

AGENDA Council Meeting

9:00 AM - Thursday, April 20, 2023 **Council Chambers**

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Page		
	A.	CALL TO ORDER
	В.	ADOPTION OF AGENDA
	C.	ADOPTION OF MINUTES
4 - 9	1.	Council Meeting Minutes Council Meeting - 06 Apr 2023 - Minutes
	D.	DELEGATIONS
10 - 45	1.	9:15 a.m Phil McFarland - KPMG - 2022 Audited Financial Statements 2022 Audited Financial Statements
	2.	11:00 a.m James Oudshoorn
	E.	PUBLIC HEARINGS - 10:00 A.M. (1HR)
46 - 368	1.	Bylaw 23-002 - Country Crossroads Estate Area Structure Plan and Bylaw 23-003 Land Use Bylaw Amendment (Rural Agriculture to Grouped Country Residential) - Public Hearing Bylaw 23-002 - Country Crossroads Estate Area Structure Plan and Bylaw 23-003 Land Use Bylaw Amendment (Rural Agriculture to Grouped Country Residential) - Public Hearing
	F.	DEPARTMENT REPORTS
		F.1. COMMUNITY SERVICES
369 - 371		F.1.1. Planning and Development Department - 1st Quarter Report 2023 Planning and Development Department 1st Quarter Report 2023

F.1.2. <u>Industrial-Commercial Land Use Strategy</u>

Industrial-Commercial Land Use Strategy

476 - 486			F.1.3.	Bylaw 23-012 - Road Closure, Sale and Consolidation- First Reading Bylaw 23-012 - Road Closure, Sale and Consolidation - First Reading
487 - 489			F.1.4.	Proclamation of 'Economic Development Week' - May 8-12, 2023 Proclamation of 'Economic Development Week' - May 8-12, 2023
		F.2.	MUNIC	CIPAL SERVICES
490 - 497			F.2.1.	Water Co-op Liaison Committee Bylaw and Terms of Reference Water Co-op Liaison Committee Bylaw and Terms of Reference
		F.3.	ADMIN	NISTRATION
498 - 507			F.3.1.	<u>Donation Request - Courageous Companions</u> <u>Donation Request - Courageous Companions</u>
		F.4.	INFRA	STRUCTURE
		F.5.	CORP	ORATE SERVICES
	G.	CORI	RESPO	NDENCE
508 - 509	1.			Fighters' Burn Camp for Children Fighters' Burn Camp for Children
510 - 511	2.			ciation of Nurses - Nursing Week ciation of Nurses - Nursing Week
	H.	COU	NTY CO	UNCIL AND COMMITTEE UPDATES
512 - 516	1.			County Council Attendance Update - March 2023 Ounty Council Attendance Update - March 2023
	l.	CLOS	SED SE	SSION
	1.	_		Services Board Remuneration Discussion (FOIP Advice from Officials)
	2.		osure h	stallation Borrowing Bylaw 23-016 (FOIP Section 25 - earmful to economic and other interests of a public
	3.			

Road Closure Compensation Discussion (FOIP Section 25 - Disclosure harmful to economic and other interests of a public body)

- 4. <u>Drainage Discussion (FOIP Section 16 Disclosure harmful to business interests of a third party)</u>
- J. NEW BUSINESS
- K. ADJOURN



MINUTES Council Meeting

9:00 AM - Thursday, April 6, 2023 Council Chambers

The Council Meeting of Lethbridge County was called to order on Thursday, April 6, 2023, at 9:00 AM, in the Council Chambers, with the following members present:

PRESENT: Reeve Tory Campbell

Deputy Reeve John Kuerbis Councillor Lorne Hickey Councillor Mark Sayers Councillor Eric Van Essen Councillor Klaas VanderVeen Councillor Morris Zeinstra

Interim Chief Administrative Officer, Larry Randle Director of Public Operations, Jeremy Wickson

Director of Infrastructure, Devon Thiele

Director of Finance & Administration, Jennifer Place Interim Director of Community Services, Hilary Janzen

Executive Assistant, Candice Robison

Municipal Intern - Finance, Jeremy Vander Meulen

Human Resources Manager, Chris Sopal

A. CALL TO ORDER

Reeve Campbell called the meeting to order at 9:01 a.m.

The new Human Resources Manager, Chris Sopal introduced himself to Council.

B. ADOPTION OF AGENDA

91-2023 Councillor MOVED that the April 6, 2023 Lethbridge County Council Meeting

VanderVeen Agenda be adopted as presented.

CARRIED

C. <u>ADOPTION OF MINUTES</u>

C.1. <u>County Council Meeting Minutes</u>

92-2023 Deputy MOVED that the March 16, 2023 Lethbridge County Council Minutes

Reeve be adopted as presented.

Kuerbis CARRIED

E. <u>SUBDIVISION APPLICATIONS</u>

E.1. <u>Subdivision Application #2023-0-013 – Groenenboom Farms</u> - NW1/4 34-09-23-W4M

93-2023 Deputy MOVED that the Country Residential subdivision of NW1/4 34-9-23-

Reeve W4M (Certificate of Title No. 171 080 413, 171 080 414 +15), to Kuerbis accommodate a land swap and reconfigure two titles within a ¼-section, by consolidating an existing 5.72-acre (2.31 ha) parcel into the NW¼-34-9-23-W4M and in turn subdivide out a vacant 3.0-acre (1.21 ha) title for country residential use; BE APPROVED subject to

the following:

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CONDITIONS:

- 1. That, pursuant to Section 654(1)(d) of the Municipal Government Act, all outstanding property taxes shall be paid to Lethbridge County.
- 2. That, pursuant to Section 655(1)(b) of the Municipal Government Act, the applicant or owner or both enter into and comply with a Development Agreement with Lethbridge County which shall be registered concurrently with the final plan against the title(s) being created
- 3. That the titles and portions of land to be subdivided and consolidated to relocate/ reconfigure the two parcel titles be done by a plan prepared by a certified Alberta Land Surveyor in a manner such that the resulting titles cannot be further subdivided without approval of the Subdivision Authority.
- 4. That the applicant provides at their expense a professional soils analysis by an accredited agency or engineer to ensure suitability for a private on-site septic treatment system on the new 3.0-acre vacant parcel.
- 5. That the applicant provides at their expense a professional geotechnical report for the proposal, to verify a suitable building site with sound soil footings and outline acceptable setbacks to the top of coulee edge.

CARRIED

D. <u>DELEGATIONS</u>

D.1. 9:15 a.m. - Travis Geremia, SMRID & Jeff Olitch, MPE

Travis Geremia from SMRID and Jeff Olitch from MPE were present to provide information to Council regarding the Chin Reservoir expansion.

E. SUBDIVISION APPLICATIONS

E.2. <u>Subdivision Application #2023-0-018 Koot</u> <u>- Lot 1, Block 2, Plan 021 0172 within SE1/4 6-10-20-W4M</u>

94-2023

Councillor Sayers MOVED that the Country Residential subdivision of Lot 1, Block 2, Plan 021 0172 within SE1/4 6-10-20-W4M (Certificate of Title No. 021 024 900), to subdivide a vacant 2.0-acre (0.81 ha) lot from a 7.27-acre (2.94 ha) title for grouped country residential use; BE APPROVED subject to the following:

RESERVE:

The 10% reserve requirement, pursuant to Sections 666 and 667 of the Municipal Government Act, be provided as money in place of land on the 7.27-acres at the market value of \$40,000 per acre with the actual acreage and amount to be paid to Lethbridge County be determined at the final stage (approx. \$29,080), for Municipal Reserve purposes.

CONDITIONS:

- 1. That, pursuant to Section 654(1)(d) of the Municipal Government Act, all outstanding property taxes shall be paid to Lethbridge County.

 2. That, pursuant to Section 655(1)(b) of the Municipal Government.
- 2. That, pursuant to Section 655(1)(b) of the Municipal Government Act, the applicant or owner or both enter into and comply with a Development Agreement with Lethbridge County which shall be registered concurrently with the final plan against the title(s) being created.
- 3. That the applicant has a professional soils analysis completed for the 2.0-acre east lot to demonstrate suitability of a private on-site septic treatment system on the land, with results to be as determined satisfactory to the Subdivision Authority.

- 4. That the applicant submits a plan of survey as prepared by an Alberta Land Surveyor that certifies the exact location and dimensions of the parcel being subdivided.
- 5. That any easement(s) as required by utility agencies shall be established prior to finalization of the application.

CARRIED

F. DEPARTMENT REPORTS

F.1. COMMUNITY SERVICES

F.1.1. Bylaw 23-008 - Amendment to Bylaw 18-012 being the Chinook Industrial Park Area Structure Plan and Bylaw and Bylaw 23-009 - Land Use Bylaw Amendment from Lethbridge Urban Fringe To Rural General Industrial and Business Light Industrial - First Reading

95-2023 Councillor MOVED that Bylaw 23-008 be read a first time. Hickey

CARRIED

96-2023 Councillor MOVED that Bylaw 23-009 be read a first time. Van Essen

CARRIED

F.1.2. Bylaw 23-013 - Advertising - First Reading

97-2023 Deputy MOVED that Bylaw 23-013 - Advertising be read a first time.

Reeve CARRIED

Kuerbis

Reeve Campbell recessed the meeting at 10:05 a.m.

Reeve Campbell reconvened the meeting at 10:15 a.m.

I. CLOSED SESSION

I.1 - 10:15 a.m. Delegation - Financial Matters (FOIP Section 16(1) - Disclosure harmful to business interests of a third party & Section 25(1) - Disclosure harmful to economic and other interests of a public body)

I.2 - 11:00 a.m. Delegation - MPE (FOIP Section 24(1)(g) - Advice from Officials)

98-2023 Councillor Hickey MOVED that the Lethbridge County Council Meeting move into Closed Session, pursuant to Section 197 of the *Municipal Government Act*, the time being 10:15 a.m. for the discussion on the following:

I.1 - 10:15 a.m. Delegation - Financial Matters (FOIP Section 16(1) - Disclosure harmful to business interests of a third party & Section 25(1) - Disclosure harmful to economic and other interests of a public body)

I.2 - 11:00 a.m. Delegation - MPE (FOIP Section 24(1)(g) - Advice from Officials)

Present during the Closed Session:
Lethbridge County Council
Chief Administrative Officer
Senior Management
Administrative Staff
CARRIED

99-2023 Councillor MOVED that the Lethbridge County Council Meeting move out of the

Hickey closed session at 11:52 a.m.

CARRIED

Reeve Campbell recessed the meeting at 11:52 a.m.

Reeve Campbell reconvened the meeting at 12:29 p.m.

F. **DEPARTMENT REPORTS**

MUNICIPAL SERVICES F.2.

F.2.1. Agricultural Services Board Committee Meeting Recommendations -2023 Level of Service and Terms of Reference

100-2023 MOVED that Council approve the 2023 Agriculture Service Board Councillor VanderVeen Terms of Reference document as recommended by the ASB Committee.

CARRIED

101-2023 Deputy MOVED that Council approve the 2023 Agriculture Service Board Reeve Level of Service document as recommended by the ASB Committee. Kuerbis **CARRIED**

F.2.2. 2023 Capital Purchasing - Reallocation of Funds

102-2023 MOVED that \$100,000 of capital funding approved in the 2023 budget Deputy Reeve year for an Operations work truck be reallocated to a Base Kuerbis Stabilization Distribution System for a tandem water truck and for Hamlet/Subdivision plow and sander attachments.

CARRIED

INFRASTRUCTURE F.3.

F.3.1. <u>Local Improvement Plans - Township Road 8-2, Range Road 21-5, and</u> Valley View Place

103-2023 MOVED that the Local Improvement Plan for Township Road 8-2 be Deputy amended to reflect a split of 75% for the landowners and 25% for the Reeve Kuerbis County.

CARRIED

104-2023 Councillor MOVED that the distribution of the Local Improvement Plan for the VanderVeen benefitting landowners for the paving of Township Road 8-2, be approved as amended.

CARRIED

MOVED that the distribution of the Local Improvement Plan for the 105-2023 Deputy Reeve benefitting landowners for the paving of Range Road 21-5 and Valley View Place, be approved based on a funding spit of 75/25 with 75% Kuerbis being borne by the landowners and 25% being borne by the County. **CARRIED**

CORPORATE SERVICES F.4.

F.4.1. 2023 Business Tax Rate Bylaw #23-011 - Third Reading

106-2023 Deputy MOVED to amend the Business Tax Rate Bylaw to increase the rate Reeve from \$2.50 per animal unit to \$2.53 per animal unit. Kuerbis **DEFEATED** 107-2023 Councillor MOVED that Business Tax Rate Bylaw #23-011 be read a third time.

Van Essen CARRIED

F.5. ADMINISTRATION

F.5.1. County Council 5 Year Donation History

The Director of Finance and Administration reviewed the County Council 5 Year donation history.

F.5.2. <u>Link Pathway Committee Representation</u>

108-2023 Deputy MOVED to recommend that Councillor Zeinstra and Councillor Reeve VanderVeen be appointed to the Link Pathway Committee.

CARRIED

F.5.3. <u>Transmark - Request for Letter of Support</u>

109-2023 Councillor MOVED that Lethbridge County provide a letter of support to Transmark for their Transport Canada's National Trade Corridors Fund application for their Digitization Enhancement Project.

CARRIED

G. CORRESPONDENCE

G.1. Schizophrenia Society of Alberta - Lethbridge Strides of Hope Invitation

The Schizophrenia Society of Alberta Lethbridge Strides of Hope Walk invitation was reviewed by Council.

G.2. Town of Picture Butte Council Meet & Greet Invitation

The invitation to attend the Town of Picture Butte Council Meet & Greet on April 26, 2023 was reviewed by Council.

G.3. <u>Town of Barrhead - EPR Program Exemption</u>

Correspondence from the Town of Barrhead regarding the EPR program exemption for newspapers was reviewed by Council.

H. COUNTY COUNCIL AND COMMITTEE UPDATES

H.1. <u>Rural Municipalities of Alberta Committee Participation - Councillor John Kuerbis</u>

110-2023 Councillor MOVED that a letter be drafted under the Reeve's signature indicating support for Deputy Reeve Kuerbis's participation in the RMA quasi-judicial agency committee.

CARRIED

J. <u>NEW BUSINESS</u>

I. <u>CLOSED SESSION</u>

- I.3 Water Co-op Discussion Director of Public Operations (FOIP 16 Disclosure harmful to business interests of a third party)
- I.4 Request for Contribution Discussion (FOIP Section 21 Disclosure harmful to intergovernmental relations)

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111-2023 Councillor MOVED that the Lethbridge County Council Meeting move into Closed Hickey Session, pursuant to Section 197 of the Municipal Government Act, the time being 1:36 p.m. for the discussion on the following: I.3 - Water Co-op Discussion - Director of Public Operations (FOIP 16 - Disclosure harmful to business interests of a third party) I.4 - Request for Contribution Discussion (FOIP Section 21 -Disclosure harmful to intergovernmental relations) Present during the Closed Session: Lethbridge County Council Chief Administrative Officer Senior Management Administrative Staff **CARRIED** 112-2023 Councillor MOVED that the Lethbridge County Council Meeting move out of the Hickey closed session at 2:26 p.m. **CARRIED** Reeve Campbell reconvened the meeting at 2:26 p.m. 1.1. Water Co-op Discussion - Director of Public Operations (FOIP 16 - Disclosure harmful to business interests of a third party) 113-2023 MOVED to direct administration to draft a bylaw and terms of Deputy Reeve reference for the formation of a committee for the purpose of working Kuerbis with the water co-ops. **CARRIED I.2.** Request for Contribution Discussion (FOIP Section 21 - Disclosure harmful to intergovernmental relations) 114-2023 Councillor MOVED that a letter signed by the Reeve be sent to Nobleford Town VanderVeen council denying their request with an explanation justifying council's decision. **CARRIED** K. **ADJOURN** Councillor MOVED that the Lethbridge County Council Meeting adjourn at 2:28 115-2023 Zeinstra p.m. **CARRIED** Reeve

CAO

AGENDA ITEM REPORT



Title: 2022 Audited Financial Statements

Meeting: Council Meeting - 20 Apr 2023

Department: Council

Report Author: Eric Van Essen

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 18 Apr 2023

STRATEGIC ALIGNMENT:











Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

The 2022 Audited Financial Statements have been reviewed and presented to the Audit Committee and Council as a whole, by the Auditors, KPMG LLP and is being recommended for approval.

RECOMMENDATION:

That Council approved the Audited Financial Statements for the fiscal year ended December 31, 2022 as presented by KPMG LLP.

REASON(S) FOR RECOMMENDATION(S):

The Municipal Government Act Section 276 (1) States:

Each municipality must prepare annual financial statements of the municipality for the immediately preceding year in accordance with

- (a) Canadian generally accepted accounting principles for municipal governments, which are the standards approved by the Public Sector Accounting Board included in the CPA Canada Public Sector Accounting Handbook published by the Chartered Professional Accountants of Canada, as amended from time to time, and
- (b) any modification of the principles or any supplementary accounting standards or principles established by the Minister by regulation.

PREVIOUS COUNCIL DIRECTION / POLICY:

Annual Approval of the Financial Statements is a requirement of the Municipal Government Act (MGA).

BACKGROUND INFORMATION:

The County's auditors, KPMG LLP have audited and prepared the financial statements and have provided an unqualified opinion. The statements meet the requirements of Section 276 of the Municipal Government Act and are consistent with Canadian generally accepted accounting

principals as recommended by the Public Sector Accounting Board of the Canadian Institute of Charted Accountants.

ALTERNATIVES / F	PROS / CONS:			
Audited Annual Finar later than May 1st of		et be approved by	Council and submitted	I to the Province no
FINANCIAL IMPAC	T:			
None				
LEVEL OF PUBLIC	PARTICIPATION:			
⊠ Inform	Consult	☐ Involve	Collaborate	☐ Empower
ATTACHMENTS:				

Draft Financial Statements

Financial Statements of

LETHBRIDGE COUNTY

And Independent Auditor's Report thereon

Year ended December 31, 2022

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

Lethbridge County's management is responsible for the preparation, accuracy, objectivity, and integrity of the accompanying financial statements and the notes thereto. Management believes that the financial statements present fairly the County's financial position as at December 31, 2022 and the results of its operations for the year then ended.

The financial statements have been prepared in accordance with Canadian public sector accounting standards. Financial statements are not precise, since they include certain amounts based on estimates and judgments. Such amounts have been determined on a reasonable basis in order to ensure that the financial statements are presented fairly in all material respects.

In fulfilling its responsibilities and recognizing the limits inherent in all systems, management has designed and maintained a system of internal controls to produce reliable information to meet reporting requirements. The system is designed to provide management with reasonable assurance that transactions are properly authorized, reliable financial records are maintained, and assets are properly accounted for and safeguarded.

The County Council carries out its responsibilities for review of the financial statements principally through its Audit Committee. This committee meets regularly with management and external auditor's to discuss the results of audit examinations and financial reporting matters. The external auditor's have full access to the Audit Committee with and without the presence of management. The County Council has approved the financial statements.

The financial stateme	ents have been a	udited by the ir	ndependent firm o	f KPMG LLP.	Their report to	the
Members of Council	of Lethbridge Co	ounty, stating th	ne scope of their	examination a	nd opinion on	ı the
financial statements	follows	•				

Chief Administrative Officer	 Manager of Finance and Administration



KPMG LLP 3410 Fairway Plaza Road South Lethbridge AB T1K 7T5 Canada Tel 403-380-5700 Fax 403-380-5760

INDEPENDENT AUDITOR'S REPORT

To the Reeve and Members of Council of Lethbridge County

Opinion

We have audited the accompanying financial statements of Lethbridge County (the "County"), which comprise:

- the statement of financial position as at December 31, 2022
- the statement of operations for the year then ended
- the statement of changes in net financial assets for the year then ended
- the statement of cash flows for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the County as at December 31, 2022, and its results of operations, changes in net financial assets, and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "Auditor's Responsibilities for the Audit of the Financial Statements" section of our auditor's report.

We are independent of the County in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.



Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the County's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the County or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the County's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.
 - The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design
 audit procedures that are appropriate in the circumstances, but not for the purpose
 of expressing an opinion on the effectiveness of the County's internal control.



- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the County's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the County to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Chartered Professional Accountants

KPMG LLP

Lethbridge, Canada

April 18, 2023

Statement of Financial Position

December 31, 2022, with comparative information for 2021

	2022		2021
Financial assets:			
Cash \$	4,803,164	\$	11,643,963
Investments (note 3)	27,725,507	Ψ	21,901,080
Taxes and grants in place of taxes (note 4)	827,373		1,214,764
Trade and other receivables	4,374,971		6,994,193
Restricted cash (note 5)	6,993,010		3,226,717
	44,724,025		44,980,717
Financial liabilities:			
Accounts payable and accrued liabilities	1,864,841		1,726,118
Deposit liabilities	127,044		100,544
Deferred lease payments (note 7)	2,690,937		2,989,930
Deferred revenue (note 6)	6,142,823		2,299,365
Employee future benefits (note 17)	322,688		303,186
Long-term debt (note 8)	14,330,744		15,162,383
Other liabilities	850,188		927,352
	26,329,265		23,508,878
Net financial assets	18,394,760		21,471,839
	-, ,		, ,
Non-financial assets:			
Tangible capital assets (note 10)	119,949,810		122,322,859
Prepaid expenses and deposits	297,567		238,276
Inventories for consumption	1,145,195		1,320,654
	121,392,572		123,881,789
Contingent liabilities (note 13)			
Accumulated surplus (note 11) \$	139,787,332	\$	145,353,628

Statement of Operations

Year ended December 31, 2022, with comparative information for 2021

	Budget	2022	2021
	(note 20)		,
Revenue:			
Net municipal property taxes (note 12) \$	16,465,850	\$ 16,390,019	\$ 16,203,065
Sales and users charges	4,110,820	4,327,863	4,456,431
Government transfers (note 14)	504,000	1,076,648	1,548,276
Fines	85,000	127,970	105,824
Penalties and cost of taxes	231,000	444,274	487,996
Licenses and permits	50,000	63,672	84,900
Rentals	216,890	216,136	222,420
Return on investments	325,125	814,011	258,398
Gain on sale of tangible capital assets	-	543,144	3,598
Other	2,899,615	4,052,847	3,074,637
Total revenue	24,888,300	28,056,584	26,445,545
Expenses (note 15):			
Council and other legislative	576,070	2,587,852	500,972
General administration	3,977,365	6,707,782	4,504,799
Protective Services	2,236,320	2,594,412	2,358,203
Roads, Streets, walks and lighting	6,509,310	10,948,699	10,481,655
Fleet services	2,081,000	4,373,370	3,271,663
Water, wastewater and waste management	3,081,765	7,073,383	4,296,863
Parks and recreation	104,915	47,799	85,350
Family and community support	81,150	81,168	78,786
Agricultural development	897,030	861,958	878,948
Total expenses	19,544,925	35,276,423	26,457,239
Excess (deficiency) of revenue over expenses before the undernoted	E 242 27E	(7 240 920)	(11 604)
before the undernoted	5,343,375	(7,219,839)	(11,694)
Other:			
Deferred lease payments	-	298,994	298,994
Government transfers for capital (note 14)	3,798,950	1,354,549	2,829,295
	3,798,950	1,653,543	3,128,289
Excess (deficiency) of revenue over expenses	9,142,325	(5,566,296)	3,116,595
Accumulated surplus, beginning of year	145,353,628	145,353,628	142,237,033
Accumulated surplus, end of year \$	154,495,953	\$ 139,787,332	\$ 145,353,628

Statement of Change in Net Financial Assets

Year ended December 31, 2022, with comparative information for 2021

	Budget	2022	2021
	(note 20)		
Excess (deficiency) of revenue over expenses \$	9,142,325	\$ (5,566,296)	\$ 3,116,595
Acquisition of tangible capital assets Amortization of tangible capital assets Gain on sale of tangible capital assets Proceeds on sale of tangible capital assets	(8,107,500) - - -	(5,107,225) 6,628,099 (543,144) 1,395,320	(5,179,499) 6,253,243 (3,598) 1,091,067
	1,034,825	(3,193,246)	5,277,808
Acquisition inventories for consumption Acquisition of prepaid expenses Use of inventories for consumption Use of prepaid expenses	· ·	(1,634,834) (303,158) 1,810,292 243,867	(2,250,479) (236,622) 2,231,712 264,076
	-	116,167	8,687
Change in net financial assets	1,034,825	(3,077,079)	5,286,495
Net financial assets, beginning of year	21,471,839	21,471,839	16,185,344
Net financial assets, end of year \$	22,506,664	\$ 18,394,760	\$ 21,471,839

Statement of Cash Flows

Year ended December 31, 2022, with comparative information for 2021

	2022	2021
Cash provided by (used in):		
Operating activities:		
Excess (deficiency) of revenue over expenses \$ Items not involving cash:	(5,566,296)	\$ 3,116,595
Amortization of tangible capital assets	6,628,099	6,253,243
Gain on disposal of tangible capital assets	(543,144)	(3,598)
Deferred lease payments	(298,994)	(298,994)
	518,659	9,067,246
Change in non-cash operating assets and liabilities:	•	
Taxes and grants in place of taxes	387,391	78,816
Trade and other receivables	2,619,222	116,392
Restricted cash	(3,843,458)	38,701
Accounts payable and accrued liabilities	138,725	300,889
Employee benefit obligations	19,502	(1,579)
Deposit liabilities	26,500	19,989
Deferred revenue	3,843,458	(38,701)
Prepaid expenses and deposits	(59,291)	27,454
Inventories for consumption	175,459	(18,767)
	3,527,173	9,590,440
Capital activities:		
Acquisition of tangible capital assets	(5,107,225)	(5,179,499)
Proceeds on sale of tangible capital assets	1,395,320	1,091,067
	(3,711,905)	(4,088,432)
Investing activities:		
Increase in investments	(5,824,427)	(5,018,989)
Financing activities:		
Payments on long-term debt	(831,640)	(793,518)
Net change in cash	(6,840,799)	(310,499)
Cash position, beginning of year	11,643,963	11,954,462
Cash position, end of year \$	4,803,164	\$ 11,643,963

Notes to Financial Statements

Year ended December 31, 2022

1. Significant accounting policies:

The financial statements of Lethbridge County (the "County") are prepared by management in accordance with Canadian Public Sector Accounting Standards. Significant aspects of the accounting policies adopted by the County are as follows:

(a) Reporting entity:

The financial statements reflect the assets, liabilities, revenue and expenses of the reporting entity which comprises all of the organizations that are owned or controlled by the County and are, therefore, accountable to the Council for the administration of their financial affairs and resources.

The schedule of taxes levied also includes requisitions for education, health, social and other external organizations that are not part of the municipal reporting entity.

The statements exclude trust assets that are administered for the benefit of external parties. Interdepartmental transactions and balances have been eliminated.

(b) Basis of accounting:

The financial statements are prepared using the accrual basis of accounting. The accrual basis of accounting records revenue as it is earned and measurable. Expenses are recognized as they are incurred and measurable based upon receipt of goods or services and/or the legal obligation to pay.

Funds from external parties and earnings thereon restricted by agreement or legislation are accounted for as deferred revenue until used for the purpose specified.

Government transfers, contributions and other amounts are received from third parties pursuant to legislation, regulation or agreement and may only be used for certain programs, in the completion of specific work, or for the purchase of tangible capital assets. In addition, certain user charges and fees are collected for which the related services have yet to be performed. Revenue is recognized in the period when the related expenses are incurred, services performed or the tangible capital assets acquired.

Notes to Financial Statements (continued)

Year ended December 31, 2022

1. Significant accounting policies (continued):

(c) Use of estimates:

The preparation of financial statements in conformity with Canadian Public Sector Accounting Standards requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the period. Significant items subject to such estimates and assumptions include the carrying amount of tangible capital assets, provisions for impairment of taxes and grants in place of taxes and trade and other receivables, provision for impairment in valuation of investments, employee future benefits, and the recognition of deferred lease payments and deferred revenues.

Actual results could differ from these estimates.

(d) Investments:

Investments are recorded at amortized cost. Investment premiums and discounts are amortized on the effective rate method over the term of the respective investments. When there has been a loss in value that is other than a temporary decline, the respective investment is written down to recognize the loss.

(e) Revenue recognition:

Net municipal property taxes are recognized as revenue as levied.

Sales and user charges are recognized as revenue as goods are transferred or services are rendered.

Contributed assets are recognized as revenue at fair market value of the assets at the date of receipt.

Investment income is reported as revenue in the period earned. When required by the funding government or related Act, investment income earned on deferred revenue is added to the investment and forms part of the deferred revenue balance.

All other income is recognized as earned.

Notes to Financial Statements (continued)

Year ended December 31, 2022

1. Significant accounting policies (continued):

(f) Requisition over-levy and under-levy:

Over-levies and under-levies arise from the difference between the actual property tax levy made to cover each requisition and the actual amount requisitioned.

If the actual levy exceeds the requisition, the over-levy is accrued as a liability and property tax revenue is reduced. Where the actual levy is less than the requisition amount, the underlevy is accrued as a receivable and as property tax revenue.

Requisition tax rates in the subsequent year are adjusted for any over-levies or under-levies of the prior year.

(g) Government transfers:

Government transfers are the transfer of assets from senior levels of government that are not the result of an exchange transaction, are not expected to be repaid in the future, or the result of a direct financial return.

Government transfers are recognized in the financial statements as revenue in the period in which events giving rise to the transfer occur, providing the transfers are authorized, any eligibility criteria have been met, and reasonable estimates of the amounts can be determined.

Government transfers, contributions and other amounts are received from third parties pursuant to legislation regulation or agreement and may only be used for certain programs, in the completion of specific work, or for the purchase of tangible capital assets. In addition certain user charges and fees are collected for which the related services have yet to be performed. Revenue is recognized in the period when the related expenses are incurred, services performed or the tangible capital assets are acquired.

(h) Employee future benefits:

- (i) The County and its employees make contributions to the Local Authority Pension Plan. These contributions are expensed as incurred. The costs of multi-employer defined contribution pension plan benefits, such as the Local Authority Pension Plan, are the employer's contributions due to the plan in the period.
- (ii) Sick leave and other retirement benefits are also available to the County's employees. The costs of these benefits are actuarially determined based on service and best estimates of retirement ages and expected future salary and wage increases. The obligations under these benefit plans are accrued based on projected benefits as the employees render services necessary to earn the future benefits.

Notes to Financial Statements (continued)

Year ended December 31, 2022

1. Significant accounting policies (continued):

(i) Contaminated sites liability:

Contaminated sites are a result of contamination being introduced into air, soil, water or sediment of a chemical, organic or radioactive or live organism that exceeds an environmental standard. The liability is recorded net of any expected recoveries. A liability for remediation of a contaminated site is recognized when a site is not in productive use and is management's estimate of the cost of post-remediation including operation, maintenance and monitoring.

(j) Non-financial assets:

Non financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They have useful lives extending beyond the current year and are not intended for sale in the ordinary course of operations.

(i) Tangible capital assets:

Tangible capital assets are recorded at cost which includes amounts that are directly attributable to acquisition, construction, development or betterment of the asset. When conditions indicate that they no longer contribute to the County's ability to provide goods and services, or when the value of the future economic benefits associated with the tangible capital asset are less than their book value the assets are written down. The net write downs are accounted for as an expense. The cost, less residual value, of the tangible capital assets, excluding land, are amortized on a straight line basis over their estimated useful lives as follows:

Asset	Useful life - years
Land improvements	15 - 40
Buildings	15 - 50
Engineered structures	
Road systems	5 - 100
Water systems	45 - 75
Wastewater systems	45 - 75
Storm systems	45 - 75
Machinery and equipment	3 - 40
Vehicles	5 - 25

Assets under construction are not amortized until the asset is available for productive use.

Notes to Financial Statements (continued)

Year ended December 31, 2022

1. Significant accounting policies (continued):

(ii) Contributions of tangible capital assets:

Tangible capital assets received as contributions are recorded at their fair value at the date of receipt and also are recorded as revenue.

(iii) Leased tangible capital assets:

Leases which transfer substantially all of the benefits and risks incidental to ownership of property are accounted for as leased tangible capital assets. All other leases are accounted for as operating leases and the related payments are charged to expenses as incurred.

(iv) Works of art and cultural and historical assets:

Works of art and cultural and historical assets are not recorded as assets in these financial statements.

(v) Interest capitalization:

The County does not capitalize interest costs associated with the acquisition or construction of a tangible capital asset.

(vi) Inventories for consumption:

Inventories held for consumption are recorded at the lower of cost and replacement cost with costs determined on an average cost basis.

Notes to Financial Statements (continued)

Year ended December 31, 2022

2. Future accounting pronouncements:

The following summarizes the upcoming changes to the Public Sector Accounting Standards by the Public Sector Accounting Standards Board (PSAB). In 2022, the County will continue to assess the impact and prepare for the adoption of these standards. While the timing of standard adoption can vary, certain standards must be adopted concurrently.

(a) PS 1201 - Financial Statement Presentation:

The implementation of this standard requires a new statement of re-measurement gains and losses separate from the statement of operations. This new statement will include the unrealized gains and losses arising from the re-measurement of financial instruments and items denominated in foreign currency. This standard is effective for fiscal years beginning on or after April 1, 2022.

(b) PS 3450 - Financial Instruments:

This section establishes recognition, measurement, and disclosure requirements for derivative and non-derivative instruments. The standard requires fair value measurements of derivative instruments and equity instruments; all other financial instruments can be measured at either cost or fair value depending upon elections made by the government. Unrealized gains and losses will be presented on the new statement of re-measurement gains and losses arising from the adoption of PS 1201. There will also be a requirement to disclose the nature and extent of risks arising from financial instruments and clarification is given for the de-recognition of financial liabilities. As the County does not invest in derivatives or equity instruments based on its investment policy, it is anticipated that the adoption of this standard will have a minimal impact on the County. This standard is effective for fiscal years beginning on or after April 1, 2022.

(c) PS 2601 - Foreign Currency Translation:

This section establishes guidance on the recognition, measurement, presentation and disclosure of assets and liabilities denominated in foreign currencies. The Section requires monetary assets and liabilities, denominated in a foreign currency and non-monetary items valued at fair value, denominated in a foreign currency to be adjusted to reflect the exchange rates in effect at the financial statement date. The resulting unrealized gains and losses are to be presented in the new statement of re-measurement gains and losses. This standard is effective for fiscal years beginning on or after April 1, 2022.

Notes to Financial Statements (continued)

Year ended December 31, 2022

2. Future accounting pronouncements (continued):

(d) PS 3041 - Portfolio Investments:

This section removes the distinction between temporary and portfolio investments and provides additional guidance on recognition, measurement, presentation and disclosure of these types of investments. Upon adoption of this section and PS 3450, PS 3040 - Portfolio Investments will no longer be applicable. This standard is effective for fiscal years beginning on or after April 1, 2022.

The requirements in PS 1201, PS 3450, PS 2601 and PS 3041 are required to be implemented at the same time.

Management has indicated that the impact of the adoption of this standard is being evaluated and it is not known or reasonably estimable at this time.

(e) PS 3280 - Asset retirement obligations:

This section provides guidance on how to account for and report a liability for retirement of a tangible capital asset. This standard is effective for fiscal years beginning on or after April 1, 2022.

(f) PS 3400 - Revenue:

This section provides guidance on how to account for and report on revenue, specifically addressing revenue arising from exchange transactions and unilateral transactions. This standard is effective for fiscal years beginning on or after April 1, 2022.

(g) PSG-8 - Purchased Intangibles:

This new guideline allows for recognition of intangibles purchased through an exchange transaction. Narrow-scope amendments were made to PS 1000 Financial Statement Concepts to remove prohibition on recognition of intangibles purchased through exchange transactions and PS 1201 Financial Statement Presentation to remove the requirement to disclose that purchased intangibles are not recognized. This is effective for fiscal years beginning on or after April 1, 2023.

(h) PS 3160 - Public Private Partnerships:

This section establishes standards on how to account for public private partnership arrangements. This standard is effective for fiscal years beginning on or after April 1, 2023.

Notes to Financial Statements (continued)

Year ended December 31, 2022

3. Investments:

		2022	2021
Short-tem deposits Temporary investments, with original maturities of over 3 months	·	2,069,356 25,656,151	\$ 565,960 21,335,120
Total	\$	27,725,507	\$ 21,901,080

Temporary investments are short-term deposits comprised of redeemable GICs with interest rates ranging from 1.30% to 5.10% (2021-0.60% to 2.25%). The investments will mature on or before December 31, 2023 (2021-December 31, 2022).

4. Taxes and grant in place of taxes:

	2022	2021
Secured:		
Current taxes and grants in place of taxes	\$ 1,978,501	\$ 1,830,997
Arrears taxes	1,994,890	564,583
	3,973,391	2,395,580
Less: allowance for uncollectible taxes	(3,146,018)	(1,180,816)
	\$ 827,373	\$ 1,214,764

5. Restricted cash:

Restricted cash is comprised of funds set aside in the Municipal Land Reserve account and funding contributions received for restricted purposes not spent. Municipal reserve funds may be used only for the purposes specified in the Municipal Government Act, section 671(4) Accordingly, these amounts are not available for current operations.

Notes to Financial Statements (continued)

Year ended December 31, 2022

6. Deferred revenue:

Deferred revenue, reported on the statement of financial position, is made up of the following:

	De	ecember 31, 2021	(1	Externally restricted inflows repayments)	Revenue recognized	December 31, 2022
Municipal Sustainability Initiative Grant - Capital (MSI)	\$	1,632,137	\$	3,528,173	\$ (1,206,040)	\$ 3,954,270
Federal Gas Tax Fund Grant (FGTF) Municipal Sustainability		225,805		2,397,980	(669,301)	1,954,484
Initiative Grant - Operating (MSI)		100,989		107,600	(106,531)	102,058
Other ´		140,020		-	(48,527)	91,493
Other - Provincial		197,214		274,905	(431,601)	40,518
Other - Federal		3,200		14,700	(17,900)	-
Total	\$	2,299,365	\$	6,323,358	\$ (2,479,900)	\$ 6,142,823

Funding allocations for the 2017 to 2021 years have been made available to the County from the Municipal Sustainability Initiative ("MSI") – Capital Component, and the Federal Gas Tax Fund ("FGTF") are also available to the County. These allocations are only receivable from the funding source upon approval of project submissions made by the County. As at December 31, 2022, the County did not have any approved projects submitted towards these allocations. As a result these allocations have not been included in these financial statements.

Notes to Financial Statements (continued)

Year ended December 31, 2022

7. Deferred lease payments:

	2022	2021
Balance, beginning of year Amortization	\$ 2,989,931 (298,994)	\$ 3,288,924 (298,994)
	\$ 2,690,937	\$ 2,989,930

The County received \$8,969,812 as a prepaid lease payment from McCain Foods Limited for the use of a water treatment plant. The lease is for the useful operating life of the plant. The minimum term was for an initial period of ten years ending December 31, 2011 with four subsequent renewal terms of five years each. The deferred lease payments will be recognized as revenue as the payments are being used to fund the acquisition of the water treatment plant. The revenue will be recognized evenly over the thirty year minimum term of the lease, including the four renewal terms.

8. Long-term debt:

		2022		2021
Debenture tax supported	\$	14,330,744	\$	15,162,383
Current portion	¢	931 640	¢	702 519
Current portion	Ф	831,640	Φ	793,518

Principal and interest repayments are due as follows:

		Principal	Interest		Total
2023	\$	871,754	\$	541,396	\$ 1,413,150
2024		913,973		459,062	1,373,035
2025		548,359		415,277	963,636
2026		538,248		394,521	932,769
2027		552,873		379,901	932,774
Thereafter	10,	905,537		4,678,978	15,584,515

Debenture debt is repayable to Alberta Municipal Financing Corporation and bears interest at the rate of 2.765% to 6.500% per annum, before Provincial subsidy, and matures in periods 2024 to 2048. For qualifying debentures, the Province of Alberta rebates 60% of interest in excess of 8%, 9%, and 11% to a maximum annual rate of 12.5%, depending on the date borrowed. Debenture debt is issued on the credit and security of the Lethbridge County at large.

Interest payments on long-term debt amounted to \$541,396 (2021 - 570,486).

Notes to Financial Statements (continued)

Year ended December 31, 2022

9. Debt limits:

Section 276(2) of the Municipal Government Act requires that debt and debt limits as defined by Alberta Regulation 255/2000 of the Lethbridge County be disclosed as follows:

	2000	2004
	2022	2021
Total debt limit Total debt	\$ 46,597,014 14,330,744	\$ 40,116,810 15,162,383
Unused debt limit	\$ 32,266,270	\$ 24,954,427
Debt servicing limit Debt servicing	\$ 7,766,169 1,373,035	\$ 6,686,135 1,372,735
Amount of debt servicing limit unused	\$ 6,393,134	\$ 5,313,400

The debt limit is calculated at 1.5 times revenue of the municipality (as defined in Alberta Regulation 255/2000) and the debt service limit is calculated at 0.25 times such revenue. Incurring debt beyond these limitations requires approval by the Minister of Municipal Affairs. These thresholds are guidelines used by Alberta Municipal Affairs to identify municipalities that could be at financial risk if further debt is acquired. The calculation taken alone does not represent the financial stability of the municipality. Rather, the financial statements must be interpreted as a whole.

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LETHBRIDGE COUNTY

Notes to Financial Statements (continued)

Year ended December 31, 2022

10. Tangible capital assets:

		Land			Water	Wastewater	Storm	Machinery and		Total	Total
	Land	Improvements	Buildings	Road systems	systems	systems	systems	equipment	Vehicles	2022	2021
Cost:											
Balance, beginning of							· ·				
year Additions	\$4,615,160	\$153,986 -	\$5,199,282 11,970	\$324,007,769 1,898,272	\$20,378,380	\$24,402,736	\$2,765,572 283,220	\$16,086,976 2,411,997	\$3,747,758 501,766	\$401,357,619 5,107,225	\$398,834,418 5,179,499
Disposals	(1,220)	-	-	(661,107)	-		-	(1,221,825)	(45,055)	(1,929,207)	(2,656,298)
Balance, end	\$4,613,940	\$153,986	\$5,211,252	\$325,244,934	\$20,378,380	\$24.402.726	\$3,048,792	¢17 077 140	\$4.204.460	¢404 525 627	¢404 257 640
of year	\$4,613,940	\$155,966	\$5,211,252	\$325,244,934	\$20,376,360	\$24,402,736	\$3,046,79Z	\$17,277,148	\$4,204,469	\$404,535,637	\$401,357,619
Accumulated	amortization:										
Balance, beginning of											
year	\$ -	\$77,802	\$3,270,566	\$250,576,430	\$5,538,200	\$10,069,149	\$394,380	\$7,717,148	\$1,391,085	\$279,034,760	\$274,350,347
Disposals	-	-	-	(156,045)	-	-	-	(913,175)	(7,811)	(1,077,031)	(1,568,830)
Amortization	-	8,089	118,919	4,127,362	292,771	499,563	23,905	1,156,163	401,326	6,628,098	6,253,243
Balance, end of year	\$ -	85,891	3,389,485	254,547,747	5,830,971	10,568,712	418,285	7,960,136	1,784,600	284,585,827	279,034,760
Net book value, end											
of year 2022	\$4,613,940	\$68,095	\$1,821,767	\$70,697,187	\$14,547,409	\$13,834,024	\$2,630,507	\$9,317,012	\$2,419,869	\$119,949,810	\$122,322,859
Net book value, end											
of year 2021	\$4,615,160	\$76,184	\$1,928,716	\$73,431,339	\$15,892,696	\$14,333,587	\$2,371,192	\$8,369,828	\$2,356,673	\$ -	\$122,322,859

Notes to Financial Statements (continued)

Year ended December 31, 2022

10. Tangible capital assets (continued):

(a) Assets under construction:

Assets under construction having a value of \$968,250 (2021 - \$594,129) have not been amortized. Amortization of these assets will commence when the asset is put into service. The breakdown of assets under construction are as follows:

Water	\$	1,585
Storm Systems		349,267
Roads		597,786
Bridges		19,612
	\$	968,250

(b) Tangible capital assets disclosed at nominal values:

Where an estimate of fair value could not be made, the tangible capital asset has been recognized at a nominal value. Land is the only category where nominal values were assigned, a nominal value of \$190 has been applied to 11.80 acres total of Municipal reserve public access walk ways.

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LETHBRIDGE COUNTY

Notes to Financial Statements (continued)

Year ended December 31, 2022

11. Accumulated surplus:

Accumulated surplus consists of individual fund surplus and reserves and reserve funds as follows:

		Unrestricted	4	Restricted Surplus (i)	Equity in TCA (ii)	Total 2022	Total 2021
Balance, beginning of year	\$	3,204,826	\$	37,978,257	\$ 104,170,545	\$ 145,353,628	\$ 142,237,033
Excess (deficiency) of revenue over expenses	·	(5,566,296)		_	-	(5,566,296)	3,116,595
Transferred to restricted surplus		(2,588,783)		2,588,783	-	-	-
Acquisition of tangible capital assets				(5,107,225)	5,107,225	-	-
Net book value of tangible capital						-	-
assets disposed		852,176		-	(852,176)	-	
Amortization of capital assets		6,628,099		-	(6,628,099)	-	-
Deferred lease payments		(298,994)		-	298,994	-	-
Debt principal paid		(831,640)		-	831,640	-	-
Balance, end of year	\$	1,399,388	\$	35,459,815	\$ 102,928,129	\$ 139,787,332	\$ 145,353,628

Notes to Financial Statements (continued)

Year ended December 31, 2022

11. Accumulated surplus (continued):

	2022	2021
) Reserves:		
Administration Building Reserve	\$ 750,952	\$ 665,397
ASB Reserve Future Projects	268,150	261,891
Donation Reserve	23,015	23,015
Community Grant Reserve	34,588	34,588
Computer Replacement Reserve	226,229	211,260
Council Discretionary Reserve	151,919	157,337
Drainage Reserve	496,606	410,014
Emergency Services Reserve	2,174,797	1,952,797
Utilities Future Project Reserve	5,295,027	4,415,498
Fleet Equipment Replacement	5,166,654	5,639,050
Commercial and Industrial Land Reserve	1,806,219	4,511,683
Gravel Pit Reclamation Reserve	56,515	55,196
Kedon Road Reserve	701,292	584,922
Safety Program Reserve	124,120	107,224
Municipal Debt Reduction Proceeds Reserve	2,616,426	4,956,133
Public works Reserve	3,844,814	3,610,068
Market Access Network Reserve	9,127,848	7,639,067
Recreation Reserve	115,775	165,775
Snow Removal Reserve	924,842	874,842
Other Designated Reserves	1,554,027	1,702,500
Total reserves	\$ 35,459,815	\$ 37,978,257

(ii) Equity in tangible capital assets:

	2022	2021
Tangible capital assets (note 10) Accumulated amortization (note 10) Long-term debt (note 8) Deferred lease (note 7)	\$404,535,637 (284,585,827) (14,330,744) (2,690,937)	(15,162,383)
Total equity in tangible capital assets	\$102.928.129	\$104.170.546

Notes to Financial Statements (continued)

Year ended December 31, 2022

12. Net municipal property taxes:

Taxation revenue, reported on the statement of operations, is made up of the following:

	Budget	2022	2021
General taxation:			
			A 1= 001 100
Real property taxes	\$ 18,551,177	\$ 18,475,346	\$ 17,031,468
Linear property taxes	2,939,501	2,939,501	3,506,733
Government grants in place of		, ,	, ,
property taxes	1,138,141	1,138,141	1,412,881
	22,628,819	22,552,988	21,951,082
Less taxes levied for other authorities:			
School Authorities	400,024	400,024	377,721
Alberta School Foundation Fund	5,448,054	5,448,054	5,078,668
Green Acres Foundation	314,891	314,891	291,628
	6,162,969	6,162,969	5,748,017
Net municipal property taxes	\$ 16,465,850	\$ 16,390,019	\$ 16,203,065

Notes to Financial Statements (continued)

Year ended December 31, 2022

13. Contingent liabilities:

Lethbridge County is a member of Genesis which provides liability insurance. The investment in this program is not reflected as an asset in the accompanying financial statements.

Under the terms of membership, the County could become liable for its proportionate share of any claim losses in excess of the funds held by the exchange. Any liability incurred would be accounted for as a current transaction in the year the losses are determined.

14. Government transfers:

	Budget	2022	2021
Operating Capital	\$ 504,000 3,798,950	\$ 1,076,648 1,354,549	\$ 1,548,276 2,829,295
	\$ 4,302,950	\$ 2,431,197	\$ 4,377,571
Government transfers are comprised of:			
	Budget	2022	2021
Federal transfers: Shared-cost agreement and grants-operating Shared cost agreement and grants- capital	\$ - -	\$ 669,301 -	\$ - 191,318
Total federal transfer	-	669,301	191,318
Provincial transfers: Shared-cost agreement and grants- operating Shared cost agreement and grants- capital Total provincial transfers	504,000 3,798,950 4,302,950	407,347 1,354,549 1,761,896	1,548,276 2,637,977 4,186,253
Total government transfers	\$ 4,302,950	\$ 2,431,197	\$ 4,377,571

Notes to Financial Statements (continued)

Year ended December 31, 2022

15. Expenses by object:

	Budget 20		2022	2021
Salaries, wages and benefits	\$ 8,279,100	\$	8,109,042	\$ 8,046,411
Contracted and general services Materials, good and utilities	4,039,000 5,666,555		9,861,543 4,580,406	6,134,247 4,044,271
Provision for Allowances Transfers to local boards and agencies	763,380		2,265,227 753,183	160,176 747,234
Transfers to individual and organizations Interest on long-term debt	218,495 578,395		2,547,211 531,712	501,171 570,486
Amortization	-		6,628,099	6,253,243
Total expenses by object	\$ 19,544,925	\$	35,276,423	\$ 26,457,239

16. Segmented information:

Segmented information has been identified based upon lines of service provided by the County. County services are provided by departments and their activities are reported by functional area in the body of the financial statements. Certain lines of service that have been separately disclosed in the segments information, along with the services they provide, are as follows:

(a) Protective Services:

The mandate of Protective Services is to provide for the rescue and protection of people and property within Lethbridge County through effective and efficient management and coordination of emergency service systems and resources.

(b) Public Works:

The Public Works department is responsible for the delivery of municipal public works services related to the planning, development and maintenance of roadway systems, streets, walks and lighting.

(c) Utility Services:

The Utility department is responsible for water supply and distribution services within Lethbridge County, as well as wastewater treatment and disposal activities and waste management functions.

Notes to Financial Statements (continued)

Year ended December 31, 2022

16. Segmented information (continued):

(d) Community Services:

Community Services provides funding for programs that support individuals, families, and communities. Programs and services are delivered through Family and Community Support Services.

(e) Parks and Recreation:

The Parks and Recreation department is responsible for clean, safe and attractive parks within Lethbridge County.

(f) Agricultural Development:

The County is responsible for agricultural development activities including pest control, soil, weed and crop services, agricultural field services, and roadside mowing programs.

Certain allocation methodologies are employed in the preparation of segmented financial information. Taxation and payments-in-lieu of taxes are allocated to the segments based on the segment's budgeted net expenditure. User charges and other revenue have been allocated to the segments based upon the segment that generated the revenue. Government transfers have been allocated to the segment based upon the purpose for which the transfer was made.

The accounting policies used in these segments are consistent with those followed in the preparation of the financial statements as disclosed in Note 1.

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LETHBRIDGE COUNTY

Notes to Financial Statements (continued)

Year ended December 31, 2022

16. Segmented information (continued):

	Emergency		Utility	Community	Parks and	Agriculture	Other and	
2022	Services	Public Works	Services	Services	Recreation	Development	unallocated	Total 2022
Revenue:								
Taxation	\$ -	\$ -	\$ 588,088	3 \$ -	\$ -	\$ -	\$ 15,801,931	\$ 16,390,019
Goods and services	-	643,296	3,589,878	-	-	43,871	50,818	4,327,863
Government transfers	3,200	2,060,434	26,643	-	-	214,907	126,013	2,431,197
Fines	127,970	-			-	-	-	127,970
Penalties and cost of taxes	-	-	5,535	· -	-	-	438,739	444,274
Licenses and permits	-	-		-	-	-	63,672	63,672
Rentals	-	-	32,245	; -	-	3,000	180,891	216,136
Return on investments	-	1,327		-	-	-	812,684	814,011
Gain on sale of tangible capital assets	-	91,989		-	-	-	451,155	543,144
Other revenue	1,060,594	2,410,793	28,667	-	150,645	-	701,142	4,351,841
Total revenue	1,191,764	5,207,839	4,271,056	-	150,645	261,778	18,627,045	29,710,127
Expenses:								
Salaries and wages	289,080	3,673,497	565,661	-	36,847	671,410	2,872,547	8,109,042
Contracted and general	2,278,184	1,451,636	4,793,925	; -	5,955	40,088	1,291,755	9,861,543
Materials	19,442	4,134,218	170,685	; -	3,165	129,295	123,601	4,580,406
Provisions for allowances	-	-			-	-	2,265,227	2,265,227
Transfer to local boards and agencies	-	-	591,900	81,168	-	-	80,115	753,183
Transfers to individuals and organizations	-	-		-	-	-	2,547,211	2,547,211
Interest on long-term debt	-	406,836	124,876	-	-	-	-	531,712
Amortization	7,706	5,655,882	826,336	-	1,832	21,165	115,178	6,628,099
Total expenses	2,594,412	15,322,069	7,073,383	81,168	47,799	861,958	9,295,634	35,276,423
Excess (deficiency) of revenue over expenses	\$ (1,402,648)	\$ (10,114,230)	\$ (2,802,327	') \$ (81,168) \$ 102,846	\$ (600,180)	\$ 9,331,411	\$ (5,566,296)

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LETHBRIDGE COUNTY

Notes to Financial Statements (continued)

Year ended December 31, 2022

16. Segmented information (continued):

2021	Emergency Services	Public Works	Utility Services	Community Services	Parks and Recreation	Agriculture Development	Other and unallocated	Total 2021
Revenue:								
Taxation	\$ -	\$ -	\$ 588,088	\$ -	\$ -	\$ -	\$ 15,614,977	\$ 16,203,065
Goods and services	-	697,730	3,630,049	_	_	51,625	77,027	4,456,431
Government transfers	-	2,904,489	3,150	-	5,991	305,907	1,158,034	4,377,571
Fines	105,824	-	-	-	-	-	-	105,824
Penalties and cost of taxes	-	-	6,075		-	-	481,921	487,996
Licenses and permits	-	-		-	-	-	84,900	84,900
Rentals	-	-	35,679	-	-	5,850	180,891	222,420
Return on investments	-	1,358	-	-	-	-	257,040	258,398
Gain (loss) on sale of	-	(186,997)		-	-	-	190,595	3,598
tangible capital assets								
Other revenue	488,000	2,380,443	71,370	-	-	4,031	429,787	3,373,631
Total revenue	593,824	5,797,023	4,334,411	-	5,991	367,413	18,475,172	29,573,834
Expenses:								
Salaries and wages	207,649	3,765,882	663,759	-	44,342	658,201	2,706,578	8,046,411
Contracted and General	2,131,441	733,850	1,895,776	-	16,175	29,188	1,327,817	6,134,247
Materials	9,483	3,577,647	153,424	-	23,001	176,754	103,962	4,044,271
Provision for allowances	-	-	-	-	-	-	160,176	160,176
Transfer to local boards and	-	-	588,088	78,786	-	-	80,360	747,234
agencies								
Transfers to individuals and	-	-	-	-	-	-	501,171	501,171
organizations								
Interest on long-term debt	-	416,731	153,755	-	-	-	-	570,486
Amortization	9,630	5,259,208	842,061	-	1,832	14,806	125,706	6,253,243
Total expenses	2,358,203	13,753,318	4,296,863	78,786	85,350	878,949	5,005,770	26,457,239
Excess (deficiency) of revenue over expenses	\$ (1,764,379)	\$ (7,956,295)	\$ 37,548	\$ (78,786)	\$ (79,359)	\$ (511,536)	\$ 13,469,402	\$ 3,116,595

Notes to Financial Statements (continued)

Year ended December 31, 2022

17. Employee benefit obligations:

	2022	2021
Vacation Post-employment benefits	\$ 182,843 139,845	\$ 165,744 137,442
	\$ 322,688	\$ 303,186

Vacation:

The vacation liability is comprised of the vacation that employees are deferring to future years. Employees have earned these benefits and are expected to use them within the next budgetary year.

Post-employment benefits:

The County provides a retirement allowance for its employees. Employees with over 10 years of service to the County are eligible for the allowance at a rate of \$450 per year for each year of service over 10 years, plus \$1,500, up to a maximum of \$15,000. The benefit is paid out when the employee ceases to be an employee of the County.

Notes to Financial Statements (continued)

Year ended December 31, 2022

18. Local authorities pension plan:

The County participates in a multi-employer defined benefit pension plan. This plan is accounted for as a defined contribution plan.

Employees of the County participate in the Local Authorities Pension Plan (LAPP), which is covered by the Public Sector Pension Plans Act. The Plan serves about 281,764 people and about 435 employers. It is financed by employer and employee contributions and investment earnings of the LAPP fund.

Contributions for current service are recorded as expenditures in the year in which they become due.

The County is required to make current service contributions to the Plan of 8.45% (2021 - 9.39%) of pensionable earnings up to the year's maximum pensionable earnings under the Canada Pension Plan and 12.80% (2021 - 13.84%) on pensionable earnings above this amount. Employees of the County are required to make current service contributions of 7.45% (2021 - 8.39%) of pensionable salary up to the year's maximum pensionable salary and 11.80% (2021 - 12.84%) on pensionable salary above this amount.

Total current services contributions by the County to the Local Authorities Pension Plan in 2022 were \$454,240 (2021 - \$510,709). Total current service contributions by the employees of the County to the Local Authorities Pension Plan in 2022 were \$408,147 (2021 - \$463,931).

At December 31, 2021, the LAPP disclosed an surplus of \$11.9 billion (2021 - \$5.0 billion).

19. Comparative information:

Certain 2021 comparative information has been reclassified to conform with the financial statement presentation adopted for the current year.

20. Budget and statement of operation reconciliation:

The following table reconciles the excess of revenue over expenses in the Statement of Operations to the Budget Balance as shown in the 2021-2023 Budget and demonstrates how the legislative requirement for a balanced budget (where planned revenue sources equal planned expenditures) has been met.

