Reserve on the adjacent quarter (Lot R, Plan 4281 M.C.).

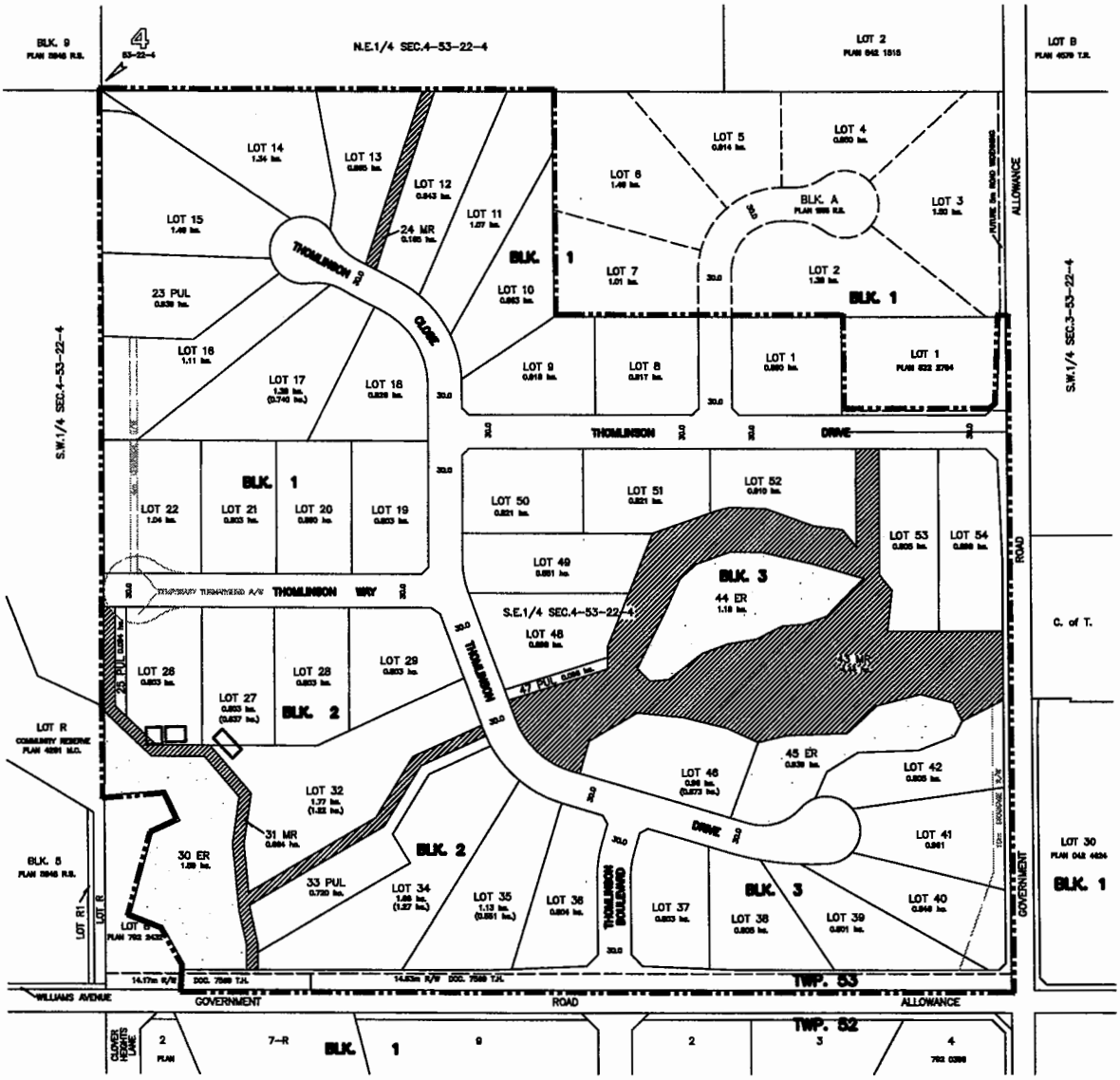
The municipal reserve dedication proposed is comprised of three parcels of land totalling 5.09 hectares (12.57 acres). Two of the municipal reserve parcels are 10 metre wide strips of land for a potential trail system. One of the 10 metre strips is located between Lot 12 and 13 and will allow for a future trail linkage to the adjoining quarter section. The other 10 metre strip reserve is located between Lots 32 and 33PUL and along the bank of Old Man Creek. These strip reserves then join through the road system to a 4.26 ha. (10.53 ac.) block of municipal reserve which is contiguous with and surrounds the central wetland environmental reserves. Refer to figure 8.0 for a sketch showing the municipal and environmental reserve areas.