The reconciliation below to encompass these items is provided for information purposes only to provide users with supplementary comparative information. It should not be used as a replacement for the statement of financial activities and accumulated surplus and users should note that this information may not be appropriate for their purposes.

Notes to Financial Statements (continued)

Year ended December 31, 2022

20. Budget and statement of operation reconciliation (continued):

	Budget	2022	2021
Excess of revenue over expenses	\$ 9,142,325	\$ (5,566,296)	\$ 3,116,595
Adjustments to revenue:			
Equipment rental revenue, internal	3,394,600	4,460,374	3,879,777
Transfers from reserves	5,372,375	9,947,771	5,227,257
Gain on sales of tangible capital assets	_	(543,144)	(3,598)
Deferred lease payment	_	(298,994)	(298,994)
Services recovered, internal	942,640	945,377	918,748
Adjustments to expenses:			
Equipment rental costs, internal	(3,394,600)	(4,460,374)	(3,804,833)
Transfer to reserves	(5,560,575)	(7,090,175)	(9,200,990)
Capital purchases as per budget	(8,107,500)	(5,026,122)	(5,058,786)
Debt principal payments	(831,625)	(831,640)	(793,518)
Services performed, internal	(942,640)	(944,208)	(919,096)
Amortization expense	-	6,628,099	6,253,243
Provision for allowances	(15,000)	-	-
Budget balance, deficit	\$ -	\$ (2,779,332)	\$ (684,195)

The budget information was approved by Council on December 16, 2022.

Notes to Financial Statements (continued)

Year ended December 31, 2022

21. Salary and benefits disclosure:

Disclosure of salaries and benefits for elected municipal officials, the chief administrative officer and designated officers as required by Alberta Regulation 313/2000 is as follows:

				2022	2021
			Benefits and		
	Salary (i)	1	Allowances (ii)		
Councilors:					
Division 1	\$ 41,685		\$ 10,790	\$ 52,475	\$ 66,173
Division 2	68,790		12,633	81,423	49,979
Division 3	40,308		8,989	49,297	42,919
Division 4	42,603		12,317	54,920	46,159
Division 5	41,073		9,881	50,954	36,526
Division 6	47,454		12,527	59,981	46,390
Division 7	42,756		10,514	53,270	45,241
	324,669		77,651	402,320	333,387
Chief Administrative Officer Designated officers (2	234,030		49,643	283,673	254,591
positions)	203,351		41,160	244,511	249,071

- (i) Salary includes regular base pay, bonuses, overtime, lump sum payments, gross honoraria and any other direct cash remuneration.
- (ii) Benefits and allowances include the employer's share of all employee benefits and contributions or payments made on behalf of employees including pension, health care, dental coverage, vision coverage, group life insurance, accidental disability and dismemberment insurance, long- and short-term disability plans, professional memberships, and tuition.

Benefits and allowances also include the employer's share of the costs of additional taxable benefits including special leave with pay, financial planning services, retirement services, concessionary loans, travel allowances, car allowances, and club memberships.

22. Approval of financial statements:

These financial statements were approved by Council and Management.

AGENDA ITEM REPORT



Title: Bylaw 23-002 - Country Crossroads Estate Area Structure Plan and Bylaw 23-

003 Land Use Bylaw Amendment (Rural Agriculture to Grouped Country

Residential) - Public Hearing

Meeting: Council Meeting - 20 Apr 2023

Department: Community Services

Report Author: Hilary Janzen

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 08 Apr 2023

STRATEGIC ALIGNMENT:











Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

An application was received for the Country Crossroads Estate Area Structure Plan (Bylaw 23-002 and to re-designate a 66 acre title in the SW5-8-20-W4 from Rural Agriculture to Grouped Country Residential (Bylaw 23-003). If the bylaws are approved it will allow for the phased subdivision and development of the parcel for Country Residential use.

RECOMMENDATION:

That Bylaw 23-002 (Country Crossroad Estate ASP) be read a second time.

That Bylaw 23-002 (Country Crossroad Estate ASP) be read a third time.

That Bylaw 23-003 (Land Use Bylaw Amendment - RA to GCR) be read a second time.

That Bylaw 23-003 (Land Use Bylaw Amendment - RA to GCR) be read a third time.

REASON(S) FOR RECOMMENDATION(S):

The proposed Area Structure Plan and Rezoning meet most of the requirements within the Municipal Development Plan and Grouped Country Residential Strategy.

PREVIOUS COUNCIL DIRECTION / POLICY:

- The Lethbridge County Municipal Development Plan) Bylaw 22-001) requires that where there
 will be more than 4 adjacent titles, the applicant must submit an Area Structure Plan for County
 Council consideration and that the parcels be re-designated to the Grouped Country
 Residential Land Use District.
- The Grouped Country Residential Land Use Strategy encourages subdivision in areas close to urban areas and where the lands are fragmented and considered poor quality agricultural lands.

• Bylaw 23-002 received first reading on March 16, 2023.

BACKGROUND INFORMATION:

An application was received for the Country Crossroads Estate Area Structure Plan (Bylaw 23-002) and to re-designate a 66 acre title in the SW5-8-20-W4 from Rural Agriculture to Grouped Country Residential (Bylaw 23-003). This would allow for the phased subdivision and development of the parcel for Country Residential use.

The Country Crossroads Estate Area Structure Plan provides a plan for the future subdivision of the subject lands in a manner that attempts to meet the County's current policies and requirements.

Comments regarding the proposed bylaws were received from Alberta Transportation, SMRID, Fortis, Alberta Health Services, and Telus:

- Alberta Transportation confirmed that a Traffic Impact Assessment needs to be completed as per Section 2.4.3. of the Area Structure Plan.
- Alberta Health Services recommended that the developer consider a communal wastewater system based on the soils analysis.
- SMRID indicated that the irrigation rights will need to be sold or transferred, the other
 comments noted by the SMRID were addressed by the applicant and the documents were
 updated accordingly.
- Telus and Fortis had no concerns.

The circulation was also sent out to ATCO pipelines and Triple W Gas but no responses were received.

Comments were received from the County of Lethbridge Rural Water Association after the circulation period was completed. They indicated they do not have capacity to serve this area at this time.

The Planning and Development Department reviewed the applications and provides the following comments based on the County's current policies:

The Municipal Development Plan (Section 8) and the Grouped Country Residential Land Use Strategy provide policies and recommendations with regards to the consideration of Country Residential Developments. The proposed development meets most, but not all, of the County's policies:

- The parcel would be considered fragmented/cut off due to the SMRID Irrigation canals.
- The parcel is directly adjacent to existing country residential developments to the south and north.
- The subject lands are not in proximity to any confined feeding operations or noxious/hazardous facilities.
- The lands are less than 70 acres in size and may be considered for further subdivision by County Council as long as an Area Structure Plan is provided.
- The soils analysis has shown that the soils are marginal for conventional septic systems and that a mound system or secondary treatment would be required. Mound septic systems are an acceptable means to treat wastewater within Lethbridge County.
- The development will have a road system that provides legal and physical access to the County's road network
- The stormwater plan submitted for the development has been reviewed and accepted by County administration.

- Potable would need to be provided by the local water co-op if the entire proposed development
 were to occur. The applicant has provided options in the Area Structure Plan for providing
 potable water to the development that do not include a water co-op (irrigation water,
 groundwater wells). They also propose that hauled water could be utilized for the first four lots
 in phase 1A, and subsequent lots would be required to find another means of potable water
 supply.
- The development is within 300 meters of the Taylor Business Park but no adverse impacts were identified by having a residential area within that 300 meters.
- The eastern side of the development is partially within the 300 meter setback to the future communal septic system to be located at the Taylor Business Park, however any future residences would not be constructed within that 300 meter setback.

The proposed bylaws were advertised in the March 28 and April 4 editions of the Sunny South News and on the County's website. In addition, a notice of the proposed bylaw and public hearing was sent to all the affected/adjacent landowners. At the time of the writing of this report, county administration had received 3 comments from nearby landowners. Comments had also been previously received when the applicant had sent out their communication to the adjacent landowners in December of 2021. The comments received were all in objection to the proposed Area Structure Plan and Rezoning. The general concerns are:

- Increased traffic and impact to Range Road 20-5
- Developing good farm land
- Increased population (more urban than rural)
- Architectural controls
- Potable water supply
- Water table (septic fields)
- Drainage
- Proximity to an industrial park

ALTERNATIVES / PROS / CONS:

County Council may refuse second reading of the bylaws:

Pros:

- This would alleviate concerns expressed by the adjacent landowners.
- Would address concerns related to not adhering to all the County's policies and guiding documents.

Cons:

• The County would forgo any future taxes from the development of the properties.

FINANCIAL IMPACT:

- If the bylaws were approved, future development would be taxed at the County's residential tax rate.
- There would be additional costs to the County (i.e. ongoing maintenance of infrastructure) that would arise if the bylaws are approved.

LEVEL OF PUBLIC	PARTICIPATION:			
☐ Inform	Consult	X Involve	Collaborate	☐ Empower

ATTACHMENTS:

Bylaw 23-002- Country Crossroad Estate - ASP

Country Crossroads Estate ASP-Issued for County Application March 6, 2023 - Compiled-1

Bylaw 23-003 - Country Crossroad Estate - Amendment to LUB

23 003 RA GCR Ortho

Rezoning Application - RA to GCR

AT Comments - December 14 2022 (RPATH0007157)

AHS Comments

Fortis Comments

SMRID Comments

Telus Comments

COLRWA Comments

Pirot Comments

Honess Comments

Richter Comments

Draffin Comments Redacted

Garner Comments Redacted

Heninger Comments Redacted

Nadeau-Schwark Comments Redacted

Whishaw comments Redacted

Prins Comments

McDougall Comments

Echlin-Healy Comments Redacted

Salberg Comments Redacted

neighbour signatures (002) Redacted

S Greene Comments Redacted

J Green Comments Redacted

Skiba Comments

Skiba comments - Most Precipitation in a Two-Day Period in Lethbridge History

Barrus Comments

Spencer Comments

LETHBRIDGE COUNTY IN THE PROVINCE OF ALBERTA

BYLAW NO. 23-002

A BYLAW OF LETHBRIDGE COUNTY BEING A BYLAW PURSUANT TO SECTION 633(1) OF THE MUNICIPAL GOVERNMENT ACT, REVISED STATUTES OF ALBERTA 2000, CHAPTER M.26

WHEREAS the landowners wish to develop lands within the 5-8-20-W4 being that portion of the southwest quarter lying to the west of the 65 metre canal right-of-way and lying north of the south halves of legal subdivisions 3 and 4, and lying to the north of the 30 metre canal right-of-way on Plan 8210212;

AND WHEREAS the County's Municipal Development Plan and the Lethbridge County and City of Lethbridge Intermunicipal Development Plan requires that developers prepare an Area Structure Plan to ensure sound development occurs within Lethbridge County;

AND WHEREAS the total area considered by the Area Structure Plan is approximately 66.8 acres (27 hectares);

AND WHEREAS the landowner/developer have prepared the "Country Crossroad Estate Area Structure Plan" which contains engineering, survey, and geotechnical information to support the above conditions.

NOW THEREFORE BE IT RESOLVED, under the Authority and subject to the provisions of the Municipal Government Act, Revised Statutes of Alberta, 2000, Chapter M-26, as amended, the Council of Lethbridge County in the Province of Alberta duly assembled does hereby enact the following:

1. The "Country Crossroad Estate Area Structure Plan" Bylaw No. 23-002, attached as "Appendix A".

		Reeve	
		CAO	
	GIVEN second reading this	day of	, 20
		Reeve	
		CAO	
	GIVEN third reading this	day of	, 20
Reading March 1	6, 2023	Reeve	
olic aring Reading		CAO	

GIVEN first reading this 16th day of March, 2023.

Country Crossroads Estate

AREA STRUCTURE PLAN

 $SW_{4}^{1} Sec.05 - 8-20-W4M$

February 2023



Prepared for: Jody Nakamura

Prepared by: Martin Geomatic Consultants Ltd.



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1.0 INTRODUCTION

1.1 PURPOSE OF THE PLAN

The purpose of the Country Crossroads Estate Area Structure Plan (ASP) is to provide a comprehensive planning framework for development of the land within the southwest quarter of Sec. 05-8-20-W4M. The Plan Area is located in Lethbridge County and is shown on **Figure 1 - Location Plan.** Prior to consideration of subdividing or re-subdividing a property, Lethbridge County requires preparation of an Area Structure Plan to address all planning issues related thereto. The purpose of this area structure plan is thus to provide all pertinent information to the County and its advisors that will enable development of the subject property.

The plan is submitted for approval according to provincial statutory requirements. This plan will also be used to support a land use reclassification pursuant to Lethbridge County Land Use Bylaw #1404.

1.2 PLAN PREPARATION

Prior to commencing the preparation of the area structure plan document, Martin Geomatic Consultants Ltd. (MGCL) had discussions and met with representatives from:

- Lethbridge County
- Alberta Environment and Parks,
- Alberta Transportation,
- County of Lethbridge Rural Water Association,
- Exon Mobil,
- Fortis Alberta,
- Lethbridge County,
- Saint Mary River Irrigation District,
- Shaw Cable.
- Telus Communications,
- the landowner of the proposed plan area,
- Triple W Natural Gas Co-op Ltd.

2.0 LEGISLATIVE FRAMEWORK

2.1 THE MUNICIPAL GOVERNMENT ACT

Country Crossroads Estate Area Structure Plan has been produced in accordance with Section 633 of the Municipal Government Act. It is the intention of this plan to create a framework for the development of a portion of SW. 1/4 Sec. 5-8-20-W4M into Grouped Country Residential classified area.

2.2 THE SOUTH SASKATCHEWAN REGIONAL PLAN

The Country Crossroads Estate ASP aims to follow the Alberta Government South Saskatchewan Regional Plan (SSRP) 2014 – 2024, Amended February 2017.

Strategic Outcomes of the SSRP aligned with the Country Crossroads Estate ASP include: sustainable development wherein economic development takes into account environmental sustainability and social outcomes, conserving and maintaining the benefits of biodiversity, advancing watershed management, promoting efficient use of land, and strengthening communities.

2.3 LETHBRIDGE COUNTY MUNICIPAL DEVELOPMENT PLAN

The Country Crossroads Estate ASP aims to follow the Lethbridge County Municipal Development Plan (MDP) Bylaw No. 22-001.

The MDP outlines specific requirements necessary for residential development in Lethbridge County. Based on these requirements the Country Crossroads Estate ASP sets the stage for the proposed development.

Part 4, Sec. 4 - Land Use and Development Requirements of the MDP, outlines specific requirements in order that land in the County is properly planned and serviced based on the proposed use. County Crossroads Estates ASP and Land Use request is compatible with these detailed prerequisites for ASP's, land use re-designation, Geotechnical and soil reports.

This ASP has been designed such that the requirements outlined in Part 4 Plan Policies; Sec. 5 - Subdivision and Sec. 6 - General Residential Land Use, can be met when the development is ready for subdivision. The detailed design will be required to confirm as closely as possible to the policies in Sec. 11 - Infrastructure and Servicing and with the County's requirements in "Engineering Guidelines and Minimum Servicing Standards".

This ASP has endeavored to meet the requirements as detailed in Part 4, Sec. 8 - Grouped Country Residential. Particularly the criteria for siting, servicing roadways and fire suppression have generally been met. Notwithstanding these requirements, the source of potable water has not yet been finalized. The ASP presents three alternatives for the potable water supply and the Developer is endeavoring to obtain water through the water co-op. The water source must be finalized and approved by Lethbridge County.

The Grouped Country Residential Land Use District (GCR) is intended to provide for a high quality clustered residential development in areas where no conflict to agriculture can be anticipated pursuant to the municipal development plan.

The minimum lot size is 2 acres (0.8 ha) to facilitate on-site sewage disposal systems.

2.4 LETHBRIDGE COUNTY, GROUPED COUNTRY RESIDENTIAL LAND USE STRATEGY

The main purpose of the above strategy is the identification of suitable site criteria for GCR developments.

This section of the ASP addresses the siting criteria as detailed in the county's strategy.

2.4.1. SITING CRITERIA

One of the siting criteria is that GCR sites should be located on lands that are already subdivided or are fragmental areas and land where the adjacent properties are currently subdivided for grouped country residential purposes.

Country Crossroads Estates falls within land that meets the above, preferred, siting criteria. The SW ¼ of Section 28 is divided in half with Highway 4 and the railway right of way running diagonally through the quarter section. Additionally, the triangular SW half is further divided in half by the SMRID main canal. This leaves a fragmented site that is difficult to farm. Existing grouped country residential sites are adjacent to the site's north and south boundaries. In total there are about 45 residential sites within 800 meters of the Country Crossroads ASP area.

2.4.2. SERVICING

The site meets the following criteria from the GCR land use strategy:

- Potable water can be obtained
- Supply of irrigation water from SMRID
- Soils on the site can handle individual, private septic systems. (refer to Appendix 2 Geotechnical Evaluation.)
- A Storm Water Management Plan has been completed and is attached as Appendix 5 –
 Stormwater Management Plan; this demonstrates that all stormwater up to the 1 in 100 year event will be stored on site and as such will not impact any adjacent or downstream landowners.
- The various shallow utility companies have been contacted and they have verified that gas, electrical and telephone services are available to the site

2.4.3. ROADS

The ASP area is accessed off of Range Roads 205 which is currently paved. All roads in the development will be paved. A T.I.A will be undertaken prior to subdivision approval and any upgrades to the existing roads that are required as a result of this the subdivision will be undertaken by the developer.

2.4.4. FIRE SUPPRESSION

The lots will be a minimum of 2 acres in size which will enable the houses to be setback a considerable distance from each other. Fire fighting water will be available on site from the wet pond. Additionally, the Coaldale fire department is the responsive fire department and the site is approximately 18 minutes from the fire station. If needed, the Lethbridge fire station is about 13 minutes from the site.

2.5 COUNTY LAND USE BYLAW

The Grouped Country Residential Land Use District (GCR) is intended to provide for a high quality clustered residential development in areas where no conflict to agriculture can be anticipated pursuant to the municipal development plan.

The minimum lot size is 2 acres (0.8 ha) to facilitate on-site sewage disposal systems.

Additional requirements of the Land Use Bylaw will be noted in subsequent sections of the plan where necessary.

3.0 THE PLAN AREA AND SITE ANALYSIS

3.1 LOCATION AND DEFINITION OF PLAN AREA

The plan area is located in Lethbridge County within the SW. 1/4 Sec. 5-8-20-W4M, approximately 12 km driving distance southeast of the Lethbridge City limits along Highway 4. It is bordered on the north by existing group country residential; on the east by a an irrigation main canal, on the south by existing group country residential and a drainage channel, and on the west by Range Road 205 *refer to Figure 2 - Land Ownership Map*. The plan area includes one land parcel: Title Number 051 470 968 in the name of Jody Nakamura. Refer to **Appendix 1 - Property Ownership Titles** and to **Figure 2 - Land Ownership Map**.

The site presently has one occupied house surrounded by irrigated crop land. The subject property is surrounded by farmsteads to the west, Ritchie Bros Auctioneers to the east (beyond the irrigation canal), and by country residential to the north and south. The site is nearly level with an average slope of 0.5% dropping from north to south. A single dwelling exists in the central part of the site. A single dugout exists east of the dwelling. A former irrigation canal has been backfilled and runs across the plan area from the northwest corner to the south boundary of the site.

3.2 SITE CHARACTERISTICS

The existing site features and contours are shown on Figure 3.0 - Existing Site.

- Access to the plan area is from paved Range Road 205 via Highway 508, which connects between Highway 4 and Highway 5.
- There is an existing 50 mm waterline owned by County of Lethbridge Rural Water Association, which runs parallel with Rge Rd. 205 adjacent to the site.
- There is an existing irrigation Canal along the east boundary of the plan area,
- There is an existing drainage channel along a portion of the southwest boundary of the plan area.
- There is an existing 25 mm gas line owned by Triple W Natural Gas Co-op Ltd., which runs across the site to service the existing dwelling,
- Overhead power follows the east ditch of Range. Rd. 205 and borders the west side of the plan area.
- One existing residential dwelling is located in the plan area which is currently using septic field disposal of wastewater.
- There is an existing abandoned well site along the south boundary as shown on Figure 3 Existing Site.

There is an existing Commercial septic field on the east side of the SMRID Canal.

3.3 Soils

According to the Alberta Soils Information System, the site soils are characterized as "Orthic Dark Brown Chernozem on medium textured (L, SiL) sediments deposited by wind and water (LET). The polygon includes soils that are finer textured than the dominant or co-dominant soils (5). Undulating, low relief landform with a limiting slope of 2% (U1I)."

The "Geotechnical Evaluation, Proposed Rural Residential Subdivision, SW-5-8-20-W4, County of Lethbridge" report prepared by Wood, May 31, 2018 (refer to the attached **Appendix 2.0 - Geotechnical Evaluation**) indicates that the soil stratigraphy was found to have topsoil underlain by clay fill, clay, silty sand, sandy clay till, and clay till deposits. This report provides more information on the soil and ground water candidates with recommendations on the excavations, site grading, dewatering, buried services and trench backfill, concrete, pavement, stormwater management, residential construction, sewage disposal, and testing and inspections.

3.4 TOPOGRAPHY

The site is relatively flat with an average slope of 0.5% dropping from north to south. The high point of the plan area is at an elevation of about 926.0 m along the east boundary. The low point is at 922.26 m in the south-west area adjacent to the drainage channel. Refer to **Figure 3.0** - **Existing Site.**

3.5 WATER AND HYDROLOGY

The above noted Geotechnical Evaluation found that the depth to ground water varied between 2.3 and 3.4 meters.

- There are no natural bodies of water within the plan area.
- A S.M.R.I.D. irrigation canal exists adjacent to and along the east boundary of the plan area.
- A S.M.R.I.D. drainage channel exists adjacent to and along the south boundary of the plan area,
- A highway ditch along Range Road 205 runs parallel to and adjacent to the west boundary of the site.
- A human made dugout exists adjacent to the existing house near the center of the property.

3.6 Habitat And Vegetation

The plan area consists mainly of irrigated crop land.

3.7 Environmental, Historical And Archaeological Significance

The "Phase 1 Environmental Site Assessment, Nakamura Residential Subdivision, SW 05-008-20 W4M near Lethbridge, Alberta" report prepared by Amec Foster Wheeler Environment & Infrastructure, Lethbridge, Alberta, April 2018 (refer to the attached **Appendix 3 - Environmental Site Assessment**) indicates:

- The site has been used for pasture and farm land since at least 1950,
- An irrigation canal traversed the site until it was backfilled prior to 1983,
- A farm house was built on a concrete foundation in 1996,
 A former Mobil Oil C.P.R Wilson No.5-4 well was identified south of the site, drilled to a depth of 1306 meters in 1955 and abandoned in 1958,

- A Phase 2 environmental investigation has been recommended in the Environmental Assessment due to the former oil well. The Developer wishes to secure approval of this ASP prior to completing the Phase 2 ESA. The Phase 2 ESA, if required, would be done prior to subdivision.
- Recommendations pertaining to hazardous building materials should be considered.

3.8 EXISTING USE OF LAND

- The plan area is mainly used for agriculture, with approximately 66.21 acres (26.79 ha) of irrigated cropland (refer to Figure 3 Existing Site),
- There is a house situated near the center of the plan area. This house is intended to remain in place and is incorporated in the development layout,
- Range Road 205 passes along the west side of the site which provides access to the plan area.

4.0 SITE FEATURES

4.1 LOCATION

- The site is within the rural agricultural area of Lethbridge County thereby giving residents the rural atmosphere many people desire.
- The site is in close proximity of the City of Lethbridge where a wide variety of education, medical, commercial, recreational and community services exist.

4.2 HIGHWAY ACCESS

 The paved Range Road 205 and Highway 508 provides access between the site and the City via Highway 4 and Highway 5.

4.3 EASE OF DEVELOPMENT

Basic utilities such as potable and non potable water, storm water drainage channel, gas and electrical are located at or near the site boundary and therefore the servicing and development of the site will be generally simple, efficient and economical. Nine (9) existing residents either border or back onto the plan area.

4.4 SURROUNDING USES OF LAND

- Existing agricultural land uses will not have a detrimental effect on housing within ASP.
- The residential nature of the proposed development is not likely to affect any existing land uses surrounding the plan area.
- The Ritchie Bros Auction development immediately east of the plan area is shielded to a
 great extent by the high banks of the adjacent irrigation canal. Further to this, the auction
 type use is not an impediment to a rural residential lifestyle.
- There is an existing commercial septic field as part of the auction development to the east. The Subdivision and Development Regulations require a 300 metre separation between the septic field and any residential building. This is reflected in the ASP.
- There is no known natural resource development within the vicinity of the plan area which can either restrict or be impacted by the purposed residential subdivision.
- Existing grouped county residential sites are adjacent to the sites North and South boundaries. In total there are about 45 residential sites within 800 meters of the Country Crossroads Estates ASP areas.

4.5 LIFESTYLE

 This development will provide a type of residential land use that allows the residents to have full utility services and still live in a community offering a rural lifestyle.

5.0 PLAN GOALS, OBJECTIVES AND LAND USE

5.1 PLAN GOALS

The Country Crossroads Estate Area Structure Plan will respond to the needs, issues and requirements identified by the owners, Lethbridge County as well as those agencies and organizations having an interest in the planning of this area.

The goals of this Area Structure Plan follow the planning policies outlined through the legislative framework.

When adopted by the Lethbridge County Council, this Area Structure Plan will create the framework for subdividing and developing the subject property.

This document will function as the required plan and as such will outline:

- proposed land use,
- proposed lot layout,
- the road access and circulation,
- the location of public utilities,
- supply of irrigation water,
- supply of potable water,
- sanitary sewage disposal,
- drainage and stormwater management,
- other related matters.

5.2 PLAN OBJECTIVES

The Country Crossroads Estate Area Structure Plan will adhere to the following objectives:

- create lots with a minimum size of 2 acres (0.81 ha),
- institute a drainage and storm water management system for the planned development,
- review alternatives for the supply of potable water and the delivery of the water to each lot,
- consider road access and circulation for the development,
- analyze the impact on traffic in the surrounding roads,
- investigate the suitability of on-site septic systems for wastewater treatment and disposal,
- allow for a community irrigation system,
- identify electrical, gas, and communications servicing requirements.

6.0 DESIGN AND LAND USE

6.1 Proposed Land Use

A total of 25 lots with a minimum size of 2 acres (0.81 ha) will be created on the proposed development which is proposed to be re-zoned as Grouped Country Residential, as shown on **Figure 4** – Land Use. This layout is preliminary and may have minor changes when the detailed design is done. Any changes to the layout or number of lot will require approval during the subdivision process.

6.2 DENSITY AND POPULATION

The housing density within the proposed development is comprised of 25 lots or 0.37 units per acre (0.93 units per ha.) of net area (*refer to Figure 5 - Proposed Lot Layout*).

Based on an average occupancy of 3 persons per household, the population within the plan area is estimated to be approximately 75 persons.

6.3 MUNICIPAL RESERVE REQUIREMENTS

The County has indicated they do not want park land for the Municipal Reserve; rather they want cash-in-lieu for the 10% municipal reserve requirement.

6.4 ABANDONED OIL WELL SETBACK

There is an abandoned oil well near the southern site boundary with the coordinate of this shown on Figure 5.0 – Proposed Lot Layout and Figure 7.0 – Building Setbacks.

The minimum setback for any building or structure is 5.0 metres from the old well site.

6.5 RITCHIE BROS. COMMERCIAL SEPTIC FIELD SET BACK

The required minimum setback for any residential building to the commercial septic field is 300 meters as shown on Figure 5.0 – Proposed Lot Layout and Figure 7.0 – Building Setbacks.

7.0 ROADS

Access into the proposed development area will be from the paved Range Road 205 which connects to the north with Highway 4 and to the south Highway 508. A paved local road is proposed to extend east from Rge-Rd. 205 to a loop road and cul-de-sac through the site back to Rge-Rd 205 to create access for 25 residential lots (*refer to Figure 5 - Proposed Lot Layout*). The loop road includes two access points to the Rge-Rd. 205. The proposed loop road and cul-de-sac turn around will be paved and will be constructed according to the Lethbridge County Standards.

Alberta Transportation has stated that a detailed Transportation Impact Assessment is required for this development. They have indicated that it is not required to have the TIA at the Area Structure Plan stage. However, prior to any subdivision of the site, a TIA must be completed to meet Alberta Transportation requirements.

The Developer will be responsible for the upgrade cost of adjacent roads if the TIA determines that upgrades are required because of this development.

8.0 SERVICING

8.1 POTABLE WATER SUPPLY AND DISTRIBUTION

It is envisioned that the domestic potable water requirements for the subdivision will be met by one of the following alternatives or by a combination of these alternatives.

8.1.1 POTABLE WATER SUPPLY, ALTERNATIVE 1

The first alternative is to have the water supplied by the County of Lethbridge Rural Water Association via extensions from an existing potable water pipe running through the site. Each lot will be supplied with a trickle system to fill individual cisterns. The Water Co-op is in the process of finalizing their water supply plans for this area.

8.1.2 POTABLE WATER SUPPLY, ALTERNATIVE 2

The second alternative is the provision of ground water well(s) which will supply each lot via a trickle system to fill individual cisterns. Pre-chlorination and/or other treatment may be required prior to distribution to each lot. The feasibility of this alternative will be determined if it is required by Lethbridge County.

8.1.3 POTABLE WATER SUPPLY, ALTERNATIVE 3

The third alternative is use SMRID supplied irrigation water that will be treated as required by each individual lot owner. The feasibility of this alternative will be determined as required by Lethbridge County.

8.1.4 DETERMINATION OF FINAL POTABLE WATER SOURCES

The final method of water supply will be dependent on the Water Co-op's final plans and the costs associated with each of the alternatives. The ultimate method of supply could be by a combination of these alternatives which would be subject to Lethbridge County administrative approval.

The County may consider allowing four lots in Phase 1A to haul potable water pending the final determination of a potable water supply for the balance of the lots.

8.1.5 GOVERNMENT REQUIREMENTS

The water supply and cisterns will be installed in accordance with requirements of the Chinook Health Region, the Safety Codes Council of Alberta and Lethbridge County.

8.1.6 HOME OWNER ASSOCIATION

The potable water and irrigation systems will not be taken over by Lethbridge County. A separate entity will be created to manage these facilities. The entity and management requirements shall be approved by Lethbridge County.

8.2 SEWAGE DISPOSAL

8.2.1 GEOTECHNICAL EVALUATION FOR SEWAGE DISPOSAL

The "Geotechnical Evaluation, Proposed Rural Residential Subdivision, SW-5-8-20-W4, County of Lethbridge" report prepared by Wood, May 31, 2018 (refer to the attached **Appendix 2 - Geotechnical Evaluation**) indicates:

- Ten (10) boreholes were completed to a depth of 6.1 m, with depth to groundwater varying from 2.2 m to 3.4. Soil stratigraphy was found to have topsoil underlain by clay fill, clay, silty sand, sandy clay till, and clay till deposits.
- The groundwater depths generally satisfy the septic treatment requirements,
- The soil textures are marginally suitable for conventional septic effluent,
- The soil textures may warrant treatment mounds or secondary treatment,
- The detailed design of each septic field will determine the classification requirements.

8.2.2 ALBERTA SEWAGE SYSTEM REQUIREMENTS

Alberta Regulations AR229/97 and AR196/2015, the *Alberta Private Sewage Systems Standard of Practice 2015* (the "SOP") describes the requirements for the design of on-site wastewater treatment and disposal systems. All on-site waste water treatment and disposal systems must adhere to these regulations.

8.2.3 INDIVIDUAL LOT REQUIREMENTS

The owner or builder for each lot must use a qualified septic system designer and contractor to determine the type of septic system necessary for each lot. The type of system will be based on house design and soil conditions which vary throughout the lots.

The geotechnical study for the site indicates that a treatment mound or secondary efficient treatment may be required instead of a conventional treatment field.

8.2.4 Possible Conflict with Storm Water Drainage

No on-site septic system components shall be installed in areas designated for stormwater conveyance or detention of runoff.

8.3 STORM WATER MANAGEMENT

Stormwater within the development will be managed such that runoff will be stored and controlled on-site and then directed to the existing Tiffin Drainage channel running along the south property boundary (refer to Figure 6 – Site Drainage). Post-development runoff will be controlled and released per the Tiffin Drain - Master Drainage Plan, Alberta Environment and Parks requirements, and the Lethbridge County Engineering Guidelines and Minimum Service Standards. Existing site topography will be utilized to minimize site grading. A brief summary of the existing and proposed drainage systems follows, and a more detailed description of the site drainage is included in the Stormwater Management Plan, which is appended to this document in Appendix 5 - Stormwater Management Plan;

8.3.1 EXISTING CONDITION

The land generally slopes down to the southwest at an average grade of 0.5% and drains in to an existing drainage channel. A portion of the runoff from the site is trapped on site in a localized depression which spills in to the drainage channel. The drainage channel (R/W plan 821 0212) flows west and north through farmland and discharges to Sixmile Coulee and in to the Oldman River at the City of Lethbridge.

8.3.2 DRAINAGE CONCEPT

- The stormwater management concept is outlined in the attached Stormwater Management Plan, Refer to Appendix 5 Storm Water Management Plan.
- Runoff from the site will drain to a storm water detention pond to retain water on site and will then be released at the designated rate (Tiffin Drain – Master Drainage Plan, Lethbridge County) through a controlled outlet in to the existing Tiffin drainage channel, which flows down to the Oldman River,
- The proposed storm water detention pond is designed to accommodate the runoff from a storm event up to a 100 year storm,
- Runoff will be directed to the storm water detention pond through individual lot swales and
 a system of drainage ditches or dry ponds along the boundaries of some lots. Storm
 drainage will then flow through ditches located in the road right of ways to the storm pond.
 The conveyance concept is outlined on Figure 6 Site Drainage.
- All of the designated drainage conveyance routes and storage facilities within the plan area will be protected by caveat, easements, or right-of-way as required.
- Currently we are planning that the storm water detention pond will be a wet pond with a
 normal water level being maintained with irrigation water. The pond design may change to
 a dry pond during detailed design.

8.3.3 SITE GRADING

The subdivision will be graded to be consistent with the overall Stormwater Management Plan as shown on **Figure 6 - Site Drainage**. Individual lots will be graded, by the Lot Owner, such that all surface runoff will be directed to perimeter swales and ditches, designed to carry the runoff into the stormwater detention facilities. Drainage ditches will be graded by the Developer.

Design grades with corner elevations for all lots will be provided to the County prior to subdivision. Elevations for individual lots will be provided to lot owners.

As built lot elevations must be checked and approved by the Consultant to ensure compliance with design grades.

8.4 UTILITIES

8.4.1 ELECTRICITY

Epcor is the electricity provider for Lethbridge County and the distributor is Fortis Alberta. It is planned that electrical service to individual lots will be distributed underground. Internal roadways will be serviced with street lights. All necessary applications for the detailed design and installation of electric utilities will be submitted to Fortis for their approval.

8.4.2 NATURAL GAS

Natural gas is available through ATCO Gas, who have advised that there be will no problems supplying gas to this development.

8.4.3 TELECOMMUNICATIONS/CABLE SERVICE

Telus Communications provides telephone and cable service for the area. Cellular phone service is also available.

8.4.4 SOLID WASTE MANAGEMENT

Individual solid waste will be disposed of at local transfer stations for the development unless a municipal fee-for-service is available.

8.5 IRRIGATION SYSTEM

8.5.1 COMMUNITY IRRIGATION

A community irrigation system will provide SMRID supplied non-potable water to each lot for watering lawns and gardens or possibly as a source of grey water for each lot. This irrigation water will be supplied by SMRID either directly from the canal turn out or through an irrigation storage pond. Any irrigation water storage pond will be separate from the storm water management pond. The water will be supplied through a communal pipeline system with lateral connections supplying each lot.

8.5.2 WATER SUPPLY AND STORAGE

Water for fire protection will be supplied through either this irrigation water storage pond or the storm water management pond, which will have its level maintained with irrigation water supplied by SMRID. This irrigation water supply system will require approval for SMIRD.

8.5.3 OPERATION OF SYSTEM

A homeowner's association will be formed to own and operate the irrigation system within the development. The irrigation piping will be installed in an easement through the lots in favor of the homeowner's association.

9.0 PROTECTIVE SERVICES

9.1 FIRE PROTECTION

The Coaldale Fire Department is the responding fire station and is located approximately 18 km from the plan area. Additional support, when needed, will be from the City of Lethbridge fire department. Fire Station #3 (2614 16 Ave. South) is approximately 13 minutes from the plan area

A dry hydrant will be installed at the irrigation water storage pond to provide an on-site water supply.

9.2 POLICE PROTECTION

Policing in the development area is provided by the R.C.M.P. which has a detachment located in the Town of Coaldale, which is approximately 20 kilometers from the plan area.

10.0 DEVELOPMENT AGREEMENT

The Developer will enter into a Development Agreement with Lethbridge County regarding the following matters:

- Runoff conveyance and detention as per the Stormwater Management Plan,
- Roadway construction,
- Potable water installation,
- Irrigation system,
- Shallow utilities,
- Other services or matters considered necessary by Lethbridge County.
- Roadway signage including culvert markers.

11.0 ARCHITECTURAL CONTROLS

11.1 Purpose Of Controls

The developer of County Crossroad Estates will establish a set of aarchitectural controls in order to achieve standards and development limitations throughout the area. These architectural controls will be administered by the Developer.

11.2 Typical Items Included In Controls

Typically the controls that will be in effect within County Crossroads Estate will include the following:

- Minimum dwelling unit area and site coverage (building footprint),
- Diversity in home design,
- Incorporation of energy efficiency features,
- Roof pitch & materials,
- Exterior finishing materials,
- Fencing materials,
- Minimum landscaping requirements in which xeriscaping will be considered,
- Hobby farm animals such as horses,
- Accessory building.
- Backfill requirements for the old irrigation canal
- Building and lot drainage requirements
- Sanitary Sewage Disposal

11.3 SITE SPECIFIC BUILDING RESTRICTION

11.3.1 BUILDING ON THE OLD IRRIGATION CANAL

The Architectural Controls will also contain a sketch depicting the old irrigation canal that has been backfilled and the existing dugout that will be backfilled. (Refer to **Figure 8 – Footprint of Old Canal and Dugout** by the Old Irrigation Canal)

It's not known if these areas were backfilled and compacted properly. Therefore, the Architectural Controls will have a requirement that the portion of any building or structure falling within the footprint of the old canal or dugout must have that portion excavated and back filled to 98% Standard Proctor density. This backfill must be done under the supervision of a geotechnical engineer.

11.3.2 BUILDING NEAR THE ABANDONED OIL WELL

The Architectural Controls will also depict the location of the abandon oil well which is near the south boundary. Refer to **Figure 5 - Proposed Lot Layout** and **Figure 7 - Building Setbacks.**

Provincial regulations require that there be no structures built within 5.0 metres of the abandoned well. Therefore a caveat will be filed on any lot or portion of a lot within 5 meters of the well location. The Architectural Controls will also identify this setback requirement.

11.3.3 SANITARY SEWAGE DISPOSAL

The Architectural Controls will require the lot owner to use a qualified designer to undertake a soils evaluation and design the sewage disposal system. The soil is marginally acceptable for a conventional treatment field and alternative methods of treatment may have to be employed.

12.0 IMPLEMENTATION AND DEVELOPMENT CONTROL

- This Area Structure Plan will become a Bylaw of Lethbridge County.
- The Land Use Bylaw must be amended to represent this ASP.
- All subsequent subdivision applications must adhere to provisions of this A.S.P. Bylaw and the Land Use Bylaw.
- Development applications, within the boundaries of the plan area, must comply with the requirements of the respective land use districts for which they are proposed.
- Building permits must be reviewed through a safety codes process approved by Lethbridge County.
- The developer of Country Crossroads Estate subdivision will establish a level of architectural standards and development limitations in order to achieve the desired results within the proposed subdivision. These standards and limitations are beyond the normal statutory requirements of Lethbridge County and will thus be administered by either the Developers or agents acting on their behalf and within their legal authority.
- The owners of any lot falling within the old footprint of the irrigation canal or dugout will receive notification with respect to the old irrigation canal at the time of purchase. This notification will advise that any portion of a building or structure falling within this area must be excavated and backfilled with compaction to 98% standard provided density. Further the notification will advise that this work must be undertaken under the supervision of a geotechnical engineer.
- Lethbridge County may utilize other bylaws and policies that will regulate aspects of activity within the boundaries of the Area Structure Plan.

13.0 PHASING

This development will be constructed in phases.

The first phase will be about 6 to 10 lots built along the southerly site access road. During this phase the road fronting these lots and the storm water management wet pond and the irrigation water storage pond will be constructed. Irrigation and potable water, as well as shallow utilities will also be made available to each lot.

Future phases will be developed in groups of lots as consumer demand for the lots dictates.

14.0 ADJACENT LANDOWNER CONSULTATION AND OTHER CORRESPONDENCE

14.1 NOTICE SENT TO ADJACENT OWNERS

A letter and drawings were hand delivered to residences in immediate vicinity of the ASP. (See Appendix 6 – Adjacent Owner Consultation)

14.2 NEIGHBORHOOD COMMENTS

One letter outlining concerns was received from John & Laura Prins.

14.3 OTHER CORRESPONDENCE

- Letter from John & Laura Prins
- Receipt for the down payment to the County of Lethbridge Rural Water Association for 27 water units
- Maps from SMRID showing irrigable land and the current irrigation turnout for the ASP site.
- Telus map
- Triple W Natural Gas Co-op map

15.0 MARKET DEMAND

The County's Group Residential strategy requires that a market demand study be included with the ASP. Consultation with land appraisers and realtors has determined that a market demand study in a rural residential development setting is difficult to undertake.

Regardless, it is possible that the lots in this ASP could take anywhere up to 10 or 15 years to be all sold. Estimating the market conditions over that period of time would be impossible. The best measure of market demand is the number of lots that are serviced at one time. Even though the ASP may contain 24 lots, the developers of Country Crossroad Estates will only service lots that they can foresee will be sold in relatively a short time period.

The ASP provides the framework for how the development is to proceed. Just because the ASP is approved it does not mean servicing all the lots at one time. With respect to this development, the owners have about 5 buyers that are interested in purchasing now. As such his plan is to service all 5 to 10 lots right away. The balance would be serviced based on market demand at that time. The owner of Phase 2 has no plans for servicing the lots. It could be 5 to 10 years before he gets started. The developers will regulate putting lots on the market only when there is purchaser interest and even then the servicing will be done in small phases.

CLOSURE

We are pleased to present to you the Crossroads Country Estates Area Structure Plan.

We trust this meets your requirements. Please contact the undersigned if you have any questions or comments.

Respectfully submitted February 1, 2023.

Prenare by

Prepare by Ed Martin, P.Eng.

Reviewed by Ray Martin, P.Eng.

FIGURES

- 1. LOCATION PLAN
- 2. LAND OWNERSHIP MAP
- 3. Existing Site
- 4. LAND USE
- 5. PROPOSED LOT LAYOUT
- 6. SITE DRAINAGE
- 7. BUILDING SETBACKS
- 8. Lots Affected By Old Irrigation Canal & Dugout

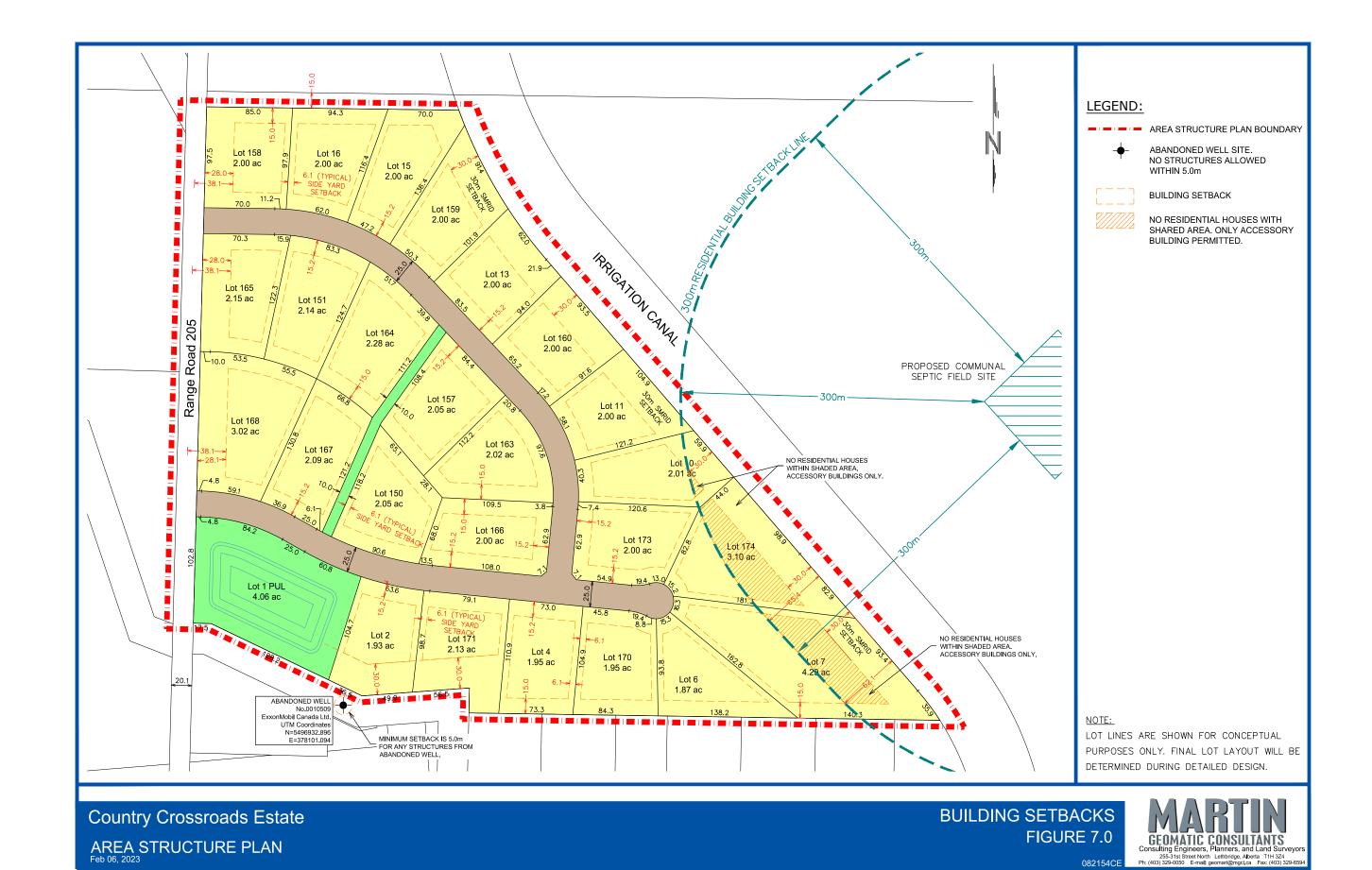
Country Crossroads Estate

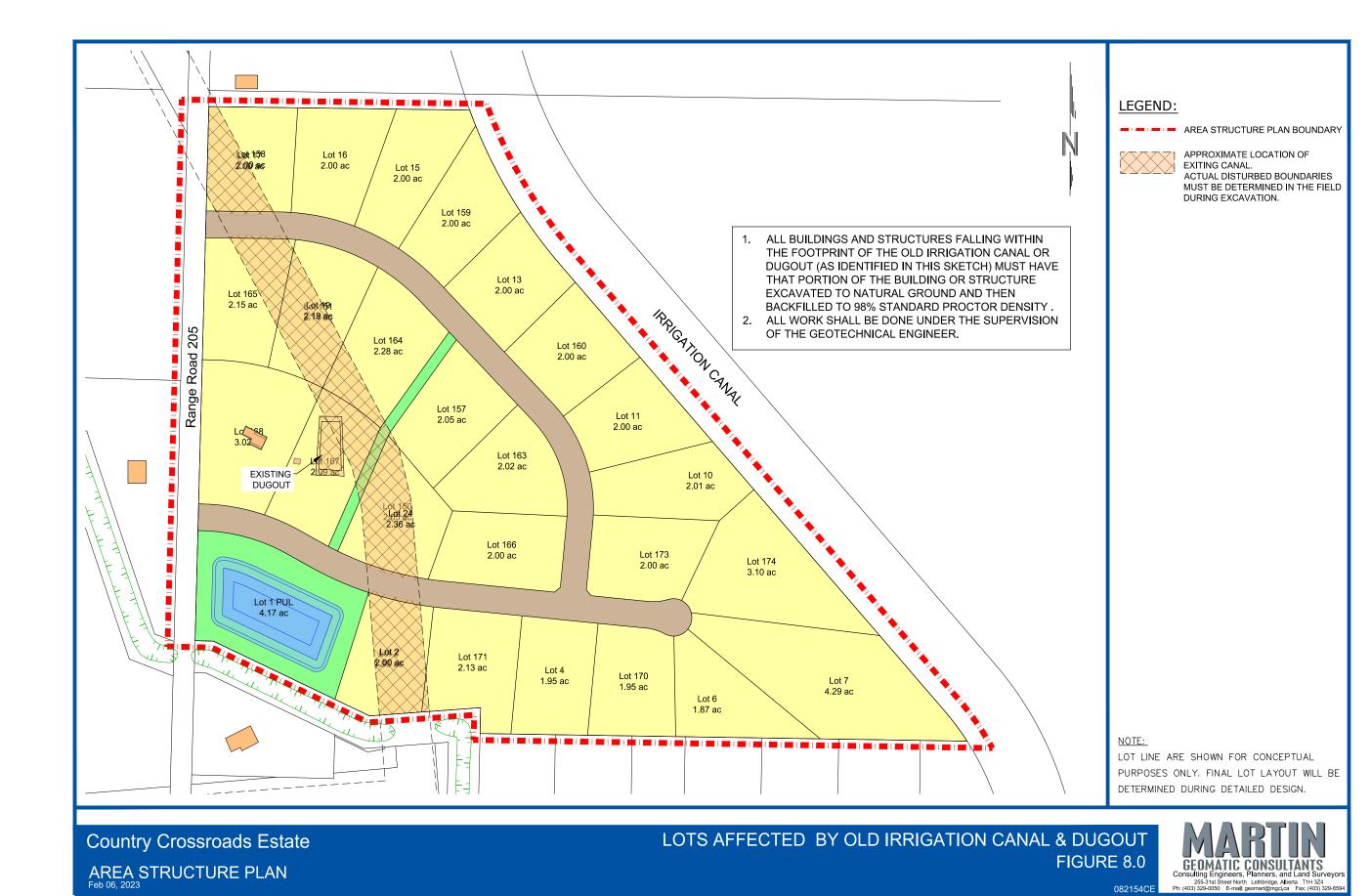
AREA STRUCTURE PLAN
Feb 06, 2023

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LAND OWNERSHIP MAP FIGURE 2.0







APPENDICES

- 1. PROPERTY OWNERSHIP TITLES
- 2. GEOTECHNICAL EVALUATION
- 3. ENVIRONMENTAL SITE ASSESSMENT
- 4. CORRESPONDENCE
 - a. LETTER TO ADJACENT LANDOWNERS
 - b. NEIGHBORHOOD COMMENTS
 - c. RECEIPT FROM WATER COOP FOR 27 WATER UNITS
 - d. TELUS MAP
 - e. SMRID MAPS
 - f. TRIPLE W GAS CO-OP MAP
- 5. STORMWATER MANAGEMENT PLAN

APPENDIX 1

PROPERTY OWNERSHIP TITLES

<u>Certificate of Title</u> <u>Landowner</u>

C of T #051 470 968 - Jody Nakamura



LAND TITLE CERTIFICATE

S

LINC SHORT LEGAL TITLE NUMBER 0020 144 473 4:20:8:5:SW 051 470 968

LEGAL DESCRIPTION

MERIDIAN 4 RANGE 20 TOWNSHIP 8

THAT PORTION OF THE SOUTH WEST QUARTER LYING TO THE WEST OF THE 65 METRE CANAL RIGHT OF WAY AND LYING NORTH OF THE SOUTH HALVES OF LEGAL SUBDIVISIONS 3 AND 4, AND LYING TO THE NORTH OF THE 30 METRE CANAL RIGHT OF WAY ON PLAN 8210212

CONTAINING 27 HECTARES (66.8 ACRES) MORE OR LESS EXCEPTING THEREOUT:

THE NORTH 15 METRES CONTAINING 0.37 OF A HECTARE MORE OR LESS EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: COUNTY OF LETHBRIDGE

REFERENCE NUMBER: 941 226 700

REGISTERED OWNER(S)

REGISTRATION DATE(DMY) DOCUMENT TYPE VALUE CONSIDERATION

051 470 968 10/12/2005 TRANSFER OF LAND \$414,000 \$414,000

OWNERS

JODY F NAKAMURA OF 4611-50 AVE TABER ALBERTA T1G 1G3

(CONTINUED)

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

REGISTRATION # 051 470 968 NUMBER DATE (D/M/Y) PARTICULARS

1485KX . 21/06/1971 IRRIGATION ORDER/NOTICE

THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER

IRRIGATION DISTRICT

3432U . RESTRICTIVE COVENANT

3903EM . 24/10/1934 CAVEAT

CAVEATOR - ALBERTA RAILWAY AND IRRIGATION CO..

941 261 421 07/10/1994 UTILITY RIGHT OF WAY

GRANTEE - TRIPLE W NATURAL GAS CO-OP LIMITED.

SEE INSTRUMENT FOR INTEREST

941 261 422 07/10/1994 UTILITY RIGHT OF WAY

GRANTEE - TRIPLE W NATURAL GAS CO-OP LIMITED.

SEE INSTRUMENT FOR INTEREST

051 470 969 10/12/2005 MORTGAGE

MORTGAGEE - THE TORONTO DOMINION BANK.

300,10004 JASPER AVE

EDMONTON

ALBERTA T5J1R3

ORIGINAL PRINCIPAL AMOUNT: \$250,000

TOTAL INSTRUMENTS: 006

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS $14~{\rm DAY}$ OF MAY, $2010~{\rm AT}~09\!:\!51~{\rm A.M.}$

ORDER NUMBER:16529001

CUSTOMER FILE NUMBER: 082154



END OF CERTIFICATE

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APPENDIX 2

GEOTECHNICAL EVALUATION

Wood - Geotechnical Investigation dated May 31, 2018



May 31, 2018 Wood File: BX30531 469 – 40 Street S Lethbridge, Alberta T1J 4M1 T: +1 403 327-7474 F: +1 403 327-7682 www.woodplc.com

Ed Martin, P. Eng. Martin Geomatic Consultants Ltd. 255 31 Street North Lethbridge, Alberta T1H 3Z4

Dear Mr. Martin:

Re: GEOTECHNICAL INVESTIGATION

Proposed Rural Residential Subdivision SW-5-8-20-W4, County of Lethbridge

1.0 INTRODUCTION

At the request of Martin Geomatic Consultants Ltd., (Martin Geomatics), Wood Environment & Infrastructure Solutions (Wood) has carried out a geotechnical investigation for the above-captioned project.

Based on information provided to Wood, it is understood that the development of a rural residential subdivision is being proposed at the above-captioned location, complete with site servicing, paved streets, and a storm-water management pond.

This report summarizes the results of the current geotechnical investigation, and provides geotechnical discussion and recommendations to support the proposed development.

2.0 GEOTECHNICAL INVESTIGATION – METHODOLOGY AND RESULTS

2.1 Methodology

In order to assess the subsurface soil and groundwater conditions at the subject site, Wood visited the site on May 4, 2018 and monitored the drilling of a series of ten boreholes at the locations denoted on Figure 1 as BH18-01 to BH18-10, inclusive. The boreholes were generally laterally distributed across the proposed development area, with BH18-10 advanced near the proposed storm pond. In addition, boreholes BH18-01 and BH18-05 were advanced within a former irrigation canal right of way to assess depth of fill.

The boreholes were advanced using a truck-mounted drill equipped with continuous flight solid stem augers. The boreholes were terminated at depths ranging between about 5.0 m and 6.1 m below grade.

During the drilling, disturbed soil samples were collected from the auger flights. In addition, Standard Penetration Tests (SPTs) were also carried out at regular intervals to assess the soil consistency/compactness, and to obtain representative samples for identification.





Upon completion of the drilling, 25 mm diameter hand-slotted standpipes were installed in boreholes BH18-01, BH18-03, BH18-05, BH18-07, and BH18-10. The annular space was backfilled with drill cuttings, with a bentonite cap at the surface. The remaining boreholes were backfilled with the auger cuttings.

The drilling was carried out under the supervision of a Wood representative, who collected the soil samples and logged the subsurface conditions. The recovered soil samples were transported to Wood's Lethbridge laboratory for further review by a geotechnical engineer and selected laboratory classification testing. Laboratory testing for this project consisted of routine moisture content determinations and Atterberg Limits testing, with results presented on the appended borehole logs and summarized in the following paragraphs.

Samples remaining will be stored for a period of three months following this report at which time they will be discarded unless we are requested otherwise by the Client.

2.2 Soil and Groundwater Conditions

The subsurface conditions encountered are detailed on the attached borehole logs and summarized in the following paragraphs. It must be noted that boundaries of soil indicated on the borehole logs are inferred from non-contiguous sampling and observations during drilling. These boundaries are intended to reflect transition zones for the purposes of geotechnical design, and should not be interpreted as exact planes of geological change.

The boreholes were each surfaced with a 100 mm to 150 mm thick layer of topsoil.

Underlying the topsoil, layers of clay fill were encountered in boreholes BH18-01, BH18-04, and BH18-05. The clay fill extended to depths of 1.5 m and 1.0 m below grade at BH18-01 and BH18-05, respectively. The clay fill was generally described as low to medium plastic, silty and sandy with trace fibrous organics, trace red shale, organic staining, light brown to dark brown, and moist.

The predominant natural mineral soil encountered within the boreholes was clay, becoming clay till at depth. The clay and clay till were generally described as low to medium plastic, silty and sandy with trace gravel, coal and oxide inclusions, light brown to dark brown, and soft to very stiff (based on observed drill resistance, tactile observations, and SPT N-values ranging between about 4 and 22 blows per 300 mm of sampler penetration. Based on laboratory testing, the *in situ* water content of the clay and clay till ranged between about 9 percent and 21 percent, generally indicative of damp to moist soil conditions. Fissuring of the near surface clay and clay till was also observed in several boreholes.

Layers of silty sand were encountered in boreholes BH18-02 and BH18-10. The silty sand was generally described as fine to coarse grained, trace to some clay with trace gravel, coal and oxide inclusions, brown, and damp to moist.

The results of Atterberg Limits testing carried out on three representative samples of the clay are provided on the borehole logs, and detailed in the following table. The results of the Atterberg Limits testing indicated that the clay is of low to medium plasticity.



Table 1: Atterberg Limits

Borehole / Sample No.	Liquid Limit, w _L	Plasticity Index, I _P	Moisture Content, w
BH18-01/S4	34%	17%	16.5%
BH18-05/S6	31%	16%	15.0%
BH18-10/S8	36%	17%	16.3%

No free groundwater or seepage was encountered at the borehole locations. As indicated previously, standpipes were installed in selected boreholes upon completion of the drilling; however, the standpipes had been destroyed prior to measurement of the depth to groundwater at those locations. While groundwater depths are indicated on the borehole logs, those depths are inferred from observations of the soil profile during drilling, and the results of the laboratory testing. As indicated on the borehole logs, these inferred depths ranged between depths of about 2. 2 m and 3.4 m below existing grades.

It is further noted that groundwater conditions are expected to fluctuate seasonally in response to spring thaw and periods of heavy precipitation, and may differ at the time of construction.

3.0 GEOTECHNICAL DISCUSSION AND RECOMMENDATIONS

3.1 General

As indicated in Section 1.0, it is understood that the subject site will be developed into about 23 residential building lots, complete with site servicing, paved streets, and a storm-water management pond in Lot 13.

Based on a historical records and air photo review, the site has previously been traversed by an irrigation canal, as illustrated on Figure 1. It is noted that there may be extensive fill and pockets of soft soils related to the historical canal. Boreholes BH18-01 and BH18-05 were advanced in the area of the historical canal, and the results of drilling indicated up to 1.5 m of fill soils, with marginally soft conditions below the fill. Accordingly, full subgrade reconstruction within proposed building footprints would be required where the proposed building footprint encroaches onto the former canal alignment. The affected building lots include Lots 1, 12, 13, 16, 17, 22, 24, and 25. Similarly, there is an existing dugout at Lot 16 which will also require subgrade reconstruction prior to lot development. Further discussion pertaining to subgrade reconstruction is provided in Section 3.2.

Based on our understanding of the proposed development as discussed above, in conjunction with the results of the current investigation, the following paragraphs provide geotechnical discussion and recommendations pertaining to excavations, site grading, site servicing, storm-water management pond construction, and pavement construction, with preliminary discussion and recommendations addressing residential construction and onsite sanitary sewage disposal.



3.2 Excavations, Site Grading, and Dewatering

All excavations should conform to Part 32 of the Alberta Occupational Health and Safety Code.

Prior to placement of any fill, site stripping will be required. As indicated in Section 2.2, topsoil thicknesses ranging between 100 mm to 150 mm were encountered at the borehole locations. As indicated previously, clay fill soils were encountered to depths of up to about 1.5 m in the area of the former irrigation canal. For roadway areas, this fill should also be fully excavated as part of the site stripping. It is noted that actual fill thicknesses in the area of the former canal, or in other areas of the site between boreholes, may be in excess of the 1.5 m indicated at borehole BH18-01.

It is further recommended that as part of the rough site/subdivision grading, that all fill associated with the former canal also be sub-excavated and the subgrade reconstructed. This would minimize the potential for foundation bearing problems at the time of residential lot development as a result of less than adequate construction control of the subgrade reconstruction in the area of the canal.

Prior to placement of structural fill at the site, the exposed subgrade should be reviewed by the geotechnical engineer to confirm adequacy of the site striping, and be proof-rolled. Any loose or soft zones noted during the inspection should be further assessed by the geotechnical engineer for appropriate remedial action.

The material used for structural fill that will support footings, slabs, or roadways should comprise of approved fine-grained material or imported granular material. The native clay and clay till soils are generally acceptable for use as structural fill, provided the material is free of organics and/or otherwise deleterious materials, and is inspected by a geotechnical engineer prior to placement. Structural fill that will support foundation elements should be placed in maximum 200 mm thick lifts, moisture conditioned as required and uniformly compacted to 100 percent Standard Proctor Maximum Dry Density (SPMDD) at a moisture content within about three percent of optimum. Any structural fill should also extend laterally beyond the edges of foundation elements a minimum distance equal to the thickness of fill beneath the foundation or slab. Structural fill that will support slabs or roadways should be compacted to a minimum of 98 percent of SPMDD, as a moisture content within three percent of optimum. In situ compaction testing should be carried out during the fill placement to ensure that the specified compaction is being achieved.

During rough grading, positive site grading should be maintained at all times in order to minimize the potential for water ponding at the site.

As indicated in Section 2.2, the boreholes were open and dry on completion, with the inferred groundwater table below 2 m below grade. Accordingly, excessive groundwater seepage into conventional foundation and buried utility excavations is not anticipated at this site. Minor groundwater accumulations, where encountered, can likely be removed with conventional sump pumping techniques.



3.3 Buried Services and Trench Backfill

Where spatial restrictions do not allow for the required safe trench sideslope inclinations, conventional shoring (i.e., trench boxes) can be considered. For shoring design, the following parameters can be used for the soils encountered at the site:

Table 2: Parameters for Shoring Design

Parameter	Native Clay and Clay Till
Total Unit Weight, y, kN/m ³	18.5 kN/m ³
Active Earth Pressure Coefficient, ka	0.40

The weight of the adjacent structures must also be considered in the calculation of the lateral earth pressures where these structures fall within a line drawn up at 45° from the base of the excavations. Where trench boxes or shoring are used, adjacent structures should be inspected prior to and following construction to ensure damage has not occurred to the foundations.

For frost protection, it is recommended that a minimum of 2.1 m of soil cover be provided above watermains and sanitary sewer pipes.

Bearing problems are not anticipated for pipes founded on the natural soil deposits. It is noted that the trench bases, where left open for extended periods, will likely be susceptible to softening and loosening in the presence of weather and/or construction traffic. Accordingly, short sections should be worked at a time, and backfilling should follow relatively closely behind the pipe installation. Excavating or trenching should be done so that the slope of the walls is adequate for above mentioned soils and conforms to Part 32 of the 2009 Alberta Occupational Health and Safety Code.

The pipeline excavations should be reviewed by a qualified geotechnical engineer to confirm that the bearing soils exposed are as anticipated in design. Loose or disturbed materials should be removed from the pipeline excavation prior to placement of pipes, and hand cleaning may be required to prepare an acceptable bearing surface. Accordingly, the pipeline subgrade should be protected at all times from rain, snow, freezing temperatures and the ingress of free water.

The bedding course may be thickened if portions of the subgrade become unduly wet during excavation. The bedding aggregate should be provided around the pipe to at least 300 mm above the pipe. The bedding aggregate should be compacted to a minimum 95 percent of Standard Proctor Maximum Dry Density (SPMDD). In wet zones, the incorporation of geotextile and uniformly graded, clear, crushed stone can be considered.

The trenches above the service pipes should be backfilled with inorganic on-site soils placed in maximum 300 mm thick lifts and compacted to at least 98 percent of SPMDD. The natural on site excavated soil can be generally used as trench backfill, provided the material is conditioned to or within three percent of the optimum moisture content as determined by the Standard Proctor test. As the near surface soils were relatively dry, moisture conditioning of the soils should be anticipated.



3.4 Concrete Mix Considerations

In general, the natural mineral soil deposits and groundwater in the Lethbridge area contain high levels of water soluble sulphates, indicating severe potential for sulphate attack on concrete in contact with native mineral soil deposits (CSA Class S-2 exposure). Accordingly, sulphate resisting cement (i.e., Type HS or HSb) should be used in the manufacture of concrete in contact with soil at this site. A minimum 56 day compressive strength of 32 MPa and a maximum water/cement ratio of 0.45 should also be specified.

An air entrainment agent is recommended for concrete exposed to cyclic freeze-thaw action. In addition to the improved durability, the air entraining will provide improved workability of the plastic concrete.

3.5 Curbs and Sidewalks

The concrete for the curbs and gutters should be proportioned, mixed, placed and cured in accordance with City of Lethbridge specifications. During cold weather, the freshly placed concrete should be covered with insulating blankets, or hoarded and heated, to protect against freezing.

The subgrade for the sidewalks should comprise of undisturbed native soil or well-compacted fill. A minimum 150 mm thick layer of compacted (minimum 98 percent SPMDD) granular material meeting the City of Lethbridge gradation specification for GBC should be placed below the sidewalk slabs.

3.6 Pavement Construction

Recommendations for site preparation are provided in Section 3.2.

Subgrade preparation of all pavement areas will be required prior to placement of the pavement structure. This should include scarification to a depth of 150 mm, moisture conditioning to within three percent of optimum, and recompaction to a minimum of 98 percent of SPMDD. Any loose or soft zones noted during the inspection should be further assessed by the geotechnical engineer for appropriate remedial action.

Silty sand and sandy clay soils were noted in some areas of the site, accordingly there is a risk of subgrade dilatency and deterioration particularly under construction wheel loading, particularly during unfavourable weather conditions. The risk of subgrade deterioration can generally be reduced by minimizing heavy wheel loads on the exposed subgrade. Where subgrade deterioration by dilatant conditions occurs, the subgrade can typically be stabilized by sub-excavation and granular base thickening, as well as the incorporation of geotextiles and grid into the pavement structure. Wood can provide further support in this regard, as required.

Provided the preceding recommendations are followed, the pavement thickness design requirements given in the following table are recommended for the anticipated traffic loading and subgrade conditions.



Table 3: Recommended Pavement Structure Thicknesses for Pavement Areas

Pavement Layer	Compaction Requirements	Light Duty Residential Structure Thicknesses		
Asphaltic Concrete	97% Marshall Density	90 mm Type 3¹		
Granular Base Course ¹ (GBC)	100% SPMDD	200 mm		
*Notes: 1) City of Lethbridge Specification				

2) The subgrade must be compacted to 98% SPMDD.

3) The above recommendations are minimum requirements

The recommended pavement structures provided in the above table are based on the natural subgrade soil properties determined from visual examination and textural classification of the soil samples. Consequently, the recommended pavement structures should be considered for preliminary design purposes only, and should be verified during construction based on actual site subgrade conditions. The subgrade for asphalt and gravel surfaced areas should be proof-rolled to check for excessive deflection, soft or loose areas prior to placing base or subbase gravel. Any deficient areas should be remediated with use of additional gravel or possibly with geogrid. Details of the remediation measures are best determined during construction when subgrade conditions are exposed and evident.

If construction is undertaken under adverse weather conditions (i.e., wet or freezing conditions) subgrade preparation and granular base requirements should be reviewed by the geotechnical engineer. As well, if only a portion of the pavement will be in place during construction, the granular base may have to be thickened, and the subgrade improved with a geotextile separator, in order to withstand the conditions imposed by construction traffic.

Samples of both the aggregates and asphaltic concrete paving materials should be checked for conformance to the City Lethbridge specifications prior to use on site, and during construction.

Good drainage provisions will optimize pavement performance. The pavement subgrade and the finished surface should be free of depressions and should be sloped (preferably at a minimum grade of two percent) to provide effective surface drainage toward catch basins. Surface water should not be allowed to pond adjacent to the outside edges of pavement areas.

A program of in situ density testing must be carried out to verify that satisfactory levels of compaction are being achieved.

For detailed pavement design, specific geotechnical investigation will be required. Further, the traffic loading requirements and desired functional design life of the pavement should also be taken into consideration for detailed design.



3.7 Storm Water Management

Based on information provided by the client, it is understood that a Storm-Water Management (SWM) Pond will also be constructed as part of the current development. The SWM Pond will generally be located within proposed Lot 13, near borehole location BH18-10.

Based on the results of the current investigation, it is anticipated that the base of the proposed pond would be set into the natural clay till stratum. It is noted that the inferred groundwater table was estimated to be about 3.4 m below existing grade at the proposed pond location.

Given the soil conditions at the proposed pond location, the base of the pond should be set no deeper than about 3.0 m below existing grades. Full lining of the SWM Pond will be required, either using compacted clay or a synthetic membrane such as high density polyethylene (HDPE).

To support the design and construction of the SWM Pond, the following discussion and recommendations are offered:

- The design and construction of the storm water detention pond should conform to the latest edition of the Alberta Environmental Protection 'Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems'.
- The interior side slopes of the pond should be sloped with a maximum gradient of 3 horizontal to 1 vertical (i.e., 3H:1V). The exterior side slopes of the pond embankments should be sloped at a maximum gradient of 4H:1V. The top of the embankment should have a minimum width of 3 m to provide suitable width for maintenance vehicles.
- The natural soils are generally considered suitable for the construction of the perimeter berms. Prior to placement of berms, the footprint of the berms should be stripped of any topsoil, organics and/or otherwise deleterious material, and the exposed subgrade should be approved by geotechnical engineer. The stripped subgrade that will support the new berms should be scarified to a depth of 150 mm, moisture conditioned and recompacted to minimum 98 percent of Standard Proctor Maximum Dry Density (SPMDD) prior to placing fill for the lagoon berms. The initial lift of fill should be worked and compacted to 'knit' the prepared subgrade and overlying fill into a relatively homogeneous mass. The berm fill material should placed in maximum 150 mm thick lifts and compacted to a minimum of 98 percent of SPMDD at a moisture content within three percent of optimum (as determined by standard Proctor testing).
- For a clay liner solution, a clay liner with a minimum thickness of 0.6 m should be provided across the pond base, and a clay liner with a minimum thickness of 0.75 m should be provided along the pond sideslopes. The material proposed for use for the clay liner should have a permeability in the order of 10⁻⁸ m/s, and be approved by a geotechnical engineer prior to use. The approved clay material should be placed in maximum 150 mm thick lifts and compacted to a minimum of 98 percent of SPMDD at a moisture content ranging between optimum and three percent above optimum (as determined by standard Proctor testing).



- To reduce potential for drying and shrinkage cracking of the liner, it is recommended that an
 additional earth cover of 0.3 m thickness be placed above the liner as a protective layer. The
 protective layer should be compacted to minimum 95 percent of SPMDD.
- Following construction of the liner, the side slopes of the pond above the normal water level as
 well as the exterior side slopes should be dressed with a 150 mm thick layer of topsoil, and
 seeded with deep-root grass species native to the area to minimize the potential for erosion of
 the pond sideslopes.
- Clay collars should be provided at inlet/outlets of pipes connected to the pond where there is less than a metre of hydraulic head across the clay plug, in order to minimize the potential for internal erosion or piping along the inlet or outlet piping. The clay collars should extend between 1 m and 2 m along the length of the piping, and extend laterally to the natural subgrade soils. The clay material should be approved by a geotechnical engineer prior to placement, and should be placed in maximum 150 mm lifts and compacted to a minimum of 95 percent of SPMDD at a moisture content ranging between optimum and three percent above optimum (as determined by standard Proctor testing). Concrete seepage cutoff collars should be provided where there is potential for more than a meter of hydraulic head to develop along the pipe.
- As an alternative to a compacted clay liner, consideration can be given to using a synthetic geomembrane, such as a High Density Polyethylene (HDPE) liner. In this regard, an HDPE liner should have a minimum thickness of 60 mil, and be placed in accordance with the manufacturer's recommendations. Inlet and outlet pipes should be fully booted and welded to the liner material to facilitate a water tight seal at the pipe protrusions. The liner should be anchored at the top of the berms into a minimum 0.6 m deep by 0.6 m wide trench. Following construction of the liner, consideration should be given to covering the liner with a 0.3 m thick compacted clay layer, or with Class 1M rip rap (Alberta Transportation Specifications for Bridge Construction).

For a clay liner solution, full-time geotechnical supervision should be provided during construction. Compaction should be carried out using a heavy, self-propelled sheepsfoot compactor. Lift surfaces that have been allowed to dry out should be scarified, moisture conditioned and recompacted prior to placement of the subsequent lift. Where lift surfaces have degraded due to excess precipitation, etc., the material should be either removed or allowed to dry to the required moisture content and recompacted. In situ density testing should be provided to verify that the target liner density is achieved.

For synthetic liner construction, full quality control testing will be required to verify field welds. In addition, the subgrade will require geotechnical review prior to the placement of the liner material.

3.8 Residential Construction – Preliminary Comments

For preliminary design purposes, the following general discussion and recommendations are offered to support the development of single family residential and related ancillary structures within the study area. Specific, detailed geotechnical investigations are required for non-residential developments in the subdivision, and may be needed for some residential structures if there are unusual design features associated with the residence.



Conventional Strip and Spread Footing Foundations

Based on Wood's review of the soil conditions within the widely spaced boreholes at the site, the natural occurring clay and clay till encountered within the boreholes is generally considered suitable for the support of conventional strip and spread footings for proposed single family residences. For preliminary design, a Serviceability Limit States (SLS) bearing pressure of 75 kPa is recommended, with a corresponding unfactored Ultimate Limit States (ULS) bearing pressure of 225 kPa. A geotechnical resistance factor of 0.5 should be applied to the ULS bearing pressure, per current building code requirements.

As indicated above, further investigation and/or review of the bearing soils associated with any non-residential structures will be required to support detailed design of the various proposed structures.

For protection against frost action, perimeter footings in heated areas should be extended to provide at least 1.5 m of soil cover. For any unheated buildings or portions of the building, footings should have at least 2.1 m of soil cover. Alternatively, insulation can be used to reduce the thickness of soil cover required.

Basements

All below grade walls, such as for the residential basements, should be designed to resist a horizontal earth pressure 'p' at any depth 'h' below the surface as given by the following equation:

 $p = k_0 (xh + q)$

where: p =lateral earth pressure in kPa acting at a depth h

 K_0 = lateral at-rest earth pressure coefficient (use k_0 = 0.50),

x = unit weight of backfill (use x = 18.5 kN/m³ for clay)

h = depth to point of interest in m (ft)

q = equivalent value of any surcharge on the ground surface.

The above expression assumes a fully drained condition along the base of the below-grade walls.

Damp-Proofing and Drainage

While only minor groundwater was encountered during the current investigation, the installation of weeping tile around residences is still recommended, regardless of groundwater elevation. The requirements for weeping tile installation are outlined in Section 9.14 of the Alberta Building Code. Weeping tiles must discharge to either a gravity outlet, or to a pumped sump, in accordance with local regulatory requirements.

In conjunction with installation of weeping tile, below grade foundation walls around basements require damp proofing, in accordance with the current Alberta Building Code.

Weeping tile flow due to surface water infiltration along foundation walls can be minimized by providing a modest amount of compaction to the exterior foundation wall backfill, thus minimizing future settlement of the backfill. The backfill within two metres of the residence foundation should be graded



away from the foundation at approximately a ten percent slope. Downspout roof leaders should discharge onto splash pads at least a metre from the foundation walls.

Construction of Grade-Supported Slabs

In general, it is anticipated that engineered fill or the natural clay till at the site will provide adequate support for grade supported basement floors, concrete garage slabs, driveways and parking slabs, provided the subgrade is adequately prepared by stripping topsoil and fill, and reconstruction to achieve design elevations by placement of thin lifts compacted to a minimum of 98 percent of Standard Proctor Maximum Dry Density (SPMDD).

Following preparation of the subgrade surface, a levelling course of 25 mm nominal size well graded crushed gravel at least 150 mm in compacted thickness is recommended directly beneath the slabs. The gravel should also be compacted to at least 98 percent of SPMDD.

As an alternative to compacted gravel, a vapour break consisting of a minimum of 200 mm thick layer of 25 mm washed gravel fill can be provided beneath basement floor slabs. If floor coverings that are sensitive to moisture penetration will be installed in basement areas, additional vapour break considerations (such as the inclusion of a polyethylene vapour barrier should also be considered.

The excavated subgrade for the slabs on grade, including basement slabs, should be protected at all times from rain, snow, freezing temperatures, excessive drying and the ingress of free water. To minimize the potential negative effects of settlement or heave in soil below the slabs, it would be preferable to allow slabs to float with no rigid connections to walls or foundation elements except at doorways.

Some relative movement between the slabs-on-grade and adjacent walls or foundations and differential movements within the slabs should be anticipated. Where recommendations outlined in this report are followed, these movements are expected to be within tolerable limits.

The water-to-cement ratio and slump of concrete utilized in the floor slabs should be strictly controlled to minimize shrinkage of the slabs. Adequate joints should be provided in the floor slab to further control cracking.

3.9 Onsite Sanitary Sewage Disposal – Preliminary Comments

It is understood that the subject lots will be serviced by private sewage systems which will be developed by the buyers of the individual lots in conjunction with the design and construction of proposed residences.

The design and construction of private onsite sanitary sewage disposal systems in Alberta is subject to the requirements of the *Alberta Private Sewage Systems Standard of Practise 2015* (hereafter referred to as the *2015 Standard*).

One of the most significant changes encompassed in the 2015 Standard compared to the prior 2009 Standard of Practice is a shift from a design based on percolation testing to a design based on soil profile and textural classification. Percolation rates can only be used to support a design based on soil profile.



In accordance with the 2015 Standard, a site (i.e., lot) specific evaluation and report is required to support the detailed design and construction of individual private sewage systems. Detailed requirements for the Site Evaluation are provided in Part 7 of the 2015 Standard.

Using the results of the Site Evaluation, a type of private sewage system best suited for the site is proposed. Selection of the type of system is based on various factors including soil profile, vertical separation between groundwater or impervious layer and point of effluent infiltration, design effluent volume and anticipated effluent strength.

The typical and most cost efficient private sewage system for a single family residential lot generally involves primary treatment of effluent using a septic tank with discharge to a conventional treatment field. The treatment field typically utilizes perforated piping laid in a bed of gravel in trenches, which distributes the effluent in the trenches to the natural subsurface soils.

Where there are limits imposed by proximity to water table or very low permeable soils, a treatment mound can be considered as an alternative to a conventional treatment field. A treatment mound generally refers to a system where effluent from a septic tank is distributed onto an imported sand layer that is constructed above grade. In this case, the effluent must be discharged into the treatment mound using a pressurized system. Accordingly, the costs associated with importing sand for the treatment mound and operation of a discharge pump make this style of treatment system costlier than the conventional treatment field.

As an alternative, secondary treatment of the effluent can be considered. Secondary treatment of the effluent, as outlined in Part 5 of the 2015 Standard, can be carried out by means of a sand filter, a recirculating gravel filter, or a Packaged Sewage Treatment Plant. Where effluent quality meets Level 2 or better (as outlined in Table 5.1.1.1 of the 2015 Standard), the options for disposal of the effluent are less restrictive, and effluent may even be used for sub-surface drip dispersal and irrigation (subject to Section 8.5 of the 2015 Standard).

For the proposed lots, the inferred groundwater table was below about 2 m depth, as discussed in the previous Section 2.2. The groundwater depths observed generally satisfy the vertical separation requirements for soil-based treatment as outlined in Paragraph 8.1.1.4 of the 2015 Standard.

Based on the current investigation and visual review of samples recovered from boreholes at the site, the soils indicate a textural classification of about SiCL (silty clay loam). Based on the results of the textural classification, the site is considered marginally suitable for effluent discharge using a conventional treatment field, and a treatment mound or secondary treatment of the effluent may be warranted.

It is noted that the detailed design of each proposed discharge field must be based on a soil profile assessment and textural classification of test pits within the footprint of the proposed discharge fields, and that these textural classifications will vary somewhat from the classification indicated above.



3.10 Testing and Inspection

All engineering design recommendations presented in this report are based on the assumption that an adequate level of inspection and review will be provided during construction and that all construction will be carried out by a suitably qualified contractor experienced in foundation and earthworks construction. An adequate level of inspection is considered to be:

For earthworks: full time monitoring and representative compaction testing
 For concrete construction: testing of concrete supplier mixes for conformance with prescribed and/or performance concrete specifications

4.0 CLOSURE

The recommendations given in the above sections are based upon interpreted conditions found within the ten boreholes advanced at this site. Should subsurface conditions other than those presented in this report be encountered during construction, the Client should notify our office so that these recommendations can be reviewed.

Soil conditions, by their nature, can be highly variable across a site. A contingency should be included in the construction budget to allow for the possibility of variations in soil conditions, which may result in modification of the design, and/or changes in the construction procedures.

Wood requests the opportunity to review the design drawings and the civil works during construction of the subdivision to confirm that the recommendations in this report have been correctly interpreted and implemented. If not afforded the opportunity to conduct this review, Wood cannot accept responsibility for the interpretation of this report. Wood would be pleased to provide any further information that may be needed during design and to advise on the geotechnical aspects of specifications for inclusion in contract documents.

This report has been prepared for the exclusive use of Martin Geomatic Consultants Ltd. and their designers for the specific application to the development described in this report. Any use that a third party makes of this report, or any reliance or decisions based on this report are the sole responsibility of those parties.



This report has been prepared in accordance with generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made.

We trust that this report satisfies your present requirements, and we look forward to assisting you in the completion of this project. Should you have any questions, please contact the undersigned at your convenience.

Yours truly,

Wood Environment & Infrastructure Solutions A Division of Wood Canada Limited

John Lobbezoo, P.Eng.

Associate Engineer, Geotechnical

Branch Manager, Lethbridge & Medicine Hat

Attachments:

Figure 1 Borehole Location Plan Borehole Logs Explanation of Symbols and Terms Reviewed by: Kevin Spencer, M.Eng., P.Eng.

Senior Associate Geotechnical Engineer

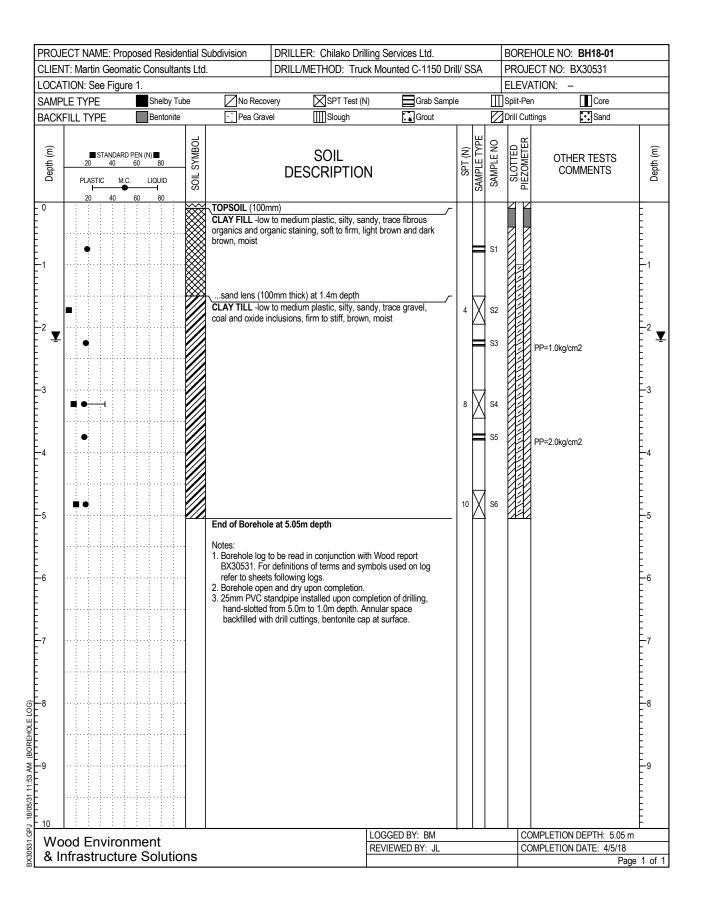
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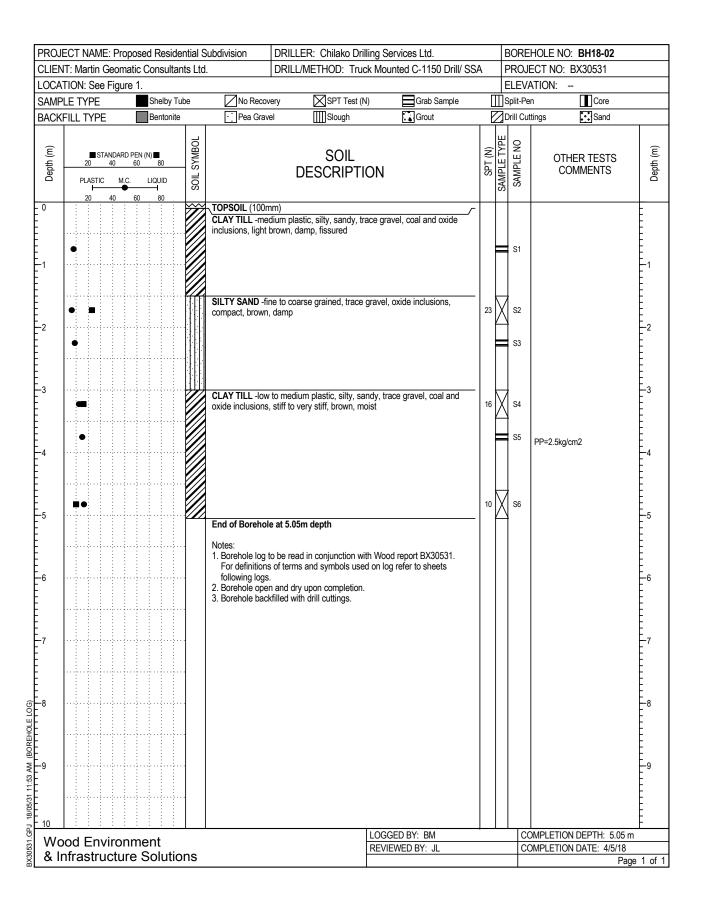
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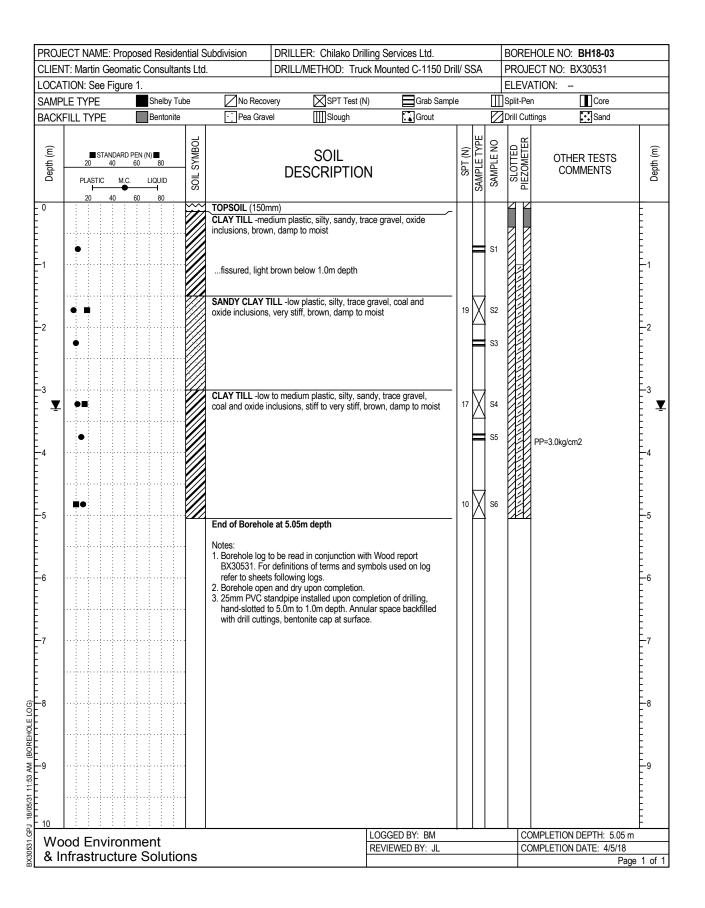
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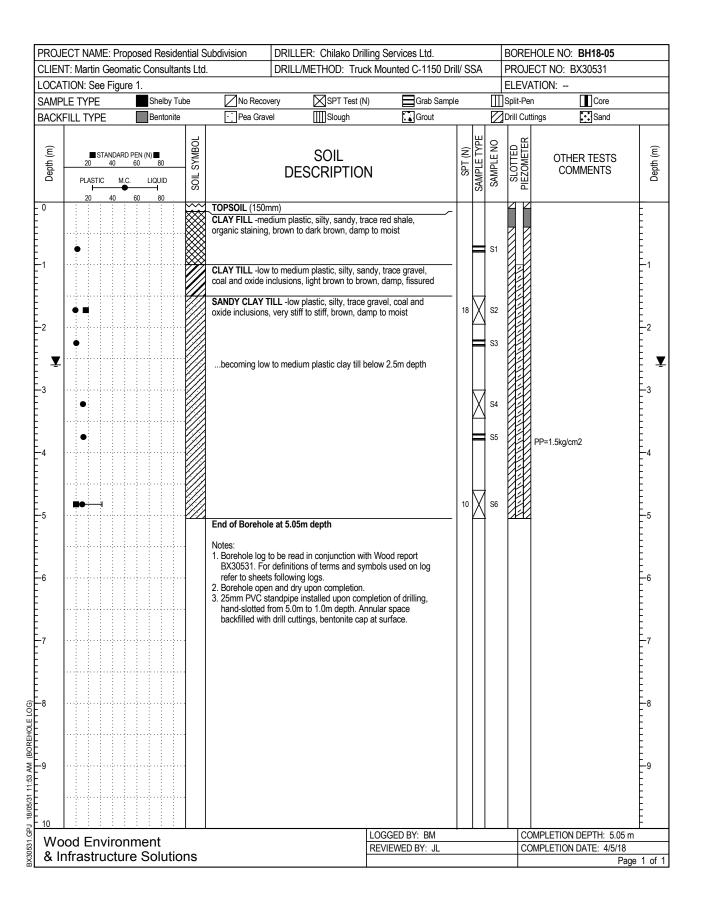
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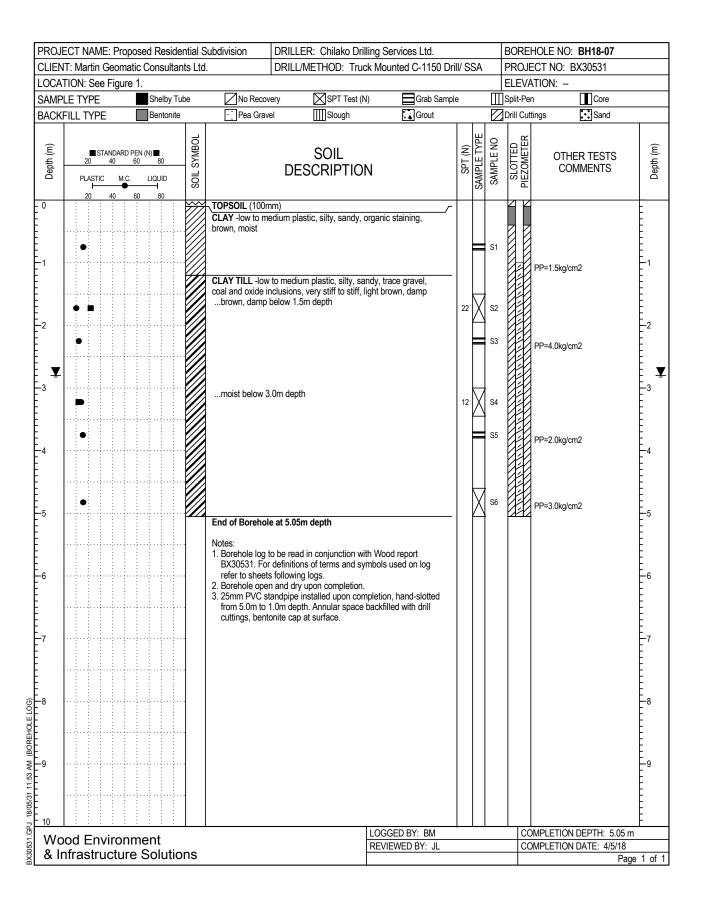




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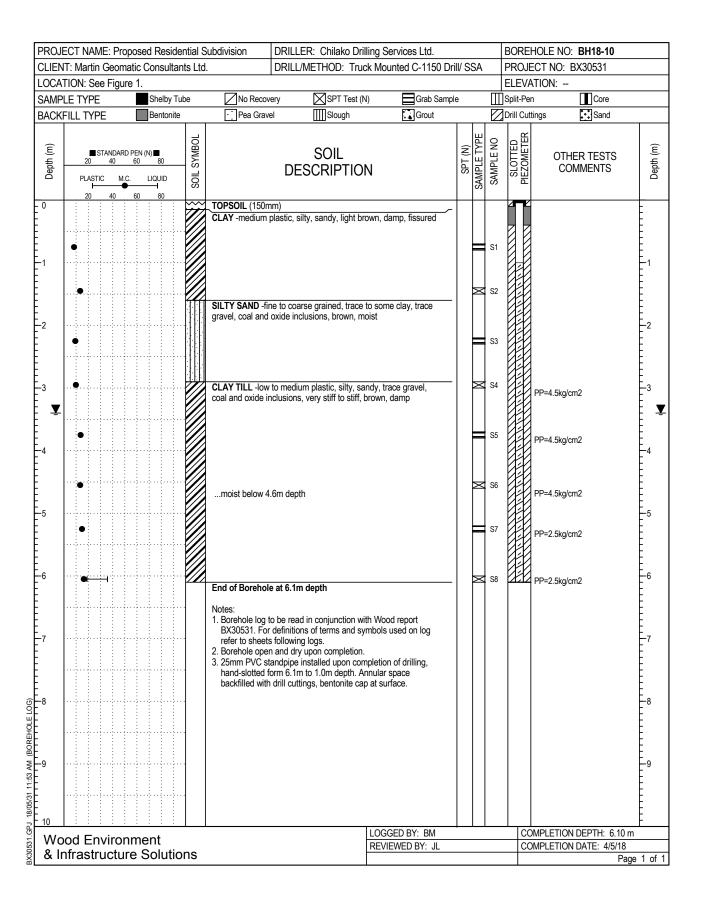


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	FILL TYPE	Bentonite	Pea Gravel	Slough	Grout		Drill Cutti		
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0	20 40 6		TOPSOIL (100mm)			<u>_</u>	<i>n</i>		-
	•		SILTY SAND -low to me clay, silty, brown, damp	dium plastic, fine to me	dium grained, some		S 1		
1			CLAY -low to medium p	ium plastic, silty, sandy,	trace gravel, coal and	_			<u>-</u> 1
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BACKF	FILL TYPE	Bentonite	Pea Gravel	Slough	Grout	7	Drill Cut	ttings Sand	
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-1 -2 -3 -3			TOPSOIL (150mm) CLAY -low to medium p brown, moist CLAY TILL -low to med oxide inclusions, stiff to	ium plastic, silty, sandy very stiff, brown, damp,	trace gravel, coal and	9 2 16 2 12	\$1 \$2 \$3 \$4 \$5 \$5 \$5 \$6	PP=3.0kg/cm2 PP=2.0kg/cm2	-1
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EXPLANATION OF TERMS AND SYMBOLS

The terms and symbols used on the borehole logs to summarize the results of field investigation and subsequent laboratory testing are described in these pages.

It should be noted that materials, boundaries and conditions have been established only at the borehole locations at the time of investigation and are not necessarily representative of subsurface conditions elsewhere across the site.

TEST DATA

Data obtained during the field investigation and from laboratory testing are shown at the appropriate depth interval.

Abbreviations, graphic symbols, and relevant test method designations are as follows:

*C	Consolidation test	*ST	Swelling test
D_R	Relative density	TV	Torvane shear strength
*k	Permeability coefficient	VS	Vane shear strength
*MA	Mechanical grain size analysis	W	Natural Moisture Content (ASTM D2216)
	and hydrometer test	WI	Liquid limit (ASTM D 423)
N	Standard Penetration Test (CSA A119.1-60)	\mathbf{W}_{p}	Plastic Limit (ASTM D 424)
N_d	Dynamic cone penetration test	E_f	Unit strain at failure
NP	Non plastic soil	γ	Unit weight of soil or rock
pp	Pocket penetrometer strength (kg/cm²)	γd	Dry unit weight of soil or rock
*q	Triaxial compression test	ρ	Density of soil or rock
$q_{\rm u}$	Unconfined compressive strength	Pd	Dry Density of soil or rock
*SB	Shearbox test	C_{u}	Undrained shear strength
SO ₄	Concentration of water-soluble sulphate	\rightarrow	Seepage
		<u>▼</u>	Observed water level

The results of these tests are usually reported separately

Soils are classified and described according to their engineering properties and behaviour.

The soil of each stratum is described using the Unified Soil Classification System¹ modified slightly so that an inorganic clay of "medium plasticity" is recognized.

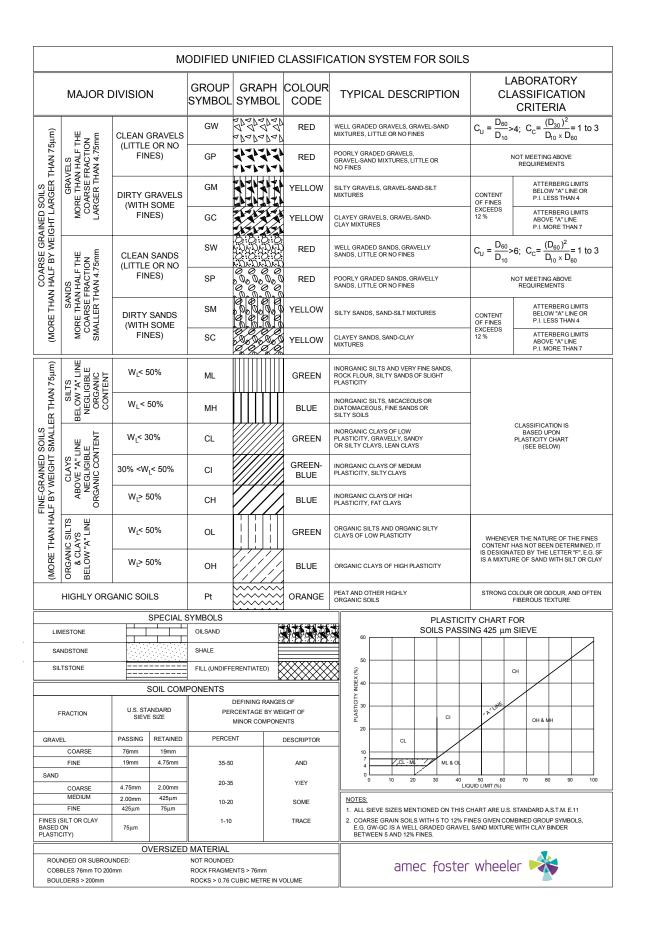
The modifying adjectives used to define the actual or estimated percentage range by weight of minor components are consistent with the Canadian Foundation Engineering Manual².

Relative Density and Consistency:

Cohesio	nless Soils		Cohesive Soils	
Relative Density	SPT (N) Value	Consistency	Undrained Shear Strength c _u (kPa)	Approximate SPT (N) Value
Very Loose	0-4	Very Soft	0-12	0-2
Loose	4-10	Soft	12-25	2-4
Compact	10-30	Firm	25-50	4-8
Dense	30-50	Stiff	50-100	8-15
Very Dense	>50	Very Stiff	100-200	15-30
•		Hard	>200	>30

Standard Penetration Resistance ("N" value)
The number of blows by a 63.6kg hammer dropped 760 mm to drive a 50 mm diameter open sampler attached to "A" drill rods for a distance of 300 mm.

[&]quot;Unified Soil Classification System", Technical Memorandum 36-357 prepared by Waterways Experiment Station, Vicksburg, Mississippi, Corps of Engineers, U.S. Army. Vol. 1 March 1953. "Canadian Foundation Engineering Manual", 4th Edition, Canadian Geotechnical Society, 2006.



APPENDIX 3

ENVIRONMENTAL SITE ASSESSMENT

Amec Foster Wheeler- Phase 1 Environmental Site Assessment dated April 2018



PHASE I ENVIRONMENTAL SITE ASSESSMENT Nakamura Residential Subdivision SW 05-008-20 W4M near Lethbridge, Alberta

CONFIDENTIAL

Submitted to:
Martin Geomatic Consultants Ltd.

Submitted by:

Amec Foster Wheeler Environment & Infrastructure
Lethbridge, Alberta

April 2018

Project No.: BX20137



13 April 2018 BX20137

Martin Geomantic Consultants Ltd. 255 – 31 Street North Lethbridge, AB, T1H 3Z4

Re: Phase I Environmental Site Assessment Nakamura Residential Subdivision

SW 05-008-20 W4M

Amec Foster Wheeler Environment & Infrastructure (Amec Foster Wheeler) is pleased to submit this report describing the results of the Phase I Environmental Site Assessment for the above-referenced property.

If you have any questions regarding our findings or recommendations, please contact the undersigned at 403-327-7474. Thank you for allowing Amec Foster Wheeler to be of service. We look forward to working with you again.

With appreciation,

Amec Foster Wheeler Environment & Infrastructure,

Soft Poly

Scott Roughead, C.E.T.

Senior Environmental Technologist

ASET Member #: 098653

Martin Geomatic Consultants Ltd.
Phase I Environmental Site Assessment
Nakamura Residential Subdivision
Portion of SW 05-008-20 W4M
April 2018

EXECUTIVE SUMMARY

Project: Phase I Environmental Site Assessment

Site Civic Address: No Site Civic Address

Short Legal Description: 4;20;8;5;SW

Alberta Township System: SW 05-008-20 W4M

Site Size: Approximately 27 hectares (66.6 acres)

Site Owners: Jody F Nakamura

Site Occupant: Jody F Nakamura (Farmer)

Martin Geomatic Consultant Ltd. retained Amec Foster Wheeler Environment & Infrastructure (Amec Foster Wheeler) to conduct a Phase I Environmental Site Assessment (ESA) of an approximate 27 hectare, zoned Rural Agricultural (RA) property with legal land description of SW 05-008-20 W4M, within the County of Lethbridge, Alberta, herein referred to as the 'Site'.

The objective of the Phase I ESA was to identify actual or potential substances or conditions of environmental concern at the Site that could be associated with previous or current land use, construction, management or operation of the Site or surrounding properties, and to determine if additional investigations are warranted. These substances or conditions are commonly referred to as either Areas of Potential Environmental Concern (APECs) or Items of Potential Environmental Concern (IPECs).

METHODOLOGY

The Phase I ESA was conducted in accordance to the 2001 Canadian Standards Association (CSA), *Phase I Environmental Site Assessment (CAN/CSA Z768-01 R2016)* guideline which is referenced by the Canadian Mortgage and Housing Corporation and the major financial institutions. The Phase I ESA methodology also adheres to the Alberta Environment and Parks (AEP) 2016 *Alberta Environmental Site Assessment Standard*.

Amec Foster Wheeler's Phase I ESA standards, procedures and policies were adhered to during the completion of this assessment.

At the time of the Site visit, the ground surfaces on the property and surrounding properties were clear.

FINDINGS AND RECOMMENDATIONS

The on-site and off-site environmental concerns are summarized as follows and include the recommendations for further work or actions to be considered to IPECs or APECs.

Methane

The aerial photograph review did identify potential wetlands that have been filled in on the southern portion of Site, as well as a backfilled irrigation canal that crossed the Site from north

Martin Geomatic Consultants Ltd.
Phase I Environmental Site Assessment
Nakamura Residential Subdivision
Portion of SW 05-008-20 W4M
April 2018

to south. A methane survey would be required to determine the presence or absence and actual concentrations of methane at the Site or within Site buildings.

Radon

Shales and coal beds which may be present in the subsurface are a potential source for radon generation. There is, therefore, a potential for radon concentrations present in the subsurface to exceed the annual occupational exposure limit on-site. However, a radon survey would be required to determine the actual concentrations in the buildings on-site.

Equipment Containing Regulated Substances

Equipment potentially containing liquid and vapour mercury (thermostats and light tubes and bulbs), and small quantities of radioactive material (smoke detectors) were identified within the Site building. Amec Foster Wheeler recommends that when this equipment is serviced or removed during routine maintenance, renovation, alterations or demolition of the building, the units (>10 bulbs/tubes and/or >two smoke detectors/thermostats) are segregated, packaged to avoid breakage and disposed of in accordance with the waste management regulations.

Ozone-Depleting Substances

Amec Foster Wheeler recommends that when equipment containing refrigerants are serviced or removed during maintenance, renovation, alteration or demolition of the building, the units be inspected by qualified personnel and the presence or absence of ODS confirmed. If the units contain ODSs, they should be handled and disposed of in accordance with the ODS regulations.

Asbestos-Containing Materials

Based on the construction date of the Site building (1996), there is a possibility of non-friable asbestos-containing materials (ACMs) being present in, but not limited to, the roofing materials, vinyl flooring and mastics, caulking compounds, drywall joint compounds, floor levelling compounds, and penetration mastics. Amec Foster Wheeler recommends that if these items or other suspect materials are to be disturbed during routine maintenance, renovations, alterations or demolition, the materials should be assessed, sampled and tested by qualified environmental health practitioners in accordance with the asbestos management and waste regulations.

Lead-Containing Paint

Based on the construction date of the Site building (1996), although unlikely, there is the potential for lead-containing paints to be present within the building. Amec Foster Wheeler recommends that when potential lead-containing paints are to be disturbed during routine maintenance or renovations, alterations or demolition of the building, the painted surfaces be assessed by a qualified environmental practitioner prior to disturbance and if required, abated in accordance with the occupational health and safety and waste control regulations.

Pipelines and Oil and Gas Wells

A search of the Abacus database (AbaData) identified one well, Mobil Oil C.P.R. Wilson No. 5-4, located 10 m south of Site. The well was drilled in 1955 and abandoned in 1958. It is believed that it was an exploration well as no production report is available. The completion depth was

Page (ii)

Martin Geomatic Consultants Ltd. Phase I Environmental Site Assessment Nakamura Residential Subdivision Portion of SW 05-008-20 W4M April 2018

1306.1 m. The lease plan was available and shows that a portion of the lease covered approximately 3 acres of the southern portion of the Site.

There were no records pertaining to environmental spills in relation to the above noted well site, however environmental impacts can result from the drilling and production process, specifically in areas surrounding the well head, flare pits and sumps. Potential parameters of concerns can include elevated metals, petroleum hydrocarbons and/or salinity concentrations.

Based on the limited information available for the former well site, including specific operations, production activity, spills, remediation activities (if completed), reason for closing and planned activities for the property, along with overlapping of the lease and close proximity of the well to the Site (10 m south), the former Mobile Oil well represents an on- and off-site APEC. Further investigation (Phase II ESA) would be required to determine if this property has affected the Site.

In summary, based on Amec Foster Wheeler's review of the available information for the Site and surrounding properties as presented herein,

- i) a Phase II intrusive environmental investigation is recommended.
- ii) recommendations pertaining to the assessment of methane, radon and potential hazardous building materials as described in this report should also be considered.

The opinions in this report are based on the assumption that information provided to Amec Foster Wheeler, and information presented by others in reports to various agencies is accurate and complete.

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Amec Foster Wheeler Environment & Infrastructure is committed to achieving sustainability through balancing economic growth, social responsibility and environmental protection. Learn more at: http://amecfw.com/aboutus/sustainability.htm.

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GLOSSARY OF ABBREVIATIONS

ACM Asbestos-Containing Material(s)
AECB Atomic Energy Control Board
AEP Alberta Environment and Parks
AER Alberta Energy Regulator
AHS Alberta Health Services

APEC Area of Potential Environmental Concern

AST Above-ground Storage Tank

CCME Canadian Council of Ministers of the Environment

CFC Chlorofluorocarbon

CMHC Canadian Mortgage and Housing Corporation

CSA Canadian Standards Association

ELC Environmental Law Centre

EPEA (Alberta) Environmental Protection and Enhancement Act

ESA Environmental Site Assessment

ESAR Environmental Site Assessment Repository

FIP Fire Insurance Plans

FOIP Freedom of Information and Protection of Privacy

HCFC Hydrochlorofluorocarbon HPA Hazardous Products Act

HWY Highway

IPEC Item of Potential Environmental Concern

L Litres

LCP Lead-Containing Paint(s)

masl Metres Above Sea Level mbgl Metres Below Ground Level mbgs Metres Below Ground Surface

ODS Ozone-Depleting Substances

PCB Polychlorinated Biphenyl(s) PHC Petroleum Hydrocarbons

PTMAA Petroleum Tank Management Association of Alberta

RD Routine Disclosure

TDG Transportation of Dangerous Goods Act

UFFI Urea Formaldehyde Foam Insulation

UST Underground Storage Tank

WHMIS Workplace Hazardous Materials Information System

WL Working Level

Glossary of Abbreviations

Martin Geomatic Consultants Ltd. Phase I Environmental Site Assessment Nakamura Residential Subdivision Portion of SW 05-008-20 W4M April 2018

1.0 INTRODUCTION

The following provides a description of the project background, objectives of this assessment and methodology used to complete this assignment.

1.1 Project Background

Martin Geomatic Consultant Ltd. retained Amec Foster Wheeler Environment & Infrastructure (Amec Foster Wheeler) to conduct a Phase I Environmental Site Assessment (ESA) of an approximate 27 hectare, zoned Rural Agricultural (RA) property with legal land description of SW 05-008-20 W4M, within the County of Lethbridge, Alberta, herein referred to as the 'Site'.

Approval to proceed with this assessment was provided by Ed Martin on 22 March 2018. Amec Foster Wheeler understands the assessment has been undertaken for potential rezoning of the Site from Rural Agricultural to Grouped Country Residential.

1.2 Objectives

The objective of the Phase I ESA was to identify actual or potential substances or conditions of environmental concern at the Site that could be associated with previous or current land use, construction, management or operation of the Site or surrounding properties, and to determine if additional investigations are warranted. These substances or conditions are commonly referred to as either Areas of Potential Environmental Concern (APECs) or Items of Potential Environmental Concern (IPECs).

The Canadian Standards Association (CSA) notes that no environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions about a property. Performance of a standardized environmental site assessment protocol is intended to reduce, but not to eliminate, uncertainty regarding the potential for recognized environmental conditions about the property, given reasonable limits of time and cost.

1.3 Methodology

Amec Foster Wheeler's methodology in conducting Phase I ESAs is based on the requirements of the 2001 CSA *Phase I Environmental Site Assessment (CAN/CSA Z768-01 reaffirmed 2012)* guideline, which is referenced by the Canadian Mortgage and Housing Corporation (CMHC) and major financial institutions. The guideline sets standards for the review of mandatory and optional information pertaining to a property and its surroundings, completion of checklists, property viewing procedures, interviews, and preparation of the final report. Our report methodology also complies with the requirements of the 2016 Alberta Environment and Parks (AEP) *Alberta Environmental Site Assessment Standard*. Amec Foster Wheeler's standard procedures for health and safety, site viewing and evaluation, and Amec Foster Wheeler's report writing and review policies were adhered to during the completion of this assessment.

The assessment comprised five main components:

1. identifying the background environmental setting of the Site and surrounding properties;

- 2. reviewing readily-available historical archives and government and public agency records for the Site and selected surrounding properties;
- completing a viewing of the Site and perimeter-viewing of surrounding properties;
- interviewing representatives knowledgeable about the Site and surrounding properties;
 and.
- 5. preparing a report summarizing the methodology and findings of the Phase I ESA and providing recommendations.

Background information gathered for surrounding properties was limited to information that was readily-available during this assessment. Historical records reviewed included records available for properties located within a 150 m radius of the subject Site boundaries as selected by the Client. Search radius for other parameters including historical aerial photographs, geology, topography, etc., met the AEP Phase I Guidelines. This assessment included an overview of the surrounding land uses and does not constitute a complete assessment of those properties.

The following records were reviewed and methodologies applied in the completion of this Phase I ESA:

- Topographical elevations for the Site and surrounding lands provided by Abacus Datagraphics Ltd. (AbaData) were reviewed.
- The Quaternary Geology Map of Southern Alberta provided by the Alberta Research Council (1987) was reviewed for the Site.
- The Surficial Geology Map of Southern Alberta (2013), Map 601, published by the Alberta Geological Survey was reviewed.
- A map of the bedrock geology of the Site and surrounding lands titled Bedrock Geology of Alberta, Map No. 600 published by Alberta Geological Survey in 2013 was reviewed.
- Water well drilling reports from Alberta Environment and Parks' (AEP) on-line groundwater database were reviewed on 25 March 2018.
- Historical and current land titles for the Site were reviewed to identify landowners and potential land uses. Land titles were provided by the Alberta Government Services Calgary land titles office and obtained from the on-line Spatial Information System and are included in Appendix A.
- Historical aerial photography of the Site and surrounding properties was reviewed to identify land uses and development. Photographs were obtained through the Alberta Environment and Parks (AEP) Air Photo Services (including select images archived in Amec Foster Wheeler's resource library) and from Abacus Datagraphics Ltd. (AbaData), and Google Earth Images™. Reproductions of selected photographs are included in Appendix B.
- A review of available Fire Insurance Plans (FIPs) was completed to identify historical building materials, structures and equipment on the Site and surrounding properties.

- Research of FIP collections listed in the Catalogue of Canadian Fire Insurance Plans 1875-1975 published by L. Dubreuil and C.A. Woods was completed.
- A review of available urban and rural directories was completed to identify historical occupants of the Site and surrounding properties.
- Federal, provincial and municipal government and public agencies were contacted and databases were researched to obtain readily-available environmental information for the Site and selected surrounding properties. Documents received from the agencies and databases are included in Appendix C or maintained in Amec Foster Wheeler's project file.
- Scott Roughead of Amec Foster Wheeler conducted the Site viewing on 29 March 2018. The Site and surrounding lands and improvements were viewed to identify evidence of potential impacts, including but not limited to, forms of soil disturbance, waste storage/spillage, staining of ground surfaces or discolouration of soils, and hazardous materials or chemical management issues. Viewing of surrounding properties was limited to publicly-accessible areas. Copies of selected photographs taken at the time of viewing are included in Appendix D. Completed environmental checklists are maintained in Amec Foster Wheeler's project files. Mr. Roughead's Statement of Qualifications is included in Appendix E.
- A interview was conducted with Jody Nakamura, Site owner and occupant, on 29 March 2018. This individual is hereafter referred to as the Site Representative in this report.