A Deferred Reserve Caveat is registered on the SE 1/4 4-52-22-4. The caveat requires a total reserve dedication of 5.665 hectares (14 acres). The 10% required for municipal reserves will be fully dedicated under this plan. This is calculated by taking the 56.6 hectares which is the area of the remainder of the SE ¼ 4-53-22-4 and subtracting 3.94 hectares (the area of the environmental reserve and environmental reserve easement proposed to be dedicated under this plan). This leaves a net area of 52.7 hectares on which to base the 10% which yields a municipal reserve requirement of 5.27 hectares. The municipal reserves provided under the ASP total 5.27 hectares (13.02 acres).

AREA STRUCTURE PLAN

SHOWING PROPOSED COUNTRY
RESIDENTIAL SUBDIVISION
S.E. 1/4 SEC. 4-53-22-4
STRATHCONA COUNTY

Fig. 8
ENVIRONMENTAL & MUNICIPAL RESERVE AREAS



ASP BOUNDARY
ENVIRONMENTAL RESERVE AREA
MUNICIPAL RESERVE AREA

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FEBRUARY, 2005

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	Area (ha.)
Se1/4 4-53-22-4	64.7
Blk. A, Plan 1856 R.S.	-8.09
Total	56.6
Dedicated ER	-3.71
Total	52.9
Net Area =	52.9
MR Requirement (Net Area x 10%)	5.29
Dedicated MR	-5.29
Remainder of MR required	0.00
Balance Owing =	**0.00**

Figure 9.0 – Municipal Reserve requirement calculation

5.5 Land Use Allocations

Land Uses:	**(ha.)**
Country Residential Lots:	36.10
Environmental Reserves:	3.71
Internal Roadways:	6.00
Road widening:	1.57
Public Utility Lots:	1.85
Municipal Reserves:	5.27
Total:	54.5

Figure 10.0 – Land use Allocations

6.0 POPULATION AND STUDENT GENERATION

The country residential subdivision proposes 38 lots, each lot a minimum of 0.80 hectares (2.00 acres) in size. The total number of housing units will be 38 upon full development of the site. As well there are 3 other parcels in the quarter section. Lot B, Plan 792 2432 has no subdivision potential due to area and configuration. Lot 1, Plan 822 2784 has no potential due to area constraints that would not enable subdivision. Lot A, Plan 1856 R.S. has a potential for an additional 6 lots based on Section 10.30 (b) of the Municipal Development Plan. This would bring the potential density for the entire quarter section to 46 parcels. According to the 2003 Municipal Census the average Country Residential household size is 3.12 persons. Based on this figure the projected population upon full development of the subject quarter would be 144 persons.

6.1 School Generation

The school population is projected to be:

Level	# Students
Elementary	39
Junior High	20
Senior High	27
Total	86

Figure 11.0 – Estimated future student population

School population generation is based on the following ratios of public and private combined*:
Elementary: 0.27 pupils per population
Junior High: 0.14 pupils per population
Senior High: 0.19 pupils per population

It is anticipated school busing will be required as the school population generated is inadequate to warrant the provision of any schools on the property.
[Strathcona County, (1990). "New Schools and Park Sites Study"]

7.0 TRAFFIC PROJECTIONS

When fully developed the proposed subdivision will consist of 38 households. With the potential for six lots in Block A, the existing lot in the northeast corner and an existing lot in the southwest corner of the quarter, the ultimate density for the quarter section could be 46 lots. Using a figure of 12 vehicle trips per day per household the traffic generation rate upon full development will be 552 vehicle trips per day.

8.0 ENGINEERING AND SERVICING

In accordance with County requirements and standards, two access roads will be provided for the development, namely, the main access road from Township Road 530 (Baseline Road) and a secondary access road from Range Road 223. Strathcona County recently completed a Functional Plan for Township Road 530 that defines the intersection location for the development and the intersection geometrics configuration. A 17.9 metre road widening will be provided along Township Road 530 and also the appropriate right of way for intersectional treatment. The access from Baseline road is proposed to be in a location as to be in agreement with the future design considerations of Baseline road from Strathcona County (Refer to figure 12.0 for a copy of the proposed design considerations of Baseline road by the Engineering & Environmental Planning department of Strathcona County). A five metre road widening will be provided along Range Road 223 and also the appropriate right of way for intersectional treatment. The intersection configuration will comply with the county geometric design standards.

A 30 metre right of way will be provided for all subdivision internal roads. The roadway and lot driveway geometric, location, and other design features will comply with Strathcona County Engineering standards.

Trails will be constructed in the 10 metre wide municipal reserve strips and in the municipal reserve surrounding the wetland environmental reserve. A preliminary Noise Attenuation Analysis has been conducted and it is proposed to construct an earth berm/fence combination adjacent to Baseline Road. There is no noise attenuation required along Range Road 223.

8.1 Water Supply

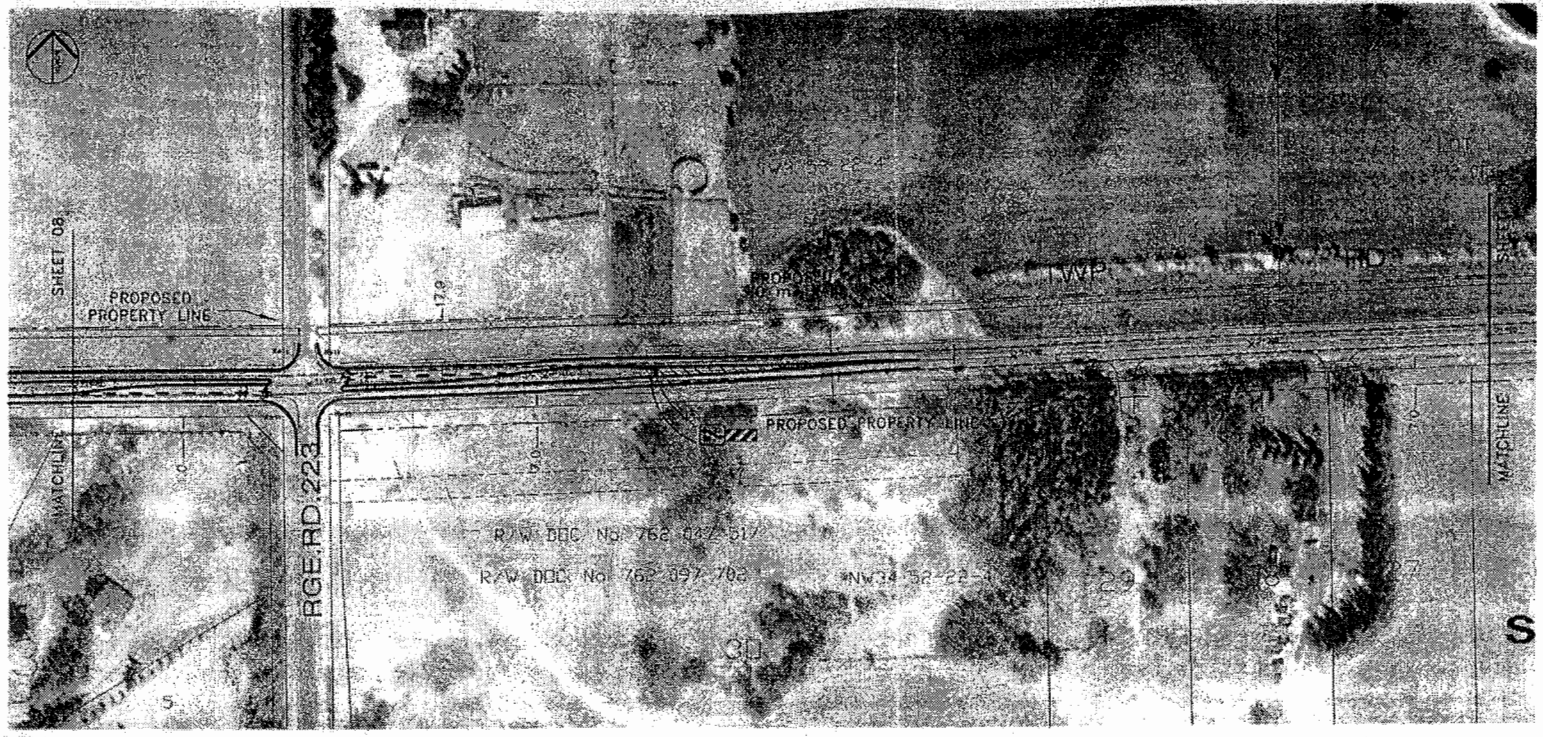
The level of water service will consist of providing basic domestic water supply similar to that provided in other recently developed country residential subdivisions in Strathcona County. This type of system has been called a "trickle flow" system in Strathcona County. In accordance with the Strathcona County Rural Water Servicing Policy SER-001-026-Capital Cost Recovery, the County's offsite water network will need to be extended to the property line of this development from Sherwood Park. The County network supplies a restricted flow of 0.5 igpm to each lot in order to provide an economical system. Fire protection flows are not supplied.