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2.0 SITE AND PHYSICAL SETTING

The following sections provide a description of the physical setting of the Site including improvements and land topography, drainage, geology and hydrogeology.

2.1 Site Facilities and Land

The Site is located within SW 05-008-20 W4M. A map showing the location of the Site in the County of Lethbridge is provided as Figure 1. Access to the Site is from Range Road 20-5, located west of the Site. The Site is zoned by the County of Lethbridge as Rural Agricultural (RA) and has been owned by Jody F Nakamura since 2005.

It is understood that the subject parcel encompasses the triangular shaped area just north of an irrigation canal, along Range Road 20-5, west of the Saint Mary River irrigation Canal (SMRID). It is understood that the proposed parcel will be developed into 40 residential building lots, complete with full site servicing and paved streets.

The Site was originally used as pasture and farm land from at least 1950 (as evident in aerial photograph and historical land title review). The most recent Site activity was farming. One residential farm house (Alberta Rural Address of 80025 Rge Rd 20-5) and several small sheds are located on the west side of the Site (Photo #1 and #2, Appendix D). The 2000 square foot, two storey house with basement, was constructed in 1996. The house is situated on a concrete foundation, with hardy plank siding and asphaltic shingled roof. A septic field is located on the east side of the house with a 500,000-gallon dugout for water storage. Power and natural gas are supplied to the house from a utility right of way located along Range Road 20-5. The farm house is surrounded to the north, south and east by 6 acres of pasture land and 60 acres of alfalfa field.

An irrigation canal transvers the Site from prior to 1950 until its abandonment and backfill prior to 1983, as evident in aerial photograph review. The location of the former irrigation canal, can be seen on Figure 2.

A water pipeline right of way is located adjacent west of the Site and includes a 300 mm diameter irrigation water pipeline owned by the SMRID (Photo #3, Appendix D). The main SMRID canal is located along the east property line, with a smaller canal along the south property line (Photo #4, Appendix D). The smaller canal along the south property line was constructed between 1961 and 1970 as evident in aerial photography review.

A former Mobil Oil C.P.R Wilson No. 5-4 well was identified south of the Site adjacent to the small irrigation canal. The well was drilled to a depth of 1306.1 m in December of 1955 and abandoned in April of 1958. The lease access road was located south of Site, with the well lease covering approximately 3 acres of the present Site pasture (Photo #4, Appendix D and Figure 2). The well is discussed further in Section 5.6 of subject report.

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2.2 Geology and Hydrogeology

The Quaternary Geology Map of Southern Alberta provided by the Alberta Research Council (2012) indicates the Site consists primarily of glacial deposits including gravel, sand, silt and clay, with some exposed local till and bedrock. These deposits can be up to 60 m thick deposited mainly in floors and terraces of river valleys and melt water channels and deltas. The area is characterized by flat to undulating topography. Surficial geology in the area is dominated by sediments including fine sand, silt and clay, and some minor gravel beds.

Bedrock Geology of Alberta, Map No. 600 published by Alberta Geological Survey in 2013 was reviewed and indicates that the bedrock geology for the Site is the Bears Paw Formation (KBp), characterized by dominantly dark grey to brown mudstone with concretionary sideritic bentonite concretionary layers; concentrations locally yield ammonites; deposition was in a marine to marginal marine environment.

The Old Man River is located approximately 10 km west of the Site at its closest distance. Regional horizontal groundwater flow direction is anticipated to be west towards Old Man River. However, a site-specific groundwater investigation would be required to determine the directions of groundwater flow beneath the Site, which is beyond the scope of a Phase I ESA. Underground utility trenches, conduits, installed drainage systems, structures, fill placement, variations in soil type and minor fluctuations in topography may influence the shallow groundwater flow. In addition, seasonal fluctuations of the groundwater elevation and flow direction can be expected.

3.0 HISTORICAL RECORDS

The following sections include the results of the review of available land titles, aerial photographs, fire insurance plans, urban and rural directories, and government and publicagency regulatory records.

3.1 Land Titles

The Alberta Land Titles records list Jody Nakamura as the current Site owner since 2005. A listing of the previous landowners of the Site from 1932 to present is provided in Table 1. Amec Foster Wheeler's summary of the findings is presented below. Copies of the current and historical land titles are included in Appendix A.

Short Legal Dates of Ownership Name of Owner(s) 4;20;8;5;SW 2005 to present Jody F Nakamura 4;20;8;5;SW 1982 - 2005 Robert D Wilson (Farmer) Her majesty the Queen in Right of The Province of Alberta As Represented by The 1954 - 1982 4;20;8;5;SW Manager of The St. Mary and Milk Rivers Development 1948 - 1954 His majesty the King in the right of Alberta 4;20;8;5;SW 4;20;8;5;SW 1932 - 1948 Alberta Railway and Irrigation Company

Table 1: Land Titles

There were no easements, orders, liens, rights-of-way, caveats of concern or IPECs/ APECs identified on the Site in the land title review.

3.2 Aerial Photographs

Aerial photographs of the Site and surrounding lands were reviewed. The aerial photographs ranged in dates from 1950 to 2009 and the scale of the images ranged from 1:20,000 to 1:40,000.

Aerial photography does not provide a continuous record of Site development and activities. It is possible that features of interest will have appeared and disappeared between the dates of coverage. In addition, photographic-quality and scale are variable and may make features difficult to identify, or their purpose difficult to establish. An interpretation of the aerial photography is presented in Table 2. Amec Foster Wheeler's summary of the findings is provided below. Reproductions of aerial photographs from the years 1950 (Figure B-1), 1961 (Figure B-2), 1970 (Figure B-3), 1983 (Figure B-4), 1999 (Figure B-5) and 2009 (Figure B-6) are included in Appendix B.

Table 2: Aerial Photographs

Photo Date and Scale		Photography Interpretation
1950	Site	The east portion of the Site appears to be agricultural farm land. An area of sparse vegetation and wetland is visible on the southwest corner of Site. The historical irrigation canal is visible through the center of Site, running from northwest corner to south center. Pasture land is visible on the west side of the irrigation canal.
1:40,000	Surrounding Properties	A road is visible at the present-day location of Range Road 20-5. A small farm appears to be located west of the Range Road. A second historical irrigation canal is visible south of the Site with farm land and a Township road beyond. Farm land primarily surrounds the Site in all directions with small farm structures visible to the north of the Site.
1961	Site	A low lying wet area (possibly marshy area, irrigation canal or dugouts) are visible along the south side of the Site between the Range Road and the irrigation canal. The remainder of the Site appears like the 1950 aerial photo.
1:40,000	Surrounding Properties	The main SMRID canal is now visible along the east side of Site. The remainder of the Site appears similar to the 1950 aerial photo.
1970	Site	The low-lying dugout area located on the south corner of the Site is now filled in and the small irrigation canal is visible to the south of Site.
1:31,680	Surrounding Properties	Further farm structures are visible north of the Site. The irrigation canal south of the site has been filled in and now appears to be only an irrigation ditch. A smaller canal has been constructed.
1983	Site	The historical irrigation canal that ran across the Site from north to south is now filled in. The outline (land scar) is still visible. The majority of the Site is now farm land.
1:31,680	Surrounding Properties	The small irrigation canal south of the Site is well defined and a small structure is visible south of the small canal. A new barn is visible on the farm located west of Range Road 20-5.
1999 1:20,000	Site	The present farm house and 500,000-gallon fresh water storage dugout is now visible on Site. A drive way for the farm house is visible. What appears to be irrigation pipe is visible in the southeast corner of the Site. Most of the Site is farm land with a small pasture south of the farm house and dugout. Generally, the Site appears like present day.
		Grouped Country Residential properties are now visible south and north of the Site. Increased development is visible on the farms located west of Site.
2009	Site	The site appears like 1999 aerial photo and present day. The outline of the former irrigation canal is still visible.
1:20,000	Surrounding Properties	The surrounding properties appear similar to the 1999 air photo.

Based on the review of the historical aerial photographs it appears that the Site was used as rural agricultural farm land from 1950 until present.

It should be noted that aerial coverage from 1955 to 1958 was not available for the Site (period when Mobil Oil C.P.R. Wilson No. 5-4 may have been visible).

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3.3 Fire Insurance Plans

In Canada, Fire Insurance Plans (FIPs) were first published in 1874 and were discontinued from publication in 1975. FIPs were not listed in the *Catalogue of Canadian Fire Insurance 1875-1975* plans and none were available in the collections archived at the University of Calgary Libraries and Cultural Resources, the Glenbow Museum Archives, the Galt Museum Archives or Amec Foster Wheeler's resource library.

3.4 Urban and Rural Directories

Urban and rural directories were not available for the Site.

3.5 Government and Public Agency Records

Amec Foster Wheeler contacted federal, provincial and municipal government and public agencies and researched databases to obtain current and historical publicly-available environmental information about the Site and selected surrounding properties. The responses received from the agencies and obtained from the databases are presented in Table 3. Amec Foster Wheeler's summary of the findings is presented below. Copies of the correspondence are provided in Appendix C.

Table 3: Publicly-Available Environmental Records

National Pollutant Release Inventory (NPRI) – Inventory of pollutant releases (to air, water and land), disposals and transfers for recycling:

A search of the NPRI did not identify any pollution releases for the Site for the years searched (1994 to 2016) within a 300 m radius of the Site.

Treasury Board of Canada - Canadian Federal Contaminated Sites:

A search of the Treasury Board of Canada's online database indicated there were no Canadian Federal Contaminated Sites on the Site or within a 2 km radius of the Site.

Canadian Nuclear Safety Commission (CNSC) - Licensing of Nuclear Facilities:

A search of the CNSC online database did not identify the Site or the current landowner in ongoing, completed or cancelled nuclear environmental assessments.

Alberta Environment and Sustainable Resource Development (AEP) and Environment Canada's Help End Landfill Pollution (H.E.L.P.) Project Registry (1988) – Registered Landfills or Dumps: A search of the H.E.L.P. registry did not identify a landfill within a 300 m⁽¹⁾ radius of the Site Quarter Section (SW ½ 05-008-20-W4M).

AEP - Authorization and Approvals for the Site and Surrounding Properties:

A search of the AEP Authorizations and Approvals database did not identify records of active or inactive authorizations or approvals for the Site or surrounding area.

The Alberta Subdivision and Development Regulation establish set back limits and development restrictions for properties within 300 m and up to 450 m from a landfill, waste site and other facilities.

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AEP Water Well Drilling Reports - Groundwater wells within the Site quarter section:

The search of the AEP groundwater records did not identify any groundwater wells on-Site. Two groundwater wells are located within the SW ¼ 05-008-20-W4M. The closest well is located approximately 10 m south of the Site. The drilling report is incomplete and does not identify purpose or yield, or owner, only a completion depth of 4284 ft. (1305.7 m). This well is suspected to be the Mobil Oil C.P.R. Wilson No. 5-4 well.

The second well is located 15 m south of Site to a completion depth of 265 ft. The well is used for domestic purpose and was installed in 1983 and owned by Lionel Stokell. The static water level is 140 ft. The groundwater drilling reports are available in Appendix C.

Groundwater monitoring wells were not identified on-Site. The Site representative was not aware of any water wells on-Site.

AEP Environmental Site Assessment Repository (ESAR) – *ESAR reports on the Site and neighboring properties:*

A search of AEP's ESAR database did not identify reports for surrounding properties within 150 m of the Site.

AEP Routine Disclosure (RD) and Freedom of Information and Protection of Privacy (FOIP) Office – Potential environmental issues at the Site:

The responses received from the AEP FOIP Office on 27 March 2018 stated there are no routinely available records pertaining to nature and extent of soil, ground and surface water contamination, remedial measures taken to clean-up; status, or external correspondence between submitter and the Department of Environment for the Site.

Alberta Environmental Law Centre (ELC) – Stop orders, control orders, tickets, violations of various Environmental Acts and wellsite reclamation certificates:

The responses received from the ELC stated there had been no enforcement actions issued against the Site owner.

Alberta Energy Regulator (AER) – Information on oil and gas wells, facilities, batteries, incident reports and pipeline township maps:

At the time of issue of the Phase I ESA, response from the AER for the well file had not yet been received, when received the findings will be updated.

Abacus Datagraphics Limited Database (AbaData)² – Oil/gas wells, groundwater wells, pipelines, facilities and batteries, AER waste control location or landfill, or environmental spills:

A search of the Abacus database (AbaData) identified one well (Mobil Oil C.P.R. Wilson No. 5-4) located 10 m south of Site. The well was drilled in 1955 and abandoned in 1958. It is believed that it was an exploration well as no production report is available. The completion depth was 1306.1 m (4285.1 feet).

The lease plan was available and shows that a portion of the lease covered approximately 3 acres of the southern portion of the Site.

There were no records pertaining to environmental spills in relation to the above noted well site.

Petroleum Tank Management Association of Alberta (PTMAA) – Above-ground and Underground Bulk Storage Tanks reported since 1992 or surveyed in 1992:

The response received from the PTMAA did not identify any USTs or ASTs for the Site.

County of Lethbridge – Records of known contamination or compliance concerns, landfills, bylaw complaints or infractions or surface drainage issues:

The County of Lethbridge issued development permits for the Site in September of 1994.

The County also forwarded a letter to Amec Foster Wheeler from Mobil Oil of Canada Ltd. dated August 1, 1957 that indicates an abandoned well was located on LSD. 4-5-8-20-W4M and that all equipment was removed in May and June of 1956.

Abacus Datagraphics obtains their data from the AER, Alberta Energy, Alberta Environment and other sources.

4.0 HISTORICAL ENVIRONMENTAL REPORTS

Amec Foster Wheeler did not receive any previous environmental reports for the Site.

5.0 ENVIRONMENTAL ISSUES INVENTORY

The following sections describe environmental issues evaluated during the course of this assignment.

5.1 Land In-Filling

An irrigation canal was infilled on the Site between 1970 and 1983. The outline of the former canal is visible on current air photos and is presented on Figure 2.

Review of historical development and construction details or an intrusive investigation would be required to confirm the presence or absence of non-native fill materials on the Site. However, there could be no assurances that even an extensive investigation sampling and analytical program would detect impacts to the Site, if any, associated with the fill material. Therefore, no Phase II ESA is recommended to assess the fill at this time.

5.2 Dumps and Landfills

Background

The Subdivision and Development Regulation (43/2002) outlines the development restrictions and setback distances associated with construction of a school, hospital, food establishment, or residence in the vicinity of an active or inactive/closed dump or landfill. Construction, management and closure of a landfill are regulated under the Waste Control Regulation (192/1996) (as amended) and the Alberta Environment Code of Practice for Landfills. Dumps and landfills may represent potential sources of soil and groundwater contamination, or health hazards.

Site

According to the available records, no active or inactive registered landfills or dumps are known to be located on the Site or within a 300 m radius of the Site. There was no evidence of potential landfills or dumps identified on the Site in the historical review or during the Site viewing. The Site Representative was not aware of historical dumps on the Site. Based on the available information, Amec Foster Wheeler does not anticipate dumps or landfills are present on the Site.

5.3 Methane

Background

Methane is a gas derived from the breakdown of organic material or waste under anaerobic conditions (e.g., dumps and landfills). The primary concern with respect to methane is its potential to accumulate in enclosed spaces and explode upon ignition. Methane also acts as an

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asphyxiant, decreasing the oxygen content of the air, which may cause health concerns, including increased breathing and pulse rates, impaired muscular coordination and fatigue. The 2010 National Building Code includes provisions for the construction of new buildings which address soil gas ingress into buildings.

Site

The Site is not located within 500 m of a registered active or inactive landfill or a dump, as discussed in Section 5.2. No evidence of potential landfills or dumps or other sources of potentially buried organics were identified on the Site during the Site viewing or in the historical review. A Groundwater Well Drilling Report lithology was reviewed for a groundwater well located in NW¼ 05-008-20 W4M. The report did not indicate any organic shales within the upper 130 m from ground surface.

The aerial photograph review did identify potential wetlands that have been filled-in on the southern portion of Site, as well as the backfilled irrigation canal.

Based on this available information, there is potential for methane gas to be a potential environmental concern at the Site, however testing would be required to determine the presence or absence and concentration (if present), of methane on Site.

5.4 Radon and NORM

Background

Radon is a colourless, odourless gas that occurs naturally from the breakdown of uranium. Radon can be found in high concentrations where there are soils and rocks containing high levels of uranium, granite, shale, sandstones or phosphate. In open air or in areas with high air circulation, radon is not considered a health hazard. However, in confined spaces (such as basements), radon can concentrate and become a health hazard. According to Health Canada's 2011 Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials (NORM), radon released from soil beneath a building gives rise to an average indoor background concentration of about 45 Bq/m³ (Becquerel's per cubic metre), but much higher values are possible in some areas. The 2010 National Building Code (R2012), includes provisions for the construction of new buildings which address soil gas ingress into buildings. In addition, the 2014 Alberta Building Code incorporated these provisions, which require all buildings to include a "rough-in" for a subslab depressurization system for protection against potential radon ingress. Municipalities across the province have been incorporating the enforcement of these protective measures as part of building development permit applications at varying timelines.

Health Canada and Canadian Mortgage and Housing Corporation (CMHC) have issued a guide and other papers, which address radon concerns (CMHC 2007). Health Canada recommends that the level of radon in the air in a home in a normal living area be no more than 200 Bq/m³ per year and recommends that action be taken to reduce the radon level to a value as low as reasonably achievable, if values are above this level. If the annual radon concentration reaches or exceeds 600 Bq/m³, action should be taken sooner and within one year to reduce the value.

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Health Canada (2011) also recommends that all workplaces be assessed for potential elevated levels of radon. Derived Working Limits (DWLs) have been determined and provide an estimate of dose from the quantities that may be directly measured in the workplace. The investigative DWL for radon in the workplace is 200 Bq/m³. Where the annual average concentration of radon gas is expected to be above 200 Bq/m³, measurements should be made to estimate the average annual radon gas concentration. Radon is also governed by the *Occupational Health and Safety Regulation, Alta. Reg. 62/2003*.

A 2011 Radon Potential Map of Canada, published by Radon Environmental Management Corporation, identified three zones of the relative radon hazard across Canada based on geologic conditions (i.e., geology, geophysics and geochemistry). The regions depicted in the map reflect conditions where higher radon readings might be found in Zone 1 (High) versus Zone 2 (Elevated) and Zone 3 (Guarded), respectively. A radon survey of private Canadian residences was published in 2012 by Health Canada in connection with Health Canada's National Radon Program. The survey included the evaluation of a select number of private homes from regional health units across Canada. The study estimated that of the 121 health regions, 92.6% had homes with radon concentrations above the Canadian Radon Guideline of 200 Bq/m³. In Alberta, employers are required to develop and implement safe work practices and procedures for all workers who deal with, or come into contact with a radiation source under the OHS regulations.

Naturally-occurring radioactive material (NORM) is material that contains radioactive elements derived from a natural source. NORM primarily contains uranium and thorium which release radium, radon and potassium as they decay. NORM may be found in its natural state in rocks or sand, but can also be associated with oil and gas production residue as a mineral scale in pipes, as a sludge or on contaminated equipment. According to the Canadian Nuclear Safety Commission, NORM can also be present in consumer products such as bricks and cement blocks, granite counter tops, phosphate fertilizers, tobacco products, etc. (see: http://nuclearsafety.gc.ca/eng/resources/fact-sheets/naturally-occurring-radioactive-material.cfm). The federal government, through Health Canada, issued the document "Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials (revised 2011)" which was last published in 2014.

In Alberta, employers are required to develop and implement safe work practices and procedures for all workers who deal with, or come into contact with a radiation source under the OHS regulations.

Site

The Site falls into Zone 1 (High) radon potential within the Chinook Health Region (Alberta Health Services Southern Region), however a radon survey of private Canadian residences was published in 2012 by Health Canada in connection with Health Canada's National Radon Program for the Chinook Health Region, which indicated that 91% of the respondents were below the Canadian Radon Guideline of 200 Bg/m³.

Bedrock Geology of Alberta, Map No. 600 published by Alberta Geological Survey in 2013 was reviewed and indicates that the bedrock geology for the Site is the Bears Paw Formation (KBp),

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characterized by dominantly dark grey to brown mudstone with concretionary sideritic bentonite concretionary layers; concentrations locally yield ammonites; marine to marginal marine in origin. Based on the bedrock information, and the anticipated thickness of overlying fine-grained sediments, and results from the 2012 Radon survey for the Chinook Health Region, naturally-occurring radon is not expected to be a concern at Site. A radon survey would be required to definitively determine the presence or absence of radon and the concentrations if present, however based on available information, NORM are not considered a concern on Site.

5.5 Water and Groundwater Wells

Background

The Water Act outlines the regulatory requirements for obtaining water from natural water systems in Alberta. A water well license, permit or approval must be obtained for groundwater wells. Unused groundwater wells must be properly decommissioned in accordance with the Water (Ministerial) Regulation 205/1998 (as amended up to and including Alberta Regulation 185/2015). Groundwater wells in themselves do not typically represent a contaminant source of environmental concern; however, they can act as a conduit for liquid-phase contamination.

Site

The search of the AEP groundwater records did not identify any groundwater wells on-Site. Two groundwater wells are located within the SW ¼ 05-008-20-W4M. The closest well is located approximately 10 m south of the Site (Well ID: 118269). The drilling report is incomplete and does not identify purpose or yield, or owner, only a completion depth of 4284 ft. This well is suspected to be the Mobil Oil C.P.R. Wilson No. 5-4 well.

The second well is located 15 m south of Site to a completion depth of 265 ft. (Well ID: 118268). The well is used for domestic purpose and was installed in 1983 and owned by Lionel Stokell. The static water level is 140 ft. The groundwater drilling reports are available in Appendix C.

Groundwater monitoring wells were not identified on-Site. The Site representative was not aware of any water wells on-Site.

5.6 Pipelines and Oil and Gas Wells

Background

Oil and gas wells can represent an environmental concern from a number of related sources including drilling mud, sumps/earthen pits, flare pits/stacks, produced fluids, storage tanks, pipelines, chemicals and waste, etc.

Ground disturbance in the right-of-way of a pipeline is defined by and regulated under the *Pipeline Act RSA 2000* (revised 2014) and the *Pipeline Regulation Alta. Reg. 91/2005* (as amended). Ground disturbance must be completed in accordance with the applicable Alberta AER regulations and must meet the requirements of the licensee. Ground disturbance may not be undertaken within the right-of-way for a pipeline without the approval of the licensee of the pipeline. If approval cannot reasonably be obtained from the licensee, approval must be obtained from the AER prior to the commencement of any ground disturbance. Reclamation of

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pipelines in Alberta is regulated under the *Environmental Protection and Enhancement Act* the *Public Lands Act*, the *Water Act* and the 1994 *Environmental Protection Guidelines for Pipelines*.

Pipeline leaks may be caused by a single catastrophic event or by a combination of events including excavation damage, corrosion, material/weld defects, or vandalism. Indicators of a possible pipeline failure or leak in the environment can include: dead or discoloured vegetation, sunken or depressed soils along the right-of-way, pools of hydrocarbon liquid at the surface of the right-of-way, odours, surface gas bubbles or clouds of vapour.

Site

A search of the Abacus database (AbaData) identified one well, Mobil Oil C.P.R. Wilson No. 5-4, located 10 m south of Site (Photo #4 Appendix D and Figure 2). The well was drilled in 1955 and abandoned in 1958. It is believed that it was an exploration well as no production report is available. The completion depth was 1306.1 m. The lease plan was available and shows that a portion of the lease covered approximately 3 acres of the southern portion of the Site.

The AbaData records are available in Appendix C. There were no records pertaining to environmental spills in relation to the above noted well site, however environmental impacts can result from the drilling and production process, specifically in areas surrounding the well head, flare pits and sumps.

Potential impacts can include metals, petroleum hydrocarbons and/or salinity parameters criteria exceedances.

Based on the limited information available for the former well site, including specific operations, production activity, spills, remediation activities (if completed), reason for closing and planned activities for the property, along with overlapping of the lease and close proximity of the well to the Site (10 m south), the former Mobile Oil well represents an on and off-site APEC. Further investigation (Phase II ESA) would be required to determine if this property has affected the Site.

5.7 Chemical Inventory, Storage and Handling

Background

In Alberta, the storage, handling and transportation of hazardous chemicals is regulated by the Occupational Health and Safety Regulation, Alta Reg. 62/2003, the 2014 Alberta Fire Code (as amended), Workplace Hazardous Materials Information System (WHMIS-2015) and the *Transportation of Dangerous Goods Act* (TDG). WHMIS 2015 incorporates the Globally Harmonized System of Classification and Labelling for chemicals (GHS). The historical and current chemical handling and storage practices as well as incidents or accidents are factors which will contribute to the likelihood of chemical impacts to a property. The effect of chemical drips, leaks, spills or releases will depend on a number of influencing factors. The type and volume of chemical, duration of the discharge, type and condition of the affected substance, ambient and ground temperatures, and precipitation are a few of these factors.

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Site

No chemical storage or handing was identified on-Site. Fertilizers and pesticides are used in farming applications however at the time of the Site visit the farm fields were leased out and no fertiliser or pesticide was stored on-Site.

5.8 Storage Tanks

Background

Fuel storage at industrial facilities in Alberta is regulated by the following regulations and codes and agencies: the 2010 National Fire Code of Canada; the 2014 Alberta Fire Code; the Waste Control Regulation, Alta Reg. 192/1996 (as amended), the 2003 Environmental Code of Practice for Above-ground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, the PTMAA and the local Fire Departments. In general, the codes and regulations apply to storage tanks associated with flammable and combustible liquids, and chemicals and include petroleum products as well as some thinners, solvents and inks. The Alberta Fire Code provides construction requirements of storage tanks and associated connections. Under the authority of Alberta Labour, which has delegated this authority to the PTMAA, all underground storage tanks and above-ground storage tanks with a capacity of 2,500 L or greater, excluding agricultural properties, unrefined petroleum products, and upstream oil and gas facilities require registration with the PTMAA. Both of the PTMAA databases (active tank sites and inventory of abandoned tank sites) are not complete.

The main limitation of these databases is that they only include information reported through registration or a survey of abandoned sites completed in 1992 and should not be considered as a comprehensive inventory of all past or present storage tank sites. Registration with PTMAA was not required for agricultural tanks and PTMAA only maintains records for flammable refined petroleum hydrocarbons and waste oil. Upstream or midstream oil and gas industry tanks are regulated through AER Directive 055: Storage Requirements for the Upstream Petroleum Industry. The PTMAA cannot guarantee that tanks do not or have not existed at this location. Information in the databases is based on information supplied by the owner and the PTMAA cannot guarantee its accuracy.

Site

A search of the PTMAA did not identify any active or abandoned tanks for the Site. Storage tanks and pipelines were not identified during the Site visit. There were no ASTs observed during the Site visit.

The detailed response received from the PTMAA is located in Appendix C of the subject report.

5.9 Pesticides

Background

In Alberta, storage, handling and use of pesticides (herbicides, insecticides, fungicides and rodenticides) are regulated under the Alberta *Environmental Protection and Enhancement Act*, the *Pesticide (Ministerial) Regulation 43/97 (1997a)*, the *Pesticide Sales Handling, Use and*

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Application Regulation 24/97 (1997c) and the Environmental Code of Practice for Pesticides. The human health concerns associated with pesticides are varied, depending on the specific pesticide. They can range from non-carcinogenic effects such as hepatotoxicity to carcinogenic effects.

Site

There was no evidence of pesticide storage or use noted during the Site inspection. The farm fields are leased out yearly. No fertilizer of pesticide was stored on Site.

5.10 Non-Hazardous and Hazardous Waste

Background

The Waste Control Regulation (192/1996) (as amended) of the EPEA and the TDG Act outline the specific regulatory requirements of waste (non-hazardous, hazardous and hazardous recyclables) generation, handling, transporting and disposal in Alberta. Section 179 of the EPEA requires that a Personal Identification Number be obtained from AEP if the facility generates, transports, stores or disposes of hazardous waste beyond the small quantities exemption listed in the Waste Control Regulation. The TDG Act requires that anyone transporting hazardous wastes and recyclables, which are considered dangerous goods, must carry a current certificate of TDG training.

Site

There were no areas of potential environmental concern associated with waste handling or disposal, or evidence of unauthorized dumping observed or reported during the Site reconnaissance

5.11 Air Emissions

Background

Requirements for an Air Emissions Approval in Alberta are outlined in the *Environmental Protection and Enhancement Act* (EPEA), specifically within the *Activities Designation Regulation (276/2003*). The Substance Release Division of the Activities Designation Regulation specifically identifies substance release activities that require air emissions approvals. The operation of fuel burning equipment for comfort heating in a building does not require an approval under the EPEA.

Site

There are no known historical or current activities which generate emissions from the Site, which would require an air emissions approval. Amec Foster Wheeler has not identified a source of air emission, exempt from an approval, which represents a potential source of environmental concern to the Site.

5.12 Storm, Sanitary and Process Wastewater

Background

The Water Resources Act outlines the regulatory requirements for discharging wastewater to natural water systems in Alberta. The requirements for approval, with respect to wastewater and stormwater drainage in Alberta, are outlined in the EPEA, specifically within the Activities Designation Regulation (276/2003). The Substance Release Division of the Activities Designation Regulation specifically identifies substance release activities, which require wastewater and stormwater drainage approvals. Regulatory control of wastewater and stormwater discharges is regulated by the Alberta Wastewater and Storm Drainage Regulation (119/1993) (as amended) and the Wastewater and Storm Drainage (Ministerial) Regulation (120/1993). The release of normal domestic sewage and normal stormwater to the municipal sanitary and storm sewerage systems does not require an approval under EPEA. Control of discharges to the municipal sewerage system is the responsibility of the municipality or municipal (city) government.

Site

Water is supplied to Site by pumping it form the SMRID irrigation canal and storing it in the 500,000 gallon dugout. A septic field is located on the east side of the house. All stormwater is directed to the county ditch located along the west side of the Site.

Amec Foster Wheeler did not identify areas of potential environmental concern associated with Site drainage.

5.13 Spills, Surface Staining and Stressed Vegetation

Background

The *Transportation of Dangerous Goods Act*, 1992, S.C. 1992, c. 34, and the Transportation of Dangerous Goods (TDG) Regulations (SOR/2001 – 286) identify the nine classes of regulated substances. The regulation outlines under what conditions a release or 'spill' of a substance into the environment must be reported to the appropriate local authorities and if applicable, to AEP.

The properties of a substance, in combination with the physical condition and properties of the material which are stained, will affect the nature, degree and extent of impact caused by a release. Surface discolouration or staining of the ground surface as well as surface films, odour, or textural anomalies may be representative of either a one-time spill or release event or the result of long-term spills, drips or leaks which may have occurred during storage, decanting or filling. Localized or widespread stressed vegetation, evident by foliage discolouration, changes in vegetation cover, areas of predominant chemical tolerant plant species, or areas devoid of vegetation may also be evidence of subsurface impacts associated with historical spills or releases. The application of new gravel or surface materials or the relocation of the filling/ decanting stations or storage facilities can make evidence of a potential subsurface issue difficult to identify.

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Site

There was no evidence of spills, surface staining or stressed vegetation during the Site reconnaissance.

The Site Representative was not aware of reportable spills or leaks occurring on the Site.

5.14 Mould

Background

Many different mould species can cause health concerns, especially in indoor environments. Moulds can produce allergens that can trigger allergic reactions or even asthma attacks in people allergic to mould. They can cause potentially life-threatening infections in people with compromised immune systems. Some mould species such as *Aspergillus versicolor* and *Stachybotrysatra* produce toxins that can have both acute and chronic health effects.

Different species can grow on a variety of substrates such as wood, paper, carpet, foods, and insulation. Moulds can grow on just about any organic substrate as long as moisture and oxygen are present. Controlling moisture can control mould growth but spores already present will not be eliminated. Mould can often be hidden from immediate view and can grow on the undersides of carpet, ceiling tiles or drywall. In damp areas or places where water leaks are known to have occurred, mould growth should be suspected. Qualified Occupational Health and Safety personnel can confirm this by inspection.

Care must be taken in the removal or clean-up of mould affected building materials. The minimum personal protective equipment recommended is eye-goggles, gloves, and an N-95 respirator. It is particularly important not to raise dust during the removal, as this will spread the spores. Amec Foster Wheeler recommends that only qualified people be involved in the removal of mould-affected materials.

Suspected mould growth on building materials is identified by visual growth or evidence of water intrusion/damage. Microbial growth may occur within enclosed spaces and may not be evident during a walk through building assessment. Removal of materials containing mould should be done in accordance with *Occupational Health and Safety Regulation, Alta Reg. 62/2003* (with amendments up to and including *Alta. Reg. 182/2013*) and the *Occupational Health and Safety Code* 2009.

Site

Mould or conditions conducive to mould growth were not observed during the Site viewing; the Site Representative was not aware of mould or locations of potential mould growth on the Site.

5.15 Equipment Containing Regulated Substances

Background

Hydraulic fluids include a large group of liquids the most common of which include mineral oils, organophosphate ester, and polyalphaolefin. Some fluids have an odour, some do not, and some are combustible and some are not. Hydraulic fluids are either petroleum hydrocarbon

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derivatives or man-made. The health and environmental effects of hydraulic fluids is also variable; however, their carcinogenicity has not been evaluated. In the environment, hydraulic fluids tend to degrade rapidly but may be persistent for more than a year. The toxic effects of hydraulic fluids on humans and other organisms are poorly understood.

Building operating equipment such as hydraulic lift equipment, in-ground vehicle hoists, hydraulic piston-style elevators, some escalators, and hydraulic dock levellers operate with hydraulic fluids and possibly lubricants within their system and in reservoirs. The construction of a building and installation of these types of equipment typically include in-ground hydraulic cylinders and/or below floor pits or vaults which are either lined with concrete or open to the soils or aggregate material beneath a building floor. The equipment requires regular inspection and maintenance. In the event of manufacturing defects, damage or as the equipment deteriorates over time, seals and valves may fail and fluids can be released.

Mercury has historically been employed in the construction of thermostats, switches and lamps. Commercial switches and thermostats reportedly may contain 2 to 18 mg of mercury with industrial switches and equipment containing 5 kg or more. Older mercury-containing lamps can contain up to 80 mg of mercury per lamp. Fluorescent lamps manufactured since 2000 have in the order of 4 to 12 mg of mercury per lamp. Other types of lamps, such as metal-halide and high-pressure sodium vapour, can also contain mercury in the order of 20 to 250 mg/lamp. Mercury was also commonly added to leaded paints as a fungal retardant (biocide); however, it is not commonly tested for as the proper handling and disposal of lead-containing paints would typically minimize any safety or disposal issues for mercury. The Surface Coating Materials Regulations (April 2005 as amended in 2010) restricted the maximum total mercury content of paints and other liquid coating materials to 10 mg/kg in or around premises attended by children or pregnant women.

Ionization smoke detectors use a small radioactive source in detecting smoke particles. The radionuclide used is an oxide of Americium-241, which is bonded to a metallic foil and sealed in an ionization chamber. Americium-241 emits alpha particles and low-energy gamma rays. The smoke detector alarm is activated when the flow of alpha particles is interrupted by smoke particles. When smoke detectors are used in accordance with manufacturer requirements and are not opened, they do not pose a radiation human health risk. The Atomic Energy Control Board (AECB) achieves regulatory control of nuclear materials and nuclear facilities through a comprehensive licensing system, which is administered through the cooperation of federal and provincial government departments such as health, environment, transportation and labour.

The handling and disposal of mercury wastes are regulated by the Waste Control Regulation 192/1996 (as amended) and the Canadian Environmental Protection Act. Disposal of small quantities of radioactive/liquid mercury waste (one to two smoke detectors or thermostats), and mercury vapour waste (10 or less lamps), into non-hazardous waste receptacles is generally acceptable. Larger quantities are regulated for disposal as Special Wastes.

Site

Equipment potentially containing liquid and vapour mercury (thermostats and light tubes and bulbs), and small quantities of radioactive material (smoke detectors) were identified within the

Site building. Amec Foster Wheeler recommends that when this equipment is serviced or removed during routine maintenance, renovation, alterations or demolition of the building, the units (>10 bulbs/tubes and/or >two smoke detectors/thermostats) are segregated, packaged to avoid breakage and disposed of in accordance with the waste management regulations.

5.16 Equipment Containing Ozone-Depleting Substances

Background

An ozone-depleting substance (ODS) refers to any substance containing chlorofluorocarbon (CFC), hydrochlorofluorocarbon (HCFC), Halon or any other material capable of destroying ozone in the atmosphere. ODSs have been used in rigid polyurethane foam and insulation, packaging, laminates, aerosols, air conditioning and refrigerants, propellants, fire extinguishers, cleaning solvents, and in the sterilization of medical equipment. Federal regulations introduced in 1995 required the elimination of production and import of CFCs by 01 January 1996 (subject to certain essential uses), a suspension on the production and import of HCFC-22 by 01 January 1996, and the complete elimination of HCFC-22 by the year 2020. The HPA does not require the licensing, approval, or registration of property at which ODSs have been identified. However, Alberta regulations require the licensing of contractors who handle ODSs through equipment servicing.

Site

Amec Foster Wheeler recommends that when equipment containing refrigerants are serviced or removed during maintenance, renovation, alteration or demolition of the building, the units be inspected by qualified personnel and the presence or absence of ODS confirmed. If the units contain ODSs, they should be handled and disposed of in accordance with the ODS regulations.

5.17 Equipment Containing Polychlorinated Biphenyl Fluids

Background

Polychlorinated biphenyl (PCB) containing products were manufactured for use in applications where stable, fire-resistant, and heat-transfer properties were demanded up to approximately 1980. Most PCBs were sold for use as dielectric fluids (insulating liquids) in electric transformers and capacitors. Other uses included dye carriers in carbonless copy paper, heat transfer fluid, hydraulic fluid, some electrical and communication components, plasticizers, paints, coatings and sealants, plastics, rubbers, lubricants, wax extenders, adhesives/mastic, caulking and grout, roofing and siding materials, insulation materials and other materials that required durability and resistance to thermal and photo-reactive processes and weathering for industrial applications.

In 1977, the Government of Canada banned the importation, manufacture and sale for reuse of PCBs. Since 1977, the government has adopted various regulations and taken measures to manage PCB manufacture, processing, use, import, export, sale, storage, transportation, destruction and releases into the environment. PCBs are currently regulated under the PCB Regulations (SOR/2008-273 as amended) of the 1999 Canadian Environmental Protection Act. The PCB Regulations set deadlines for ending the use of PCBs, eliminating all PCBs and

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equipment containing PCBs currently in storage, and limiting the period of time PCBs can be stored before being destroyed. These deadlines apply based on the liquid or solid state of the PCB, the concentration of the PCB or the type of equipment or materials the PCB is contained in. In Alberta, waste (liquid, solid, substance or equipment) containing PCBs at a concentration equal to or greater than 50 mg/kg is hazardous waste and is regulated under the *Waste Control Regulation (Alberta Regulation 192/1996)*.

Human health concerns associated with PCBs include carcinogens, if they are ingested, and toxic by-products including furans and dioxins, if they are burned.

Site

Transformers were not identified on-Site during the Site assessment. It is unlikely that PCBs are present on Site.

5.18 Asbestos-Containing Materials

Background

Asbestos-containing materials (ACMs) were generally discontinued from use in Canada in the late 1970s to early 1980s, although non-friable asbestos is still found in many more recent buildings. ACMs are fibrous hydrated silicates, and can be found in building materials as either 'friable' or 'non-friable' asbestos products. Friable asbestos (material containing 0.1% or greater asbestos fibres), refers to materials that can be readily crumbled using hand pressure, separating asbestos fibres from the binding materials with which they are associated. Non-friable material (material containing 1.0% or greater asbestos fibres) refers to asbestos that is associated with a binding agent (such as tar or concrete), preventing ready release of airborne fibres. Friable asbestos is commonly found in boiler and pipe insulation. Non-friable or bound asbestos is typically found in roofing tars, floor tiles, and precast asbestos concrete products commonly referred to as 'transite'. The only method of confirming whether materials are asbestos-containing is to sample and analyze the suspect materials. Any potential ACM must be treated as an ACM unless laboratory analysis indicates otherwise. Alberta Labour and the Alberta Asbestos Abatement Manual state that asbestos/asbestos fibres are not permitted in or to enter into building air plenums. Employees present in buildings with known or suspect ACMs must be informed and all ACMs must be identified. Materials that are identified as containing asbestos which are in poor condition should immediately be managed, either by proper encapsulation or removal. ACMs will also become an issue during renovation, alteration, maintenance or demolition activities during which these materials would be disturbed. Removal of materials containing asbestos should be done in accordance with Alberta Human Resources & Employment Health and Safety, Alberta Asbestos Abatement Manual current edition, Occupational Health and Safety Regulation, Alta Reg. 62/2003 and the Occupational Health and Safety Code 2009.

Site

Based on the construction date of the Site building (1996), there is a possibility of non-friable asbestos-containing materials (ACMs) being present in, but not limited to, the roofing materials, vinyl flooring and mastics, caulking compounds, drywall joint compounds, floor levelling

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compounds, and penetration mastics. Amec Foster Wheeler recommends that if these items or other suspect materials are to be disturbed during routine maintenance, renovations, alterations or demolition, the materials should be assessed, sampled and tested by qualified environmental health practitioners in accordance with the asbestos management and waste regulations.

5.19 Lead Containing Paint

Background

Lead was used extensively for pigmentation, sealing, and as a drying agent in oil based paints up until the early 1950s. Exterior paints typically contained up to 60% lead by dry weight. Beginning in the 1960s, a decrease in the content of lead employed in paints was initiated. In 1976, the federal government passed the *Liquid Coating Materials Regulations* under the Canadian *Hazardous Products Act* limiting the amount of lead for interior paints to 0.5% by weight of the dried paint film. Exterior and commercial paints could still contain lead and these lead paints were routinely used in buildings until the early 1980s. In 2005, under the *Hazardous Products Act*, the federal government issued the *Surface Coating Materials Regulations SOR/2010-224*, which limited the amount of lead permissible in paints and other surface coating materials to 0.009% lead by dry weight (90 mg/kg). This reduction does not generally apply to surface coating applied to buildings or other structures used for agricultural or industrial purposes as an anti-weathering or anti-corrosive coating.

The presence of lead-containing paints (LCPs) in buildings represents the most significant hazard where persons, notably small children, may ingest peeling or flaking LCPs. The generation of airborne lead-containing dust created during renovation, demolition, or construction activities (i.e., during sanding and grinding), or like actions on deteriorated painted surfaces (peeling/flaking) also comprises a potential health concern. The Alberta Occupational Health and Safety Regulation occupational exposure limits for an eight-hour period for lead in air is 0.05 mg/m³. The Canadian Council of Ministers of the Environment has also established allowable concentrations of lead in soil, sediment and water.

The presence of LCPs can only be verified through sampling and analysis of suspect paint samples. If present LCPs may be addressed through the implementation of appropriate management or abatement plans to protect the health of persons working at the property, as required under the *Occupational Health and Safety Act*. Appropriate management and disposal plans are also required where maintenance, alteration, renovation, or demolition activities undertaken at a property may disturb these lead-containing materials and generate waste materials as required under the *Occupational Health and Safety Code 2009*.

Site

Based on the construction date of the Site building (1996), although unlikely, there is the potential for lead-containing paints to be present within the building. Amec Foster Wheeler recommends that when potential lead-containing paints are to be disturbed during routine maintenance or renovations, alterations or demolition of the building, the painted surfaces be assessed by a qualified environmental practitioner prior to disturbance and if required, abated in accordance with the occupational health and safety and waste control regulations.

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5.20 Urea Formaldehyde Foam Insulation

Background

Urea Formaldehyde Foam Insulation (UFFI) was widely used as an insulating material in the 1970s and up until December 1980, when a ban on the use of UFFI was enacted under the HPA. UFFI is low-density foam that is formed by the polymerization of urea and formaldehyde liquids. Some buildings were constructed with UFFI. In addition, UFFI was commonly injected through walls by drilling injection holes, typically in roof structures, ceilings and overhangs. The HPA does not require the licensing, approval or registration of a property where UFFI has been identified except for residential properties. The human health concerns associated with UFFI are the release of gases as the UFFI cures, ages and degrade. Sampling and analysis is required to confirm the presence of UFFI in suspect materials.

Site

The Site building was constructed in 1996. No exposed wall cavities, insulation or evidence of potential UFFI applications were identified on the Site. Based on the available information, UFFI is not expected to be present.

5.21 Surrounding Land Uses

Amec Foster Wheeler visually-inspected the surrounding land uses on 07 November 2016 via car and on foot to identify current surrounding land uses and to identify off-site issues of potential environmental concern to the subject Site. Surrounding lands were viewed from the boundaries of the subject Site and from publicly-accessible areas and Amec Foster Wheeler did not enter any of the observed off-site buildings.

As discussed in Section 2.2, the regional groundwater in the area of the Site is anticipated to flow towards the west. However, a groundwater study of the Site has not been completed to date to confirm this assumption. The Site and surrounding lands are illustrated on Figure 2. A summary of observations regarding surrounding land use is provided below.

North

A farm house, with agricultural land, borders the Site to the North (Photo #8, Appendix D).

Amec Foster Wheeler did not identify off-site issues on the north-surrounding properties with the potential to pose an off-site APEC/IPEC to the Site.

East

The SMRID canal borders the Site to the east (Photo #9, Appendix D).

Amec Foster Wheeler did not identify off-site issues on the east-surrounding properties with the potential to pose an off-site APEC/IPEC to the Site.

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South

Land to the south of the Site includes the small irrigation canal followed by the grouped country residential subdivision. (Photo #3, #10 and #11, Appendix D).

The Mobil Oil C.P.R. Wilson No 5-4 well was located south of the Site from 1955 to 1958. The lease extended on-Site and covered approximately 3 acres of the southern portion (Figure 2). There were no records pertaining to environmental spills in relation to the above noted well site, however environmental impacts can result from the drilling and production process, specifically in areas surrounding the well head, flare pits and sumps. Potential impacts can include metals, petroleum hydrocarbons and/or salinity parameters. criteria exceedances

Based on the limited information available for the former well site, including specific operations, production activity, spills, remediation activities (if completed), reason for closing and planned activities for the property, along with overlapping of the lease and close proximity of the well to the Site (10 m south), the former Mobile Oil well represents an on and off-site APEC. Further investigation (Phase II ESA) would be required to determine if this property has affected the Site.

West

The Site is bordered to the west by Range Road 20-5 followed by Rural Agricultural land (Photo #12, Appendix D).

Amec Foster Wheeler did not identify off-site issues on the west-surrounding properties with the potential to pose an off-site APEC/IPEC to the Site.

Assumptions

These opinions as described above are based on the assumption that information provided to Amec Foster Wheeler, and information presented by others in reports to various agencies, is accurate and complete.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The on-site and off-site environmental concerns are summarized as follows and include the recommendations for further work or actions to be considered to address IPECs or APECs which are summarized as follows.

Methane

The aerial photograph review did identify potential wetlands that have been filled in on the southern portion of Site, as well as a backfilled irrigation canal that crossed the Site from north to south. A methane survey would be required to determine the presence or absence and actual concentrations of methane at the Site or within Site buildings.

Radon

Shales and coal beds which may be present in the subsurface are a potential source for radon generation. There is, therefore, a potential for radon concentrations present in the subsurface to exceed the annual occupational exposure limit on-site. However, a radon survey would be required to determine the actual concentrations in the buildings on-site.

Equipment Containing Regulated Substances

Equipment potentially containing liquid and vapour mercury (thermostats and light tubes and bulbs), and small quantities of radioactive material (smoke detectors) were identified within the Site building. Amec Foster Wheeler recommends that when this equipment is serviced or removed during routine maintenance, renovation, alterations or demolition of the building, the units (>10 bulbs/tubes and/or >two smoke detectors/thermostats) are segregated, packaged to avoid breakage and disposed of in accordance with the waste management regulations.

Ozone-Depleting Substances

Amec Foster Wheeler recommends that when equipment containing refrigerants are serviced or removed during maintenance, renovation, alteration or demolition of the building, the units be inspected by qualified personnel and the presence or absence of ODS confirmed. If the units contain ODSs, they should be handled and disposed of in accordance with the ODS regulations.

Asbestos-Containing Materials

Based on the construction date of the Site building (1996), there is a possibility of non-friable asbestos-containing materials (ACMs) being present in, but not limited to, the roofing materials, vinyl flooring and mastics, caulking compounds, drywall joint compounds, floor levelling compounds, and penetration mastics. Amec Foster Wheeler recommends that if these items or other suspect materials are to be disturbed during routine maintenance, renovations, alterations or demolition, the materials should be assessed, sampled and tested by qualified environmental health practitioners in accordance with the asbestos management and waste regulations.

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Lead-Containing Paint

Based on the construction date of the Site building (1996), although unlikely, there is the potential for lead-containing paints to be present within the building. Amec Foster Wheeler recommends that when potential lead-containing paints are to be disturbed during routine maintenance or renovations, alterations or demolition of the building, the painted surfaces be assessed by a qualified environmental practitioner prior to disturbance and if required, abated in accordance with the occupational health and safety and waste control regulations.

Pipelines and Oil and Gas Wells

A search of the Abacus database (AbaData) identified one well, Mobil Oil C.P.R. Wilson No. 5-4, located 10 m south of Site. The well was drilled in 1955 and abandoned in 1958. It is believed that it was an exploration well as no production report is available. The completion depth was 1306.1 m. The lease plan was available and shows that a portion of the lease covered approximately 3 acres of the southern portion of the Site.

There were no records pertaining to environmental spills in relation to the above noted well site, however environmental impacts can result from the drilling and production process, specifically in areas surrounding the well head, flare pits and sumps. Potential concerns can include elevated metals, petroleum hydrocarbons and/or salinity concentrations.

Based on the limited information available for the former well site, including specific operations, production activity, spills, remediation activities (if completed), reason for closing and planned activities for the property, along with overlapping of the lease and close proximity of the well to the Site (10 m south), the former Mobile Oil well represents an on- and off-site APEC. Further investigation (Phase II ESA) would be required to determine if this property has affected the Site.

In summary, based on Amec Foster Wheeler's review of the available information for the Site and surrounding properties as presented herein,

- i) a Phase II intrusive environmental investigation is recommended.
- ii) recommendations pertaining to the assessment of methane, radon and potential hazardous building materials as described in this report should also be considered.

The opinions in this report are based on the assumption that information provided to Amec Foster Wheeler, and information presented by others in reports to various agencies is accurate and complete.

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7.0 CLOSURE

This report was prepared for the exclusive use of Martin Geomatic Consultants Ltd. and is intended to provide an environmental assessment of the property described by short legal 4;20;8;5;SW located near Lethbridge, Alberta, at the time of the Site visit. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third party. Should additional parties require reliance on this report, written authorization from Amec Foster Wheeler will be required. With respect to third parties, Amec Foster Wheeler has no liability or responsibility for losses of any kind whatsoever, including direct or consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The report is based on data and information collected during the Phase I ESA of the property conducted by Amec Foster Wheeler. It is based solely on the conditions of the Site encountered at the time of the Site visit on 29 March 2018, supplemented by a review of historical information and data obtained by Amec Foster Wheeler as described in this report, and discussion with a representative of the owner/occupant, as reported herein. Except as otherwise maybe specified, Amec Foster Wheeler disclaims any obligation to update this report for events taking place, or with respect to information that becomes available to Amec Foster Wheeler after the time during which Amec Foster Wheeler conducted the Phase I ESA.

In evaluating the property, Amec Foster Wheeler has relied in good faith on information provided by other individuals noted in this report. Amec Foster Wheeler has assumed that the information provided is factual and accurate. In addition, the findings in this report are based, to a large degree, upon information provided by the current owner/occupant. Amec Foster Wheeler accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted.

Amec Foster Wheeler makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and change. Such interpretations and regulatory changes should be reviewed with legal counsel.

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This Report is also subject to the further Standard Limitations contained in Appendix F.

We trust that the information presented in this report meets your current requirements. Should you have any questions, or concerns, please do not hesitate to contact the undersigned.

With appreciation,

Amec Foster Wheeler Environment & Infrastructure a Division of Amec Foster Wheeler Americas Limited

Reviewed by:

Scott Roughead C.E.T. Senior Environmental Technologist

Soft LA

ASET Member#: 98653

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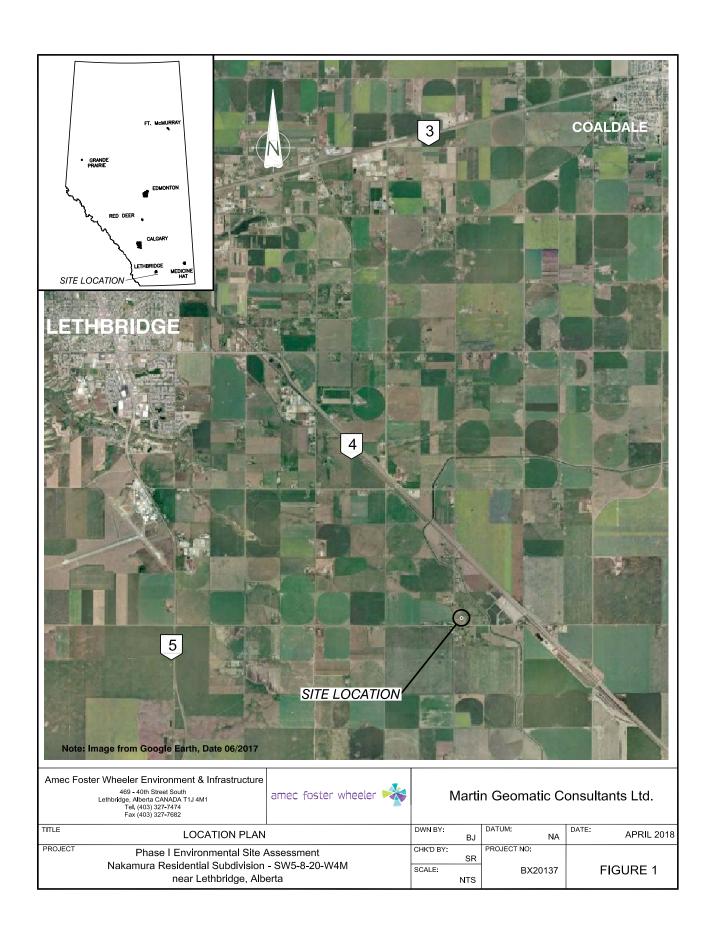
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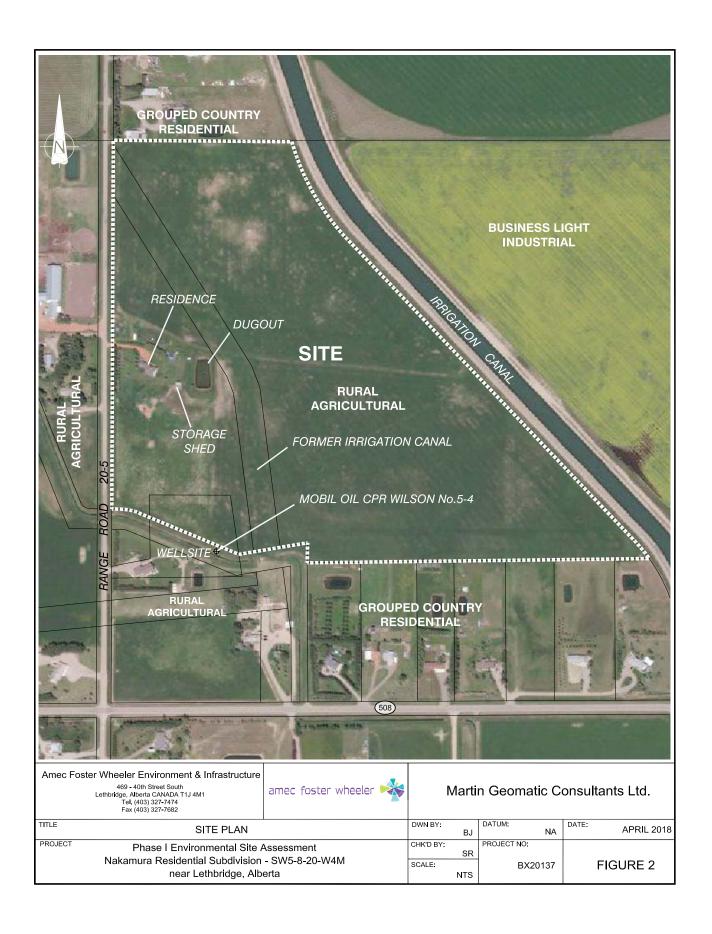
Page 31



Figures

Figure 1: Location Plan Figure 2: Site Plan







Appendix A

Land Titles



LAND TITLE CERTIFICATE

S

LINC SHORT LEGAL TITLE NUMBER 0020 144 473 4;20;8;5;SW 051 470 968

LEGAL DESCRIPTION

MERIDIAN 4 RANGE 20 TOWNSHIP 8

SECTION 5

THAT PORTION OF THE SOUTH WEST QUARTER LYING TO THE WEST OF THE 65 METRE CANAL RIGHT OF WAY AND LYING NORTH OF THE SOUTH HALVES OF LEGAL SUBDIVISIONS 3 AND 4, AND LYING TO THE NORTH OF THE 30 METRE CANAL RIGHT OF WAY ON PLAN 8210212
CONTAINING 27 HECTARES (66.8 ACRES) MORE OR LESS EXCEPTING THEREOUT:

THE NORTH 15 METRES CONTAINING 0.37 OF A HECTARE MORE OR LESS EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: COUNTY OF LETHBRIDGE

REFERENCE NUMBER: 941 226 700

REGISTERED OWNER(S)

REGISTRATION DATE(DMY) DOCUMENT TYPE VALUE CONSIDERATION

051 470 968 10/12/2005 TRANSFER OF LAND \$414,000 \$414,000

OWNERS

JODY F NAKAMURA OF 4611-50 AVE TABER ALBERTA T1G 1G3

(CONTINUED)

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

REGISTRATION # 051 470 968

NUMBER DATE (D/M/Y) PARTICULARS

1485KX . 21/06/1971 IRRIGATION ORDER/NOTICE

THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER

IRRIGATION DISTRICT

RESTRICTIVE COVENANT 3432U .

3903EM . 24/10/1934 CAVEAT

CAVEATOR - ALBERTA RAILWAY AND IRRIGATION CO..