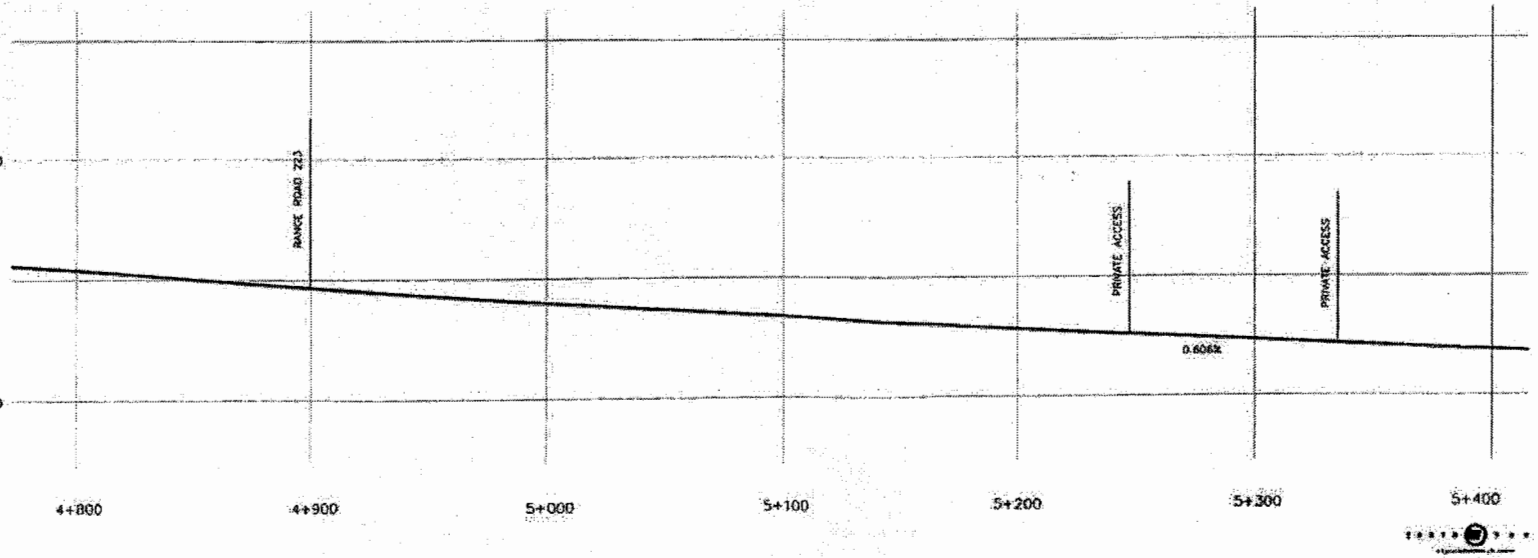
The developer will install the network of small diameter water lines within the development limits to the property line of each lot, where prefabricated chambers are installed with metering, flow restriction, service shutoff and other equipment. House builders must install a 3400 litre cistern on each lot to provide some stored water to meet a reasonable level of peak consumption. Re-pumping of water from the storage cisterns is needed to supply and pressurize the house plumbing systems.