941 261 421 07/10/1994 UTILITY RIGHT OF WAY

GRANTEE - TRIPLE W NATURAL GAS CO-OP LIMITED.

SEE INSTRUMENT FOR INTEREST

941 261 422 07/10/1994 UTILITY RIGHT OF WAY

GRANTEE - TRIPLE W NATURAL GAS CO-OP LIMITED.

SEE INSTRUMENT FOR INTEREST

10/12/2005 MORTGAGE 051 470 969

MORTGAGEE - THE TORONTO DOMINION BANK.

300,10004 JASPER AVE

EDMONTON

ALBERTA T5J1R3

ORIGINAL PRINCIPAL AMOUNT: \$250,000

TOTAL INSTRUMENTS: 006

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 14 DAY OF MAY, 2010 AT 09:51 A.M.

ORDER NUMBER:16529001

CUSTOMER FILE NUMBER: 082154



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

(CONTINUED)

PAGE 3

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION, APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S

LINC

SHORT LEGAL

0020 144 473 4;20;8;5;SW

TITLE NUMBER 051 470 968

LEGAL DESCRIPTION

MERIDIAN 4 RANGE 20 TOWNSHIP 8

SECTION 5

THAT PORTION OF THE SOUTH WEST QUARTER LYING TO THE WEST OF THE 65 METRE CANAL RIGHT OF WAY AND LYING NORTH OF THE SOUTH HALVES OF LEGAL SUBDIVISIONS 3 AND 4, AND LYING TO THE NORTH OF THE 30 METRE CANAL RIGHT OF WAY ON PLAN 8210212 CONTAINING 27 HECTARES (66.8 ACRES) MORE OR LESS

EXCEPTING THEREOUT:

THE NORTH 15 METRES CONTAINING 0.37 OF A HECTARE MORE OR LESS

EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: COUNTY OF LETHBRIDGE

REFERENCE NUMBER: 941 226 700

REGISTERED OWNER (S)

REGISTRATION DATE (DMY) DOCUMENT TYPE VALUE

CONSIDERATION

051 470 968 10/12/2005 TRANSFER OF LAND \$414,000

\$414,000

OWNERS

JODY F NAKAMURA OF 4611-50 AVE TABER ALBERTA T1G 1G3

821136817B

(CONTINUED)

ENCUMBRANCES, LIENS & INTERESTS PAGE 2

REGISTRATION

051 470 968

NUMBER DATE (D/M/Y) PARTICULARS

1485KX .

21/06/1971 IRRIGATION ORDER/NOTICE

THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER

IRRIGATION DISTRICT

3432U .

RESTRICTIVE COVENANT

3903EM .

24/10/1934 CAVEAT

CAVEATOR - ALBERTA RAILWAY AND IRRIGATION CO..

941 261 421

07/10/1994 UTILITY RIGHT OF WAY

GRANTEE - TRIPLE W NATURAL GAS CO-OP LIMITED.

SEE INSTRUMENT FOR INTEREST

941 261 422

07/10/1994 UTILITY RIGHT OF WAY

GRANTEE - TRIPLE W NATURAL GAS CO-OP LIMITED.

SEE INSTRUMENT FOR INTEREST

051 470 969

10/12/2005 MORTGAGE

MORTGAGEE - THE TORONTO DOMINION BANK.

300,10004 JASPER AVE

EDMONTON

ALBERTA T5J1R3

ORIGINAL PRINCIPAL AMOUNT: \$250,000

TOTAL INSTRUMENTS: 006

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 14 DAY OF MAY, 2010 AT 09:51 A.M.

ORDER NUMBER:16529001

CUSTOMER FILE NUMBER: 082154

END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

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PAGE 3

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION, APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).

Certificate of Title

THE MENT OF THE STATE OF THE ST

Canada

South Albertu Land Registration Bistrict

THIS IS TO CERTIFY INM ROBERT D. WILSON OF THE CITY OF LETHBRIDGE, IN THE PROVINCE OF ALBERTA (FARMER)

IS now the owner of an estate in fee simple

of and in

THAT PORTION OF THE SOUTH WEST QUARTER OF SECTION FIVE (5) IN TOWNSHIP

EIGHT (8) RANGE TWENTY (20) MEST OF THE FOURTH MERIDIAN, LYING TO THE

WEST OF THE 65 METRE CANAL RIGHT OF WAY AND LYING NORTH OF THE SOUTH

HALVES OF LEGAL SUBDIVISIONS THREE (3) AND FOUR (4) AND LYING TO THE

8210712 - CORRECTED 08/08/84

NORTH OF THE 30 METRE CANAL RIGHT OF WAY ON PLAN 8210213, CONTAINING

27 MECTARES (66.8 ACRES) MORE OR LESS

EXCEPTING THE NORTH 15 METRES CONTAINING 0.37 MECTARES MORE OR LESS

EXCEPTING THEREOUT ALL MINES AND MINERALS

CONVENTED AND CANCELLED

OCT 1 6 1991

1.)

SUBJECT TO THE ENCUMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER.

IN WITNESS WHEREOF I have hireunto subscribed my name and affixed my official seal

this

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AUGUST

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1615 - 21 STREET SOUTH

LETHERIDGE, ALBERTA

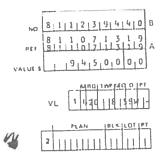
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IS now the owner of an estate in fee simple

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OF SECTION FIVE (5)
THAT PURITON OF THE SOUTH WEST QUARTER/LYTING TO THE WEST OF THE
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AND THE SOUTH HALF OF LEGAL SUBDIVISION FOUR (4) CONTAINING

//CORRECTED 15/1/82

EXCEPTING THEREOUT ALL MINES AND MINERALS

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SUBJECT TO THE ENCUMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER.

IN WITNESS WHEREOF I have threatto labsorded my numerical attitued my official seri-

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Post Office Agress 1615 - 21 STREET SOUTH

LETHBRIDGE, ALBERTA

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South Albertn Lund Registration District

THIS IS TO CERTIFY that ROBERT D. WILSON OF THE CITY OF LETHBRIDGE IN THE PROVINCE OF ALBERTA (FARMER)

IS now the owner of an extate in fee simple

THAT PORTION OF THE SOUTH WEST QUARTER OF SECTION FIVE (5), IN TOWNSHIP EIGHT (8) RANGE TWENTY (20) WEST OF THE FOURTH MERIDIAN WHICH LIES TO THE WEST OF THE WESTERLY LIMIT OF CANAL RIGHT OF WAY SHOWN ON PLAN IRR. 1442

EXCEPTING THEREOUT THE SOUTH HALF OF LEGAL SUBDIVISION THREE (3) AND THE SOUTH HALF OF LEGAL SUBDIVISION FOURTY OF THE SAID SECTION FIVE (5) CONTAINING 28.3 HECTARES (20 ACRES) MORE OR LESS

EXCEPTING THEREOUT ALL MINES AND MINERALS

THIS CIRT, IS CANCELLED AS TO PORTIONS OF THE CAUGH RIGHT OF MAY ON PLAN 8210212 IN ACCORDANCE WITH THE TRANSFER TO. THE BOARD OF DIRECTORS OF THE ST. MARY SILVER AND A NEW CRAFT OPPLIESTRECT 821099172 ISSUED THIS. 4 DAY THE 10 82.	IN ACCOUNTS WITH THE ABOVE OWER SILESOUND THIS 4 DAY JUNE 17 82
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IN TOWNSHIP EIGHT (8) RANGE TWENTY (20) WEST OF THE FOURTH MERIDIAN WHICH LIES TO THE NORTH OF THE SOUTH HALVES OF LEGAL SUBDIVISION THREE (3) FOUR (4) AND WHICH LIES TO THE WEST OF THE 65 METRE CHAL RIGHT OF WAY ON PLAN 8210212 CONTAINING 28.1 NECTARES (69.5 ACRES) HOLE R LESS

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EXCEPTING THEREOUT ALL MINES AND MINERALS

SUBJECT TO THE ENCUMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER

HE WITNESS WHEREOF I have bire-into subscribed my name and affixed my official seal

DECEMBER

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1615 - 21 STREET SOUTH

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South Alberta Land Registration District

ROBERT D. WILSON, OF THE CITY OF LETHBRIDGE, IN THE THIS IS TO CERTIFY that PROVINCE OF ALBERTA (FARMER)

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of and in

FIRST... THE SOUTH WEST QUARTER AND THE WEST HALF OF THE SOUTH EAST QUARTER OF LEGAL SUBDIVISION THREE (3) IN THE SOUTH WEST QUARTER OF SECTION FIVE (5) IN TOWNSHIP EIGHT (8) RANGE THENTY (20) WEST OF THE FOURTH MERIDIAN, CONTAINING 6.07 HECTARES (15 ACRES) MORE OR LESS

EXCEPTING THEREGUT ALL MINES AND MINERALS.

SECONDLY... THAT PORTION OF THE SOUTH HALF OF LEGAL SUBDIVISION FOUR (4) OF THE SAID SOUTH WEST QUARTER OF SECTION FIVE (5) LYING SOUTH AND EAST OF THE IRRIGATION RIGHT OF WAY ON PLAN IRR. 46, CONTAINING 6.151 HECTARES (15.2 ACRES) MORE OR LESS

> EXCEPTING THE CANAL RIGHT OF WAY ON PLAN IRR. 1307, CONTAINING .692 OF A HECTARES (1.71 ACRES) MORE OR LESS

EXCEPTING OUT OF THE SECONDLY DESCRIBED ALL MINES AND HINERALS.

SUBJECT TO THE ENCUMERANCES, LIERS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER

IN WITHESS WHEREOF I have breezed subscended my name and afficied my official seal. AD 19, .81

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.day of APRIL

1619 - 21 STREET S.

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LETHBRIDGE, ALBERTA

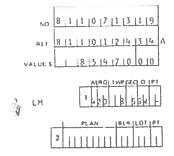
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Certificate of Title





South Alberta Lund Registration Bistrict

THIS IS TO CERTIFY IN A ROBERT D. WILSON, OF THE CITY OF LETHBRIDGE, IN THE PROVINCE OF ALBERTA (FARMER)

TS now the owner of an estate in fee simple of and in

FIRST... THE SOUTH WEST QUARTER AND THE MEST HALF OF THE SOUTH EAST QUARTER OF LEGAL SUBDIVISION THREE (3) IN THE SOUTH WEST QUARTER OF SECTION FIVE (5) IN TOWNSHIP EIGHT (8) RANGE THENTY (20) WEST OF THE FOURTH MERIDIAN, CONTAINING 6.07 HECTARES (15 ACRES) MORE OR LESS

EXCEPTING THEREOUT ALL MINES AND MINERALS.

SECONOLY... THAT PORTION OF THE SOUTH HALF OF LEGAL SUBDIVISION FOUR (4) OF THE SAID SOUTH WEST QUARTER OF SECTION FIVE (5) LYING SOUTH AND EAST OF THE IRRIGATION RIGHT OF MAY ON PLAN IRR. 46, CONTAINING 6.151 HECTARES (15.2 ACRES) MORE OR LESS

EXCEPTING THE CANAL RIGHT OF WAY ON PLAN IRR. 1307, CONTAINING .692 OF A HECTARES (1.71 ACRES) MORE OR LESS

EXCEPTING OUT OF THE SECONDLY DESCRIBED ALL MINES AND MINERALS.

SUBJECT TO THE ENCOMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MENORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER

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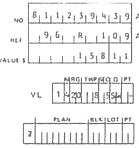
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Certificate of Citle





South Alberta Lund Registration Bistrict

THIS IS TO CERTIFY THE ROBERT D. WILSON OF THE CITY OF LETHBRIDGE IN THE PROVINCE OF ALBERTA

15 now the owner of an estate in the umplie of and in.

THAT PORTION OF THE SOUTH WEST QUARTER OF SECTION FIVE (5)

IN TOWNSHIP EIGHT (8)

RANGE TWENTY (20)

WEST OF THE FOURTH MERIDIAN CONSISTING OF A THIRTY TWO (32) FOOT STRIP IN PERPENDICULAR WIDTH ADJACENT TO THE NORTHERN, WESTERN AND SOUTH WESTERN LIMITS OF THE CANAL RIGHT OF WAY ON PLAN IRR. 46 CONTAINING .761 HECTARES (1.88 ACRES) MORE OR LESS

EXCEPTING THEREOUT ALL MINES AND MINERALS
AND THE RIGHT TO WORK THE SAME

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SUBJECT TO THE ENCUMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE WADE IN THE REGISTER

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ho DECEMBER

Post Office Admini 1615 - 21 STREET SOUTH

LETHBRIDGE, ALBERTA

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South Alberta Land Registration District

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Certificate of Citle

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South Alberta Land Registration District

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15 of an estate in fee simple

THAT PORTION OF THE SOUTH WEST QUARTER OF SECTION FIVE (5) IN TOWNSHIP EIGHT (8) RANGE TWENTY (20) WEST OF THE FOURTH MERIDIAN CONSISTING OF A THIRTY TWO (32) FOOT STRIP IN PERPENDICULAR WIDTH ADJACENT TO THE NORTHERN, WESTERN AND SOUTH WESTERN LIMITS OF THE CANAL RIGHT OF WAY ON PLAN IRR. 46 CONTAINING ONE AND EIGHTY EIGHT HUNDREDTHS (1.88) ACRES MORE OR LESS

EXCEPTING THEREOUT ALL HINES AND MINERALS AND THE RIGHT TO WORK THE SAME

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SUBJECT TO THE ENCOMBRANCES, LIERS, ESTATES OF INTERESTS NOTIFIED BY MEMORANDUM UNDERWINTTENOR ENDORSED HEREON, OR WHICH MAY HERE AFTER LE MADE IN THE REGISTER

19 WITHESS WILLIAM OF These his early subscribing name and afford my official real

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Post Other Address LETHBRIDGE, ALBERTA.

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South Alberta Land Registration District

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And a new Certificate 96 R 109 issued to Anathorn And Many on Many River And Andrew Configure 10 River And An 1953 above named registered owner. Dated 27 May 1853 and Registered at 10 o'clock 9.M, this 9 day 18	



firate of Title. Asses Fund Value \$ 10,000 Land Registration District
Refer East, So. 14 9.34 This is to Certify that Walter Ante. of the City of Lithbridge, in the Brownes of alberta is now the owner of an estate In See lines le of and in the polition of land iduals in Township bill! (8) have brother the fourth house of and in the position of land iduals in Township bill! (8) have brother that provide a section bour product in the provider of the provider of the brother product in the well of a few about product with and they great prome the land that find they are the provider with and they great provider that they are the provider that and they great provider that they are the provider that they are the provider that they are the they are the the they are the the they are the the the the they are the the the they are the the the they are the the the the they are the the the the more or ces, all as enoure on cara pean or 40, see conserver compress concurring ogent save brundled and eight five, and eight benth (385,8) acres, more or less. Subject to the right (to be execuse brundled and eight pive, and eight benth (385,8) acres, more or less. Subject to the right (to be execused within den (10) years, from 25-august 1904) of exprepation, of cultain portions between the william den (10) years, from 25-august 1904) of exprepation of cultain protection and the continuous and triplets and conditions, as are textured and contained in transfer head and triplets and triplets and triplets and triplets and triplets and triplets and triplets. all other Immerals and subject to the encumbrances, liens and interests notified by memorandum underwritten or endorsed hereon, or which may hereafter be made in the register. In Mitness Phereof I have hereunto subscribed my name and affixed my official seal this Light 1. D. 1917 day of Loruary A.D. 1917 9.0 Address Subbridge alberta \$ 5 Donds of SEX Ses. Mechanico lin \$12500 (ace over)

14 huin 16 /4 lee 5- John Huvey Sonnoki L' min g agri 450 " Int- 7% 31 mar 1919 prage 103 Withdrawal of 3.8. Lieu 1067 9.4 15 Oct. 1920. 20 m 22 Oct 1920 - 1520 C. 2/4 8 24 Franch 520, was (3 ac) Mileon Sch Deck 3736, 25/189. 20 there 920 Aun: 3000 120 870,20 Get 1930,1052 24 Get 1930,321 -1.92 se (so described) Discharge of montgage 3213 6. \$1. 12 Opril 1452 -10 an 26 april 1932 - 1155 -5. Ez-1.92 erro [ao do Oileo] aeleta Railwy & In. 60.45N232 - 10.47 an. 26 April 1932 : -8. Nij - 1.89 acros [i In trument] 5 Swife Careat : The alberta Kailway Rich Derigation Co 5 Oct 1934-10 AM - 24 Oct 1934 3903&M 10: A C 1 & ROTHERMEN 16: \$36/10 Poster 10: Third of 10 15 Am. 22 Jane 1935 & No. 8465 D. P. 4. Bacres as phischarge of mortgage \$213 & G- 2 Oct 1436. 30pm. 22 Jan 1937 - 7001 Ef 6-St. produit ova Mubel Porter 52 T18 6,27 april 1438. 10 2 am . 29 april 1938 - 5285 816 9

Certificate of Title THIS CERT, IN CARROLLE 3 0 0 Caryon or SEPARAJJON ABOVE OWIER LM South Alberta Land Registration District ROBERT D. WILSON, OF THE CITY OF LETHBRIDGE, IN THE THIS IS TO CERTIFY that PROVINCE OF ALBERTA (FARMER) of ind in ALL TROSE PORTIONS OF SECTION FIVE (5) IN TOWNSHIP EIGHT (8) RANGE THENTY (20) WEST OF THE FOURTH MERIDIAN AND BEING..... FIRST...THAT PORTION OF THE SOUTH EAST QUARTER WHICH LIES TO THE SOUTH AND NEST OF THE SOUTH WESTERLY LIMIT OF THE RAILWAY RIGHT OF WAY OF THE ALBERTA RAILWAY AND IRRIGATION COMPANY AS SAID RIGHT OF WAY IS SHOWN ON PLAN R.Y. 23 CONTAINING 48.2 HECTARES (119 ACRES) HORE OR LESS, EXCEPTING THEREOUT "A" 1.21 HECTARES (3 ACRES) MORE OR LESS, BEING THE SOUTHERLY TWENTY (20) ROOS OF THE BASTERLY TWENTY FOUR (24) ROOS OF SAID QUARTER SECTION.... MORE OR LESS 2.27 "B" PLAV..... 1.0.... CAVAL RIGHT OF WAY 1RR. 1442 EXCEPTING THEREOUT ALL MINES AND MINERALS. SECONDLY... THE NORTH HALF AND THE BAST HALF OF THE SOUTH BAST QUARTER OF LEGAL SUBDIVISION THREE (3) AND THE WIDLE OF LEGAL SURDIVISION SIX (6) CONTAINING TOGETHER 26.3 HECTARES (65 ACRES) MORE OR LESS, EXCEPTING THEREOUT..... PL/SI... <u> 110</u>.... HECTARES ACPES HORE OR LESS CHAL RIGHT OF WAY IRR 1442 1.319 THIRDLY... THOSE PORTIONS OF LEGAL SUBDIVISION FIVE (5) AND OF THE HARTH HALF OF LEGAL SUBDIVISION FORR (4) WHICH LIE TO THE HAST OF THE CAVAL RIGHT OF WAY SHOWN ON PLAN IRR 46 CONTAINING 15.02 HECTARES (37.5 ACRES) MORE OR LESS, EXCEPTING THEREOUT..... HECTARES ACRES PLAY... 10 ... CAME RIGHT OF MAY IRR 1942 3.487 8.61 EXCEPTING THEREOUT ALL MINES AND MINERALS. FOURTHLY... THOSE PORTIONS OF SAID LEGAL SUBDIVISIONS FOUR (4) AND FIVE (5) WHICH LIE TO THE WEST OF SAID CAME RIGHT OF WAY CONTAINING 7.69 FECTARES (19 ACRES) HORE OR LESS EXCEPTING THEREOUT... .761 OF A HECTARES (1.98 ACRES) HORE OR LESS BEING A STRIP OF LAND THAT TWO (32) FEET IN PERPUBLICULAR WIDTH ADJACENT TO THE MORTHERN, WESTERN AND SOUTHWESTERN LIMITS OF LIBRURATION PLANT OF WAY AS SHOWED IN THE MORTHERN, WESTERN AND SOUTHWESTERN LIMITS OF IRRIGATION RIGHT OF WAY AS SHOWN ON PLAN IRR 46. EXCEPTING THERECUT ALL MINES AND MINERALS. SUBJECT TO THE ENCOMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDOUSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER. IN VITNESS WHEREOF I have breento subscribed my name and afficed my afficial seal A D 19 81 APRIL 23 1615 - 21 STREET S. LEIMBRIDGE, ALBERTA

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South Alberta Land Residence District

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RENEWAL 53 L.II. Certificate of Citle Consta THIS CERT IS CANCENED IN FULL AND A HELF CORT, OF THE No. 2 . 1 . 1. 1. 10 . 1 . 12 . 14 . 3 3 34111111

THIS IS TO CERTIFY SHANN PORTER (WIDOW) OF LAFAYETTE IN THE STATE OF OREGON AND DONALD D. PORTER OF LONGVIEW IN THE STATE OF WASHINGTON BOTH OF THE UNITED STATES OF AMERICA. THE SAID AND PORTER AS TO AN UNDIVIDED FOURTERING (4/10) INTEREST, NO ARE NOW THE OWN TO DESCRIBE A SECOND TO THE SAID COUNTY D. PORTER AS TO AN UNDIVIDED ONE TENTH (1/10) INTEREST

of main. ALL THOSE PORTIONS OF SECTION FIVE (5) IN TOWNSHIP EIGHT (8) RANGE TWENTY (20) WEST OF THE FOURTH MERIDIAN, AND BEING . . .

FIRST: THAT PORTION OF THE SOUTH EAST QUARTER WHICH LIES TO THE SOUTH AND WEST OF THE RAILWAY ON PLAN R.Y. 23, CONTAINING ONE HUNDRED AND NINETEEN (119) ACRES HORE OR LESS,

SECONDLY: THE NORTH HALF AND THE EAST HALF OF THE SOUTH EAST QUARTER OF LEGAL SUBDIVISION THREE (3) AND ALL OF LEGAL SUBDIVISION SIX (6) IN THE SOUTH WEST QUARTER CONTAINING TOGETHER SIXTY FIVE (63) ACRES MORE OR LESS,

THIRDLY: THOSE PORTIONS OF LEGAL SUBDIVISION FIVE (5) AND THE NORTH HALF OF LEGAL SUBDIVISION FOUR (4) WHICH LIE TO THE EAST OF THE CARAL RIGHT OF WAY ON PLAN IRR.46, CONTAINING THIRTY SEVEN AND FIVE TENTHS (37.5) ACRES MORE OR LESS,

FOURTHLY: THOSE PORTIONS OF SAID LEGAL SUBDIVISIONS FOUR (4) AND FIVE (5) WHICH LIE TO THE WEST OF THE SAID CARAL RIGHT OF WAY, COMMINING MINETEEN (19) ACRES HORE OR LESS, EXCEPTING:

EXCEPTING:

(A) OUT OF THE FIRSTLY DESCRIBED PORTION THE SOUTHERLY THREE HUNDRED AND THIRTY (330) FEET OF THE EASTERLY THREE HUNDRED AND MINETY SIX (396) FEET OF THE SAID QUARTER SECTION COMMINING THREE (3.) ACRES HORE OR LESS,

(B) OUT OF THE FOURTHLY DESCRIBED PORTION, A STRIP OF LAND THIRTY TWO (32) FEET HIDE LYING TO THE WEST AND ADJACENT TO THE WESTERN LIMIT OF THE SAID CANAL RIGHT OF WAY ON PLAN IRR. 45, CONTAINING ONE AND EIGHTY EIGHT HUNDREDTHS (1.88) ACRES MORE OR LESS,

(C) OUT OF THE FIRSTLY, SECONDLY, AND THIRDLY DESCRIBED, THE CANAL RIGHT OF WAY ON PLAN IRR. 1442, CONTAINING IN:

QUARTER SECTION

SEL

ACRES MORE OR LESS

11.88

EXCEPTING OUT OF ALL THE ABOVE LAND ALL MINES AND MINERALS.

SUBJECT TO THE ENCOMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER

IN WITHESS WHEREOF I have briegato subscribid on, name and attend my official seal

Head 14 JULY
HWY, 99W. LAFAYETTE, OREGON U.S.A.
Post Office Address 1704 SUSAN AVENUE JULY

LONGVIEW, WASHINGTON U.S.A. (RESPECTIVELY)

South Attenta Land Reputration Dates:

A G 1818 V 1217.

Sham Other Abbrevistions Here	True (1992) 1115 Declaration (1993) 1115	811012433 22 1 1 83		
(Tertificate of Title HAME ANN PORTER ET AL (PART INTEREST) LAND 'S 20 8 5 (PTN) CHARGES, LIENS AND INTERESTS.	SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSFER	THE ALBERTA RAILWAY AND IGRIGATION COMPANY RALPH PETER KUIPERS AND SUSANDEE KUIPERS	THE BG MEDDING LID. THE BG MED OF DIRECTORS OF THE ST. MARY RIVER IRRIGATION DISTRICT (SWA 3.72 ACRES 16.5 FT. STRIP IN NY AND SEL OF 5 IC ALBERTA GOVERNMENT TELEPHONES THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT	
L. Earment UHW - Utility Right of War C. Carest BL. Banfater Len BL. Banfater Len III. II. I Lander WE - With of Excusion May. Merspee C. Committe and Condition May. Merspee C. Committe and Condition (1) [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	Majora of Megatinica Energia Arribani Margera Divi 400 y to C.C. 3452 U.	C. 3903 E.M. 24 10 54	C. 3373 K.X. 5 9 6 71 C. 3373 K.X. 5 9 72 URW 741045236 14 5 74	

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Certificate of Title

Assce Fund Value \$2,845.00

Refer Cert. No. 80 Q 138

South Alberta Land Registration District.

This is to Certify that FREDERICK MILTON PRITCHARD OF THE CITY OF

LETHBRIDGE IN THE PROVINCE OF ALBERTA (BARRISTER) ADMINISTRATOR OF THE ESTATE OF LAURANCE

FISK PORTER (DECEASED)

is now the owner of an estate in fee simple IN All UHOLVIDED ONE HALF (1/2) INTEREST

of and in_ ALL THOSE PORTIONS OF SECTION FIVE (5) IN TOWNSHIP EIGHT (8) RANGE TWENTY (20)
WEST OF THE FOURTH MERIDIAN IN THE PROVINCE OF ALBERTA AND BEING....

FIRST, THAT PORTION OF THE SOUTH EAST QUARTER WHICH LIES TO THE SOUTH AND WEST OF THE RAILWAY ON PLAN R.Y. 23, CONTAINING ONE HUNDRED AND NIMETEEM (119) ACRES MORE OR LESS,

SECONDLY, THE NORTH HALF AND THE EAST HALF OF THE SOUTH EAST QUARTER OF LEGAL SUBDIVISION THREE (3) AND ALL OF LEGAL SUBDIVISION SIX [6] IN THE SOUTH WEST QUARTER CONTAINING TOGETHER SIXTY FIVE (65) ACRES MORE OR LESS,

THIRDLY, THOSE PORTIONS OF LEGAL SUBDIVISION FIVE (5) AND OF THE NORTH HALF OF LEGAL SUBDIVISION FOUR (4) WHICH LIE TO THE EAST OF THE CANAL RIGHT-OF-WAY ON PLAN IRR. 46 CONTAINING THIRTY SEVEN AND FIVE TENTHS (37.5) ACRES MORE OR LESS,

FOURTHLY, THOSE PORTIONS OF SAID LEGAL SUBDIVISIONS FOUR (4) AND FIVE (5) WHICH LIE TO THE WEST OF THE SAID CANAL RIGHT-OF-WAY CONTAINING NINETEEN (19) ACRES MORE OR LESS,

EXCEPTING THEREOUT....

(A) OUT OF THE FIRSTLY DESCRIBED PORTION, THE SOUTHERLY THREE HUNDRED AND THIRTY [330]
FEET OF THE EASTERLY THREE HUNDRED AND HINETY SIX (396) FEET OF THE SAID QUARTER SECTION
CONTAINING THREE (3) ACRES MORE OR LESS,

(B)OUT OF THE FOURTHLY DESCRIBED PORTION, A STRIP OF LAND THIRTY TWO (32) FEET WIDE LYING TO THE WEST AND ADJACENT TO THE WESTERN LIMIT OF THE SAID CAMAL RIGHT-OF-WAY ON PLAN IRR. 46 CONTAINING ONE AND EIGHTY EIGHT HUNDREOTHS (1.88) ACRES MORE OR LESS,

(C) OUT OF THE FIRSTLY, SECONDLY AND THIRDLY DESCRIBED, THE CANAL RIGHT-OF-WAY ON PLAN

IRR 1442 CONTAINING IN THE

OUARTER SECTION ACRES MORE OR LESS SE 2.27

EXCEPTING OUT OF ALL THE ABOVE LAND ALL MINES AND MINERALS.

subject to the encumbrances, liens and interests notified by memorandum undorwritten or endorsed hereon, or which may hereafter be made in the register.

202 PROFESSIONAL BUILDING,

B Jane 3 All Registrary

740-4TH AVENUE SOUTH,
1 FTHRRINGE, ALBERTA.

South Alberta Land Registration District

SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSFER.....3432 U.

OVER_

CAVEAT -- THE MANAGER OF THE ST. MARY & MILK RIVERS DEVELOPMENT, 23 OCT. 1967, 4.02 PM., AD REG. SWZ CAVEAT--THE ALBERTA RAILWAY AND IRRIGATION COMPANY, 5 OCT. 1934, 10.33 AM., 24 OCT. 1934...3903 E.M. sue at - Ralph Peter Huipers & Sucan Dee 1 huipers - 1 april 1971 Pave at -7 Krigera Holding Itd. -22 June 1971-11th -29 June 1971 THIS PROPERTY FORMS PART OF THE ST. M.RY AND MILK RIVERS DEVELOPMENT.... 4950 G.U. in accordanco with the transfer, subject to any excepti THIS CERT. OF TITLE IS CANCELLED....

RENEWAL w 3 0 | Q | 11 | 3 | 8 Certificate of Citle TERHHENT IN FULL THIS CIRT. IS CAMETALED 1 420 1 19 1594 1-(M / THE, WHITH BE TO HETE TO ILL RALPH P. KUIPERS ET VX 100 South Alberta Land Registration District THE IS TO CONTITUE AND WALL BY PORTER OF SALLY CLERK ! IN THE ISTATE OF OREGON الناساط حاصدتها لالالالالالا ONE OF THE UNITED STATES OF AMERICA estimator of an estate in tersimple. IN AM UNDIVIDED ONE HALF (1/2) SHARE olind o ALL THOSE PORTIONS OF SECTION FIVE (5) IN TOWNSHIP EIGHT (8) RANGE THENTY (20) WEST OF THE FOURTH MERIDIAN AND BEING...... FIRST...THAT PORTION OF THE SOUTH EAST QUARTER WHICH LIES TO THE SOUTH AND WEST OF THE SOUTH WESTERLY LIMIT OF THE RAILWAY RIGHT OF WAY OF THE ALBERTA RAILWAY AND IRRIGATION COMPANY AS SAID RIGHT OF WAY IS SHOWN ON PLAN R.Y. 23 CONTAINING ONE HUNDRED AND NINETEEN (119) ACRES MORE OR LESS EXCEPTING THEREOUT "A": THREE (3) ACRES MORE OR LESS BEING THE SOUTHERLY THENTY (20) RODS OF THE EASTERLY TWENTY FOUR (24) RODS OF SAID QUARTER SECTION "B"; PLAN ACRES MORE OR LESS CAHAL RIGHT OF WAY EXCEPTING THEREOUT ALL SINES AND HIMERALS SECONDLY...THE NORTH HALF AND THE EAST HALF OF THE SOUTH EAST QUARTER OF LEGAL SUBDIVISION THREE (3) AND THE WHOLE OF LEGAL SUBDIVISION SIX (6) CONTAINING TOGETHER SIXTY FIVE (65) ACRES MORE OR LESS EXCEPTING THEREOUT: PLAN NO. IRR 1992 ACRES MORE OR LESS CARAL RIGHT OF HAY EXCEPTING THEREOUT ALL MINES AND MINERALS THIRDLY...THOSE PORTIONS OF LEGAL SUBDIVISION FIVE (5) AND OF THE NORTH HALF OF LEGAL SUBDIVISION FOUR (4) WHICH LIE TO THE EAST OF THE CANAL RIGHT OF WAY SHOWN ON PLAN IRR 46 CONTAINING THIRTY SEVEN AND FIVE TENTHS (37.5) ACRES MORE OR LESS EXCEPTING THEREOUT: PLAH CANAL RIGHT OF WAY MO. 188 1442 ACRES MORE OR LESS EXCEPTING THEREOUT ALL MINES AND MINERALS FOURTHLY... THOSE PORTIONS OF SAID LEGAL SUBDIVISIONS FOUR (4) AND FIVE (5) WHICH LIE TO THE WEST OF SAID CANAL RIGHT OF WAY CONTAINING MINETEEN (19) ACRES MORE OR LESS

EXCEPTING THEREOUT: OR AND EIGHTY EIGHT HUNDREDTHS (1.88) ACRES MORE OR LESS BEING A STRIP OF LAND THIRTY TWO (32) FEET IN PERPENDICULAR WIDTH ADJACENT TO THE NORTHERN, WESTERN AND SOUTHWESTERN LIMITS OF IRRIGATION RIGHT OF WAY AS SHOWN ON PLANTER 46 SUBJECT TO THE MONTHERN LIMITS OF IRRIGATION RIGHT OF WAY AS SHOWN ON PLANTER 46 SUBJECT TO THE MONTHERN LIMITS OF MARKET BETWEEN ROTHERD BY MEMORANDOWN UNDERWHITTEN OR ENDORSED HEREON, OR WHICH MAY HERE AT THE BE MADE IN THE REGISTER BU WITHESS WHEREOF Choice him and in close swampingon, industried in, intocurred AUGUST 10101 Post Office Address Herry 11 -

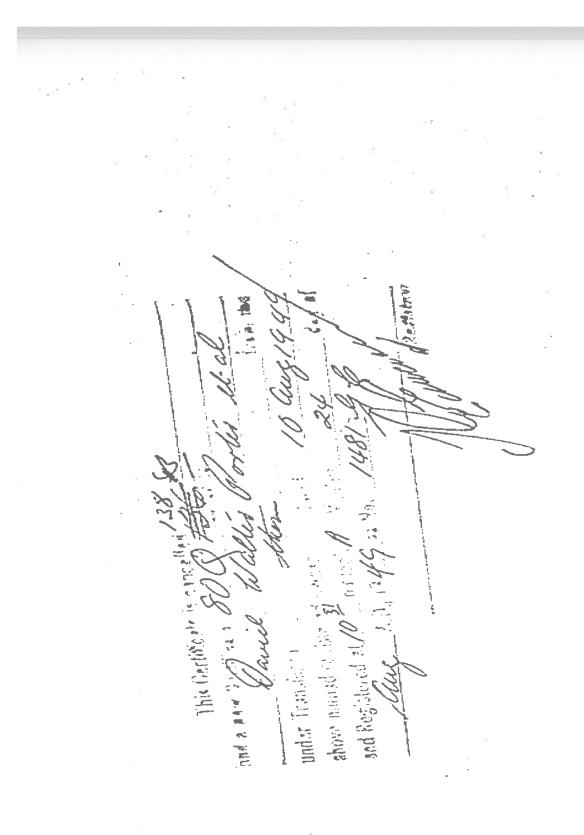
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Page 199 of 516

m A berta Land Registration District

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CHARGES, LIENS AND INTERESTS.	PAUTICULAMS	THIS PROPERTY IS INCLUDED IN THE ST. RIVER IRRIGATION DISTRICT	THE ALBERTA RAILWAY AND IRRIGATION COMPANY,	RALPH PETER KUIPERS & SUSAN DEE KUIPERS	7 KUIPERS HOLDING LID.	THE BOARD OF DIRECTORS OF THE ST. MARY IRREGATION DISTRICT	SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSPER			
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	Certificate of Title
	Asoce Fund Value \$7900,00 Refer Cort. No. 57, I, 65 Unearned Inc. Value \$1150,00
	South Alberta Land Registration District
f	This is to Certify that DAVID WALTER PORTER OF SALEN IN THE STATE
	OF OREGON ONE OF THE UNITED STATES OF AMERICA (CLERK) AND JOHN A, LIVINGSTONE OF THE CITY OF LETHBRIDGE IN THE PROVINCE OF ALBERTA (BARRISTER AT LAW) EXECUTORS OF THE WILL OF RVA MAHRI PORTER (DECEASED)
	ARE XXXnow.the.ownersol am estate in fee simple AS SHCH EXECUTORS
	FIRSTLY, THAT PORTIONS OF SECTION FIVE (5) IN TOWNSHIP EIGHT (8) RANGE TWENTY (20) WEST OF THE FOURTH MERIDIAN IN THE PROVINCE OF ALBERTA AND BEING FIRSTLY, THAT PORTION OF THE SCUTH EAST CHARTER WHICH LIES TO THE SOUTH AND WEST OF THE SCUTH WESTERLY LIMIT OF THE RAILWAY RIGHT OF WAY OF THE ALBERTA MAILWAY AND INRIGATION COMPANY AS SAID RIGHT OF WAY IS SHOWN ON A PLAN FILED IN THE LAND TITLES OFFICE FOR THE SOUTH ALBERTA LAND REGISTRATION DISTRICT AS R.Y. 23 CURTAINING ONE HUNDHED AND NINETEEN (119) ACRES MORE OR LESS. EXCEPTING THEREOUT THERE (3) ACRES MORE OR LESS. EXCEPTING THEREOUT THERE (3) ACRES MORE OR LESS. EXCEPTING THEREOUT THERE (3) ACRES MORE OR LESS BEING THE SOUTHEAST QUARTER OF LEGAL, SHUDDLY, THE KORTH HALF AND THE RAST HALF OF THE SOUTH EAST QUARTER OF LEGAL, SHUDDLYISION THREE (3) AND THE WELL OF LEGAL SUBDIVISION SIX (6) CONTAINING TOGETHER SIXTY FIVE (65) ACRES MORE OR LESS, THIRDLY, THOSE PORTIONS OF LEGAL SUBDIVISION FIVE (5) AND OF THE NORTH HALF OF LEGAL SUBDIVISION FOUR (4) WHICH LIE TO THE EAST OF THE CAMAL RIGHT OF WAY SHOWN ON A PLAN PILEU IN THE SAID LAND TITLES OFFICE AS IRR. 46 CONTAINING THIRTY SEVEN AND FIVE TENTHS (37.5) ACRES MORE ON LESS, AND FOUNTHLY, THOSE PORTIONS OF SAID LEGAL SUBDIVISIONS FOUR (4) AND FIVE (5) WHICH LIE TO THE WEST OF SAID CAMAL RIGHT OF WAY CONTAINING NINETEEN (19) ACRES MORE OR LESS, AND EXCEPTING THEREOUT ONE AND EIGHTY EIGHT HUNDREDTHS (1,88) ACRES MORE OR LESS. SUBJECT TO GAS TO ALI. THE ABOVE LAND) THE RIGHT OF EXPROPRIATION OF CERTAIN PORTIONS THEREOF AND TO SUCE OTHER RIGHTS AND CONDITIONS AS ARE SET FORTH IN TRANSFER REGISTERED AS 3432 U. AND RESERVING UNTO HIS MAJESTY ALI, COAL AND UNTO THE ALBERTA RAILWAY AND IRRIGATION COMPANY ALL OTHER MINERALS, AND ALL ALL ALL ALL ALL AND UNTO THE ALBERTA RAILWAY AND IRRIGATION COMPANY ALL OTHER MINERALS, AND
	subject to the encumbrances, liens and interests notified by momorandum andorwritten
	or endorsed hereon, or which may hereafter be made in the register.
	In Witness Whereof I have horeunto subscribed my mame and affixed my
	official seal this THIRTEENTH day of JULY A.D. 19 49 A.D. 19 49 A.D. 19 49 A.D. 19 49
	P.O. Address SW 1/4 CAVEAT, THE ALBERTA RAILWAY AND IRRIGATION COMPANY SW 1/4 CAVEAT, THE ALBERTA RAILWAY AND IRRIGATION COMPANY 24 OCT. 1934



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day of MAY J.D. 19 11 - rechession Registron 1	对西北 山
P.O. Address LETHBRIDGE, ALBERTA P.O. Address LETHBRIDGE, ALBERTA WORTGAGE. WALTER PORTER TO CREDIT FONCIER FRANCO CANADIEN \$3000.00 INT 8 PC. 20 OCT. 1930. 3213 E.G. 24 OCT. 1930. 3213 E.G. 24 OCT. 1930. 3213 E.G. 27 OCT. 1930. 3203 E.M. 28 OCT. 1930. 3213 E.G. 28 OCT. 1930. 3203 E.M. 28 OC	Company of the second
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Certificate of Title REHEWAL: 4/6/8? Carrida REFERENCES: 811239439 811239439A 811239439B South Alberta Land Registration Bistrict THIS IS TO CERTIFY BOX ROBERT D. WILSON OF THE CITY OF LETHBRIDGE IN THE PROVINCE OF ALBERTA (FARMER) now the owner of invitize in the single at and in THAT PORTION OF THE SOUTH HALF OF LEGAL SUBDIVISION THREE (3) AND THE SOUTH HALF OF LEGAL SUBDIVISION FOUR (4) IN THE SOUTH MALE OF SECTION FIVE (5) THIS CERT IS CARCILLED IN FULL THE ACCURRENCE CONTINUES THE THEORY OF TO IN TORRSHIP EIGHT (8) ABOVE OWNER ABOVE OWNER

AND A NEW COST OF TOUR PERSONNEL TO BY BY AUGUST 19 87

AD REC. RANGE TWENTY (20) WEST OF THE FOURTH MERIDIAN WHICH LIES TO THE WEST OF THE 6.5 METRE "CANAL RIGHT OF WAY ON PLAN \$210212 CONTAINING 15.3 HECTARES (37.7 ACRES) ROLLING EXCEPTING OUT OF LEGAL SUBDIVISION FOUR THE 30 METRE CANAL RIGHT OF WAY ON PLAN 8210212 CONTAINING 0.723 HECTARES (1.79 ACRES) ORE OR LESS EXCEPTING THEREOUT ALE MINES AND PITERALS SUBJECT TO THE ENCOMBRANCES LIERS, ESTATES OR INTERESTS NOTH IED BY ME VORANDUM UNDERWHITTEN OR ENDORSED HEREON ON WHICH MAY HEREALTER BE MADE IN THE REGISTER OF WITHESS WITE HEQF. I have received subscribed my name and affiliated my official sea DECEMBER 29 04.0 1615 - 21 STREET SOUTH LETHERIDGE, ALBERTA

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RENEWAL

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ENTERED 20/1/82

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South Alberta Land Registration District

THIS IS TO CERTIFY IN A ROBERT D. WILSON OF THE CITY OF LETHBRIDGE IN THE PROVINCE OF ALBERTA (FARMER)

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THAT PORTION OF THE SOUTH HALF OF LEGAL SUBDIVISION THREE (3)
AND THE SOUTH HALF OF LEGAL SUBDIVISION FOUR (4) IN THE SOUTH
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WEST OF THE FOURTH MERIDIAN WHICH LIES TO THE WEST OF THE WESTERLY
LIMIT OF THE CANAL RIGHT OF WAY AS SHOWN ON PLAN IRR. 1442
CONTAINING 15.2 HECTARES (38 ACRES) MORE OR LESS

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EXCEPTING THEREOUT ALL MINES AND MINERALS

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SUBJECT TO THE ENCOMBRANCES LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDOM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER

THE WITNESS WHEREOF I have hereonto subscribed my name and afficed my official seal

m, 29

Car o'

DECEMBER

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Post Office Address

1615 - 21 STREET SOUTH

LETHBRIDGE, ALBERTA

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South Alberta Land Registration District

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THIS IS TO CERTIFY IN A ROBERT D. WILSON OF THE CITY OF LETHBRIDGE IN THE PROVINCE OF ALBERTA (FARMER)

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THAT PORTION OF THE SOUTH HALF OF LEGAL SUBDIVISION THREE (3) AND THE SOUTH HALF OF LEGAL SUBDIVISION FOUR (4) LARGE TO THE WEST OF THE WESTERLY LIMIT OF THE CANAL RIGHT OF WAY AS SHOWN ON PLAY TRE 1947 CONTAINING 15.3 HECTARES (38 ACRES) MORE OR LESS

CORRECTED 15/1/81

"IN THE SOUTH HALF OF SECTION FIVE (5), IN TOWNSHIP EIGHT (8)

RANGE TWENTY (70) WEST OF THE FOURTH MERIDIAN WHICH LIES

EXCEPTING THEREOUT ALL MINES AND MINERALS

SUBJECT TO THE ENCOMBRANCES, LIENS, ESTATES OR INTERESTS NOTHER BY MEMORANDUM UNDERWRITTEN DRENDORSED HEREOU, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER

In WITNESS WHERLOF Environmental substituted in order and affired in official real

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LETHBRIDGE, ALBERTA

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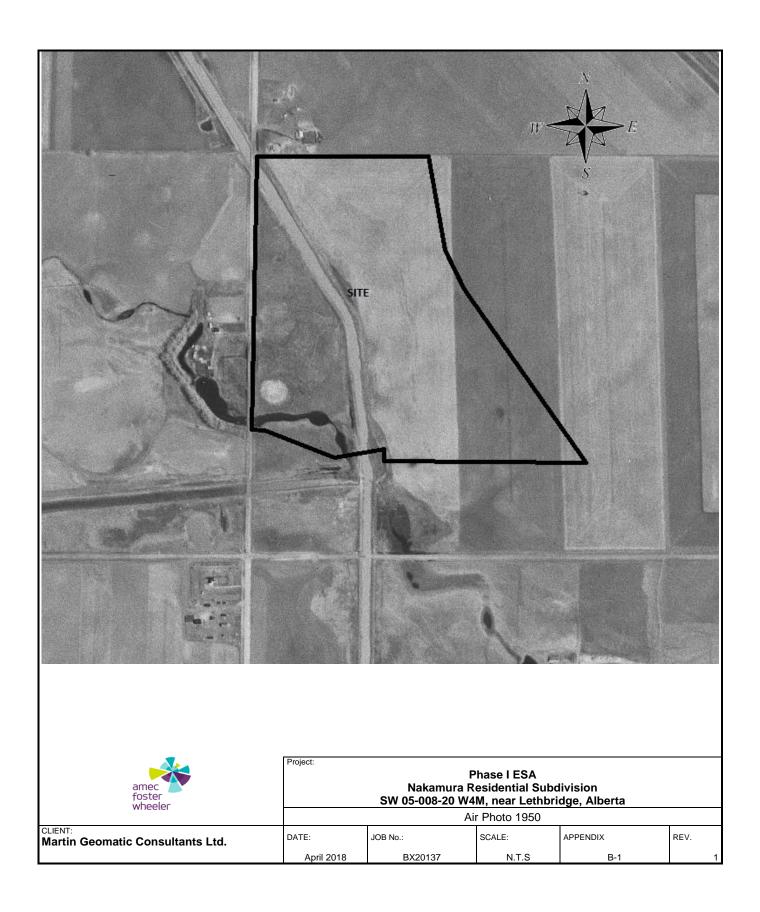
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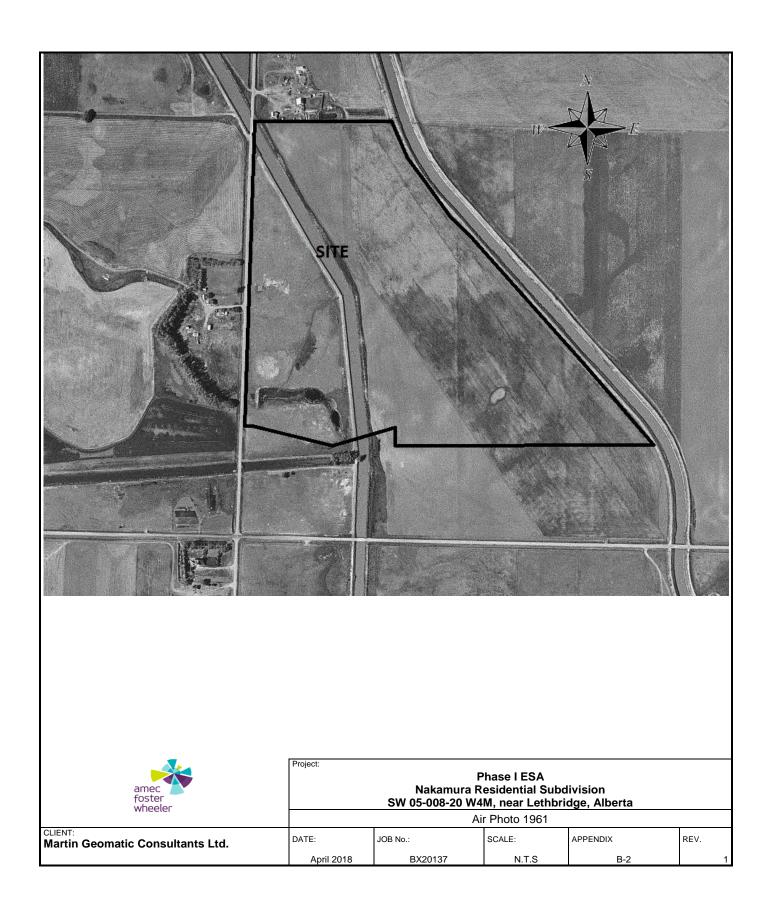
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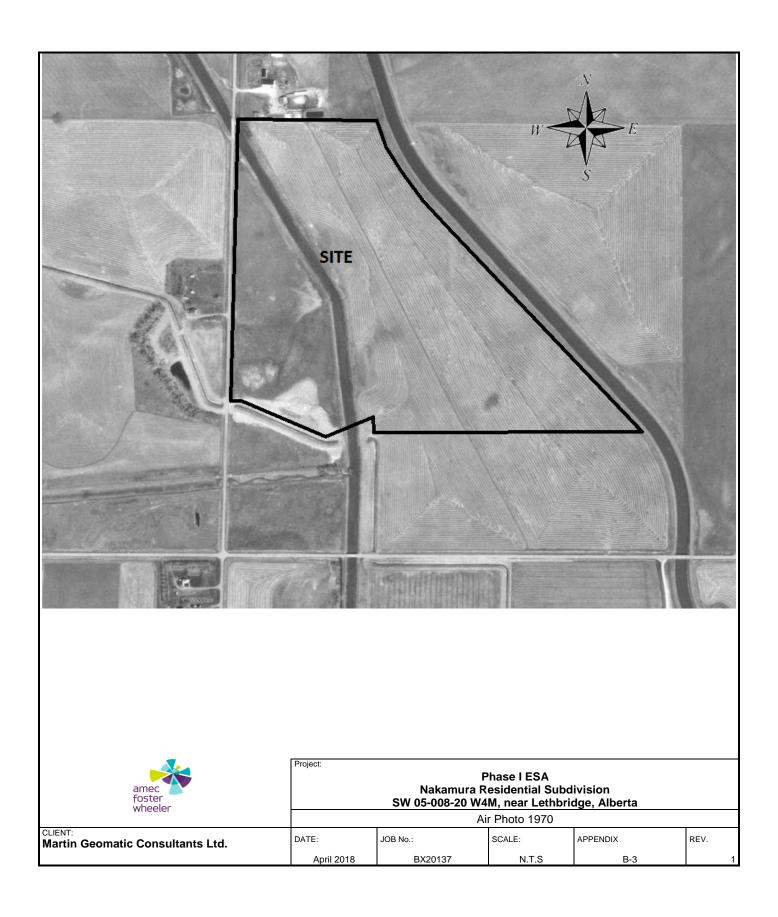


Appendix B

Aerial Photographs

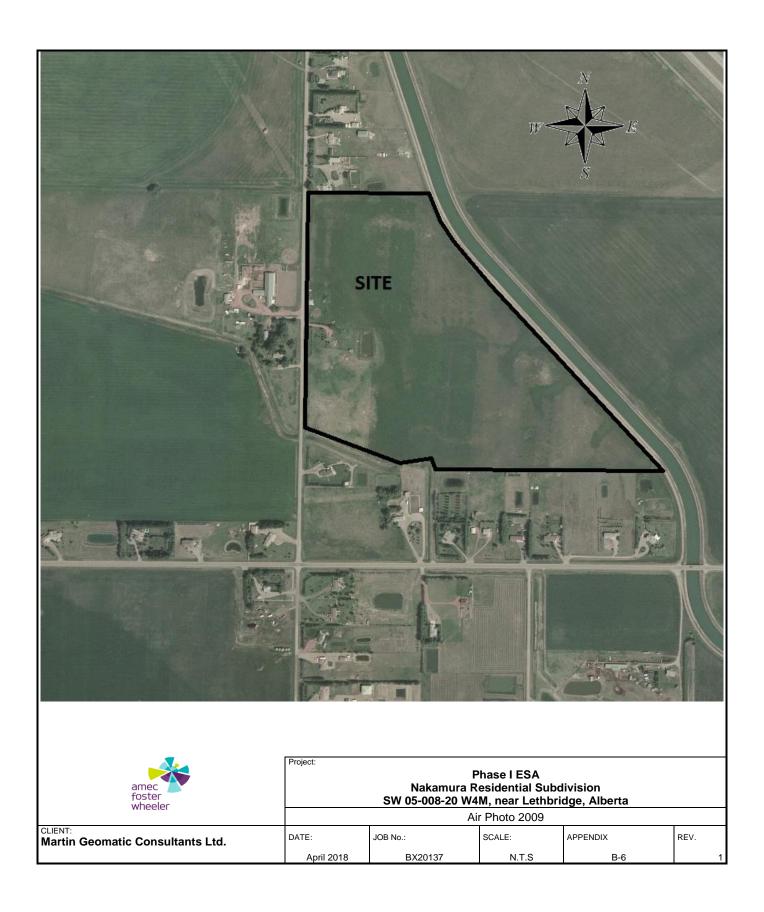














Appendix C

Documentation



Petroleum Tank Management Association of Alberta

Suite 980, 10303 Jasper Avenue Edmonton, Alberta T5J 3N6 PH: (780)425-8265 or 1-866-222-8265 FAX: (780)425-4722

April 5, 2018

Scott Roughead AMEC Foster Wheeler 469 - 40 Street South Lethbridge, AB T1J 4M1

Dear Scott Roughead:

As per your request, the PTMAA has checked the registration of active tank sites and inventory of abandoned tank sites and there are no records for the property with the legal land description:

SW 5-8-20-W4, Lethbridge

Please note that both databases are not complete. The main limitation of these databases is that they only include information reported through registration or a survey of abandoned sites completed in 1992 and should not be considered as a comprehensive inventory of all past or present storage tank sites. The PTMAA **cannot** guarantee that tanks do not or have not existed at this location. Information in the databases is based on information supplied by the owner and the PTMAA cannot guarantee its accuracy. Information on storage tanks or on past or present contaminant investigations may be filed with the local Fire Department or Alberta Environment.

Yours truly,

Connie JacobsenPTMAA



#100, 905 - 4th Avenue South, Lethbridge, Alberta T1J 4E4

Amec Foster Wheeler Environment and Infrastructure Attn: Scott Roughead 469 – 40 Street South Lethbridge, AB T1J 4M1

March 28, 2018

Re: Environmental information regarding SW-05-08-20-W4M, 80025 Range Road 20-5, Lethbridge County

The following information is the County's response to your inquiry regarding the above mentioned property.

- 1. Environmental concerns and property information.
 - a. A letter in the property file refers to there being an abandoned well on the site. It states the well was abandoned in 1956 with all equipment being removed from the property in May and June of 1956.
 - b. The property is classified as Rural Agriculture (R.A.) pursuant to the Lethbridge County Land Use By-Law 1404.
 - c. A Development Permit (94-89) was issued for a residence on the property in 1994. A copy of this permit has been included with this letter.

If you have any other questions regarding this please contact Sarah Mitchell, Development Officer at 403-328-5525.

Regards,

Sarah Mitchell

Development Officer

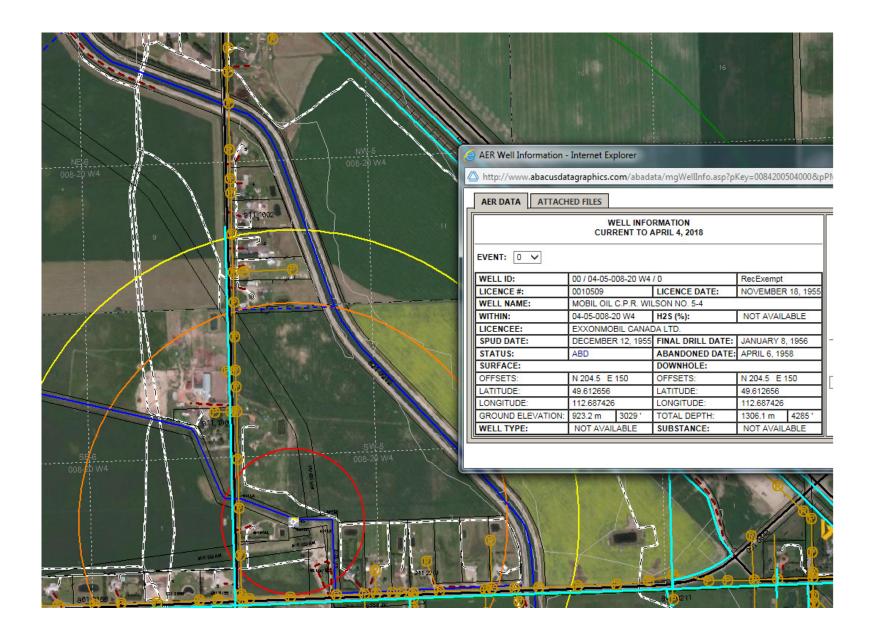
Tel: (403) 328-5525 E-Mail: mailbox@lethcounty.ca Fax: (403) 328-5602

COUNTY OF LETHBRIDGE NO. 26 DEVELOPMENT PERMIT

SCHEDULE 4	LAND USE BY-LAW NO. 806
FORM B	DEVELOPMENT APPLICATION NO. <u>94-89</u>
	DEVELOPMENT PERMIT NO. <u>94-89</u>
This development permit is hereby issued to:	
NAME: Harriet Douwes & Bourke Reaney	
ADDRESS: Box 3000 Main, Lethbridge, Alberta T1.	481
In respect of works consisting of:new resider	nce.
On land located at: S.W. 5-8-20-W4 (65 acres)	7
and as described on plans submitted by the applicant.	
This permit refers only to works outlined in Developmen	t Application No. 94-89
and is subject to the conditions contained herein:	
1) The residence is to be located a minimum distance of	of 125' from the centerline of the County road.
 All construction is to comply with the Alberta Building Client Services Division @ 381-5423. 	g Code. The applicant is to contact Alberta Labour,
This permit becomes effective the 6th day of appeal pursuant to Section 83 of The Planning Act is location becomes appeal pursuant to Section 83 of The Planning Act is location.	September , 1994 unless an ged within fourteen (14) days of the following date.
DATE: August 23, 1994	SIGNED: Development Officer

THIS IS NOT A BUILDING PERMIT

IMPORTANT: See over.





MOBIL OIL OF CANADA, LTD.

MOBIL OIL BUILDING

COMPTROLLER'S DEPARTMENT

B.E. TAYLOR, COMPTROLLER

M.P. HOLLIGH, ASSISTANT COMPTROLLER

H.W. SKIRTEN, CHIEF ACCOUNTANT

Calgary, Alberta

August 1, 1957

Secretary Treasurer, M. D. of Lethbridge #25, Barons, Alberta.

Dear Sir:

We refer to your 1957 Tax Notice based on an assessment of \$5,440.00 covering personal property on LSD. 4-5-8-20-W4M. We wish to draw to your attention that this well was abandoned in 1956 and all the equipment was removed during May and June, 1956.

The only 1957 Assessment Slip we have on file is for the personal property on our well situated on LSD. 12-32-7-20-W4M in the amount of \$2,000.00. Incidentally, this well went off production during April, 1957, and all the equipment was moved from the well-site approximately two months ago. As we did not receive an Assessment Slip for personal property on LSD. 4-5-8-20-W4M, it was assumed that your Assessor was aware of the abandonment of this well during 1956.

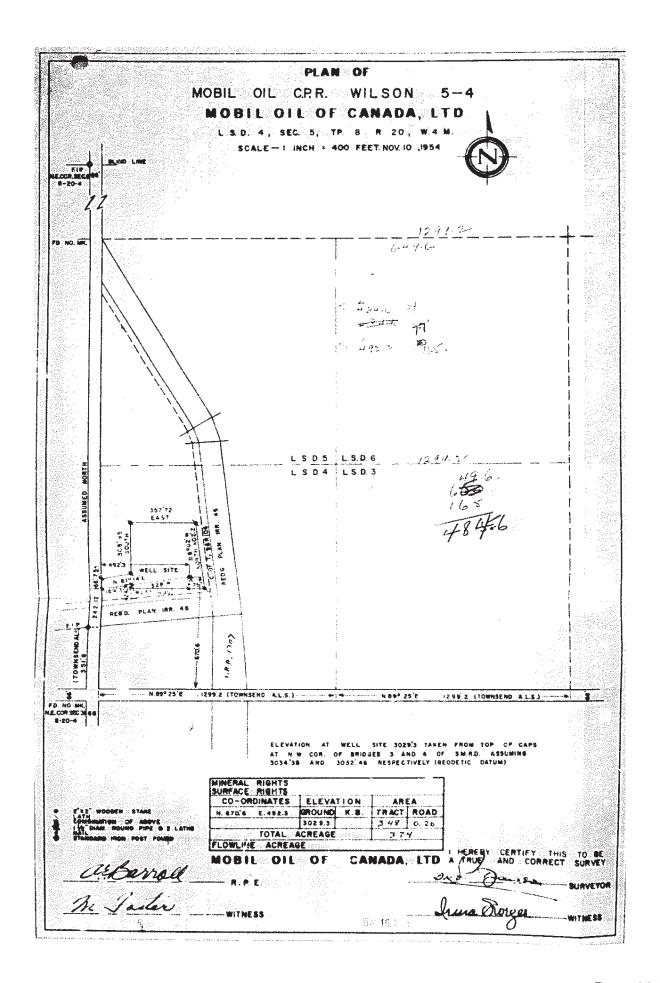
Please advise if an error has been made on this Tax Notice which should have been calculated on an assessment of \$2,000.00 instead of \$5,440.00.

Very truly yours,

B. E. Taylor

Bo Taylar DED

AEEhnis:bam





GOWN ID

Water Well Drilling Report

<u>View in Metric</u> <u>Export to Excel</u>

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID GoA Well Tag No. Drilling Company Well ID Date Report Received 118269

Well Identification and L	ocation				M	easurement in Imperial
Owner Name	Address		Town	Province	Country	Postal Code
Location 1/4 or LSD 4	SEC TWP 5 8	RGE W of MER	Lot Block P	Plan Addition	al Description	
Measured from Boundary (GPS Coordinate	s in Decimal Degrees (N 12674 Longitude btained		Elevation 30 How Elevation Obtain Estimated	39.00 ft
Drilling Information						
Method of Drilling Drilled Proposed Well Use		Type of Work Structure Test H	lole			
Industrial Formation Log		Measurement in Impe	rial Yield Test Su			easurement in Imperial
Depth from ground level (ft) Water Bearing	Lithology Description		Well Comple Total Depth Di 4284,00 ft Borehole Diamete 0.00 Surface Casin Size C Wall Thickne Bottom Perforations From (ft) Perforated by Annular Seal Placed from Amount Other Seals Screen Type	rilled Finished Well	Prom (ft) 0.00 Well Casing/Lin Size OE Wall Thickness Top a Bottom a	0: 0.00 in s: 0.000 in t: 0.00 ft
				ent	Bottom Fitting	8
			Pack Type <u>Amount</u>		Grain Size	
Contractor Certification Name of Journeyman resp	onsible for drilling/cons	truction of well	Cer	tification No		
UNKNOWN NA DRILLER Company Name UNKNOWN DRILLER			1 Сор	by of Well report prov	ided to owner Date	approval holder signed

Page: 1 / 2 Printed on 3/29/2018 10:23:12 AM



Water Well Drilling Report

View in Metric Export to Excel

118269

GIC Well ID
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

Date Report Received Well Identification and Location Measurement in Imperial Address Town Province Country Postal Code Owner Name TWP 1/4 or LSD SEC RGE W of MER Lot Block Plan Additional Description Location GPS Coordinates in Decimal Degrees (NAD 83) Measured from Boundary of Longitude <u>-112.68</u>6998 Latitude 49.612674 Elevation 3039.00 ft ft from How Location Obtained How Elevation Obtained ft from Field Estimated Additional Information Measurement in Imperial Distance From Top of Casing to Ground Level Is Artesian Flow Is Flow Control Installed Rate Describe Recommended Pump Rate Pump Installed igpm Depth ft Recommended Pump Intake Depth (From TOC) ft Type Model (Output Rating) Did you Encounter Saline Water (>4000 ppm TDS) Depth Well Disinfected Upon Completion Depth ft Geophysical Log Taken Electric Gas Submitted to ESRD Electric Sample Collected for Potability Submitted to ESRD _ Additional Comments on Well Yield Test Taken From Ground Level Measurement in Imperial Test Date Start Time Static Water Level Method of Water Removal Туре Removal Rate igpm Depth Withdrawn From ft If water removal period was < 2 hours, explain why Water Diverted for Drilling

Water Source	Amount Taken ig	Diversion Date & Time		

Contractor Certification

Name of Journeyman responsible for drilling/construction of well

UNKNOWN NA DRILLER

Company Name

UNKNOWN DRILLER

Copy of Well report provided to owner

UNKNOWN DRILLER

Printed on 3/29/2018 10:23:12 AM Page: 2 / 2



Drilling Information Method of Drilling

260.00

265.00

Rotary

Water Well Drilling Report

View in Metric Export to Excel

GIC Well ID GoA Well Tag No. Drilling Company Well ID
Date Report Received

118268

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

Type of Work

New Well

1983/12/15 Well Identification and Location Measurement in Imperial Province Address Postal Code Owner Name Town Country STOKELL, LIONEL WILSON 1/4 or LSD TWP RGE W of MER Block Additional Description Location SEC Lot Plan 20 GPS Coordinates in Decimal Degrees (NAD 83) Measured from Boundary of Longitude -112.686998 Elevation Latitude 49.612674 ft from How Location Obtained How Elevation Obtained ft from Мар Not Obtained

L	Proposed Well U Domestic	Ise			
Γ	Formation Log			Measurement in Imperial	Yield Test Summary
	Depth from ground level (ft)	Water Bearing	Lithology Description		Recommended Pump F Test Date Wate
l	24.00		Glacial Till		1983/03/11
l	28.00		Sand & Gravel		Well Completion
l	48.00		Glacial Till		Total Depth Drilled Fin
l	58.00		Clay & Coal		265.00 ft
l	75.00		Gray Clay		B or eh ole
l	100.00		Gray Sticky Clay		Diameter (in)
l	120.00		Coal		0.00 Surface Casing (if app
l	180.00		Sandy Clay		Steel Steel
l	240.00		Clay & Gravel		Size OD:

Sand

Hard Clay

nea rest canni					casarement in impent		
Recommended Pur	np Rate	90.	00 igpm	_			
Test Date	Water F	Removal Rate	(igpm)	Static Water Level (ft)			
1983/03/11	1983/03/11 7.50				140.00		
Well Completion				М	easurement in Imperia		
Total Depth Drilled	Finish	ed Well Dept	h Start	Date	End Date		
265.00 ft			1983	/03/07	1983/03/11		
Boreh ole							
Diameter (in)	Fron	n (ft)		To (ft)		
0.00		0			265.00		
Surface Casing (if Steel	• •	•	Well Ca Steel	_			
Size OD:		6.00 in		Size OE	2:4.50 in		
Wall Thickness:	0	.225 in	Wall 7	hickness	0.000 in		
Bottom at :	20	0.00 ft		Тор а	t:0.00_ft		
			E	Bottom a	t: 265.00 ft		
Perforations							
From (ft) To	(E) C	Diameter or	Slot Le	ength	Hole or Slot Interval(in)		
200.00 265		2.000	(11	1)	0.13		
Annular Seal Ce Placed from Amount	ment/G	rout) ft			
Other Seals			_				
	ype				At (ft)		
Screen Type							
Size OD:		0.00 in					
From (ft)		То	(ft)		Slot Size (in)		
Attachment _							
Top Fittings				m Fitting	S		
Pack							
Type Unknown			Grain	Size 3	75		
Amount							

Contractor Certification		
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1	
Company Name SOUTH COUNTRY DRILLING LTD.	Copy of Well report provided to owner	Date approval holder signed

Printed on 3/29/2018 10:25:58 AM Page: 1 / 2



Alberta Water Well Drilling Report

View in MetricExport to ExcelGIC Well ID
GoA Well Tag No.118268

OWN ID		а	ccuracy. The in	formation on	this report will be re-	tained in a public	: database.	,		Drilling Compar Date Report Re		1983/12/15
Well Ident	tification and L	ocation									Mea	surement in Imperia
Owner Nan STOKELL,	ne LIONEL		Address WILSON			Town			Province	Cour	try	Postal Code
Location	1/4 or LSD 4	SEC 5	TWP 8	RGE 20	W of MER 4	Lot E	Block	Plan	Additio	nal Description		
Measured t	from Boundary (of ft from			GPS Coordina Latitude 49					Elevation		ft
		ft from			How Location Map	Obtained				How Elevation Not Obtained	Obtained	
Additional	Information				·						Meas	surement in Imperia
	From Top of Cas an Flow				in	Is Flo	ow Contro	ıl Installed				
	Rate		igpm									
Recomme	ended Pump Rat	'e			0.00 igpm	Pump Ins					ft	
Recomme	ended Pump Inta	ake Depth	(From TOC)		0.00 ft	Туре			Make		H.P.	
										Model (Outp	ut Rating)	
Did you	Encounter Salin	ne Water (DS) Gas	Depth _ Depth _		t	Geop		g Taken		
	nal Comments o REPORTS SOF		₹			Sai	nple Colle	ected for Po	otability		Submitted	to ESRD <u>Yes</u>
Yield Test	t							Tak		Ground Level	Meas	surement in Imperi
Test Date 1983/03/1		Start Tin 12:00 AM		Statio	to Water Level 140.00 ft		Drawdo	own (ft)	· E	h to water level Elapsed Time Minutes:Sec		Recovery (ft)
F Depth Wit	of Water Remov Type F Removal Rate ithdrawn From	Pump 2	00.00 ft	7 <i>Y</i>		-						
Water Div	erted for Drilli	ng										
Water Soul	rce			Amo	ount Taken ig				Diversio	n Date & Time		

Contractor Certification		
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1	
Company Name SOUTH COUNTRY DRILLING LTD.	Copy of Well report provided to owner	Date approval holder signed

Printed on 3/29/2018 10:25:58 AM Page: 2 / 2



Appendix D

Site Photographs



Photo 1: Viewing southeast at residence.

Direction: Southeast.



Photo 2.

Viewing east at drive way to residence with located at 80025 Rge. Rd 20-05.

Direction: East.

Amec Foster Wheeler Environment & Infrastructure



Photo 3: Rural water line running parallel to west property line along Range Road 20-5.

Direction: East.





Photo 5:

Pasture located south of the residence and north of the former Mobil Oil well.

Direction:

East.



Photo 6:

Agricultural land located over the east half of the Site.

Direction:

East.



Photo 7: Natural gas line located in south half of Site with residence visible in center of photo.



Direction: Northwest.

Direction: West.



Photo 9:

The Site is bordered to the east by Saint Marry River Irrigation District (SMRID) Canal located on left edge of photo. Canal berm and access road visible in center of photo, with Site adjacent right.

Direction:

East.



Photo 10:

Country residential property and dugout located south of the Site. Small irrigation canal located in ditch behind dugout.

Direction:

South.



Photo 11: Rural agricultural residential property and small irrigation canal located south of Site.

Direction: East.

Photo 12:
Rural agricultural residential property located west of the Site adjacent to Rge Road 20-5.



Direction: East.



Appendix E

Statement of Qualifications

Scott Roughead, C.E.T.

Senior Environmental Technologist

Core Skills

- Technical Field Background for all aspects of Environmental Site Assessments
- Project Management and Reporting for contaminated site assessment and remediation
- Reliable Client liaison



Mr. Scott Roughead has been working as a senior environmental technologist with Amec Foster Wheeler Environment and Infrastructure for over fourteen years. Mr. Roughead has had a diverse range of duties, working on a wide arrangement of Environmental Assessment and Remediation projects. His current duties include management on Environmental projects including Phase I Environmental Site Assessments (ESAs), Phase II Environmental Site Assessments, open water and groundwater monitoring and sampling programs and supervision and management on Phase III remediation projects as well as risk management. Geotechnical duties include project management, geotechnical drilling, soil classification, and borehole log data entry. Mr Roughead's Project Management responsibilities include being a reliable and accountable liaison to clients from all identified disciplinary backgrounds.

Employment history

Amec Foster Wheeler, Environmental Technologist, Lethbridge, AB, 2005 to present. Amec Foster Wheeler, Environmental Technologist, Calgary, AB, 2003 field season.

Certifications and Training

- Ongoing Standard First Aid, 2005 to present.
- Ground Disturbance Level II, 2010 to present.
- ENFORM H₂S Alive, 2005 to present.
- Alberta Construction Safety Association Safety Training System, 2011.
- Sprouse Fire and Safety Training, 2003.
- Transportation of Dangerous Goods Course, 2014.
- Introduction to Contaminated Hydrogeology Workshop, 2010
- Project Management Training (in-house), 2007
- ▶ Tier 1 and Tier 2 Remediation Guideline Workshop, Alberta Environment, 2008.



Years with Amec Foster Wheeler: 14

Years' Experience: 14

Education

Environmental Science, Diploma, Renewable Resource Management, Lethbridge College, AB, Canada, 2003

Certificate of Specialization, Environmental Science, Fish and Wildlife Technology, Lethbridge College, Lethbridge, AB, Canada, 2004

Professional qualifications

Certified Engineering Technologist with the Association of Science and Engineering Technology Professionals of Alberta (ASET), Area of Practice Environmental Science.

ASET Member: 98653

Languages English

Environment & Infrastructure amecfw.com Page 1 of 1



Appendix F

Limitations

Sigma Rho Squared Engineering Phase I Environmental Site Assessment 608 5th Avenue South, Lethbridge, Alberta March 2017

LIMITATIONS

- The work performed in the preparation of this report and the conclusions presented are subject to the following:
 - The Standard Terms and Conditions which form a part of our Professional Services Contract;
 - b. The Scope of Services;
 - c. Time and Budgetary limitations as described in our Contract; and
 - d. The Limitations stated herein.
- No other warranties or representations, either expressed or implied, are made as to the professional services provided under the terms of our Contract, or the conclusions presented.
- The conclusions presented in this report were based, in part, on visual observations of the Site
 and attendant structures. Our conclusions cannot and are not extended to include those portions
 of the Site or structures, which are not reasonably available, in Amec Foster Wheeler's opinion,
 for direct observation.
- 4. The environmental conditions at the Site were assessed, within the limitations set out above, having due regard for applicable environmental regulations as of the date of the inspection. A review of compliance by past owners or occupants of the Site with any applicable local, provincial or federal by-laws, orders-in-council, legislative enactments and regulations was not performed.
- The Site history research included obtaining information from third parties and employees or agents of the owner. No attempt has been made to verify the accuracy of any information provided, unless specifically noted in our report.
- 6. Where testing was performed, it was carried out in accordance with the terms of our contract providing for testing. Other substances, or different quantities of substances testing for, may be present on-site and may be revealed by different or other testing not provided for in our contract.
- 7. Because of the limitations referred to above, different environmental conditions from those stated in our report may exist. Should such different conditions be encountered, Amec Foster Wheeler must be notified in order that it may determine if modifications to the conclusions in the report are necessary.
- 8. The utilization of Amec Foster Wheeler's services during the implementation of any remedial measures will allow Amec Foster Wheeler to observe compliance with the conclusions and recommendations contained in the report. Amec Foster Wheeler's involvement will also allow for changes to be made as necessary to suit field conditions as they are encountered.
- 9. This report is for the sole use of the party to whom it is addressed unless expressly stated otherwise in the report or contract. Any use which any third party makes of the report, in whole or the part, or any reliance thereon or decisions made based on any information or conclusions in the report is the sole responsibility of such third party. Amec Foster Wheeler accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on the report or anything set out therein.
- 10. This report is not to be given over to any third party for any purpose whatsoever without the written permission of Amec Foster Wheeler.
- 11. Provided that the report is still reliable, and less than 12 months old, Amec Foster Wheeler will issue a third-party reliance letter to parties that the client identifies in writing, upon payment of the then current fee for such letters. All third parties relying on Amec Foster Wheeler's report, by such reliance agree to be bound by our proposal and Amec Foster Wheeler's standard reliance letter. Amec Foster Wheeler's standard reliance letter indicates that in no event shall Amec Foster Wheeler be liable for any damages, howsoever arising, relating to third-party reliance on Amec Foster Wheeler's report. No reliance by any party is permitted without such agreement.

Limitations

APPENDIX 4

CORRESPONDENCE

- a. LETTER TO ADJACENT LANDOWNER
- b. Neighborhood Comments
- c. RECEIPT FROM WATER COOP FOR 27 WATER UNITS
- d. TELUS MAP
- e. SMRID MAPS
- f. TRIPLE W GAS CO-OP MAP

Letter To Adjacent Landowner



CONSULTING ENGINEERS, PLANNERS & LAND SURVEYORS 255 – 31st Street North, Lethbridge, Alberta, T1H 3Z4 PH: (403) 329-0050 FAX: (403) 329-6594

Email: geomart@mgcl.ca

December 13th, 2021 File: 082154CE

Dear Neighbor:

Re: Country Crossroads Estate Proposed Area Structure Plan Lethbridge County, Alberta SW 5-8-20-W4M (Jody Nakamura)

We are pleased to provide this notification and to seek feedback regarding a new country residential development being planned in your community. We are preparing an Area Structure Plan report in support of the twenty-five lot subdivision located at the Nakamura property along Range Road 205. The development would follow the Lethbridge County Land Use Bylaw for Group Country Residential zoning. The attached concept drawings are provided for your reference.

A brief description of the planned development follows:

The 25 lot country residential subdivision is located along Range Road 20-5, approximately 300 meters north of Highway 508. Existing rural residential properties border the development area to the south and north, and the SMRID canal borders the property to the east. Each of the 25 lots would be a minimum of 2 acres in area. There would be a paved public roadway looping through the property with two connections to RR-205. In order to manage runoff, a stormwater pond would be built adjacent to the RR-205 at the south end of the site. Surrounding the pond would be a landscaped area to function as a public green space. Potable water servicing is anticipated to be provided by the County of Lethbridge Rural Water Association or a private well system. Private septic systems will be used to provide on-site wastewater treatment and disposal for each individual lot. Utility servicing would be provided to each lot, including electricity, natural gas, and telecommunications. A community irrigation system is planned to supply untreated irrigation water to each lot for lawn and garden use. Architectural controls are intended to help ensure a high quality development. A phased development plan would allow for construction of approximately 6-10 lots in the initial phase. The demands of the housing market would influence the timing and size of each future phase.

If you have any comments about the proposed development, please contact the owner or MGCL as follows:

Owner:

Jody Nakamura RR 8-10-8, Lethbridge, Alberta, T1J 4P4 (403) 795-2341 inakamura@hotmail.com

MAI MAI

Consultant:

Martin Geomatic Consultants Ltd. (MGCL) Attention: Matt Redgrave, P.Eng. 255 – 31st Street North, Lethbridge, Alberta, T1H 3Z4 (403) 329-0050 Mattr@mgcl.ca

Please provide any comments or questions by January 10^{th} , 2022, and we will work to address any comments received.

If you do not have any concerns with the proposed development, please read and sign the box below:

Ι,	_(print names),
	-
of	(address),
have received the letter and concept drawings from MGCL, dated Decemoutlining the planned 25 lot rural residential development (Jody Nakamura W4M, Lethbridge County. I have reviewed the letter and concept plans and have no concerns wit development at this time, based on the information received.) in SW-5-8-20
Regards,	
	(sign names)
	(date)

Thank you.



Neighborhood Comments

February 20, 2022

Martin Geomatic Consultants Ltd. (MGCL) Attention: Matt Redgrave, P.Eng. 255 – 31 Street North Lethbridge, AB T1H 3Z4





Dear Sirs:

We have received the letter and concept drawings from MGCL, dated December 13, 2021 outlining the planned 25 lot rural residential development (Jody Nakamura) in SW-5-8-20 W4th, Lethbridge County. We have reviewed the letter and concept plans and we DO have concerns with the proposed development, based on the information received.

We are opposed to the proposal at the present time for the following reasons:

- 1. The property is in excess of 60 acres (66 acres).
- While the property may be small for agriculture purposes, it has produced an alfalfa crop annually – sometimes two cuts. Although a pivot is not possible, the owners have irrigation rights with SMRID and wheel-move equipment is on site.
- A previous proposal was made in 2010 for 27 lots and has since been amended to 25 lots, which
 is still too many. With 25 houses there would be 50 to 75 residents and likely 50 vehicles, all
 accessing Range Road 20-5, not to mention access for service vehicles. Traffic is an issue.
- 4. Who will maintain the road the County?
- Is the County Rural Water Association able to accommodate 25 more residences? Maybe not, neither do 25 private wells make any sense.
- 6. Wastewater management (25 septic fields) is a sewage drainage issue. The stormwater pond would not and should not contain wastewater drainage.
- Natural drainage for excess rainwater flows south and impacts the acreages already established along Highway 508 and has been known to overflow ditches along Range Road 20-5. Yes, we have had excessive run-off in rainy years.
- 8. The landscaped pond sounds nice but will it then drain into 6 Mile Coulee?
- 9. Community irrigation water from SMRID is currently sporadic for the existing acreages. Would they approve of this? Are they even aware of it?

There are just too many unanswered questions.

A copy of this letter is being sent to Lethbridge County and the property owner.

Yours truly,

John & Laura Prins 204062 HWY 508 Lethbridge County AB T1K 8G8 **Receipt From Water Coop For 27 Water Units**



COUNTY OF LETHBRIDGE RURAL WATER ASSOCIATION LTD.

Box 15 Lethbridge, AB T1J 3Y3

Jody Nakamura RR 8, Site 10, Comp. 8 Lethbridge, Alberta T1J 4P4

This is your receipt for a down payment on twenty-seven (27) water units @ \$250.00 each for a total of \$6,750.00.

Sincerely

Kirk Williamson



County of Lethbridge Rural Water Association Ltd. INVOICE # 1686

			Party of		Payment for: 27		Received from:		thbridge arecanour
	Total	GST # 866702798 GST	CAD SY MONEY ORDER #52657082	JATERUNITS @ 250, EAX 27= 6, 750.00	Payment for: Bowk PAYMENT FOR (27)		SORY NAKAMURA		Box 15 Lethbridge, Alberta T1J 3Y3
-	Total 6, 750.00	H		6,750,00		Price		DATE: MAR. 5.	INVOICE # U000
						Amount		5/10	

Telus Map

OneCall Ticket no: 20192703220

Overview

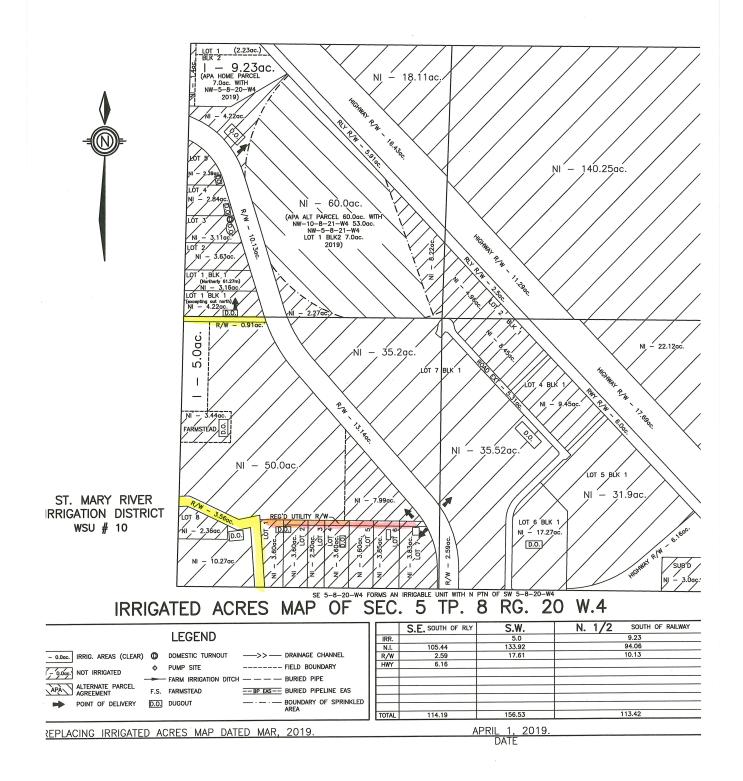
One Call Center - Dig Area

TELUS Buffer

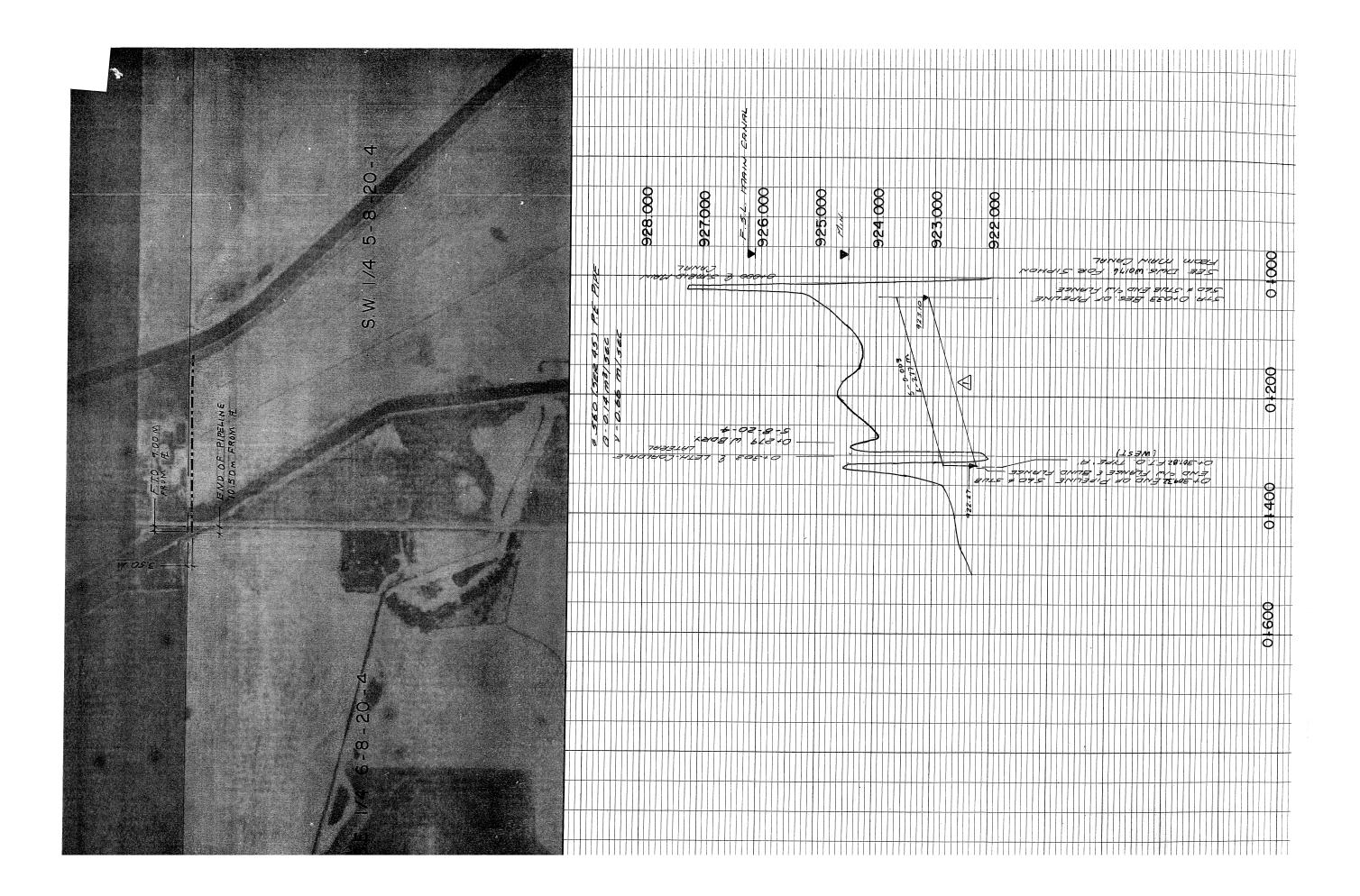
4

TELUS

SMRID Maps







Triple W Gas Co-op Map



TRIPLE W NATURAL GAS CO-OP LTD

P.O. Box 69, Warner, AB T0K 2L0

Phone: 403-642-3991

Lethbridge: 403-328-6959

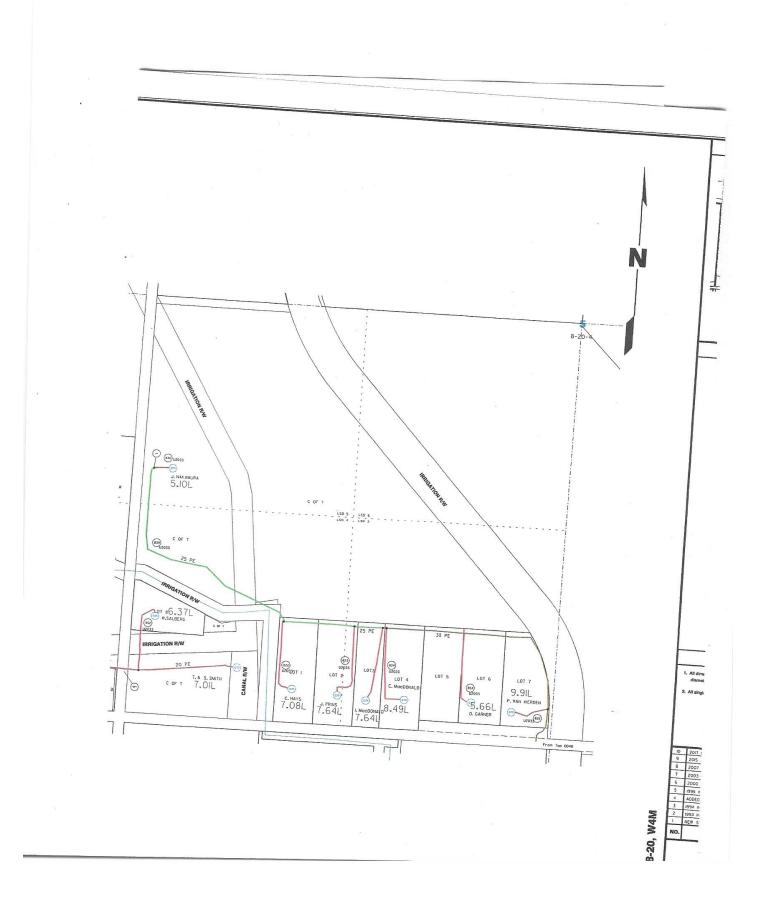
Fax: 403-642-3627 E-mail: triplew@telusplanet.net

After Hours Emergency: 403-642-3991

CUSTOMER SERVICE REQUEST FORM

No. 4946

•		11 1: 1 +		
		Martin Ceamatic		
Address or Legal Description:		SE 6-8-20 + SW planning + design	5-8-20	
Customer's Request:	/	planning + design	Subdinscon	7
Time Office received call:	2:	25 Call Taken by:	e-mail	
Time Operations received call:		Time Responded	d:	
Time Operations reached site:	-		201927032	220
TYPE OF REQUES	<u>T:</u>			
Leak on Meter Set		Appliance Problem	Line Location	
Leak in Premises		Pilot Light Out	CO Problem	
Leak on Reg Station		Venting Problem	Furnace Check	
Underground Leak		House Reg Problem	Meter Read	
10 DOM FEEL CHEST				
		Reg Station Problem	Other Outside:	
Leak Detection Equipment Rea	ding: Inside:		Outside:	
Leak Detection Equipment Rea Operation's Remarks & Recom	ding: Inside: mendations:	Sent map of a	Outside:	
Leak Detection Equipment Rea Operation's Remarks & Recom	ding: Inside: mendations:	Sent map of a	Outside:	
Leak Detection Equipment Rea Operation's Remarks & Recom Completion Time:	ding: Inside: mendations:	Sent map of a	Outside:	
Leak Detection Equipment Rea Operation's Remarks & Recom	ding: Inside: mendations:	Sent mop of a + Clesign	Outside:	
Leak Detection Equipment Rea Operation's Remarks & Recom Completion Time:	ding: Inside: mendations:	Sent mop of a + Clesign	Outside:	
Leak Detection Equipment Real Operation's Remarks & Recom Completion Time:	ding: Inside: mendations:	Sent mop of a + Clesign	Outside:	
Leak Detection Equipment Real Department Serviceman:	ding: Inside: mendations:	Sent mop of a + Clesign	Outside:	
Completion Time: Serviceman:	ding: Inside: mendations:	Sent mop of a + Clesign	Outside:	
Leak Detection Equipment Real Department Serviceman:	ding: Inside: mendations:	Sent mop of a + Clesign	Outside:	
Completion Time: Serviceman: I have read and acknowly Tenant Customer's Signature:	ding: Inside: mendations:	Sent mop of a + Clesign	Outside:	



APPENDIX 5

STORMWATER MANAGEMENT PLAN



STORMWATER MANAGEMENT PLAN COUNTRY CROSSROADS ESTATE SUBDIVISION SW5-8-20-W4M Lethbridge County, Alberta

Prepared for: Ms. Jody Nakamura

File Number: 082154CE

Dated: February 1, 2023

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APPENDIX

Appendix A – Soil Information Appendix B – SWMM Model Results

I. PROJECT BACKGROUND AND DRAINAGE FEATURES

The Country Crossroads Estate Subdivision is a proposed group country residential subdivision located approximately 300 meters north of Highway 508 along Range Road 20-5 in Lethbridge County. The legal property description is Southwest Quarter of Section 5, Township 8, Range 20 West of the 4th Meridian. The property is bound by a grouped country residential community to the north, a Saint Mary River Irrigation District (S.M.R.I.D.) canal to the east, a grouped country residential community and a drainage channel (S.M.R.I.D.) to the south, and Range Road 20-5 to the west. Refer to Figure 1 – Location Plan for an illustrative map. The purpose of this report is to provide stormwater management strategies to guide the future development of the Country Crossroads Estate Subdivision, in support of The Country Crossroads Estate Area Structure Plan (ASP) for consideration by the Lethbridge County. The ASP plan area is 70.50 acres (26.79 ha) and the proposed lot layout is shown on Figure 2 – Layout.

A. Existing Features

The subject parcel is presently used as farmland with a single dwelling and a dugout. The property is supplied with irrigation water from a S.M.R.I.D. lateral pipeline turnout. The land generally drains to the southwest at an average grade of 0.5% and drains in to a S.M.R.I.D. drainage channel (Tiffin drain). The site is characterized by three subcatchment areas. The East catchment (6.15ha) drains to the west along the southern property boundary. The West catchment (16.25ha) drains to a localized depression to the south and spills in to the Tiffin drain. The RR-205A catchment (6.13ha) drains into the east ditch of RR 20-5, which flows into the Tiffin drain. The Tiffin drain(R/W plan 821 0212) flows west and north through farmland and discharges to Sixmile Coulee and the Oldman River in the City of Lethbridge. A topographical site survey has been completed and an existing surface terrain model has been created to define drainage boundaries, storage depressions and flow conveyance routes as shown in *Figure 3* – .

B. Proposed Development

The proposed development will subdivide the parcel into 25 legal lots with each lot being approximately 2 to 4.29 acres, as well as road allowances for access and traffic circulation, and a public park with a stormwater pond. Drainage conditions will be affected as a result of this development, as the runoff flow rates and volumes will change due to the increase in the impervious areas within the plan area with the addition of hard surfaces including paved roads, building roofs and driveways. To mitigate the effect of runoff from the development, a stormwater storage pond is proposed on site with a controlled release which is designed to not exceed the allowable release rate. The proposed stormwater retention pond (storage pond) is located in the southwest corner of the site at a natural low area, to collect runoff from the development and store the water on-site. The paved roadways and grass swales will provide overland drainage routes throughout the development to convey runoff to the storage pond. The pond will drain the active storage volume in to the existing Tiffin drain, bordering the property to the south. The Tiffin drain ultimately drains to the Oldman River via Six Mile Coulee in the City of Lethbridge. Figure 4 - Stormwater shows the location of the proposed retention pond. The storage pond will include a permanent pool of water to promote the settlement of runoff pollutants.

^a GPS topographical survey, MGCL, June 01, 2016.

Stormwater Management Plan Country Crossroads Estate Subdivision Lethbridge County, Alberta

C. Soil Conditions

Existing soil descriptions for the area include Orthic Dark Brown Chernozem on medium textured loam, silt loam sediments deposited by wind on medium textured loam, silty clay loam, clay loam, clay, clay till and clay fill^b. Ten boreholes have been completed for the geotechnical investigations^c. The boreholes were drilled to a depth of 6.1m and generally found 100mm to 150mm topsoil above clay and clay till, with groundwater depths ranging from 2.2m to 3.4m. Soil reports are included in Appendix A – Soil Information.

II. METHODOLOGY

Drainage analysis of the existing site and proposed development (pre-development and post-development scenarios) has been completed to simulate the site drainage during a 100 year storm event. The stormwater will be managed on-site such that the post-development release rate will be equal to or less than 1.28 L/s/ha, per the Tiffin Drain – Master Drainage Pland. The increased runoff resulting from the construction of impervious areas will be mitigated by capturing and controlling the runoff in a retention pond and discharging at the allowable release rate.

A. Hydraulic Model

The existing pre-development and future post-development site models^e have been developed to simulate the site drainage during a 100 year storm event. The following table presents sub catchment parameters assumed in the post-development model:

- 1. Synthetic Design Storm Chicago Method: 24-hour duration, 100-year return period, (IDF Parameters A = 1019.20, B = 0, C = 0.731)^f
- 2. Rainfall time step = 5 minutes
- 3. Simulation duration = 240 hrs
- 4. Routing Method: Dynamic Wave
- 5. No effect of Evaporation and Groundwater
- 6. Catchment area = 26.83 ha
- 7. Infiltration Method: Green Ampt
- 8. Manning's N Impervious = 0.015
- 9. Manning's N Pervious = 0.15
- 10. Depression Storage Pervious = 5 mm
- 11. Depression Storage Impervious = 1 mm

B. Sub-Catchments

An existing site (pre-development) model and a proposed site model (post-development) have been developed to simulate drainage patterns in response to a 100 year synthetic design storm. The following tables present the sub-catchment parameters used in the pre-development and post-development scenarios:

b Alberta Soil Information Viewer, Alberta Agriculture and Forestry, http://www4.agric.gov.ab.ca/agrasidviewer

^c Geotechnical Investigation, Proposed Rural Residential Subdivision, SW-5-20-W4, County of Lethbridge report prepared by Wood, May 31, 2018.

^d Lethbridge County, DRAFT Tiffin Drain – Master Drainage Plan, MPE Engineering Ltd., March 2021.

^e EPA Storm Water Management Model – Version 5.0 (Build 5.0.22).

f Design Standards, City of Lethbridge, 2016.

Stormwater Management Plan Country Crossroads Estate Subdivision Lethbridge County, Alberta

	Table 1 – Pre Development Sub-Catchment Parameters							
Name	Area (ha)	Flow Length (m)	Slope (%)	Texture	Imperv. (%)	Suction Head (mm)	Conduct -ivity (mm/hr)	Initial Deficit (frac.)
East	6.15	350	1.05	SiC	0	292.2	0.5	0.25
West	16.25	463	1.11	SiC	0	292.2	0.5	0.25
RR_20-5	6.13	521	0.45	SiC	0	292.2	0.5	0.25

	Table 2 – Post Development Sub-Catchment Parameters							
Name	Area (ha)	Flow Length (m)	Slope (%)	Texture	Imperv. (%)	Suction Head (mm)	Conduct -ivity (mm/hr)	Initial Deficit (frac.)
S1	26.83	508	1.0	SiC	10	292.2	0.5	0.25

The source information for the above tables includes:

Area (ha) & Flow Path (m): measured.

Slope (%): Estimated from field survey and design plans.

Texture: Alberta Soil Viewer^g & boreholes^h.

Impervious (%): Estimated from field survey and design plans.

Hydraulic Conductivity (mm/hr) & Suction Head (mm): Typical soil characteristicsⁱ.

Initial Moisture Deficit: Typical soil characteristics^j.

III. RESULTS

The pre and post development model results are presented in the following tables. Details of the rainfall runoff modeling are included in Appendix B – SWMM Model Results.

A. Pre-Development

The pre-development runoff, storage and release rates are shown in the following tables resulting from a 100 year / 24 hour storm.

⁹ Alberta Soil Information Viewer, Alberta Agriculture and Forestry,

http://www4.agric.gov.ab.ca/agrasidviewer

^h Geotechnical Investigation, Proposed Rural Residential Subdivision, SW-5-8-20-W4.

¹ Rawls, W.J. et al., (1983). J. Hyd. Engr., 109:1316

^j XP SWMM Solutions, http://help.xpsolutions.com/display/xps2015/Infiltration

Table 3 – Pre-Development Runoff						
Name	Area (ha)	Precipitation (mm)	Infiltration (mm)	Runoff Depth (mm)	Runoff Volume (ML)	Peak Runoff (m³/s)
East	6.15	120.15	52.96	67.31	4.14	0.47
West	16.24	120.15	53.66	66.58	10.82	1.04
RR_20-5	6.12	120.15	56.01	64.19	3.93	0.25

	Table 4 – Pre-Development Storage						
Name	Invert Elev. (m)	Rim Elev. (m)	Max. Depth (m)	Max. HGL (m)	Total inflow (ML)	Max. Volume (1,000 m³)	
ponding	922.20	924.20	0.57	922.77	10.82	1.96	

Table 5 – Pre-Development Discharge					
Name	Max. Flow (m³/s)	Total Flow (ML)			
S.M.R.I.DChannel 1.38 17.93					

B. Post-Development

The prost-development runoff, storage and release rates are shown in the following tables resulting from a 100 year storm.

	Table 6 – Post-Development Runoff							
Name	Area (ha)	Precipitation (mm)	Infiltration (mm)	Runoff Depth (mm)	Runoff Volume (ML)	Peak Runoff (m³/s)		
S1	26.83	120.15	49.37	70.87	19.02	1.84		

Table 7 – Post-Development Storage						
Name	Invert Elev. (m)	Rim Elev. (m)	Max. Depth (m)	Max. HGL (m)	Total inflow (ML)	Max. Volume (1,000 m³)
wet_pond	918.90	923.00	3.54	922.44	33.17	30.37

Table 8 – Stage Storage Chart – Wet Pond						
Description	Elevation (m)	Depth (m)	Area (m²)	Increment Volume (m³)	Total Volume (m³)	
Bottom	918.90	0.00	5,700	0	0	
-	919.90	1.00	6,900	6,300	6,300	
NWL	920.90	2.00	8,800	7,900	14,100	
-	921.90	3.00	10,900	9,900	23,900	
HWL	922.40	3.50	12,400	5,900	29,800	
ТОВ	923.00	4.10	13,900	7,900	37,600	

The definitions pertaining to the above table include:

NWL = Normal Water Level

HWL = High Water Level (100 yr / 24 hr storm)

TOB = Top of Bank

Table 9 – Wet Pond Characteristics					
Туре	Stormwater Wet Pond	Catchment	26.83 ha		
Land Use	Rural Residential	% Impervious	10 %		
Permanent Pool Volume	14,100 m³	Permanent Pool Depth	2.0 m		
Active Storage Volume	15,700 m³	Active Storage Depth	1.5 m		
Volume at Spill Elevation	37,600 m³	Freeboard	0.6 m		
Unit Release Rate	1.28 L/s/ha	Peak Release Rate	34 L/s		

Table 10 - Post-Development Discharge					
Name Max. Flow (L/s) Total Flow (ML)					
Tiffin Drain 34.3 18.89					

C. Allowable and Post Development Release Rates

The allowable and post development discharge rates to be released from the development during the 100 year / 24 hour storm event are shown below.

Table 11 – Release Rates							
Outlet Description	Allowable Release Rate* (L/s)	Post –Development Peak Release Rate (L/s)	Net Change (L/s)				
Tiffin Drain	34	34	0				

^{*}Allowable Release Rate k = 1.28 L/s/ha x 26.8 ha = 34.3 L/s

The stormwater analysis for the Country Crossroads Estate development indicates that the proposed outfall in to Tiffin drain located at the southwest development boundary will receive a post-development peak flow rate not exceeding the continuous allowable release rate of 1.28 L/s/ha. The construction of a wet pond will retain runoff on site and discharge to the downstream environment with a controlled release. Preliminary stormwater modeling indicates that a gravity drain pipe with a 1.0 m elevation drop from the Wet Pond to Tiffin Drain would require a circular orifice outlet, 0.14 m in diameter.

IV. RECOMMENDATIONS

It is recommended that the detailed design of the Country Crossroads Estate Development provides a stormwater wet pond with an active storage volume 15,700 m³ on-site, to retain the runoff from a 1 in 100 year 24 hour storm, and discharge at or below the allowable release rates as outlined in this report. The retention pond shall be designed and constructed to Lethbridge County and Alberta Environment and Parks standards and guidelines. A forebay berm is intended in the wet pond to trap sediments, and a make-up water supply should be provided to maintain the permanent pool water level, accounting for evaporation. The wet pond may serve as a water source for a community irrigation system which would provide water to irrigate lawns and gardens. The establishment of vegetative zones around the wet pond is recommended to enhance the pond's capability of pollutant removal. For future houses adjacent to the pond, basement footings should be below the pond's high water level. Approval drawings

^k Lethbridge County, DRAFT Tiffin Drain – Master Drainage Plan, MPE Engineering Ltd., March 2021.

Stormwater Management Plan Country Crossroads Estate Subdivision Lethbridge County, Alberta Page 9 of 13

including the detailed designs of retention ponds, outlets, swales and grading plans are recommended prior to construction, and it is intended that such detailed designs would generally follow the stormwater concepts outlined in this report.

V. CLOSING

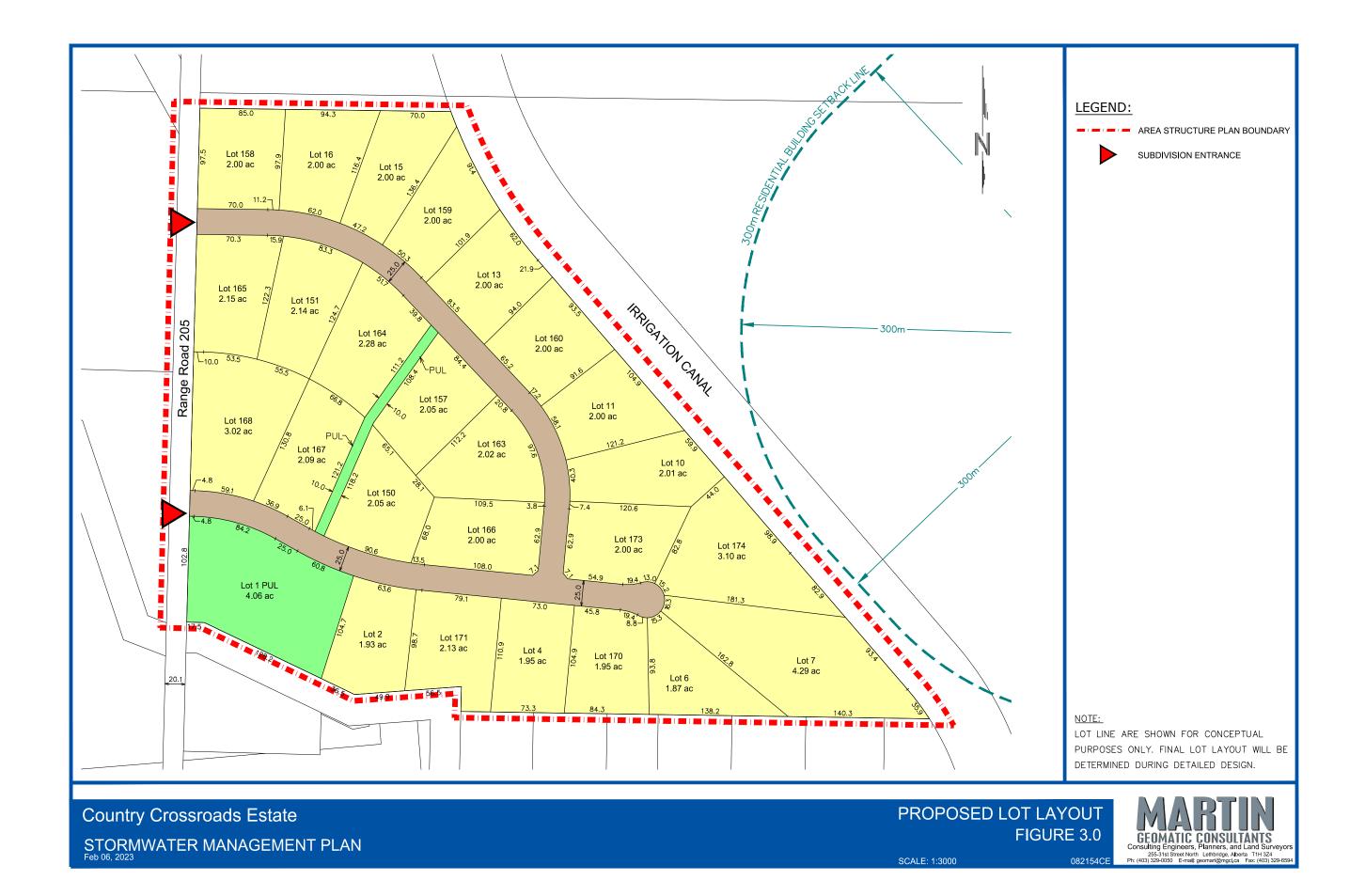
We trust that this report meets the requirements of the Area Structure Plan. Should you require any further information, please contact the undersigned.

Prepared by:

Raymond Martin, P.Eng. Civil Engineer, Project Manager

MARTIN GEOMATIC CONSULTANTS LTD.

Association of Professional Engineers and Geoscientists of Alberta Permit to Practice P05852



APPENDIX 'A' – SOILS

STORMWATER MANAGEMENT PLAN
COUNTRY CROSSROADS ESTATE SUBDIVISION
SW5-8-20-W4M
Lethbridge County, Alberta

Report on Soil Polygon: 5815

Variable	Value
POLY_ID	5815
Map Unit Name	LEWN1/U1h
Landform	U1h - undulating - high relief
LSRS Rating (Spring Grains)	4M(10)

Landscape Model Descriptions:

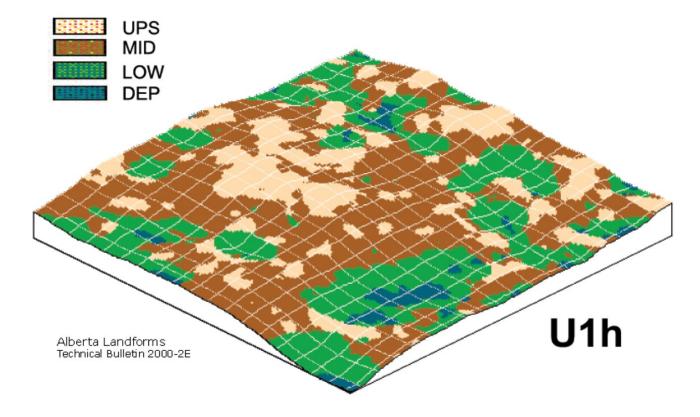
Orthic Dark Brown Chernozem on medium textured (L, SiL) sediments deposited by wind and water (LET). Orthic Dark Brown Chernozem on medium textured (L, SiCL, CL) materials over medium (L, CL) or fine (C) textured till (WNY).

The polygon may include soils that are not strongly contrasting from the dominant or co-dominant soils (1). Undulating, high relief landform with a limiting slope of 4% (U1h).

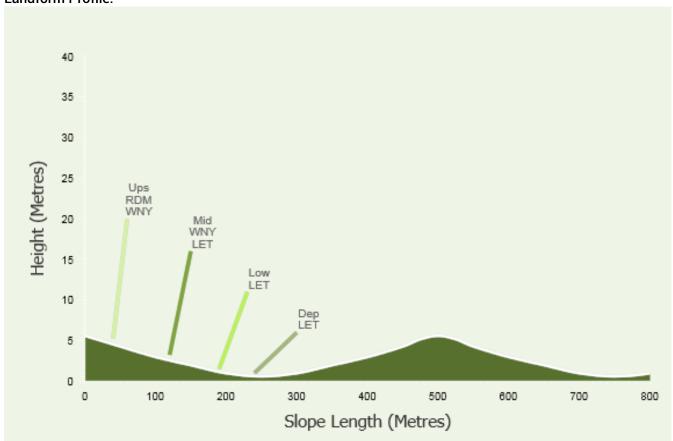
Image:



Landform Model:



Landform Profile:



Report on Soil Polygon: 5839

Variable	Value
POLY_ID	5839
Map Unit Name	RDWN1/U1h
Landform	U1h - undulating - high relief
LSRS Rating (Spring Grains)	3MT(10)

Landscape Model Descriptions:

Orthic Dark Brown Chernozem on medium textured (L, CL) till (RDM).

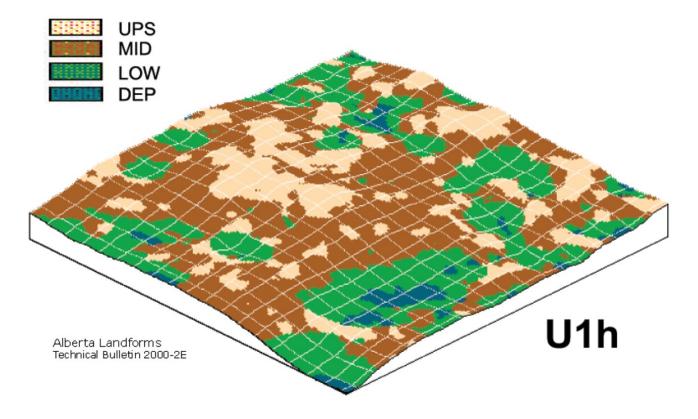
Orthic Dark Brown Chernozem on medium textured (L, SiCL, CL) materials over medium (L, CL) or fine (C) textured till (WNY).

The polygon may include soils that are not strongly contrasting from the dominant or co-dominant soils (1). Undulating, high relief landform with a limiting slope of 4% (U1h).

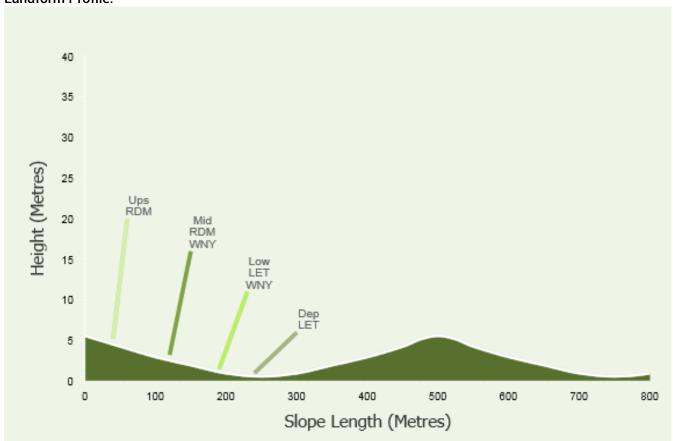
Image:



Landform Model:



Landform Profile:



Report on Soil Polygon: 5863

Variable	Value
POLY_ID	5863
Map Unit Name	LET5/U1I
Landform	U1I - undulating - low relief
LSRS Rating (Spring Grains)	3M(10)

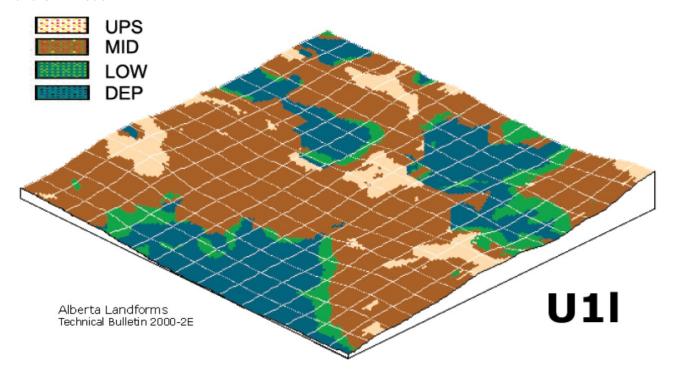
Landscape Model Descriptions:

Orthic Dark Brown Chernozem on medium textured (L, SiL) sediments deposited by wind and water (LET). The polygon includes soils that are finer textured than the dominant or co-dominant soils (5). Undulating, low relief landform with a limiting slope of 2% (U1I).