8.2 Sanitary Sewer

The proposed development will be connected to an off-site municipal sanitary system via the Septic Tank Effluent Pump (STEP) System. This system requires each residence to have a septic tank and pump. Clear effluent is pumped from the septic tank through a pressurized sanitary sewer to an urban system for treatment. The existing municipal sanitary system will be extended north from Boag Lake Estates within the Range Road 224 right of way and Baseline Road right of way into the Thomlinson Estate plan area

The sanitary system will be designed in consultation with County administration and be to municipal standards. The general alignment of the sanitary sewer is illustrated in Figure 4 of the AMEC Infrastructure Ltd. Engineering Design Brief.





LEGEND

PROFILE

- EXISTING GROUND (S
- ASBUILT EAST DITCH
- ASBUILT WEST DITCH
- ASBUILT CENTERLINE

PLAN

- PROPERTY LINE
- FENCE
- GAS/GAS LINE
- GAS/POWER LINE
- ACT/TELEPHONE LINE
- EXISTING RIGHT DITCH
- EXISTING LEFT DITCH
- BACKSLOPE LINES
- HORIZONTAL BASELINE
- CONC. TOPO FEATURES (ROAD, BLDG.
- TREE
- BUSH
- SLOUGH/WATER
- DIRECTION OF FLOW
- CULVERT
- PROPOSED PROPERTY LINE
- PROPOSED SIDEWALK

NOTES:

1. MINIMUM PRIVATE APPROACH RADIUS 6.0m, MINIMUM ROADWAY INTERSECTION OR COMMERCIAL RADIUS 12.0m UNLESS OTHERWISE SPECIFIED.
2. ALL GRADES SHOWN ARE REPRESENTATIVE ONLY AND MUST BE LOCATED IN FIELD BY THE PROPER AUTHORITIES PRIOR TO CONSTRUCTION COMMENCING.
3. ALL REPLACEMENT CULVERTS TO BE CMP, MIN. 450m FOR PRIVATE APPROACHES, 600m FOR THROUGH GRADES UNLESS OTHERWISE NOTED. ALL CULVERTS TO BE LOCATED AT LOWEST [illegible] WHERE NECESSARY.
4. [illegible] OF CULVERT
5. GRADING WITHIN 6.0m FOR PRIVATE APPROACHES OF [illegible] MATCH EXISTING.
6. USE OF [illegible] LANDS MUST BE APPROVED BY STRATHCONA COUNTY COMMUNITY & DEVELOPMENT PLANNING, 464-8137.
7. ALL TRAFFIC CONTROL SIGNS TO BE REPLACED UPON COMPLETION. ZONE OF CONSTRUCTION PRIOR TO OPENING ROAD TO THE PUBLIC.

No.	DATE	BY	DWG	SUBJECT

REVISIONS

Strathcona County

ENGINEERING & ENVIRONMENTAL PLANNING
2001 SHERWOOD DRIVE
SHERWOOD PARK, ALBERTA, T8A 3W7

JOB NUMBER	
SURVEY	
ASST. DRG.	
DRAWN	
DESIGNED	
CHECKED	
APPROVED	

APPROVED

DATE 2003/MAY/12

SCALE

H= 1:1000 to 1:100 PLOT SIZE A1

DRAWN by AD

TOWNSHIP RD. 530
FROM HWY. 21 TO
HWY. 824
TITLE
STA 4+800 TO
STA 5+400

DRAWING NUMBER	REV.	SHEET
		9

MAY 12 2003

8.3 Storm Water Management

AMEC Infrastructure Limited has prepared a storm water management system design brief, a necessary component for Alberta Environment approval. AMEC completed a hydrologic and hydraulic analysis to determine the need and locations of manmade or natural storm water storage to control the post-development peak flow rate to an acceptable pre-development rate. AMEC's analysis of existing surface drainage patterns and characteristics are included in section 3.5 of this ASP.

The following is the proposed drainage and storm water management system as presented by AMEC in their draft storm water management system brief. Refer to Appendix C for the complete document as submitted by AMEC Infrastructure Limited. The concept plan of the proposed storm water management system prepared by AMEC is presented in figure 13.0 (note: AMEC's figure 1.0).

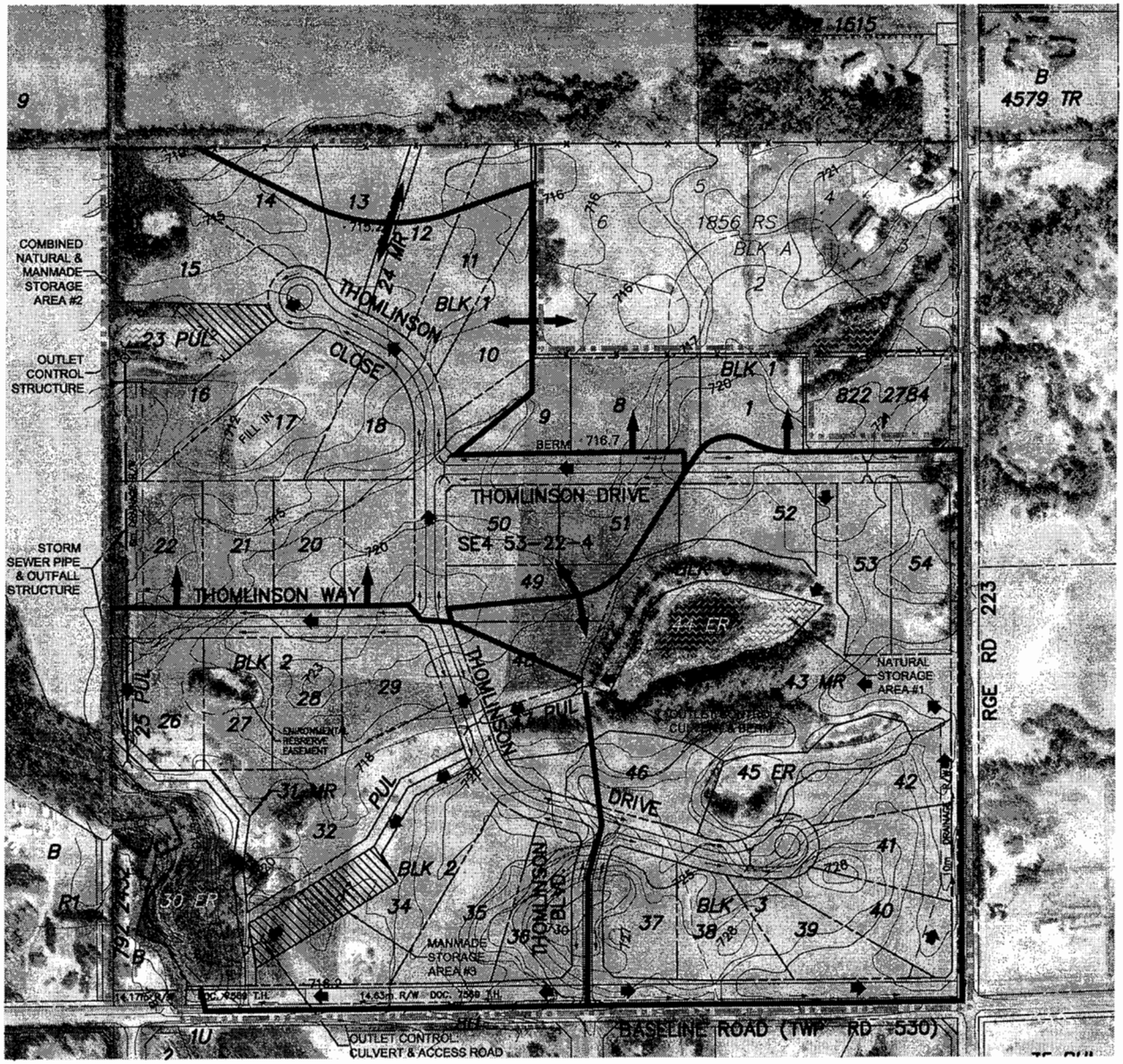
The system will consist of the following:

- A system of ditches and culverts along and crossing the roads directing runoff from the 3 sub-drainage basins to the existing natural wetland #1, the combined natural-constructed wetland #2, and the constructed wetland #3, that will be used for temporary stormwater storage.
- The storage calculations for the sub-drainage basins are presented in Tables 1, 2, and 3 to demonstrate the temporary additional volume that will be stored in the 3 wetlands. The peak storage volume needs during the 1:100 year, 24-hour storm will be approximately 2,200 cubic metres for storage area #1, 2,100 cubic metres for storage are #2, and 1,500 cubic metres for storage area #3. The temporary storage (a few days) of peak flows will result in a temporary rise in water elevation in the natural or constructed wetlands and will contribute to the sustainability of the wetlands.
- A small berm and undersized culvert will be constructed at the outlet of each storage area to restrict the outflows.

- Drainage from portions of the north lots of the development will flow as sheet flow to the north and will therefore have a negligible impact on areas to the north.

Erosion control measures will be constructed in the ditches.

[AMEC Infrastructure Limited, 2005, "Draft Storm Water Management System Brief"]



amec

AMEC Infrastructure Limited

LEGEND:

- BOUNDARY OF DEVELOPMENT
- STORM DRAINAGE BASIN BOUNDARY & DELINEATION ARROWS
- PROPOSED PROPERTY LINE
- PUBLIC UTILITY LOT (PUL)
- EXISTING CONTOURS
- EXISTING WETLAND TO BE USED FOR STORAGE
- CONSTRUCTED WETLAND
- CULVERTS
- DIRECTION OF MAJOR DRAINAGE
- DIRECTION OF DITCH DRAINAGE
- STORM SEWER MAIN

CLIENT: 1119463 ALBERTA LTD.

PROJECT: THOMLINSON ESTATES SUBDIVISION DEVELOPMENT: SE4-53-22-W4M

STRATHCONA COUNTY

TITLE:

FIGURE 2 STORMWATER MANAGEMENT PLAN

DATE: OCTOBER 21, 2005

DRAWN BY:	SCALE:	PROJECT NO.:
E.P.G./M.P.	1:4000	EDL04-0007

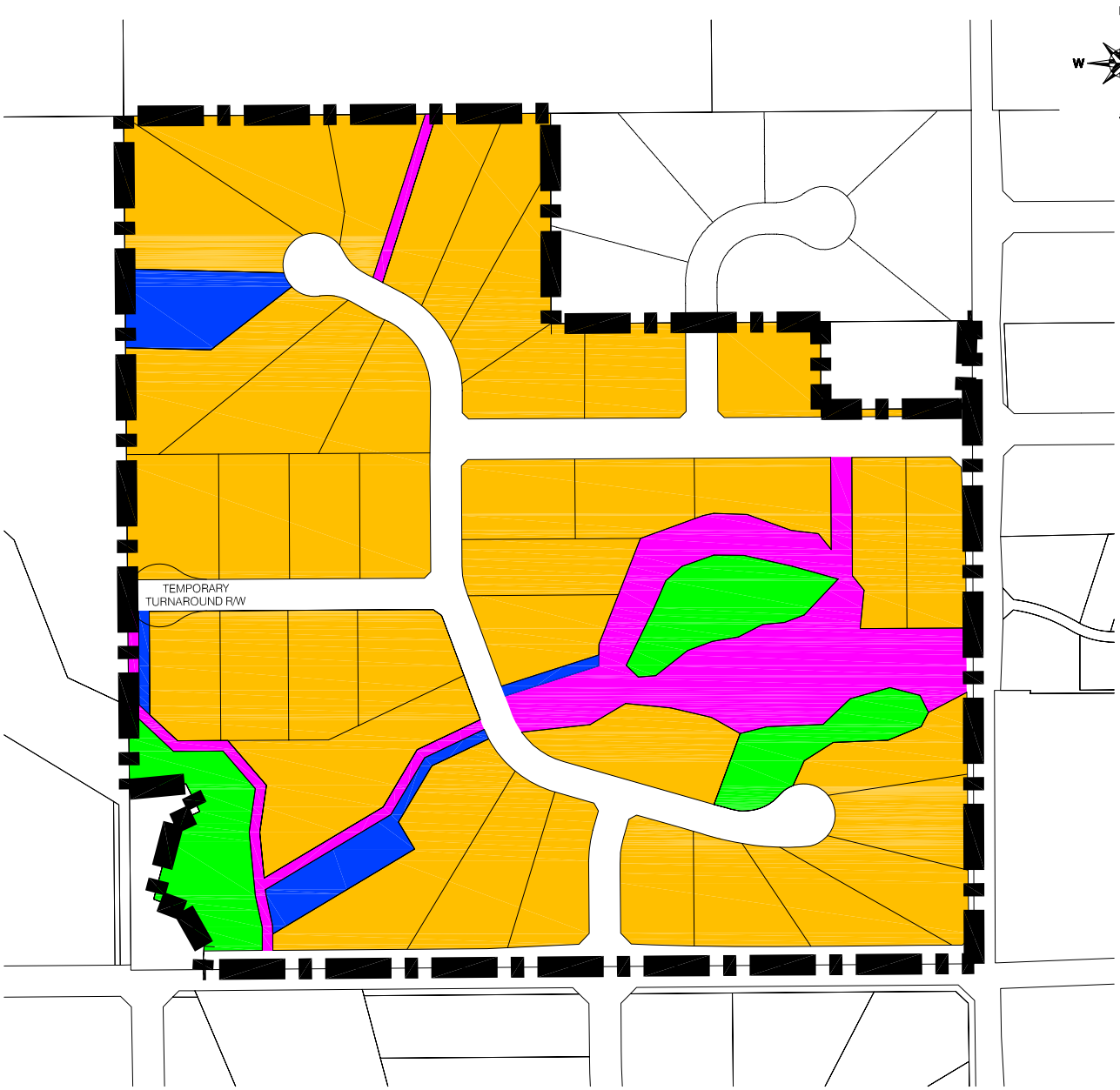
9.0 FRANCHISE UTILITIES

The subdivision is proposed to be serviced with underground power as well as natural gas, telephone and cable television. All will be located within the proposed 30 metre roadway as shown on Strathcona County Drawing No. B-23A which is attached to the Engineering Design Brief.

ATCO Gas has advised that they must install some major lines in the area to service development presently taking place. With respect to Thomlinson Estates they will need to replace the existing 2.5 inch line in their right of way paralleling Township Road 530 (Baseline Road) with a larger line. They wish to complete the work this year (2005) and in doing so they wish to shift the location of their right of way and the gas line itself south to be located immediately adjacent to the north boundary of the Utilicorp power line right of way.

10.0 STAGING

The subdivision will be developed in one stage. It is anticipated construction will begin in the spring of 2006 with construction to be completed by the spring of 2007.



Thomlinson Estates
Area Structure Plan
Bylaw 12-2006

Date of Adoption March 21, 2006

EXISTING LAND USE

Residential		Stormwater Management	
Environmental Reserve		Municipal Reserve	
PUL		Road Plan	
		ASP Boundary	

STRATHCONA COUNTY – Planning and Development Services	DRAWN: M.Bohme	DATE: 06/03/09	SCALE: NTS		DWG NAME: D32H0075