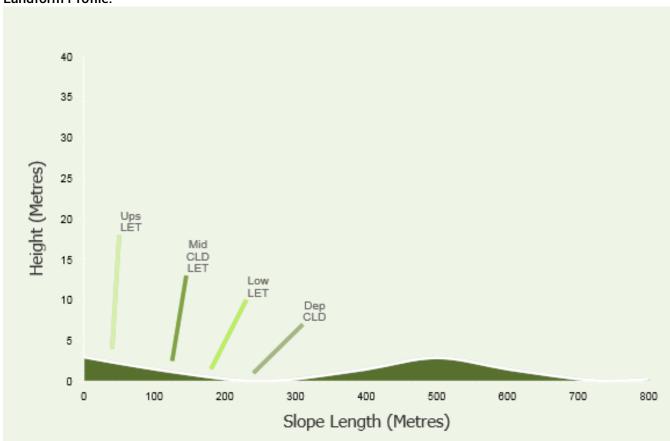
Image:



Landform Model:



Landform Profile:



APPENDIX 'B' - SWMM

STORMWATER MANAGEMENT PLAN
COUNTRY CROSSROADS ESTATE SUBDIVISION
SW5-8-20-W4M
Lethbridge County, Alberta

[TITLE]

```
Wilson NW
Pre Development
24hr 100yr
[OPTIONS]
;;Options
               Value
;;-----
FLOW UNITS
INFILTRATION
               GREEN AMPT
FLOW_ROUTING
               DYNWAVE
START DATE
               05/27/2015
START_TIME
               00:00:00
REPORT START DATE
               05/27/2015
REPORT START TIME
               00:00:00
END DATE
               06/10/2015
END TIME
               00:00:00
SWEEP_START
               01/01
SWEEP END
               12/31
DRY DAYS
REPORT STEP
               0:01:00
WET STEP
               0:05:00
DRY STEP
               0:05:00
ROUTING STEP
ALLOW PONDING
               ИО
INERTIAL DAMPING
               PARTIAL
VARIABLE STEP
               0.75
LENGTHENING STEP
               0
MIN SURFAREA
               0
NORMAL FLOW LIMITED BOTH
SKIP STEADY STATE
FORCE MAIN EQUATION H-W
LINK OFFSETS
               DEPTH
MIN SLOPE
               0
[EVAPORATION]
;;Type Parameters
;;-----
CONSTANT 0.0
DRY ONLY
[RAINGAGES]
;;
              Rain
                       Time Snow Data
        Type Intrvl Catch Source
;;-----
Lethbridge_100yr_24hr INTENSITY 0:05 1.0 TIMESERIES Chicago 24hr
[SUBCATCHMENTS]
;;
                                     Total
                                           Pcnt.
                                                        Pcnt.
                                                               Curb
                                                                      Snow
;;Name Raingage Outlet
                                     Area Imperv Width
                                                         Slope
                                                               Length Pack
East Lethbridge_100yr_24hr SMRID_Channel 6.1549 0 175.854 1.05
```

RR_20-5 West	Lethbrid Lethbrid	ge_100yr_24h: ge_100yr_24h:	r SMRID_Chan r ponding	nel 6.12 16.249	72 0 1 6 0 3	17.605 0. 50.963 1.	. 45 0 . 11 0			
[SUBAREAS] ;;Subcatchment	-		S-Imperv		PctZero	RouteTo	PctRout			
• •		0.15 1 0.15 1 0.15 1			0 0 0	PERVIOUS PERVIOUS PERVIOUS	3 100 3 100			
[INFILTRATION] ;;Subcatchment ;;	Suction	HydCon								
East RR_20-5 West	292.2 292.2 292.2	0.5 0.5 0.5	0.25							
[OUTFALLS] ;; ;;Name ;;	Invert Elev.	Outfall Type	Stage/Ta Time Ser	ble	Tide Gate					
;;SMRID_Channel					NO					
[STORAGE] ;; ;;Name	Elev.	Max. Init. Stora		. Pa	rve rams		Ponded Area	Frac.		
;; ponding	922.2		TABUL		rve1		0	0	292 0.5	
[00110117777										
	Inlet Node	Out. Nod	Э	Length	Manning N	Inlet Offset	Outlet Offset	Init Flow	Max. v Flow	
;; ;;Name ;;	Node 	Nod	e 		ı N				Max. V Flow	
;; ;;Name ;;	Node ponding Shape	Nod SMR Geom1	e ID_Channel Ge	10	0.15	0.4 Geom4	2 Barrels			
;; ;;Name ;;	Node ponding Shape	Nod SMR Geom1	e ID_Channel Ge	10 eom2	0.15	0.4 Geom4	2 Barrels			
;; Name ;; Name ;; C1 [XSECTIONS] ;; Link	Node ponding Shape TRAPEZOI	Geom1 DAL 1 Outlet	e ID_Channel Ge 10 Average	10 com2 Flap Ga	0.15 Geom3 5	0.4 Geom4	2 Barrels			
;; ;; Name ;;	Node ponding Shape TRAPEZOI Inlet	Geom1 DAL 1 Outlet X-Value	e ID_Channel Ge 10 Average Y-Value	10 com2 Flap Ga	0.15 Geom3 5	0.4 Geom4	2 Barrels			
;; Name ;; Name ;; Name ;; Link ;; Link ;; Link ;; C1 [LOSSES] ;; Link ;; CURVES] ;; Name ;; Name	Node ponding Shape TRAPEZOI Inlet	Geom1 DAL 1 Outlet X-Value	e ID_Channel Ge 10 Average Y-Value	10 com2 Flap Ga	0.15 Geom3 5	0.4 Geom4	2 Barrels			

;;Name	Date		Time		Value											
;Chicago design	storm	a =	1019 2	h –	0 0 -	0 721	Dunation		1 4 4 0			0 05				
Chicago 24hr	D COLIN,	u -	0:00	D -	1.352	0.731,	Duracion	_	1440	minutes,	r =	0.35,	raın	units	= mm/	hr.
Chicago 24hr			0:05		1.361											
Chicago 24hr			0:10		1.372											
Chicago 24hr			0:15													
Chicago 24hr			0:20		1.382											
Chicago 24hr					1.392											
Chicago 24hr			0:25		1.403											
Chicago 24hr			0:30		1.414											
Chicago 24hr			0:35		1.425											
Chicago 24hr			0:40		1.436											
			0:45		1.448											
Chicago_24hr			0:50		1.459											
Chicago_24hr			0:55		1.471											
Chicago_24hr			1:00		1.483											
Chicago_24hr			1:05		1.496											
Chicago_24hr			1:10		1.509											
Chicago_24hr			1:15		1.521											
Chicago_24hr			1:20		1.535											
Chicago_24hr			1:25		1.548											
Chicago_24hr			1:30		1.562											
Chicago_24hr			1:35		1.576											
Chicago_24hr			1:40		1.59											
Chicago_24hr			1:45		1.605											
Chicago_24hr			1:50		1.62											
Chicago_24hr			1:55		1.635											
Chicago_24hr			2:00		1.651											
Chicago_24hr			2:05		1.667											
Chicago_24hr			2:10		1.683											
Chicago_24hr			2:15		1.7											
Chicago_24hr			2:20		1.717											
Chicago_24hr			2:25		1.735											
Chicago_24hr			2:30		1.753											
Chicago_24hr			2:35		1.771											
Chicago_24hr			2:40		1.79											
Chicago_24hr			2:45		1.809											
Chicago_24hr			2:50		1.829											
Chicago_24hr			2:55		1.85											
Chicago_24hr			3:00		1.871											
Chicago_24hr			3:05		1.892											
Chicago_24hr			3:10		1.914											
Chicago_24hr			3:15		1.937											
Chicago_24hr			3:20		1.961											
Chicago_24hr			3:25		1.985											
Chicago_24hr			3:30		2.009											
Chicago_24hr			3:35		2.035											
Chicago_24hr			3:40		2.061											
Chicago_24hr			3:45		2.089											
Chicago_24hr			3:50		2.117											
Chicago_24hr			3:55		2.146											
Chicago_24hr			4:00		2.176											
Chicago_24hr			4:05		2.206											

Chicago 24hr	4:10	2.238
Chicago_24hr	4:15	2.272
Chicago 24hr	4:20	2.306
Chicago 24hr	4:25	2.341
Chicago 24hr	4:30	2.378
Chicago 24hr	4:35	2.416
Chicago_24hr	4:40	2.456
Chicago 24hr	4:45	2.498
Chicago_24hr	4:50	2.541
Chicago_24hr	4:55	2.585
Chicago_24hr	5:00	2.632
Chicago_24hr	5:05	2.681
Chicago_24hr	5:10	2.732
	5:15	2.785
Chicago_24hr Chicago_24hr	5:20	2.841
Chicago_24nr	5:25	2.9
Chicago_24hr	5:30	2.961
Chicago_24hr	5:35	3.026
Chicago_24hr		
Chicago_24hr	5:40	3.094
Chicago_24hr	5:45	3.166
Chicago_24hr	5:50	3.242
Chicago_24hr	5:55	3.323
Chicago_24hr	6:00	3.408
Chicago_24hr	6:05	3.499
Chicago_24hr	6:10	3.596
Chicago_24hr	6:15	3.699
Chicago_24hr	6:20	3.81
Chicago_24hr	6:25	3.929
Chicago_24hr	6:30	4.057
Chicago_24hr	6:35	4.195
Chicago_24hr	6:40	4.346
Chicago_24hr	6:45	4.509
Chicago_24hr	6:50	4.688
Chicago_24hr	6:55	4.885
Chicago_24hr	7:00	5.102
Chicago_24hr	7:05	5.344
Chicago_24hr	7:10	5.615
Chicago_24hr	7:15	5.921
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Chicago 24hr	7:25	6.67
Chicago 24hr	7:30	7.139
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Chicago 24hr	8:00	13.551
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Chicago 24hr	8:20	286.165
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Chicago_24hr	8:35	30.072
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Chicago 24hr	8:50	17.317
Chicago 24hr	8:55	15.38
Chicago_24hr	9:00	13.889
Chicago_24hr	9:05	12.7
Chicago 24hr	9:10	11.728
Chicago 24hr	9:15	10.915
Chicago 24hr	9:20	10.224
Chicago_24hr	9:25	9.629
Chicago 24hr	9:30	9.109
Chicago 24hr	9:35	8.652
Chicago 24hr	9:40	8.245
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Chicago 24hr	9:55	7.255
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Chicago_24hr	10:10	6.507
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Chicago_24hr	10:30	5.75
Chicago_24hr	10:35	5.592
Chicago_24hr	10:40	5.444
Chicago 24hr	10:45	5.304
Chicago 24hr	10:43	5.173
Chicago 24hr	10:55	
Chicago 24hr	11:00	5.049 4.932
Chicago 24hr	11:05	4.822
Chicago 24hr	11:10	4.717
Chicago 24hr	11:15	4.717
Chicago_24hr	11:20	4.517
Chicago_24hr	11:25	4.322
Chicago 24hr	11:30	4.345
Chicago_24hr	11:35	4.263
Chicago_24hr	11:40	4.263
Chicago 24hr	11:45	4.104
Chicago 24hr	11:50	4.109
Chicago 24hr	11:55	
Chicago_24hr	12:00	3.967 3.901
Chicago 24hr		
Chicago 24hr	12:05 12:10	3.837
Chicago_24hr	12:15	3.775 3.716
Chicago 24hr	12:15	3.659
Chicago_24hr		
	12:25 12:30	3.604
Chicago_24hr Chicago 24hr		3.55
	12:35	3.499
Chicago_24hr Chicago 24hr	12:40 12:45	3.449
Chicago_24hr Chicago_24hr		3.401
	12:50	3.355
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Chicago_24hr	13:00	3.267
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Chicago_24hr	13:35	2.996
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Chicago 24hr	13:55	2.863
Chicago_24hr	14:00	2.832
Chicago 24hr	14:05	2.802
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Chicago_24hr	14:15	2.744
	14:15	2.744
Chicago_24hr	14:25	2.689
Chicago_24hr	14:30	2.662
Chicago_24hr	14:35	2.636
Chicago_24hr	14:35	2.636
Chicago_24hr		
Chicago_24hr	14:45	2.585
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Chicago_24hr	14:55	2.537
Chicago_24hr	15:00	2.514
Chicago_24hr	15:05	2.491
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Chicago_24hr	15:15	2.447
Chicago_24hr	15:20	2.425
Chicago_24hr	15:25	2.404
Chicago_24hr	15:30	2.384
Chicago_24hr	15:35	2.364
Chicago_24hr	15:40	2.344
Chicago_24hr	15:45	2.325
Chicago_24hr	15:50	2.306
Chicago_24hr	15:55	2.287
Chicago_24hr	16:00	2.269
Chicago_24hr	16:05	2.251
Chicago_24hr	16:10	2.233
Chicago_24hr	16:15	2.216
Chicago_24hr	16:20	2.199
Chicago_24hr	16:25	2.183
Chicago_24hr	16:30	2.166
Chicago_24hr	16:35	2.15
Chicago_24hr	16:40	2.134
Chicago_24hr	16:45	2.119
Chicago_24hr	16:50	2.104
Chicago_24hr	16:55	2.089
Chicago_24hr	17:00	2.074
Chicago_24hr	17:05	2.059
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Chicago_24hr	17:15	2.031
Chicago_24hr	17:20	2.017

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Chicago_24hr	17:55	1.926
Chicago_24hr	18:00	1.914
Chicago_24hr	18:05	1.902
Chicago_24hr	18:10	1.89
Chicago_24hr	18:15	1.879
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Chicago 24hr	18:30	1.845
Chicago_24hr	18:35	1.834
Chicago_24hr	18:40	1.823
Chicago_24hr	18:45	1.812
Chicago_24hr	18:50	1.802
Chicago 24hr	18:55	
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Chicago_24hr	19:00	1.781
Chicago_24hr	19:05	1.771
Chicago_24hr	19:10	1.761
Chicago_24hr	19:15	1.751
Chicago_24hr	19:20	1.741
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Chicago_24hr	19:35	1.713
Chicago_24hr	19:40	1.704
Chicago 24hr	19:45	1.695
Chicago_24hr	19:50	1.686
Chicago_24hr	19:55	1.677
Chicago 24hr	20:00	1.668
Chicago 24hr	20:05	1.659
Chicago 24hr		
	20:10	1.651
Chicago_24hr	20:15	1.642
Chicago_24hr	20:20	1.634
Chicago_24hr	20:25	1.626
Chicago_24hr	20:30	1.617
Chicago_24hr	20:35	1.609
Chicago_24hr	20:40	1.601
Chicago 24hr	20:45	1.593
Chicago 24hr	20:50	1.586
Chicago_24hr	20:55	1.578
Chicago_24hr	21:00	1.57
Chicago 24hr	21:05	1.563
Chicago 24hr	21:10	1.555
Chicago 24hr	21:15	1.548
Chicago_24hr	21:20	1.541
Chicago_24hr	21:25	1.534
Chicago_24hr	21:30	1.526
Chicago_24hr	21:35	1.519
Chicago_24hr	21:40	1.512
Chicago_24hr	21:45	1.506
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Chicago 24hr
                         21:50
                                  1.499
Chicago 24hr
                        21:55
                                  1.492
Chicago 24hr
                      22:00
                                  1.485
Chicago 24hr
                      22:05
                                  1.479
Chicago 24hr
                      22:10
                                  1.472
Chicago 24hr
                       22:15
                                  1.466
Chicago 24hr
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                      22:25
22:30
Chicago 24hr
                                  1.453
Chicago 24hr
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                                  1.441
Chicago 24hr
                      22:40
                                  1.434
Chicago 24hr
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                                  1.428
Chicago 24hr
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                                  1.422
                       22:55
Chicago 24hr
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                       23:00
Chicago 24hr
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Chicago 24hr
                                  1.399
                      23:15
Chicago 24hr
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                      23:20
Chicago 24hr
                                  1.387
Chicago 24hr
                       23:25
                                  1.382
                     23:30
23:35
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23:45
23:50
23:55
Chicago_24hr
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Chicago 24hr
                                  1.371
Chicago 24hr
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Chicago_24hr
                                  1.36
Chicago 24hr
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Chicago 24hr
                               1.349
Chicago 24hr
                       24:00
                                  0
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INPUT
         YES
CONTROLS NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL
[TAGS]
[MAP]
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DIMENSIONS
UNITS
               Meters
[COORDINATES]
              X-Coord
                              Y-Coord
SMRID Channel 377963.916
                              5496961.816
ponding
              378118.806
                              5496947.119
[VERTICES]
;;Link
                              Y-Coord
               X-Coord
[POLYGONS]
;;Subcatchment X-Coord
                              Y-Coord
```

;; East	378647.629	E400000 070
East	378680.915	5496990.979
East	378701.689	5496947.538
East		5496926.631
	378690.051	5496920.053
East	378224.399	5496926.503
East	378225.097	5496951.351
East	378253.272	5496991.199
East	378283.862	5497013.739
East	378300.364	5497015.349
East	378314.452	5497013.336
East	378363.959	5497033.461
East	378455.327	5497151.796
East	378486.776	5497171.774
East	378647.629	5496990.979
RR_20-5	377953.069	5497013.256
RR_20-5	377942.192	5497015.069
RR_20-5	377954.256	5497496.649
RR_20-5	377956.131	5497527.081
RR_20-5	378223.649	5497523.406
RR_20-5	378228.794	5497509.442
RR 20-5	378250.393	5497457.066
RR 20-5	378166.998	5497425.158
RR 20-5	378138.716	5497375.121
RR 20-5	378036.828	5497344.663
RR 20-5	378033.202	5497264.168
RR 20-5	378007.821	5497222.833
RR 20-5	377994.405	5497182.223
RR 20-5	377989.203	5497129.584
RR 20-5	377986.065	5497104.266
RR 20-5	378005.645	5497045.164
RR 20-5	377953.069	5497013.256
West	378145.362	5497387.565
West	378166.998	5497425.158
West	378250.393	5497457.066
West	378277.588	5497412.105
West	378486.776	5497171.774
West	378455.327	5497151.796
West	378363.959	5497033.461
West	378314.452	5497033.401
West	378300.364	5497015.349
West	378283.862	5497013.349
West	378253.272	5496991.199
West	378225.097	5496951.351
West	378118.773	5496944.001
West	377970.111	
West		5497013.256
	377953.069	5497013.256
West	378005.645	5497045.164
West	377986.065	5497104.266
West	377994.405	5497182.223
West	378007.821	5497222.833
West	378033.202	5497264.168
West	378036.828	5497344.663

West 378138.716 5497375.121 West 378145.362 5497387.565 [SYMBOLS];;Gage X-Coord Y-Coord

EPA STORM WATER MA	NAGEMENT	MODEL - VER	SION 5.0 (Bui	ld 5.0.022)
Wilson NW Pre Development 24hr_100yr				
**************************************	statisti found at	cs displayed every computa ach reportina	in this repondational time of time step.	ort are step,

Analysis Options				
Flow Units Process Models: Rainfall/Runoff Snowmelt	od	YES NO NO YES NO NO GREEN_AMPT DYNWAVE MAY-27-2015 JUN-10-2015 0.0 00:01:00 00:05:00		
******* Element Count ********* Number of rain gam Number of subcatch Number of nodes . Number of links . Number of pollutar Number of land use	nments	. 3 . 2 . 1 . 0		
Raingage Summary				
*****			Data	Dogondin
Name	Data S	ource	Data Type	Recording Interval

Continuity Error (%)

-0.079

Volume

Volume

Pag
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298
으
57
တ

Flow Routing Continuity *********	hectare-m	10^6 ltr
Dry Weather Inflow Wet Weather Inflow Groundwater Inflow RDII Inflow External Inflow External Outflow Internal Outflow Storage Losses Initial Stored Volume Final Stored Volume	0.000 1.889 0.000 0.000 0.000 1.793 0.000 0.066 0.000	0.000 18.895 0.000 0.000 17.932 0.000 0.656 0.000
Continuity Error (%)	0.001	0.307

Minimum Time Step : 5.00 sec
Average Time Step : 5.00 sec
Maximum Time Step : 5.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff
East	120.15	0.00	0.00	52.96	67.31	4.14	0.47	0.560
RR_20-5	120.15	0.00	0.00	56.01	64.19	3.93	0.25	0.534
West	120.15	0.00	0.00	53.66	66.58	10.82	1.04	0.554

		Average	Maximum	Maximum	Time of Max
		Depth	Depth	HGL	Occurrence
Node	Type	Meters	Meters	Meters	days hr:min
SMRID_Channel	OUTFALL	0.00	0.00	919.40	0 00:00
ponding	STORAGE	0.33	0.57	922.77	0 09:20

		Maximum	Maximum		Lateral	Total
		Lateral	Total	Time of Max	Inflow	Inflow
		Inflow	Inflow	Occurrence	Volume	Volume
Node	Type	CMS	CMS	days hr:min	10^6 ltr	10^6 ltr
SMRID_Channel	OUTFALL	0.720	1.384	0 09:13	8.076	17.932
ponding	STORAGE	1.039	1.039	0 08:40	10.819	10.819

No nodes were surcharged.

No nodes were flooded.

	Average	Avg	E&I	Maximum	Max	Time of Max	Maximum
	Volume	Pcnt	Pcnt	Volume	Pont	Occurrence	Outflow
Storage Unit	1000 m3	Full	Loss	1000 m3	Full	days hr:min	CMS
ponding	0.590	2	6	1.961	7	0 09:20	0.805

	Flow Freq.	Avg. Flow	Max. Flow	Total Volume
Outfall Node	Pcnt.	CMS	CMS	10^6 ltr
SMRID_Channel	7.81	0.190	1.384	17.932
System	7.81	0.190	1.384	17.932

****** Link Flow Summary

		Maximum	Time of Max	Maximum	Max/	Max/
		Flow	Occurrence	Veloc	Full	Full
Link	Type	CMS	days hr:min	m/sec	Flow	Depth
C1	CONDUIT	0.805	0 09:20	0.60	0.03	0.13

******** Flow Classification Summary ********

Conduit	Adjusted /Actual Length		Fracti Up Dry	Down	Sub	Sup	Up	Down	Froude	Avg. Flow Change
C1	1.00	0.92	0.00	0.00	0.00	0.00	0.00	0.08	0.03	0.0000

******* Conduit Surcharge Summary *******

No conduits were surcharged.

Analysis begun on: Tue Apr 16 11:34:37 2019 Analysis ended on: Tue Apr 16 11:34:38 2019 Total elapsed time: 00:00:01

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[TITLE] Wilson NW Post Development 24hr_100yr [OPTIONS] ;;Options Value ;;-----FLOW_UNITS LPS INFILTRATION GREEN AMPT FLOW ROUTING DYNWAVE LINK OFFSETS DEPTH MIN SLOPE 0 ALLOW_PONDING NO SKIP_STEADY_STATE START_DATE 06/01/2020 START TIME 00:00:00 REPORT_START_DATE 06/01/2020 REPORT_START_TIME 00:00:00 END_DATE 06/12/2020 END TIME 06:00:00 SWEEP START 01/01 SWEEP END 12/31 DRY_DAYS REPORT STEP 00:01:00 WET STEP 00:05:00 DRY STEP 00:05:00 ROUTING STEP INERTIAL DAMPING PARTIAL NORMAL_FLOW_LIMITED BOTH FORCE MAIN EQUATION H-W VARIABLE STEP 0.75 LENGTHENING_STEP 0 MIN_SURFAREA 0 [EVAPORATION] ;;Type Parameters ;;-----CONSTANT 0.0

DRY ONLY

NO

Tiffin Drain

Y-Value

600 1500

5242

8000

Geom1

0.14

X-Value

0

0.2

0.4

0.6

SIDE

Geom2

0

2

Geom3

0

0.65

Geom4

0

NO

Barrels

0

C1

C1

[CURVES];;Name

Curve1

Curve1

Curve1

Curve1

[XSECTIONS]
;;Link

wet pond

CIRCULAR

;;-----

Shape

Type

Storage

Chicago_24hr	1:35	1.576
Chicago_24hr	1:40	1.59
Chicago_24hr	1:45	1.605
Chicago_24hr	1:50	1.62
Chicago_24hr	1:55	1.635
Chicago_24hr	2:00	1.651
Chicago_24hr	2:05	1.667
Chicago_24hr	2:10	1.683
Chicago_24hr	2:15	1.7
Chicago_24hr	2:20	1.717
Chicago_24hr	2:25	1.735
Chicago_24hr	2:30	1.753
Chicago_24hr	2:35	1.771
Chicago_24hr	2:40	1.79
Chicago_24hr	2:45	1.809
Chicago_24hr	2:50	1.829
Chicago_24hr	2:55	1.85
Chicago_24hr	3:00	1.871
Chicago_24hr	3:05	1.892
Chicago_24hr	3:10	1.914
Chicago_24hr	3:15	1.937
Chicago_24hr	3:20	1.961
Chicago_24hr	3:25	1.985
Chicago_24hr	3:30	2.009
Chicago_24hr	3:35	2.035
Chicago_24hr	3:40	2.061
Chicago_24hr	3:45	2.089
Chicago_24hr	3:50	2.117
Chicago_24hr	3:55	2.146
Chicago_24hr	4:00	2.176
Chicago_24hr	4:05	2.206
Chicago_24hr	4:10	2.238
Chicago_24hr	4:15	2.272
Chicago_24hr	4:20	2.306
Chicago_24hr	4:25	2.341
Chicago_24hr	4:30	2.378
Chicago_24hr	4:35	2.416

1:15

1:20

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1:30

1:35

1.521

1.535

1.548 1.562

1.576

Chicago_24hr Chicago_24hr

Chicago_24hr Chicago_24hr Chicago_24hr

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Chicago_24hr	4:40	2.456
Chicago_24hr	4:45	2.498
Chicago_24hr	4:50	2.541
Chicago_24hr	4:55	2.585
Chicago_24hr	5:00	2.632
Chicago_24hr	5:05	2.681
Chicago_24hr	5:10	2.732
Chicago_24hr	5:15	2.785
Chicago_24hr	5:20	2.841
Chicago_24hr	5:25	2.9
Chicago_24hr	5:30	2.961
Chicago_24hr	5:35	3.026
Chicago_24hr	5:40	3.094
Chicago_24hr	5:45	3.166
Chicago_24hr	5:50	3.242
Chicago_24hr	5:55	3.323
Chicago_24hr	6:00	3.408
Chicago_24hr	6:05	3.499
Chicago_24hr	6:10	3.596
Chicago_24hr	6:15	3.699
Chicago_24hr	6:20	3.81
Chicago_24hr	6:25	3.929
Chicago_24hr	6:30	4.057
Chicago_24hr	6:35	4.195
Chicago_24hr	6:40	4.346
Chicago_24hr	6:45	4.509
Chicago_24hr	6:50	4.688
Chicago_24hr	6:55	4.885
Chicago 24hr	7:00	5.102
Chicago 24hr	7:05	5.344
Chicago_24hr	7:10	5.615
Chicago 24hr	7:15	5.921
Chicago_24hr	7:20	6.269
Chicago 24hr	7:25	6.67
Chicago 24hr	7:30	7.139
Chicago_24hr	7:35	7.693
Chicago_24hr	7:40	8.361
Chicago_24hr	7:45	9.186
Chicago 24hr	7:50	10.234
Chicago 24hr	7:55	11.619
Chicago 24hr	8:00	13.551
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Ch:	icago_24hr	8:05	16.477
Ch:	icago_24hr	8:10	21.566
Ch:	icago_24hr	8:15	33.491
Ch:	icago 24hr	8:20	286.165
Ch:	icago 24hr	8:25	92.134
Ch:	icago_24hr	8:30	42.664
Ch:	icago_24hr	8:35	30.072
	icago 24hr	8:40	23.803
Ch:	icago_24hr	8:45	19.955
Ch:	icago_24hr	8:50	17.317
Ch:	icago_24hr	8:55	15.38
	icago_24hr	9:00	13.889
Ch:	icago_24hr	9:05	12.7
Ch:	icago_24hr	9:10	11.728
Ch:	icago_24hr	9:15	10.915
Ch:	icago_24hr	9:20	10.224
Ch:	icago_24hr	9:25	9.629
Ch:	icago_24hr	9:30	9.109
Ch:	icago_24hr	9:35	8.652
	icago_24hr	9:40	8.245
Ch:	icago_24hr	9:45	7.881
	icago_24hr	9:50	7.553
	icago_24hr	9:55	7.255
	icago_24hr	10:00	6.984
	icago_24hr	10:05	6.736
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	icago_24hr	10:25	5.919
	icago_24hr	10:30	5.75
	icago_24hr	10:35	5.592
	icago_24hr	10:40	5.444
Ch:	icago_24hr	10:45	5.304
	icago_24hr	10:50	5.173
	icago_24hr	10:55	5.049
	icago_24hr	11:00	4.932
Ch:	icago_24hr	11:05	4.822
	icago_24hr	11:10	4.717
	icago_24hr	11:15	4.617
	icago_24hr	11:20	4.522
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Chicago_24hr	11:45	4.109
Chicago_24hr	11:50	4.036
Chicago_24hr	11:55	3.967
Chicago_24hr	12:00	3.901
Chicago_24hr	12:05	3.837
Chicago_24hr	12:10	3.775
Chicago_24hr	12:15	3.716
Chicago_24hr	12:20	3.659
Chicago_24hr	12:25	3.604
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Chicago_24hr	12:45	3.401
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Chicago_24hr	13:00	3.267
Chicago_24hr	13:05	3.224
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Chicago_24hr	13:20	3.105
Chicago_24hr	13:25	3.068
Chicago_24hr	13:30	3.031
Chicago_24hr	13:35	2.996
Chicago_24hr	13:40	2.961
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Chicago_24hr	13:55	2.863
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Chicago_24hr	14:05	2.802
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2.251 2.233 2.216 2.199 2.183 2.166 2.15 2.134 2.119 2.104 2.089 2.074 2.059 2.045 2.031 2.017 2.004 1.99 1.977 1.964 1.951 1.939 1.926 1.914 1.902 1.89 1.879

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                           23:55
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[REPORT]
;;Reporting Options
INPUT
          YES
CONTROLS NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL
[TAGS]
[MAP]
DIMENSIONS
                 94653.76445
                                 5497995.49985
                                                  95477.67655
                                                                   5498635.57115
```

1.506

21:45

Chicago 24hr

UNITS	Meters	
[COORDINATES];;Node	X-Coord	Y-Coord
;;		
Tiffin_Drain wet pond		5498082.68
oo_pon.a	31,001,	0130037.71
[VERTICES]		
;;Link		
;;		
[POLYGONS]		
;;Subcatchment	X-Coord	Y-Coord
;;		
S1	94716.833	5498100.95
S1	94698.022	5498100.95
S1	94691.215	5498599.82
S1	94940.465	5498606.47
S1	94947.42	5498590.70
S1	94974.97	5498540.01
S1	95001.229	5498501.99
S1	95007.726	5498495.25
S1	95060.195	5498438.19
S1	95193.199	5498296.56
S1	95294.91	5498191.07
S1	95420.202	5498059.49
S1	95440.226	5498036.03
S1	94972.811	5498024.59
S1	94973.384	5498048.62
S1	94868.115	5498037.75
S1	94716.833	5498100.95
[SYMBOLS]		
	X-Coord	Y-Coord

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.	022)
Wilson NW Post Development 24hr_100yr	

Flow Units LPS Process Models: Rainfall/Runoff YES Snowmelt	
******** Element Count ********** Number of rain gages 1 Number of subcatchments 1	

Number of links Number of polls	s						
**************************************	ry	Dat	a	Recordi	ng		
Name	Data Source			Interva			
Lethbridge_100	yr_24hrChicago_24h	ir IN	TENSITY	5 mi	.n.		
************ Subcatchment Si ************************************	ummary ****	Width	%Imperv	%Slop	oe Rair	ı Gage	Outlet
s1	26.83	528.29	10.00			bridge_100y	r_24hr wet_pond
************ Node Summary ********		Tny	ort	May	Ponded	External	
Name	Туре		ev.	Depth	Area	Inflow	
Tiffin_Drain wet_pond	OUTFALL STORAGE		.40	2.14	0.0		
********** Link Summary ********* Name	From Node	To Node	Тур	pe	Leng	gth %Slope	e Roughness
C1	wet_pond	Tiffin_Drai	n OR:	IFICE			

		Full	Full	Hyd.	Max.	No. of	Full
Conduit	Shape	Depth	Area	Rad.	Width	Barrels	Flow

**************************************	Volume hectare-m 3.224 0.000 1.325 1.902 0.003 -0.165	Depth mm 120.145 0.000 49.373 70.870 0.100
**************************************	Volume hectare-m 0.000 1.902 0.000 0.000 1.889 0.000 0.000 1.415 1.428 0.000	Volume 10^6 ltr 0.000 19.016 0.000 0.000 0.000 18.887 0.000 0.000 14.149 14.278

None

Page 316 of 516

All links are stable.

Minimum Time Step : 5.00 sec
Average Time Step : 5.00 sec
Maximum Time Step : 5.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00

Total Total Total Total Total Total Total Total Peak Runoff
Precip Runon Evap Infil Runoff Runoff Runoff Coeff
Subcatchment mm mm mm mm mm 10^6 ltr LPS

S1 120.15 0.00 0.00 49.37 70.87 19.02 1841.08 0.590

Average Maximum Maximum Time of Max

Depth Depth HGL Occurrence

Node Type Meters Meters Meters days hr:min

Tiffin_Drain OUTFALL 0.00 0.00 919.40 0 00:00

wet_pond STORAGE 2.43 3.54 922.44 0 21:25

Node	Type	Maximum Lateral Inflow LPS	Inflow	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr
Tiffin_Drain wet_pond	OUTFALL	0.00	53.81	0 21:25	0.000	18.887
	STORAGE	1841.06	1841.06	0 08:40	19.016	33.165

Surcharging occurs when water rises above the top of the highest conduit.

			Max. Height	Min. Depth
		Hours	Above Crown	Below Rim
Node	Type	Surcharged	Meters	Meters
wet_pond	STORAGE	138.33	1.404	0.556

No nodes were flooded.

Average Avg E&I Maximum Max Time of Max Maximum

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	516	

Storage Unit	1000 m3	Pcnt Full	Loss	Volume 1000 m3	Full d	Occurrence ays hr:min	LPS
wet_pond				30.367			
**************************************	nary ***						
Outfall Node	Flow Freq. Pcnt.	Avg. Flow LPS	Max. Flow LPS	Total Volume 10^6 ltr			
Tiffin_Drain	96.96	20.04	53.81	18.887			
System				18.887			

Link	Type	Maximum Flow	Time of Occurre	Max Maximum ence Veloc min m/sec	Full	Full	
C1	ORIFICE	53.81	0 21	L:25		1.00	
**************************************	Summary						
Conduit	/Actual Length	Up Dry Dr	Down Dry	Time in Flow Sub Sup Crit Crit	Up Down Crit Crit	Froude Number	Flow Change

Page 319 of 516

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Tue Sep 14 13:24:12 2021 Analysis ended on: Tue Sep 14 13:24:12 2021

Total elapsed time: < 1 sec

LETHBRIDGE COUNTY IN THE PROVINCE OF ALBERTA

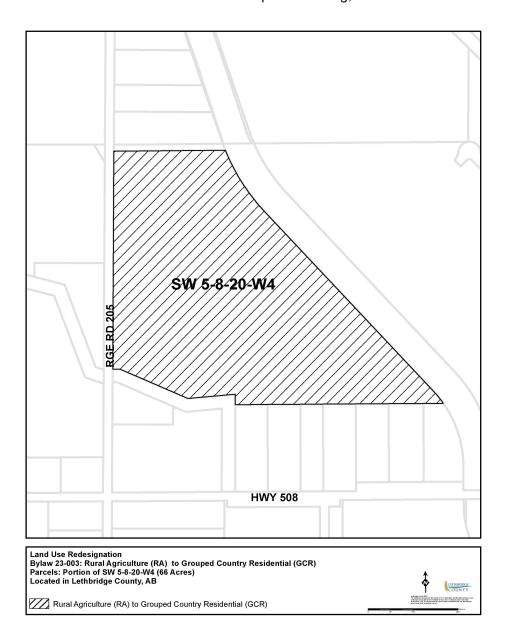
BYLAW NO. 23-003

Bylaw 23-003 of Lethbridge County being a bylaw for the purpose of amending Land Use Bylaw 1404, in accordance with Sections 230, 606 and 692 of the Municipal Government Act, R.S.A. 2000, Chapter M-26.

WHEREAS the purpose of Bylaw 23-003 is to re-designate lands within the 5-8-20-W4 being that portion of the southwest quarter lying to the west of the 65 metre canal right-of-way and lying north of the south halves of legal subdivisions 3 and 4, and lying to the north of the 30 metre canal right-of-way on Plan 8210212 from Rural Agriculture (RA) to Grouped Country Residential (GCR) as shown below:

AND WHEREAS the re-designation of the lands will allow for future residential subdivision and development of the parcels;

AND WHEREAS the municipality must prepare an amending bylaw and provide for its notification and consideration at a public hearing;



X:\Executive Files\115 Bylaws\2023 Bylaws\Bylaw 23-003 –Amendment to LUB.doc

AND WHEREAS the re-designation of the lands will allow for future residential subdivision and development of the parcels;

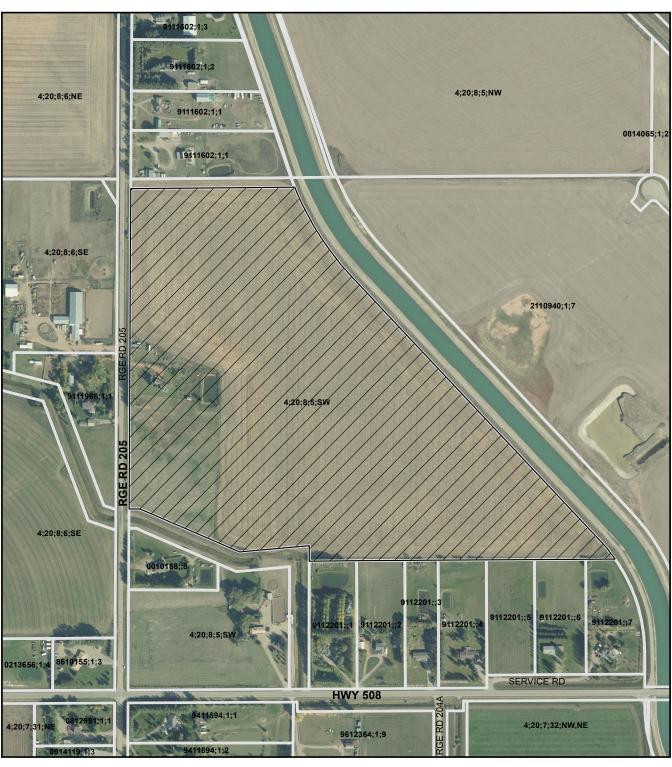
AND WHEREAS the municipality must prepare an amending bylaw and provide for its notification and consideration at a public hearing;

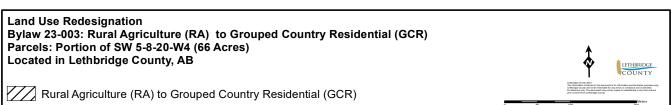
NOW THEREFORE, under the authority of the Municipal Government Act, R.S.A. 2000, C-26, as amended, the Council of Lethbridge County in the Province of Alberta duly assembled does hereby enact the following, with the bylaw only coming into effect upon three successful reading thereof;

GIVEN first reading this 16th day of March 2023.
Reeve
Chief Administrative Officer
GIVEN second reading this day of, 20
Reeve
Chief Administrative Officer
GIVEN third reading this day of, 20
Reeve

Chief Administrative Officer

1 st Reading	March 16, 2023
2 nd Reading	
Public	
Hearing	
3 rd Reading	





Form C



LETHBRIDGE COUNTY

APPLICATION FOR A

LAND USE BYLAW AMENDMENT

Pursuant to Bylaw No. 1404

OFFICE USE			
Date of Application: November 24, 2022	Assigned Bylaw	No.	
Date Deemed Complete: December 7, 2022	Application & Processing Fee:	\$ 1500.00	
Redesignation Text Amendment	Certificate of Title Submitted:	© Yes □ No	

A refusal is **not** appealable and a subsequent application for amendment involving the same lot and/or the same or similar use may not be made for at least 18 months after the date of refusal. (Refer to sections 53(1)

IMPORTANT NOTE: Although the Development Officer is in a position to advise on the principle or details of any proposals, such advice must not be taken in any way as official consent.

APPLICANT INFO	RMATION		
Name of Applicant: Mailing Address:	Martin Geomatic Consultants Ltd 255 – 31 Street North Lethbridge, AB Attention: Ed Martin	. Phone: Phone (alternate): Email:	(403) 330-5303 (403) 329-0050 edm@mgcl.ca
Postal Code: Is the applicant the	T1H 3Z4 owner of the property?	Yes ✓ No	"NO" please complete box below
Name of Owner:	Jody Nakamura	Phone: <u>(403</u>	795-2341
Mailing Address:	RR 8-10-8	A	in the meaning
	Lethbridge, AB	Applicant's interest ☐ Agent ☐ Contractor ☐ Tenant ✓ Other Proje	
Postal Code:	<u>T1J 4P4</u>	v Otilei <u>. Proje</u>	ct Engineer
ROPERTY INFO	RMATION	what hall so I	
Municipal Address:	N/A		
Legal Description:	Lot(s)	Block	Plan
	OR Quarter Ptn. SW Section	5 Township	<u>8</u> Range <u>20 W4</u>
	<u>(s</u>	ee attached copy of C of	T)

PAGE | 1 OF 3

AMENDMENT INFORMATION		
What is the proposed amendment?	☐ Text Amendment	✓ Land Use Redesignation
IF TEXT AMENDMENT:		
For text amendments, attach a description incl The section to be amended; The change(s) to the text; and Reasons for the change(s).	uding:	
IF LAND USE REDESIGNATION:		
Current Land Use Designation (zoning):	Rural Agriculture (RA)	
Proposed Land Use Designation (zoning) (if applicable):	Grouped Country Resid	ential (GRC)
SITE DESCRIPTION:		
Describe the lot/parcel dimensions Indicate the information on a scaled PLOT o 1"=200')	and lot are r SITE PLAN: (0-4 acres at 1"	ea/parcel acreage <u>66.21 acres (26.8ha)</u> = 20'; 5-9 acres at 1"= 100'; 10 acres or more a
√ Site or Plot Plan Attached		
☐ Conceptual Design Scheme or Area S	Structure Plan Attached	

OTHER INFORMATION:

Section 52 of the Land Use Bylaw regulates the information required to accompany an application for redesignation. Please attach a descriptive narrative detailing:

- The existing and proposed future land use(s) (i.e. details of the proposed development);
- If and how the proposed redesignation is consistent with applicable statutory plans;
- The compatibility of the proposal with surrounding uses and zoning;
- The development suitability or potential of the site, including identification of any constraints and/or hazard areas (e.g. easements, soil conditions, topography, drainage, etc.);
- Availability of facilities and services (sewage disposal, domestic water, gas, electricity, fire protection, schools, etc.) to serve the subject property while maintaining adequate levels of service to existing development; and
- Access and egress from the parcel and any potential impacts on public roads.

In addition to the descriptive narrative, an Area Structure Plan or Conceptual Design Scheme may be required in conjunction with this application where:

- redesignating land to another district;
- multiple parcels of land are involved;
- four or more lots could be created;
- several pieces of fragmented land are adjacent to the proposal;
- new internal public roads would be required;
- municipal services would need to be extended; or
- required by Council, or the Subdivision or Development Authority if applicable.

P A G E | 2 OF 3

The applicant may also be required to provide other professional reports, such as a:

- · geotechnical report; and/or
- soils analysis; and/or
- evaluation of surface drainage or a detailed storm water management plan;
- and any other information described in section 52(2) or as deemed necessary to make an informed evaluation of the suitability of the site in relation to the proposed use;.

if deemed necessary.

SITE PLAN

Plans and drawings, in sufficient detail to enable adequate consideration of the application, must be submitted in **duplicate** with this application, together with a plan sufficient to identify the land. It is desirable that the plans and drawings should be on a scale appropriate to the development. However, unless otherwise stipulated, it is not necessary for plans and drawings to be professionally prepared. Council may request additional information.

DECLARATION OF APPLICANT/AGENT

The information given on this form is full and complete and is, to the best of my knowledge, a true statement of the facts in relation to the application. I also consent to an authorized person designated by the municipality to enter upon the subject land and buildings for the purpose of an inspection during the processing of this application. I/We have read and understand the terms noted below and hereby certify that the registered owner of the land is aware of, and in agreement with this application.

APPLICANT: Ed Martin, P.Eng

REGISTERED OWNER (if not the same as applicant)

DATE: November 23, 2022

FOIP STATEMENT: Personal information on this form is collected under the authority of section 33(c) of the Freedom of Information and Protection of Privacy (FOIP) Act. The information collected here will be used to by Lethbridge County for the purposes of reviewing this application. This form is a public record that is available to anyone. All information contained on this form (including personal information) is disclosed by Lethbridge County to anyone requesting a copy in according with Lethbridge County Policy No. 173 (Freedom of Information and Protection of Privacy (FOIP)). For further information about the collection and use of this information please contact the Lethbridge County FOIP Coordinator at foip@lethcounty.ca or call (403) 328-5525 or come into the office #100, 905-4th Avenue South, Lethbridge Alberta, T1J 4E4.

TERMS

- 1. Subject to the provisions of the Land Use Bylaw No. 1404 of Lethbridge County, the term "development" includes any change in the use, or intensity of use, of buildings or land.
- 2. Pursuant to the municipal development plan, an area structure plan or conceptual design scheme may be required by Council before a decision is made.
- A refusal is not appealable and a subsequent application for redesignation (reclassification) involving the same or similar lot and/or for the same or similar use may not be made for at least 18 months after the date of a refusal.
- 4. An approved redesignation (reclassification) shall be finalized by amending the land use bylaw map in accordance with section 692 of the Municipal Government Act, Revised Statutes of Alberta 2000, Chapter M-26.

Note: Information provided or generated in this application may be considered at a public meeting.

PAGE | 3 OF 3

Country Crossroad Land Use Amendment-Narrative - November 23, 2022

The proposed amendment is to change the land use designation from Rural Agriculture (RA) to Grouped Country Residential (GCR). This change in land use will permit the development of about 25 residential lots with a minimum area of 2 acres (0.81ha) each. This results in a density of 0.38 lots per acre (0.94 lots per ha).

The Area Structure Plan for Country Crossroads Estates which has been submitted for approval, details the proposed layout. The GCR land use is compatible with the requirements of Lethbridge County Municipal Development Plan, and the County Land Use Bylaw.

The site comprises one land owner and encompasses a total of 66.21 acres (26.8 ha). The site is situated on a fragmented parcel and is bounded on the east by the SMRID main canal and on the west by a paved County road. The proposed land use is compatible with existing country residential sites on the south and north boundaries and some lots to the west. In total, there are about 45 residential sites within 800 metres of the proposed Country Crossroads development.

The close proximity of the site to the City of Lethbridge provides for a wide variety of educational, commercial recreational; and community services.

Geotechnical studies for the site indicates the soil is acceptable for septic field sewage treatment systems. The grading of the sites has been designed to direct the 1 in 100 year storm water into three storm water detention ponds which ultimately will drain into Highway 843 road ditch when there is capacity to accommodate the storm water. There are several alternatives to provide potable water to the site. The preferred option is water from the County of Lethbridge Rural Water Association. Other alternatives are the use of treated ground water, treated irrigation water or limited hauling of water. These alternatives, which must be approved by the County, will be addressed depending on the availability of water from the Water Co-op. Paved roads, gas, electrical, telephone and irrigation water will be available to all lots.



LAND TITLE CERTIFICATE

LINC SHORT LEGAL 0020 144 473 4;20;8;5;SW

TITLE NUMBER 051 470 968

LEGAL DESCRIPTION

MERIDIAN 4 RANGE 20 TOWNSHIP 8 SECTION 5 THAT PORTION OF THE SOUTH WEST QUARTER LYING TO THE WEST OF THE 65 METRE CANAL RIGHT OF WAY AND LYING NORTH OF THE SOUTH HALVES OF LEGAL SUBDIVISIONS 3 AND 4, AND LYING TO THE NORTH OF THE 30 METRE CANAL RIGHT OF WAY ON PLAN 8210212 CONTAINING 27 HECTARES (66.8 ACRES) MORE OR LESS EXCEPTING THEREOUT: THE NORTH 15 METRES CONTAINING 0.37 OF A HECTARE MORE OR LESS EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: COUNTY OF LETHBRIDGE

REFERENCE NUMBER: 941 226 700

REGISTERED OWNER(S) CONSIDERATION REGISTRATION DATE (DMY) DOCUMENT TYPE VALUE

051 470 968 10/12/2005 TRANSFER OF LAND \$414,000

\$414,000

OWNERS

JODY F NAKAMURA OF 4611-50 AVE TABER ALBERTA T1G 1G3

(CONTINUED)

ENCUMBRANCES, LIENS & INTERESTS PAGE 2 # 051 470 968 NUMBER DATE (D/M/Y) PARTICULARS 21/06/1971 IRRIGATION ORDER/NOTICE 1485KX THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT RESTRICTIVE COVENANT 3432U 24/10/1934 CAVEAT 3903EM . CAVEATOR - ALBERTA RAILWAY AND IRRIGATION CO... 07/10/1994 UTILITY RIGHT OF WAY 941 261 421 GRANTEE - TRIPLE W NATURAL GAS CO-OP LIMITED. SEE INSTRUMENT FOR INTEREST 07/10/1994 UTILITY RIGHT OF WAY 941 261 422 GRANTEE - TRIPLE W NATURAL GAS CO-OP LIMITED. SEE INSTRUMENT FOR INTEREST 10/12/2005 MORTGAGE 051 470 969 MORTGAGEE - THE TORONTO DOMINION BANK. 300,10004 JASPER AVE EDMONTON ALBERTA T5J1R3 ORIGINAL PRINCIPAL AMOUNT: \$250,000

TOTAL INSTRUMENTS: 006

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 14 DAY OF MAY, 2010 AT 09:51 A.M.

ORDER NUMBER:16529001

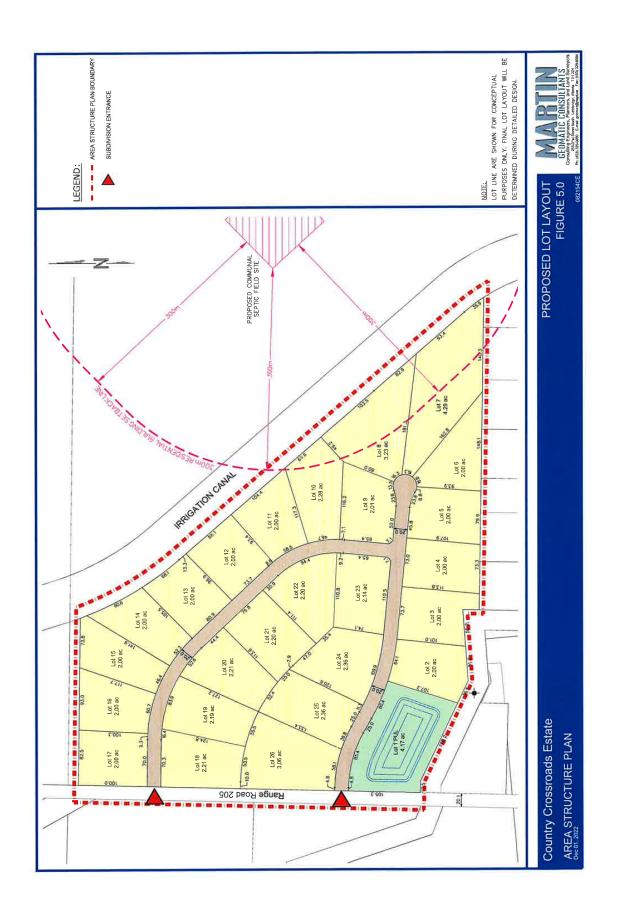
CUSTOMER FILE NUMBER: 082154



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

(CONTINUED)



Transportation and Economic Corridors Notice of Referral **Decision** Statutory plan in proximity of a provincial highway

Municipality File Number:		Highway(s):	4, 508
Legal Land Location:	QS-SW SEC-05 TWP-008 RGE-20 MER-4	Municipality:	Lethbridge County
Decision By:	Leah Olsen	Issuing Office:	Southern Region / Lethbridge
Issued Date:	2022-12-14 09:54:35	AT Reference #:	RPATH0007157
Description of Development:	An application has been submitted for the Country Crossroad Estate Area Structure Plan and to also re-designate the parcel as shown on the attached documents. If you have any comments or concerns regarding this application, please contact me by January 9, 2022.		



Classification: Protected A

This will acknowledge receipt of your circulation regarding the above noted proposal. Transportation and Economic Corridors primary concern is protecting the safe and effective operation of provincial highway infrastructure, and planning for the future needs of the highway network in proximity to the proposed development(s).

Transportation and Economic Corridors offers the following comments and observations with respect to the proposed development(s):

- Pursuant to Section 618.3(1) of the Municipal Government Act (MGA), the department expects that the municipality will comply with any applicable items related to provincial highways in an ALSA plan if applicable
- Pursuant to 618.4(1) of the Municipal Government Act, the department expects that the Municipality will mitigate the impacts of traffic generated by developments approved on the local road connections to the highway system, in accordance with Policy 7 of the Provincial Land Use Policies.

As indicated in Section 2.4.3 of the Area Structure Plan, a Traffic Impact Assessment (TIA) will need to be carried out in accordance with Transportation and Economic Corridors TIA guidelines to determine impacts of the proposed development on adjacent roadways including but not limited to intersection of Range Road 205 and Highway 508.

Please contact Transportation and Economic Corridors through the <u>RPATH Portal</u> if you have any questions, or require additional information



Issued by **Leah Olsen**, on **2022-12-14 09:54:35** on behalf of the Minister of Transportation pursuant to *Ministerial Order 52/20 – Department of Transportation Delegation of Authority*

Classification: Protected A

From: Michael Swystun < Michael. Swystun@albertahealthservices.ca>

Sent: January 6, 2023 8:28 AM

To: Hilary Janzen

Subject: RE: Lethbridge County Referral - Country Crossroad Estate Area Structure Plan

Good Morning Hilary,

AHS appreciates the opportunity to review and comment on this proposed Area Structure Plan Application. AHS would like to submit the following comments for s=consideration:

- Since, soil analysis is marginal and the high density of country residential lots adjacent to development, AHS recommends looking into communal wastewater treatment.
- AHS will defer to Alberta Environment and protected areas for water source. AHS can provide advice on private water treatment options if requested.

If you have any questions or would like to discuss any of these comments further, please feel free to contact me.

Mike

Mike Swystun, B.Sc., B.EH., CPHI(C) Executive Officer/ Public Health Inspector II Healthy Environments Specialist Pincher Creek, Alberta Mobile: 587-220-2791

24 HOUR ON call: 1-844-388-6691



From: Hilary Janzen <hjanzen@lethcounty.ca>
Sent: Thursday, December 8, 2022 2:48 PM

To: SHE.SouthZoneEPH <SHE.SouthZoneEPH@albertahealthservices.ca>; ATCO Pipelines (SouthDistrictEngineering1@atco.com) <southdistrictengineering1@atco.com>; Telus Referrals (All) (circulations@telus.com) <circulations@telus.com>; Triple W Natural Gas Co-Op (triplew@telusplanet.net) <triplew@telusplanet.net>; SMRID (lpark@smrid.ab.ca) <lpark@smrid.ab.ca>; FortisAlberta Inc. - Referrals (landserv@fortisalberta.com) <landserv@fortisalberta.com>

Subject: Lethbridge County Referral - Country Crossroad Estate Area Structure Plan

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Good Afternoon,

Please review the attached referral from Lethbridge County and provide any comments by January 9, 2023. If you require the technical documents (i.e. stormwater management plan, environmental site assessment or geotechnical report), please let me know at your earliest convenience and I will forward those onto you.

Regards,

Hilary Janzen, RPP, MCIP Supervisor of Planning and Development Lethbridge County 905 4th Ave S Lethbridge, AB T1J 4E4

403.328.5525 office 403.328.5602 fax www.lethcounty.ca



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From: Tracy Davidson <tracy.davidson@fortisalberta.com> on behalf of Land Service

<landserv@fortisalberta.com>

Sent: December 21, 2022 2:43 PM

To: Hilary Janzen

Subject: FW: [CAUTION] DUE JAN. 9 Lethbridge County Referral - Country Crossroad Estate Area Structure

Plan

Attachments: Rezoning Application - RA to GCR.pdf; Country Crossroads Estate ASP.pdf; External Circulation -

Country Crossroad Estates ASP and Rezoning.docx

Good afternoon,

FortisAlberta Inc. has no concerns regarding this area structure plan and land use redesignation application.

Thank you,

Tracy Davidson | Land Coordinator

FortisAlberta Inc. | 100 Chippewa Road, Sherwood Park, AB, T8A 4H4 | Direct 780-464-8815







We are FortisAlberta. We deliver the electricity that empowers Albertans to succeed. We keep the power on, not just because it's our job, but because we care about the people we serve. We are reliable, honest and dedicated to our work because our employees, customers and communities matter to us.

From: Hilary Janzen <hjanzen@lethcounty.ca>
Sent: Thursday, December 8, 2022 2:48 PM

To: Alberta Health Services (SouthZone.EnvironmentalHealth@ahs.ca) <southzone.environmentalhealth@ahs.ca>; ATCO Pipelines (SouthDistrictEngineering1@atco.com) <southdistrictengineering1@atco.com>; Telus Referrals (All) (circulations@telus.com) <circulations@telus.com>; Triple W Natural Gas Co-Op (triplew@telusplanet.net) <triplew@telusplanet.net>; SMRID (lpark@smrid.ab.ca) <lpark@smrid.ab.ca>; Land Service <landserv@fortisalberta.com>

Subject: [CAUTION] DUE JAN. 9 Lethbridge County Referral - Country Crossroad Estate Area Structure Plan

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Good Afternoon,

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Regards,

Hilary Janzen, RPP, MCIP Supervisor of Planning and Development Lethbridge County 905 4th Ave S Lethbridge, AB T1J 4E4

403.328.5525 office 403.328.5602 fax www.lethcounty.ca





December 20, 2022

Lethbridge County - Lethbridge 905 4 Ave South Lethbridge, AB T1J 4E4

Attention: Hilary Janzen, RPP, MCIP

Supervisor of Planning and Development

Dear Sir/Madam:

RE: PTN SW-05-08-20-W4

Country Crossroads Estate Area Structure Plan and Rezoning

Further to your correspondence of December 8th, 2022, in respect to the above-noted, the district has the following comments:

- The proposed parcel will be classified as "dry"; therefore, the existing 5.0 acres of permanent irrigation rights will need to be sold and or transferred off. A \$100 per acre service fee will apply.
- The district requires a minimum developmental setback of 100 feet from the edge of our canal right of way which has not been included in the Building Setbacks Figure 7.0.
- Only one stormwater retention pond is described in the Country Crossroads Estate Area Structure Plan; however, the narrative attached to the Application for a Land Use Bylaw Amendment indicates three stormwater retention ponds.
- The narrative indicates that all three stormwater retention ponds will drain into Hwy 843 road ditch; however, the Area Structure Plan is not aligned with this. The road borrow ditch that it will drain into is located on Range Road 20-5. They will need permission from the County to drain into the road borrow ditch who will need permission from SMRID to drain into our works.
- There is an existing SMRID point of delivery in the southeast corner of the proposed development that is not shown on the drawings. This delivery point will need to be protected during construction and access maintained for the SMRID.
- As mentioned in 8.5.1 Community Irrigation, if the proposed development wishes to use non potable water provided by the district, they would be required to form a water co-op. All necessary easements/works required would be the sole responsibility of the landowner/developer.
- The developer will need to ensure all necessary approvals are in place for all downstream recipients of the stormwater discharge route.







As well, we have been contacted by Taylor Land Development who is located on the east side of the Main Canal. They contacted SMRID in the spring/summer about boring under the main canal to release their storm water into the SMRID drain on the east side of the main canal. We advised them they would have to be a minimum of 2 metres below our main canal invert if they wish to proceed for the full width of the SMRID R/W. They would be responsible for getting all easements, approvals and access agreements and provide proof that this was completed. They would also be required to get approvals from Alberta Environment and any downstream landowner on the drain since the district does not have right of way to the river.

Yours truly,

Jan Tamminga

Operations Manager

pc. Jody Nakamura

c/o Martin Geomatic Consultants Ltd.

edm@mgcl.ca

From: circulations < circulations@telus.com>

Sent: December 13, 2022 2:42 PM

To: Hilary Janzen

Subject: RE: Lethbridge County Referral - Country Crossroad Estate Area Structure Plan

Good afternoon,

TELUS Communications Inc. has no objection to the above notification.

Thank you,

Samantha McKinnon Real Estate Specialist

Network Engineering and Operations | TELUS | Rights of Way

2930 Centre Avenue NE, Calgary, AB T2A 4Y2

From: Hilary Janzen <hjanzen@lethcounty.ca> Sent: Thursday, December 8, 2022 2:48 PM

To: Alberta Health Services (SouthZone.EnvironmentalHealth@ahs.ca) <southzone.environmentalHealth@ahs.ca>; ATCO Pipelines (SouthDistrictEngineering1@atco.com) <southdistrictengineering1@atco.com>; circulations <circulations@telus.com>; Triple W Natural Gas Co-Op (triplew@telusplanet.net) <triplew@telusplanet.net>; SMRID (lpark@smrid.ab.ca) <lp><landserv@fortisalberta.com) <landserv@fortisalberta.com>

Subject: Lethbridge County Referral - Country Crossroad Estate Area Structure Plan

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Good Afternoon,

Please review the attached referral from Lethbridge County and provide any comments by January 9, 2023. If you require the technical documents (i.e. stormwater management plan, environmental site assessment or geotechnical report), please let me know at your earliest convenience and I will forward those onto you.

Regards,

Hilary Janzen, RPP, MCIP Supervisor of Planning and Development Lethbridge County 905 4th Ave S Lethbridge, AB T1J 4E4

403.328.5525 office 403.328.5602 fax www.lethcounty.ca





April 11, 2023

Re: Country Crossroads Estate Area Structure Plan – SW 5-8-20-W4

The water distribution system in the area south of Highway 4 was installed in the year 2011. At that time the distribution system was designed and installed for all potential members of the co-op who paid for their curb stop.

Judy Nakamura chose to not pay for any curb stops at this time. Therefore the County of Lethbridge Rural Water Association's water distribution system in the area that includes the proposed Area Structure Plan was designed and constructed to accommodate those members who paid to have water. A recent engineering study states that the County of Lethbridge Rural Water Association has no capacity left in the area.

County of Lethbridge Rural Water Association

President

Conrad VanEssen

Allan Pirot Box 310 Lethbridge, Alberta T1J 3Y7

Hilary Janzen Supervisor of Planning and Development County of Lethbridge Via email

March 31, 2023

Re: Nakamura Development Proposal

Hilary,

I'm writing this note in response for an additional 25 properties proposal near our current residence. We moved here 13 years ago to enjoy the quieter life as well as to distance ourselves from the ever-increasing crime rates in town. We currently have a considerable amount of traffic on the road in front of our residence from the current property owners & have not noticed any criminal activity in our neighbourhood – although I'm aware there are some areas that are not as fortunate.

I have composed this letter to you to express my concerns about the prospect of the development proceeding. We are very much opposed to any development of this magnitude in our area & the quality of life we have come to enjoy very much. The increased vehicle traffic, noise, as well as possible exposure to undesirable elements being introduced into this neighbourhood will not be appreciated. I am of the understanding that most of the people that may be affected by this proposal are of the same mind.

I'm certain you will be hearing from many more residents & trust you will consider their concerns before making any final decisions on this proposal. I look forward to attending the hearing to address this matter.

Regards, Allan Pirot Lethbridge County #100, 905 Avenue South Lethbridge, AB T1J 4E4

Re: Proposed Bylaws 23-002 and 23-003

As a property owner potentially affected by the proposed County Crossroads Estate Area Structure Plan, we have reviewed the Areas Structure Plan and **do not** support the proposed development until the following concerns have been addressed:

- If this development is approved, more will surely follow. An expanded area structure plan is required by the Lethbridge County for this community to address future residential development.
- Strict architectural controls that maintain and enhance the community. The architectural controls
 outlined in the Structure Plan is a laundry list of "typical controls" but provides no architectural
 commitments for the project.
- Per the Structure Plan, the development will add 25 new homes, an estimated population of 75
 people and we have concerns the Range Road 205 (directly west of the development) will not safely
 support the additional traffic. The County and Developer should commit to widening and repaving
 Range Road 205 as a condition of the bylaw's approval.
- I'm not an engineer but I have serious concerns regarding storm water retention and natural
 drainage. Large rainfalls in the area have caused excessive runoff, filled ditches, and has backed up
 into resident's yards. Additionally, the area seems to have a high water table.
- The Area Plan indicates that potable water can be obtained but has not yet been obtained or approved. I feel potable water approval must be a condition of the bylaw approval. Secondly, I also feel water treatment, hauling and wells are not viable long-term options for 25 new homes located on 2-acre lots.
- The Structure Plan claims the land is "difficult to farm". The property is more than 66 irrigated acres, and I'm confident many fields in the county of similar size are farmed without difficulty. 66 acres is a large threshold.

Thank you for the opportunity to comment on the proposed development and we expect our comments will be addressed through the development process.

Regards,

Melissa and Aaron Honess 205026 HWY 508 Lethbridge County Lethbridge County April 10, 2023

#100, 905 - 4th Ave South

Lethbridge, Alberta T1J 4E4

Re: Proposed By-Laws 23-002 and 23-003

We, Larry and Deb Richter own the country residential property located at 80004 – RR 20-5, Lethbridge County. We are not in favor of the proposed Country Crossroads Estate Area Structure Plan and rezoning which provides the framework for future subdivision and development of the parcels for country residential development. We purchased our existing property in 2002 and have enjoyed residing amongst the established residential properties already located in this area. It was evident this rural area represented the true meaning of "rural living" whereby the small apportioned group of existing property owners can enjoy a static setting and lifestyle, surrounded by open parcels of farmland.

Our concerns for this subdivision or any other subdivision development in an existing residential community is as follows:

Existing rural residential communities should not be subject to rezoning for multi parcel subdivision development. This negatively affects and impacts the existing and established country lifestyle that this small community has enjoyed and wants to enjoy for years to come.

The existing Rural Road 20-5 is not engineered, maintained or capable of supporting increased load and volume resulting from sub-division infrastructure development, housing and landscaping construction and safe increased daily traffic use. Impairment and damage to the current road would require upgrade, repair and maintenance from the county to properly accommodate and maintain the quality, integrity and safety of this country residential road from this subdivision development.

There are many environmental concerns for water and sewage. The development is adjacent to a SMRID canal. Seepage, drainage, ground water and sewage issues are already a concern for existing area residents. This area was originally lightly developed with a natural high-water table and poor drainage. Increased water use could have adverse effect on adjacent properties.

Potable water is a huge concern as there is no city water available from the Lethbridge Water Co-op. Are SMRID non potable water rights available for increased concentrated residential sub-division use. Hauling of potable water and sewage would require heavy loads and increased traffic on the range road that is not designed for heavy truck traffic use.

We trust that our Lethbridge County delegates who represent our country resident ideals, will stand to preserve and sustain "rural" residential living by not allowing sub-development of multi residential parcels into established residential community areas. Increased residences in a small pre-existing community location easily shifts from a "rural" area to a "urban" area lifestyle.

Sincerely,

Larry and Deb Richter

From: Sharla Draffin

Sent: April 5, 2023 11:28 AM

To: planning; Hilary Janzen; Larry Randle; Nathan Hill; Lorne Hickey; Tory Campbell; Mark Sayers; John

Kuerbis; Eric Van Essen; Klaas Vander Veen; Morris Zeinstra

Subject: Proposed Nakamura Subdivision- Country Crossroad Estates located in SW1/4 of section5, TWP 8,

Range 20 West of the 4th.

To whom it may concern:

As an existing owner and resident along RR205 for 10+ years, this proposal has raised some concerns for us, mostly related in and around water within this area. From access to SMRID irrigation, to no-options to currently access Co-op water, to drainage/water table level, possible lack of potable water supply. (dugouts/septic fields) We have seen drainage issues in the past along this road effecting neighbors differently. The increased traffic and condition of the road would also be something to consider for all of us along this road.

We would appreciate you taking the time and interest to ensure all pertinent issues have been addressed before proceeding in any action to rezone, this is good farmable land.

Many thanks,

Greg and Sharla Draffin

80061 Range Road 205.

From: David Garner

Sent: April 10, 2023 3:28 PM

To: Hilary Janzen

Subject: Proposed Bylaws 23-002 -- 23-003 - Country Crossroad Estates located in the SW1/4 Section 5, TWP

8, Range 20 West of the 4th Meridian

To: Members of Lethbridge County Council,

As a concerned resident residing directly south of the proposed 25 lot residential development I feel compelled to express my concerns regarding this development.

- 1) Water Table: The water table is already high in this area and will continue to rise if 25 dugouts and septic fields are added. Adding in the water from the irrigation of 25 lawns, pastures, etc. will further exacerbate the water table issue.
- 2) Drainage, Flood Issues: The land slopes directly towards my property and without proper drainage the possibility of flooding our land and basement is a distinct possibility. This is a major concern as to the condition, safety and value of my property.
- 3) Water Supply: The SMRID irrigation line that supplies water to fill dugouts is certainly not large enough to accommodate any more access. There can already be marginal access at times with only the current number of users. A larger line or different access to SMRID should be a consideration.
- 4) Increased Traffic: The amount of traffic on a narrow road will increase dramatically. This raises major safety concerns for everyone who would potentially use this road and would also necessitate additional road maintenance. The road would definitely need widening to accommodate the increased traffic and current taxpayers should not have to pay for this improvement.
- 5) Architectural Control: Will there be any architectural control on what kind of building/house can be built? Will it be zoned as strictly residential? Who will be responsible for the upkeep of the land until all the lots are sold? If vacant lots are left unattended it creates the potential for the growth and spread of noxious weeds, as well as being a potential fire hazard during dry years.
- 6) Elimination of Irrigated Farm Land: Good quality farm land is a commodity that should not be taken out of production lightly. It has been farmed and has produced crops until now, so why is it now being considered as "unfarmable"?

Regards,

David Garner, 8-204054 Hwy 508 Lethbridge County, AB T1K 8G8

From: Mark Heninger

Sent: April 8, 2023 12:28 PM

To: planning; Hilary Janzen; Larry Randle; Nathan Hill; Lorne Hickey; Tory Campbell; Mark Sayers; John

Kuerbis; Eric Van Essen; Klaas Vander Veen; Morris Zeinstra

Subject: Country Crossroads Estates - Land Development

Dear County Council member,

My name is Mark Heninger. My wife Wendy and I live at 81004 Range Road 205 in Lethbridge County. I am writing concerning the proposed Country Crossroads Estates development, less than 1 mile south of our property. I became aware of the development application from several of my distant neighbors who received notices from the county office. I, along with several close neighbors, did not receive any such correspondence. I found this disappointing. I hope in the future, ALL impacted land owners in the area will be notified of potential land use changes in the appropriate ways.

I would like to highlight some of my concerns with the development as follows.

- 1. I would ask that Council members carefully consider their responsibilities in following all guidelines presently constituted in the Municipal Development Plan, and the Grouped Country Residential Land Use Strategy. Any contravention of these guidelines should nullify the acceptance of the land use proposal.
- 2. I am concerned about the infrastructure requirements for the proposed subdivision that will bring approx. 25 new acreages to our area. The 20-5 which services our properties is a paved road that I would categorize as bordering on fragile. It has served our purposes for many years, but it is narrow and in need of constant repair. There is always significant heaving along some sections of the road and each spring several potholes emerge which are not always repaired promptly or adequately. Unless the County has plans to upgrade this road BEFORE the new development commences, this road WILL NOT hold up to increased demand, especially the many years of construction traffic that will ensue. In addition, many residents in the area enjoy the opportunity to use the roadway to walk our dogs, jog, and bike ride. I have noticed over the years that in spite of the narrowness of the road, residents are always very respectful of the pedestrian traffic. Safety will certainly be an issue if there is a significant increase in vehicle and equipment traffic.
- 3. It has come to my attention that the Municipal Development Plan guidelines indicate that country residential developments are discouraged if they are within 300 meters of land zoned Industrial. The land in the proposal is directly across from Taylor business park which is zoned Industrial. I believe approval of the development would be in contravention of this land use requirement.

I have other concerns with this development which may or may not affect me directly. For the sake of keeping this letter concise, I will not elaborate on them now but will simply identify them as; potable water supply, and overland drainage and water table issues that will likely be affected by a large-scale development. Please consider these points in your review and deliberation on the proposal.

Finally, I would like to communicate that we have a very nice community which I believe is a very manageable size considering the amenities that are available. We moved out here 10 years ago to get out of the noise and congestion of the city. We want our community to continue to provide the peace and quiet and privacy it does now. Please carefully consider the impact this new development would potentially have on our community and way of life.

Best Regards,

Mark & Wendy Heninger

From: Larry Randle

Sent: April 11, 2023 8:22 AM
To: County Council
Cc: Hilary Janzen

Subject: FW: Concerns About New Development

Good morning all;

Here is another email regarding the proposed Country Crossroads development.

Thanks,

Larry

Larry Randle, BA, MMC, PRP Interim Chief Administrative Officer P: 403.317.6057 E: Irandle@lethcounty.ca www.lethcounty.ca





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From:

Cc:

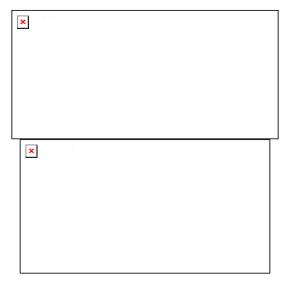
Subject: Concerns About New Development

Dear Larry Randle,

My name is Kelsey Nadeau and I am writing to express concerns about the proposed bylaws 23-002 and 23-003 regarding the Country Crossroads Estate Area Structure Plan and rezoning.

My partner, Hayden Schward, and I recently bought the property directly to the north of the proposed site (80043 Range Road 205) as it offered quiet country living with a great view. The current proposal will directly impact the ambiance of our property and We feel that there are some issues that have not been addressed in any of the planning thus far. We have compiled a list of concerns with the hopes that the county will consider these items during their deliberation of the bills.

1. Septic Concerns: While reading through the report, it mentioned that the soil is marginally acceptable for septic systems. This greatly concerns us as there will be three properties running along the southern edge of our land. The back of these lots would be the most logical place for their septic fields, mere feet away from our living room windows, bedroom window, and pond. As you can see in the satellite image, our house is on the very edge of our property and we are concerned about how a septic field in such close proximity would impact our house. The pond is not only used for gardening and livestock but also used as a primary water source for our neighbours to the north, so we would like reassurance that this water source would not be affected by neighbouring septic fields.



- 2. **Water Table:** We are aware that testing was done, but only once during May and found that water was as close as 2.3m below the surface. We are concerned to see how this development will affect the water table year-round, and in turn, affect our yard.
- 3. **Traffic and Construction:** As mentioned previously, we moved to the county to get away from the city. We appreciate the quiet and little traffic driving past our house on a daily basis. This will significantly change with a new housing development right next door. We are also concerned about the size of the development, as in its current version with 25 lots, we will have many years of construction to endure.
- 4. **Taylor Industrial Park:** We feel that approving the rezoning of this land would be going against other guidelines that the country has already adopted since this parcel of land falls within 300m of a designated industrial park. (Item #7 under *Land Use Conflicts* in Grouped Country Residential Land Use Strategy, and Section 8.1(c) in Lethbridge County Municipal Development Plan)
- 5. **Road Condition:** Our road from Highway 4 to Highway 508 is quite narrow and not engineered for the increased traffic or heavier use that construction and development would bring to the area. Is this something the county would address (before/during/after construction) and who would be financially responsible for repairs and upgrades?
- 6. **Water:** It is our current understanding that the COLRWA infrastructure is at capacity. The proposal indicates that they would like to add all 25 new houses to this system. I don't see how this is possible, and if for some reason it is deemed ok, how will that affect our water supply?

Thank you for taking the time to read this letter and consider some of our concerns. We are looking forward to
sharing our viewpoints again at the public hearing on April 20 and appreciated the time and effort that we know
the council will put into making these decisions for our community. If you have any follow-up questions, please
feel free to reach us via email

Sincerely,

×		

Kelsey Nadeau and Hayden Schwark

From: ian whishaw

Sent: March 26, 2023 6:49 PM

To: planning

Subject: Bylaaw 23-002, 23-003

Re Proposed bylaws 23-002 and 23-003

I am a homeowner just across the street from the proposed subdivision. I wish to register my opposition to the bylaws for the following reasons.

- 1. The proposed development of this area would double the number of residences in the immediate area. This would change the area from country residential into a village.
- 2. The proposed area is farmland. It is irrigated and has been farmed for as long as I have been here, more that 20 years.
- 3. Range road 205, the entrance roadway, is paved but narrow, and the development would more than double the traffic on the road. As it is the road is deteriorating and it would be challenged by increased traffic.
- 4. The proposers of the development are not developers. Their current property is marked by numerous parked trailers and trees dying from lack of water. It doesn't make sense to expand this to the remaining 60 acres.
- 5. In short this is a nice country acreage area and the bylaw would dramatically change the area and lead to pressure by neighboring properties to petition for subdivisions.

Yours truly,

Ian and Susan Whishaw 80022 RR 205 Lethbridge County Hilary Janzen,
Interim Director of Community Services
Lethbridge County
#100, 905 – 4 Ave. South
Lethbridge, AB T1J 4E4

Re: Country Crossroads Estate Area Structure Plan Proposed Bylaws 23-002 and 23-003

We received a letter and concept drawings from Martin Geomatic Consultants Ltd. (MGCL) dated December 13, 2021 outlining the planned 25 lot rural residential development (Jody Nakamura) in SW-5-8-20 W4th, Lethbridge County.

We reviewed the concept plans and we DO have concerns with the proposed development, based on the information received. We indicated our concerns in a letter to MGCL in February of 2022 (attached).

While we are unable to attend the Public Hearing on April 20, 2023, we continue to be **opposed** to the proposal for the reasons indicated in that letter. Further to the concerns in that letter:

- Increased traffic on Range Road 20-5 is an issue that concerns all residents along RR 20-5, on both sides of the road. Is the County prepared to maintain the road pursuant to this increased traffic? There is already an issue and the road is poorly patched where it crosses the existing drainage ditch.
- It is our understanding access to potable water is a concern and none of the water co-ops are able to meet requirements as outlined in GCR Land Use Strategy plans for the near future.
- Wastewater management (25 septic fields) is a sewage drainage issue. The proposal to set up a community septic field on the east of the SMRID canal is not feasible. I suspect SMRID would not allow this.
- Even if the land was made level the natural drainage flows south southwest and impacts the acreages already established along Highway 508. Existing ditches have been known to overflow along Range Road 20-5 in spring and in rainy years.
- The landscaped pond sounds nice but will it then drain into 6 Mile Coulee? Is that drainage able to accommodate the excess water?
- Irrigation water from SMRID is currently sporadic to supply the existing acreages along Hwy 508. Is SMRID aware of this proposal and are they prepared to improve our supply. Would they approve of this especially if the septic field crosses through their canal?

We continue to oppose this development along with the majority of our neighbours.

Yours truly,

John & Laura Prins 204062 HWY 508

Lethbridge County AB TIK 8G8
CC: Leene barenty Council

Martin Geomatic Consultants Ltd. (MGCL) Attention: Matt Redgrave, P.Eng. 255 – 31 Street North Lethbridge, AB T1H 324

Dear Sirs:

We have received the letter and concept drawings from MGCL, dated December 13, 2021 outlining the planned 25 lot rural residential development (Jody Nakamura) in SW-5-8-20 W4th, Lethbridge County. We have reviewed the letter and concept plans and we DO have concerns with the proposed development, based on the information received.

We are opposed to the proposal at the present time for the following reasons:

- The property is in excess of 60 acres (66 acres).
- 2. While the property may be small for agriculture purposes, it has produced an alfalfa crop annually sometimes two cuts. Although a pivot is not possible, the owners have irrigation rights with SMRID and wheel-move equipment is on site.
- 3. A previous proposal was made in 2010 for 27 lots and has since been amended to 25 lots, which is still too many. With 25 houses there would be 50 to 75 residents and likely 50 vehicles, all accessing Range Road 20-5, not to mention access for service vehicles. Traffic is an issue.
- 4. Who will maintain the road the County?
- 5. Is the County Rural Water Association able to accommodate 25 more residences? Maybe not, neither do 25 private wells make any sense.
- 6. Wastewater management (25 septic fields) is a sewage drainage issue. The stormwater pond would not and should not contain wastewater drainage.
- 7. Natural drainage for excess rainwater flows south and impacts the acreages already established along Highway 508 and has been known to overflow ditches along Range Road 20-5. Yes, we have had excessive run-off in rainy years.
- 8. The landscaped pond sounds nice but will it then drain into 6 Mile Coulee?
- 9. Community irrigation water from SMRID is currently sporadic for the existing acreages. Would they approve of this? Are they even aware of it?

There are just too many unanswered questions.

A copy of this letter is being sent to Lethbridge County and the property owner.

Yours truly

John & Laura Prins 204062 HWY 568

Lethbridge County AB T1K 8G8

To whom it may concern:

My name is Craig McDougall, and my wife Amy and I are vehemently opposed to the proposed Country Crossroads Estate addressed in Bylaw 223-002 and Bylaw 223-003. Not only will this proposed development increase noise and traffic, but there are also more pressing concerns that need to be addressed.

The land in question is currently used as agricultural land and has been profitably rented and worked by local farmers. It is my understanding that land in good condition for agriculture should not be parceled out for residential dwellings. Furthermore, a huge concern is potable water and sewer required for these dwellings. Our area is already at full capacity when it comes to the pressure in our city water line. How does the county plan to address this? There is also the concern for the wear and tear of our paved roads. Large trucks moving in a out for water and sewage needs would be detrimental to our roads. Additionally, drainage in the area is already questionable at best and we are concerned that a development here will further exasperate the problem. Finally, we were under the impression that parcels of land of this size cannot be separated into so many individual dwellings. This sounds like too many properties in too small of space.

If this area does indeed get approved for residential dwellings, we think it would be more appropriate to sub-divide this land into 4 to 5 acre parcels in order to stay in line with the rests of the acreages in the area. This area is known for its peace and quiet, while maintaining a community atmosphere. We worry that this area will become noisy, cluttered, and ultimately more urban in nature.

People who move to the country do so because of the very things that this proposed development might destroy. We strongly urge you to reconsider this development.

Sincerely,

Craig and Amy McDougall

75081 Range Road 205 Lethbridge County, AB T1K 8G8

April 11, 2023

Hilary Janzen, RPP, MCIP Supervisor of Planning and Development Lethbridge County 905 4 Avenue S Lethbridge, AB T1J 4E4

Dear Ms. Janzen:

Re: Proposed Grouped Country Residential Subdivision – County Crossroad Estates

My husband, Lloyd Healy, and I have lived approximately 300 yards south of the above-mentioned proposed development area for twelve years. We are concerned about this development going through for the following reasons:

Unsuitable for existing area – The 25-lot clustered subdivision that is being proposed is in sharp contrast (out of scale) to the existing linear, low-density acreages and farm steads that are currently present. The style and scale of the proposed development will change the rural atmosphere for all surrounding residents and create a more urban setting. This development will substantially affect the quality of life for immediate and close-by property owners and will have lasting consequences to nearby property use and enjoyment.

Safety and Condition of Range Road 205 – This is a narrow road that suffers a fair amount of damage (potholes and "waves" in the pavement) from the current traffic using it. On a daily basis, seniors and children enjoy walking along this road to walk their dogs and to exercise. With more traffic from a large subdivision and increased damage to the road, many residents will no longer feel comfortable walking and riding bikes on this road.

Lack of information provided – We did not receive notice of the formal application (rezoning and Area Structure Plan) from the landowner or Lethbridge County. The owner dropped off a map of the proposed development approximately one year ago but we have not received further information from her since then. We are finding out about this formal submission from another neighbor, twelve days before letters of concern are due on April 12.

In summary, we are opposed to this development in its present form and believe that the County of Lethbridge should decline this application.

Thank you for taking the time to read our concerns about the proposed development and we look forward to your response.

Kelly Echlin and Lloyd Healy

Warren and Anita Salberg 80009 Range Road 205 Lethbridge County T1K 8G8



Lethbridge County #100, 905 -4th Ave. South Lethbridge Alberta T1J 4E4

Re: Resident Concerns about Proposed Country Crossroads Estates - Public Hearing Proposed Bylaw 23002

Hello,

Our names are Warren and Anita Salberg and we have been residents of the immediate area of this proposed subdivision for the past 30 years. We currently (past 23 years) live at 80009 Range Road 205, immediately south and bordering the proposed subdivision. We would like to voice our opposition to the development proposed and have included a number of the reasons for opposition in the text below.

After doing a review of the proposed Area Structure Plan and comparing it to the Municipal Development Plan and the Grouped Country Residential Land Use Strategy documents, we have identified several areas that we believe disqualify this proposal from going ahead. There are a few, such as the proximity to current and proposed industrial zoned land, that should be obvious disqualifications in our opinion.

<u>Issues with Proposed Nakamura Subdivision (Country Crossroads Estates) – No particular order</u>

1) Does not meet Municipal Development Plan Guidelines for Grouped Country Residential as it is within the 300m buffer from land zoned industrial (see maps

below) as described in the Municipal Development Plan (Page 30, Section 8.1c) which states...

GCR developments will be discouraged:

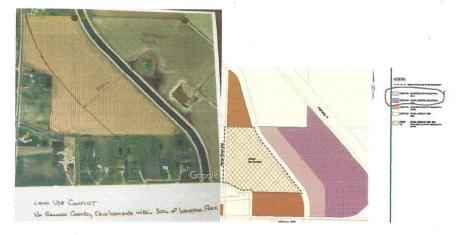
 within 300 metres (984 ft.) of a designated/undesignated industrial park/areas unless it can be demonstrated that there will be no adverse impacts to either the industrial area or future residential area;

and II. on parcels included or adjacent to lands identified in the Lethbridge County Industrial-Commercial Land Use Strategy 2016 that are identified to be reserved for future industrial/business use and growth.



and the Grouped Country Residential Land Use Strategies (Land Use Conflicts Items 7 and 8) which states...

- 7. Grouped Country Residential subdivisions are <u>discouraged within 300 metres of designated industrial parks/areas</u>, or <u>existing non-designated industrial areas or isolated developments</u>, with the exception of existing subdivisions or ASP designated areas that may continue to be developed out.
- 8. Grouped Country Residential subdivisions <u>shall not be considered on parcels included or adjacent to lands identified in the Lethbridge County IndustrialCommercial Land Use Strategy 2016 that are identified to be reserved for future industrial/business use.</u>



We did not see this land use conflict addressed in the Area Structure Plan but believe it is a critical item that Councillors and Planners need to be aware of. As you can see above, the 300m buffer from industrial zoned land covers the majority of this proposed subdivision. It should also be noted that the existing acreages were here before the industrial park was in place.

2) Taking 66 acres of good irrigable agricultural land out of production. This parcel has been farmed and in production continuously for many decades, producing good crops. Developing this area conflicts directly with the South Saskatchewan Regional Plan - Strategy 1 which states...

Reduce the rate at which land is converted from an undeveloped state into the permanent, built environment

as well as conflicting with Principle 3 of the Grouped Country Residential Land Use Strategy which states...

Minimize the conversion of agricultural and natural grasslands for residential purposes.

Under the Grouped Country Residential Land Use Strategy, this 66 acre parcel does NOT meet the definition of fragmented land...

ii) Land which the Subdivision Authority determines is so badly fragmented by existing use or ownership that the land has low agricultural productivity or cannot be logically used for agricultural purposes. For the purpose of subdivision, fragmented land may be considered to be land containing 8.1 ha (20 acres) or less of farmable agricultural land in CLI classes 1-4.

As identified in the CLI it appears that this land is Class 2.

3) Potable Water Supply. Our understanding is that there are no available water hookups available in this area but the Water Co-op will have a definitive answer. Although it appears Nakamura initially put down a deposit, it was clearly explained when this water co-op first started that the deposit had to be followed up by the purchase of a connection (significant cost) so unless Nakamura actually purchased (and continuously paid monthly for) these "actual" connections at that time, the "deposit" information is meaningless. If the "solution" to no water is cisterns and hauling water, consider the potential for damage to Range Road 20-5 as heavy water trucks and/or trailers with water tanks become an everyday occurrence. The road is currently in fair condition but needs maintenance. It was not designed for use by heavy trucks. Is the County prepared to maintain, upgrade and enhance this road to handle the additional usage?

The lack of a potable water supply conflicts with many sections in both the Municipal Development Plan and the Grouped Country Residential Land Use Strategy documents. A few examples...

- MDP, page 14, Section 4 Land Use Policies item 4.5 states...
- 4.5 All non-agricultural development must be able to be serviced by potable water, sewage (septic) systems, and have suitable access necessary to service the intended use. The detailed servicing requirements applicable for landowners/developers are outlined in Part 4 of the MDP.
- MDP, page 27, Section 6 General Residential Land Use item 6.5 Potable Water states...

6.5 Potable water is to be provided to the County's satisfaction:

(a) The County shall ensure that all residential developments have a potable water source, sufficient for the type of proposed type and scale of development, acceptable to the County and compliant to Alberta Environment and Parks regulations.

- MDP, page 32, Section 8 GCR Servicing Requirements item 8.5b states...
- b) Potable water is to be provided to the County's satisfaction:
- i. Any Large-scale (5 or more lots) country residential development is to be serviced with potable water from the applicable water co-op or the County.
- Grouped Country Residential Land Use Strategy section on "Servicing" states...
- 2. Large scale Grouped Country Residential subdivisions (5 or more lots) will be required to connect to a potable water system such as one of the Water Co-ops or similar organization. Confirmation that water allocation is available <u>must be submitted at the Area Structure Plan or Conceptual Design Scheme application stage</u>.
- 4) Currently the 9 neighbouring acreages along the south border of this proposal fill their dugouts via a small, low head gravity SMRID pipeline from the SMRID Main Canal. There is also an irrigation pump connection from this turnout for Nakamura use near the main canal. As it is right now, pre-development, the capacity of this pipeline is very low. If anyone upstream is drawing water into their dugouts some or all of those downstream do not have water available. As well, when Nakamura is filling their dugout or irrigating their pasture using the irrigation pump this small pipeline typically does not have access to water. Adding more acreages, dugouts and a storm pond to this system will further exacerbate the problem we currently face. No one has contacted us to date to even ask about this water supply. Our concern is that with the increased usage for dugouts and to maintain a water level in the storm pond, it will frequently leave many or most of us without water. This is a major concern for the 9 properties impacted.
- 5) Drainage Issues. The SMRID drainage ditch that runs through this area is already under stress during rain or spring runoff events, occasionally at the verge of overflowing. The following pictures were taken shortly after a rain event in 2014.





This drain obviously was designed and built prior to the massive industrial developments at Wilson Siding, Taylor Industrial Park, or the current acreages. We were unable to find the Tiffin Drain – Master Drainage Plan even though the Engineering Guidelines referenced it. Stormwater runoff in the area has increased significantly so our question is if anyone has actually done a study of this watershed recently to see if this drainage canal/system is capable of handling extra flow? Although the construction of a storm pond in the SW corner of the proposed subdivision is intended to contain the runoff from the subdivision for a 1:100 year storm, we all know that these types of intense storms are becoming more common. Our concern with drainage is not so much with this proposal individually but with the overall Tiffin Drain and its ability to handle more large scale industrial and residential developments in general.

To emphasize our concern about this, please note that the AMEC-Foster portion of the Area Structure Plan even includes 2 photos (pages D-2-photo 4 and D-6-photo 11) of the drain ditch in the spring of 2018 near the proposed storm water pond with water levels approaching the tops of the banks.

- 6) Water Table. Our understanding is that portions of the area along the south border of the proposal (and likely along the canal) currently has an intermittently high water table depending on the time of year and precipitation amounts. The geotechnical report in the ASP did boreholes around the site, but they only took these samples in May 2018 and then noted that the water table will vary seasonally. It is reasonable to assume that May will likely be a time of lower water table and perhaps these samples should be taken in September to monitor the water table while the SMRID Main Canal is operating. Our concern is that we are confident that the SMRID Main Canal contributes to this variance and the report does not address this with enough data to really know how high the water table actually rises to. As well, a large residential subdivision will significantly increase the amount of run-off (as opposed to tilled farmland) and the lot grading within the subdivision directs virtually all of that water through open ditches and swales to the SW corner of the proposal. This could have an impact on the water table along some of the south neighbouring properties.
- 7) According to proposed Area Structure Plan, Section 8.2.1 page 16, the soils are marginal for conventional septic systems based on soil textures and groundwater levels measured in May (see point 6 above). Will this be a problem when 25 lots are created?
- 8) Traffic and Road concerns. Range Road 20-5 is currently paved and in fair condition with several patches and cracks. This road was not designed for heavy trucks. It is a very narrow road, only about 6.5m from edge of pavement to edge of pavement which does not meet current County Engineering Guidelines, page

- 63 Section 6.2.1.2. Even with current traffic levels it can be dangerous when meeting opposing vehicles, especially trucks or school buses. Certain stretches of the road have heaving and potholes develop regularly. Adding at least 50% more traffic along this road is concerning for us as residents both for safety and maintaining the road condition. It should be noted that this road has a significant amount of pedestrian traffic daily.
- 9) Community this area has slowly developed over the past 40 years into a "rural" community with few conflicts. A significant degree of respect exists among our community for the surrounding farmers and their farming operation requirements and this respect has been reciprocated by the farmers. Most current residents live here because we want to live in a rural area, not in a hamlet or village. The type of development that has occurred until recently has typically been "linear" along the existing roadways using small parcels of land that were cut-off from neighbouring farmlands through historical usage (canals etc.). This linear development has worked well to provide the "rural" feel to these acreages because the parcels are not back to back or face to face with each other. That is why we invested in this area. A 25 lot "cluster" type of subdivision as proposed basically turns this area into a village (but without the services) and will interfere with our quality of life and likely introduce issues between the conflicting land uses. The Area Structure Plan indicates that only one person submitted comments concerned about the plan but as the County is (or should be) aware, many of us submitted emails, letters, visits and phone calls to the planners and councillors when this proposal was first suggested back in 2009 and again when it re-emerged in the past couple of years.

We believe that there are several significant conflicts between the proposed subdivision and the intentions behind the County's development guidelines and strategies and ask the County to deny this development proposal.

If you vote in favour of the proposal then our next questions are going to be "Why does the County need to have all of the planning guidelines and development strategies in the Municipal Development Plan and Grouped Country Residential Land Use Strategies if no one follows them?" and "What is the County going to do to ensure that our concerns are fully addressed".

Sincerely.

Warren and Anita Salberg

Anita Dalbers

6 Enclosure

We, as owners of properties adjacent and/or potentially affected by the proposed Country Crossroads Subdivision wish to notify the Lethbridge County that we are opposed to the rezoning, and future subdivision of the parcels for Country Residential development

Signature of Landowner	Printed Name	Street Address or	Phone Number	Email Address	Date
		Legal Land Location			
Anita Sulberg	Anda Salberg	80009 RR205 Letabridge		<	Apr1/23
Suparne // will	Syrienchol	75082 RR 205 Lethicounty		_4	Apr 3/23
VIL	John Wiseman	75082 RP2 205 L County		4	A03/23
Maria Warner	MOIRA WARNOCK	205010 HWY 508 KETIC		<u> </u>	n Aprilya
Ly Wand	BRYAN WARNOCK	205010 they 508 LOTH CA			Spil 3/23
M.R. Berr-Cgo	Mosly BARR-COE	75075 Rengeled 205 Cour	1		Apr 3/23
RICK HARDS	Dichny Kitle	4-81008 April 205 Letil		4	Mr.6/12
the Harner	DANE GORNET	8-204054-508-		G	on 16/23
(Mushall)	1 AN WHISHARD	800 LZ 22205		-	4 - 65 /
16	Rick Woste	75063 KR 205		<u> </u>	m 12/6/2
Show has	Scott Greene	80051 RRZOE		5	April 6/23
middle like	Michelle Weste	75063 KR 205		_ا	April 6/23
moman.	SusanWhishaw	80022 RR 205		3	on Apr. 6/
Stoney Smith	STACEY Smith	204068 HWY 508		2	17PRA
Jury Smith	TARRY SMUTH	11 11			
Desel Virostille	SEA VIROSTER	204041 HWS 508		4	april 6/3
Great Snall a Deaftin	- Sample	EDULI Range Landolos		-	Aprila
Sio Briois	Sio Birry	75069 RGE RD.205			APRIL 6/23
	MARK HENINGSE	81004 RR 205			Aut 6/25

We, as owners of properties adjacent and/or potentially affected by the proposed Country Crossroads Subdivision wish to notify the Lethbridge County that we are opposed to the rezoning, and future subdivision of the parcels for Country Residential development

The Control of the Co		Street Address or Legal Land Location	Phone Number	Email Address	Date
Laser- Nadeur	Kelsey Nadeau	80043 KK 205 TIK 869	,		April 6/23
If I k	HAYDEN SCHWARK	n n			~ ARE6/23
Kelly Echlin	Kelly Echlin	75081 RR 205 TIK 868		2	Apr3/23
Dawid Barries	DAWN BARRUS	75073 RR 205			m APRIL 6/23
Hoyd Heaty	11 1 1/2/4	75081 Rakd 205	<u> </u>		1-11-2
Langu Heary	Roya Healy	500 80049			April 6,202
Bolingshoop	Regina Kropshan	204067 Highway 508			om 4-062
R.		304067 Highway 508			om 4062
Horiza .	Lannie Pirot	80053 Rns Rd 205	_		4-6-23
M. Ja	Men Pint	80053 Ra Rd 205			6 Dec 33
Che Dat + Rothers	CHOCK ADAMS	2040 Et Hwy 508			Apric 23
Abol Larry Richter	2				ion oulds
1 Kichter	Deb Richter	80004 RR20-5	-		100 mar
W. Hally	Warren Salberg	80009 RR20-5		i e	Apr11/2023
	-				

Hilary Janzen

From: Scott Greene

Sent: April 12, 2023 12:26 PM

To: planning; John Kuerbis; Eric Van Essen; Klaas Vander Veen; Morris Zeinstra; Hilary Janzen;

irandle@lethcounty.ca; Nathan Hill; Lorne Hickey; Tory Campbell; Mark Sayers

Subject: Proposed subdivision

Im writing today to reference the proposed subdivision on range road 205. Im very concerned about all this entails. With the plan all ready in violation of the neighboring industrial park with being within the 300m of it. Also with the water rights with filling dugouts because the pipeline is already at capacity i'm concerned there is proper piping and drainage if the problem arises.

With me and my family moving out of city a few years ago to escape the rise in crime rise in traffic and rise in noice. this proposal will bring all those elements to the block.

The road cant handle increase traffic with that many new residents and will need a costly upgrade. A costly upgrade the county would have to pay for.

im concered about the water table and drainage issues that will also come with that many new roads homes and traffic.

also the loss of fertile farm land.

Scott Greene - opposed to approval of new subdivision

80057 range road 205

Hilary Janzen

From: Jenna Greene

Sent: April 12, 2023 11:50 AM

To: Hilary Janzen; planning; Larry Randle; Nathan Hill; John Kuerbis; Eric Van Essen; Klaas Vander Veen;

Morris Zeinstra

Subject: Re: New subdivision (Concerns)

To Whom It May Concern:

My name is Jenna Greene and I am resident of Lethbridge County. I live on R.R. 205 where a potential new housing subdivision may be built. I have concerns about this project that I would like to explain.

My family moved to our acreage in the fall of 2022. We chose this location for its privacy and security, as well as for its exposure to nature for our young daughter. A new housing subdivision will alter the place we chose to grow our family. We like knowing all of our neighbours. We like the trust we have in our spacious community. We like being able to walk down an isolated road. We like that our daughter can safely play outside.

The road that residents currently access their homes from will not withstand extra traffic of 100+ new residents. In fact, the current infrastructure of water supply, electricity, drainage etc. cannot either. To amend these limitations, constant construction will be required. We will lose our sense of tranquility.

Bylaws state that residential areas cannot be within 300 meters of commercial properties. An approval of this housing subdivision would violate this industrial zoning.

Thank you in advance for reading this letter.

Jenna Greene 80057 Range Road 205 Lethbridge County April 11, 2023

Hilary Janzen,

We are owners of farmland located Southwest of the proposed development. We are one of few farms left along Range Road 205. It is upsetting that productive land continues to be converted to asphalt and houses. I am angered by people complaining about the cost of groceries, but then removing land from agricultural production for their enjoyment.

We are not in favor of the rezoning and development.

Our main concern is that residents will not understand what normal farming activities are:

-our farmland is located directly southwest of the site, which is also the prevailing wind direction. The potential for dust, odor, etc. blown to the site is at the whim of mother nature.

-the increased traffic on the road would cause a greater risk of accidents involving machinery, equipment, or transport of agriculture products from our farmland.

-farming activities do not occur by the calendar. Farming activity can occur on holidays, weekends, or nights. Dust, odor, noise, and light may occur anytime.

We currently consider these factors as much as possible in our farming practice. We have great neighbors now. But with increased population, comes the potential for conflicts.

One more concern is the stormwater plan. We have land along the Tiffen drain. We have had the land flood in large rainstorms or melting events.

The plan includes consideration for a 24hour rain event. This is a flawed assessment. Most large storms occur in a 48 to 96 hours. The website extremeweatherwatch.com lists precipitation records for Lethbridge over a two-day period (printout attached). One of the largest occurred over four days. August 15-17, 1993 saw rainfall of 18.3 cm. This is 7.2 inches. The amount of water on 66 acres would amount to 48845 cubic metres. With a catch pond of only 15700 cubic metres, the flooding from the overload of the Tiffin drain would be detrimental to our crops.

In conclusion, we oppose the rezoning to grouped country residential.

Wes and Ledean Skiba

4-80035 Range Road 210

Most Precipitation in a Two-Day Period in Lethbridge History

This is a list of the largest precipitation totals ever recorded over two consecutive days in <u>Lethbridge</u>, <u>Alberta</u> history from 1938–2023. Change city

Rank	Precipitation	Date
1	11.0 cm	Sep 10–11, 2005
2	10.7 cm	Jun 21–22, 1963
3	9.2 cm	Aug 15–16, 1993
4	9.1 cm	Aug 16–17, 1993
5	9.1 cm	May 22–23, 1980
6	9.1 cm	Jun 6–7, 2005
7	8.4 cm	Jun 29–30, 2020
8	8.4 cm	Jun 16–17, 2010
9	8.2 cm	Jun 26–27, 1959
10	8.2 cm	Sep 20–21, 1968
11	8.2 cm	Sep 9–10, 2005
11	8.2 cm	Apr 26–27, 1974
13	7.9 cm	Jun 30 – Jul 1, 2020
14	7.8 cm	Aug 22–23, 1978
15	7.8 cm	May 27–28, 2010
16	7.5 cm	Jun 20–21, 1991
17	7.4 cm	Jun 5–6, 1951
18	7.2 cm	May 26–27, 2010
18	7.2 cm	Jun 13–14, 1981
20	7.2 cm	Sep 21–22, 1968

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April 10, 2023

RE: Proposed Bylaws 23-002 and 23-003

Dear Councilor,

I am writing this letter in response to the proposed Country Crossroads Estate Area Structure Plan and rezoning allowing future developments in the area to also evolve.

The thought of allowing such a large development in this area is extremely disappointing and detracts from any reason we choose to purchase our acreage 12 years ago and enjoy a quieter lifestyle.

My family and I live just south of the proposed development and have struggled with the county's inability to keep our present road in good repair. The added traffic to the already poor road conditions would considerably add to the consistent failure of our access road. Another concern is the possibility of increased crime that often comes with an increased population, which we have already experienced.

We are very much opposed to any development of this size in our area and the affects it would have on our quality of life. We choose this area for the proximity of the city without actually having to live within the city limits. We did not choose to live in a hamlet, which is what the new proposal and rezoning will impose upon us.

In conclusion, the loss of valuable farmland that is becoming more and more urbanized is tragic. The thought of our county electives allowing this to happen is also extremely disheartening, when we would hope preservation of such valuable land is of utmost importance.

Regards,

∕Jon Barrus

75073 Range Road 20-5

Lethbridge County, AB

T1K 8G8

RECEIVED

APR 13 2023

Lethbridge County

Lethbridge County #100, 905 4 Ave S, Lethbridge, AB

Re: Proposed Bylaws 23-002 and 23-003

As a property owner potentially affected by the proposed County Crossroads Estate Area Structure Plan, we have reviewed the Areas Structure Plan and **do not** support the proposed development due to the following concerns:

- The road infrastructure on Range Road 205 is already insufficient for the current usage. Adding 25 new homes with an estimated population of 75 people there are concerns that the road will not safely support the additional traffic. Range Road 205 currently has many individuals who walk on this road. Increasing traffic on the road will be a safety concern for the local community. The Developer and County would need to commit to reconstruction of RR 205 as well as updates to all surrounding intersections to maintain safety.
- Intersections that would be affected significantly include the intersection of highway 508 and range road 205, the intersection between highway 508 and highway 4 as well as the intersection of highway 4 and range road 205.
- I have concerns about additional drainage into the cannel and surrounding acreages.
- We would want to see more detail beyond typical architectural controls that outline specific controls that the developer must abide by for example: controls on lot usage and a surveyed plan on how they are going to deal with water run off and drainage.

Thank you for the opportunity to comment on the proposed development.

Klynt and Logan Spencer 75076 Range Road 205 Lethbridge County

AGENDA ITEM REPORT



Title: Planning and Development Department - 1st Quarter Report 2023

Meeting: Council Meeting - 20 Apr 2023

Department: Community Services

Report Author: Hilary Janzen

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 08 Apr 2023

STRATEGIC ALIGNMENT:









Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

This is the 1st Quarter Report for the Planning and Development Department.

RECOMMENDATION:

That County Council receive this report for Information.

REASON(S) FOR RECOMMENDATION(S):

This report is strictly to inform County Council on the activities of the Planning and Development Department.

PREVIOUS COUNCIL DIRECTION / POLICY:

The Planning and Development Department takes direction from the bylaws, policies, and strategic documents approved by County Council.

BACKGROUND INFORMATION:

Lethbridge County's Planning and Development Department takes direction from the Bylaws and guiding documents that have been approved by County Council including the Lethbridge County Municipal Development Plan, Intermunicipal Development Plans, Lethbridge County Land Use Bylaw, and Area Structure Plans. The Planning and Development Department manages the issuance of development permits, amendments and updates to the Land Use Bylaw, planning projects, intermunicipal relations and referrals, Road Closures and Licenses, land sales and leases and enforcement of the Land Use Bylaw, and other planning bylaw regulations.

In the 1st quarter of 2023, along with day to day duties, the following items were undertaken:

• Completed the Lethbridge County and Town of Coaldale Intermunicipal Development Plan which was approved by both municipalities in March 2023.

- Completed the update of the Industrial-Commercial Land Use Strategy and held a Council Workshop.
- Completed the Annual Internal Review for Alberta Safety Codes.

Development Authority

From January 1 to March 31, 2023, 59 development permit applications were received. This is a slight increase from 2022 when 50 development permit applications were submitted during the same period.

A total of 49 development permits were issued, 1 was refused, and 13 applications were under review in the 1st quarter of 2023. This includes development permit applications made at the end of 2022. Of the permits that were issued, 15 were residential, 16 accessory (i.e. personal shops, sheds, garages, solar arrays), 8 commercial/industrial, 5 agriculture (farm shops, hay sheds), 1 sign, and 1 miscellaneous.

A total of 9 compliance letters were issued.

Three land use bylaw complaints were received and investigated.

Building Permits

Between January 1 and March 31 2023 the following safety codes permit applications were issued:

- 19 Building Permits
- 68 Electrical Permits
- 35 Gas
- 19 Plumbing
- 1 private septic disposal systems

Subdivision Applications

County Council acting as the Subdivision Authority approved 5 subdivisions from January 1 to March 31, 2023.

Subdivision and Development Appeal Board

There were no appeals of any subdivision approvals or development permits in the first quarter of 2023.

Bylaws

- Bylaw 22-021 Green Prairie Road Closure council has approved sending the road closure to Alberta Transportation (March 16, 2023)
- Bylaw 23-002 Country Crossroads Estate Area Structure Plan received first reading March 16, 2023
- Bylaw 23-003 Rezoning (in conjunction with Bylaw 23-002) received first reading March 16, 2023
- Bylaw 23-008 Amendment to the Chinook Industrial Park Area Structure Plan first reading April 6, 2023
- Bylaw 23-009 Rezoning (in conjunction with Bylaw 23-008) first reading April 6, 2023
- Bylaw 23-012 Turin Street and Lane Closure in circulation

Intermunicipal Relations

• Completed the Lethbridge County and Town of Coaldale Intermunicipal Development Plan

- The Town of Nobleford and Lethbridge County Intermunicipal Committee held a meeting on March 15, 2023
- The City of Lethbridge and Lethbridge County Intermunicipal Committee held a meeting on March 15, 2023

ALTERNATIVES / P	ROS / CONS:			
Not Applicable				
FINANCIAL IMPAC	Т:			
	afety Codes Permits.	In the same perio	,211.61 in revenue fro od in 2022, the County	
LEVEL OF PUBLIC	PARTICIPATION:			
 Inform	Consult	☐ Involve	Collaborate	Empower

AGENDA ITEM REPORT



Title: Industrial-Commercial Land Use Strategy

Meeting: Council Meeting - 20 Apr 2023

Department: Community Services

Report Author: Hilary Janzen

APPROVAL(S):

Hilary Janzen, Supervisor of Planning & Development Approved - 15 Feb 2023 Larry Randle, Interim Chief Administrative Officer Approved - 15 Feb 2023

STRATEGIC ALIGNMENT:









Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

The Industrial Commercial Land Use Strategy is a guiding document to County Council, County Administration, developers, and landowners. The Strategy looks at what the development trends are within the County and looks at where new commercial and industrial development would be best located. The Strategy, while providing preferred locations for development in the future also recognizes the need for the County to be flexible and encourages efficient and sustainable development.

RECOMMENDATION:

That County Council approves the Industrial-Commercial Land Use Strategy and directs administration to proceed with implementation of the Strategy.

REASON(S) FOR RECOMMENDATION(S):

The Industrial-Commercial Land Use Strategy will provide the County, developers, and landowners with the strategic direction on the location and criteria for industrial and commercial development.

PREVIOUS COUNCIL DIRECTION / POLICY:

The current Industrial / Commercial Land Use Strategy was approved by County Council in October of 2016.

BACKGROUND INFORMATION:

The purpose of the Land Use Strategy is to identify a long term vision and policy framework for the County and to provide new opportunities for the diversification of the industrial-commercial sector. The Strategy looks to identify and protect suitable land area within the County that would be appropriate for future industrial or commercial development without negatively affecting other existing uses or conflicting with the County's other goals and policies.

The plan provides:

- An economic analysis which looks at the economic trends within the County and how it compares to other similar municipalities.
- A review of the relevant legislation.
- A review of the existing land uses in the County including subdivision and development permit activity and grouped industrial and commercial areas.
- A Land Use Strategy which identifies potential areas of development based on specific principles and criteria.
- A set of recommendations on how the County can proceed with the information provided in the Strategy.

The Strategy provides guidance to administration and County Council on future industrial-commercial development within the County. The report is in line with the County's Strategic Plan as it provides clear direction on growth within the County and the importance of diversifying and retaining business.

ALTERNATIVES / PROS / CONS:

County Council may choose not to approve the Industrial-Commercial Land Use Strategy

- Pros by not having a Strategy, the County may be seen as being less restrictive and more "open for business"
- Cons by not having a Strategy there could be developments that are approved that conflict with areas that would be preferred for industrial and commercial developments.

FINANCIAL IMPACT:								
There are no financia	There are no financial implications as a result of this report.							
	•	·						
LEVEL OF PUBLIC	PARTICIPATION:							
⊠ Inform	Consult	☐ Involve	Collaborate	Empower				
⊠ Inform	Consult	☐ Involve	Collaborate	Empower				
Inform ATTACHMENTS:	Consult	Involve	Collaborate	Empower				

LETHBRIDGE COUNTY







INDUSTRIAL-COMMERCIAL LAND USE STRATEGY 2023 UPDATE

March 2023

Approved by Resolution of Council

Prepared for Lethbridge County by



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LETHBRIDGE COUNTY INDUSTRIAL-COMMERCIAL LAND USE STRATEGY

EXECUTIVE SUMMARY

The following is an overview and summary of some of the main study findings and highlighted strategies identified in the report, provided for convenience and a quick synopsis. For a more comprehensive and complete understanding of the present Lethbridge County land use conditions and the suggested industrial-commercial growth strategies, it is recommended the report be read and reviewed in its entirety.



- The main purpose of the strategy is to identify and protect suitable land areas within the municipality that may appropriately be planned to accommodate industrial or commercial development, without unduly affecting other existing uses or conflict with other County policies or goals.
- The primary vision is to create a planning policy framework that will properly plan for and guide the
 growth of business development in Lethbridge County to help support the creation of a stable, healthy
 local economy, based on the principles of sustainable, managed growth.
- In reviewing economic conditions, the County has been holding steady on the average portion of assessment contributed to non-residential assessment over the past decade. After experiencing a significant decline in 2019, the portion of non-residential assessment has steadily increased each subsequent year since.
- In comparing Lethbridge County's provincial equalized assessment compares to other southern
 Alberta rural municipalities, many have a larger non-residential assessment than Lethbridge County.
 The County has a higher non-residential assessment than the closer rural municipalities of the County
 of Newell, MD of Taber and MD of Willow Creek, most of these have a much higher linear property
 assessment, along with a higher value for machinery and equipment.
- Lethbridge County does not experience the benefits of having a large 'linear property' or 'machinery
 and equipment' component to its equalized property assessment base, which helps many other rural
 municipalities off-set for having a lower non-residential assessment component.
- The majority of existing industrial-commercial activity is concentrated in the southern portion of the County and has primarily established along main transportation corridors (both highways and rail lines), in close proximity to the urban centres, and in or in close proximity to the established and designated industrial parks.
- The amount of light-industrial/commercial type land use (e.g. shop buildings, trade contractors, equipment service and sales) has traditionally been somewhat higher than industrial processing/ manufacturing uses and this trend will likely continue into the foreseeable future.

Lethbridge County Industrial-Commercial Land Use Strategy

Executive Summary | i

- On average, 32.4 industrial/commercial development permits were approved and issued each year during the 2013–2021 study period. This is an increase from the average of 16.7 industrial/commercial development permits between 2000 and 2012. On average commercial/industrial permits represent 16.9 percent of the development permits issued each year. This is higher than what was previously noted for the 2000-2012 timeframe, where these types of permits represented 12.2 percent of the annual total number of permits issued.
- Based on the analysis it appears the average use occupies 5.0 acres, but the range varies widely, with half being 3.0 acres or less. Applying the range of sizes to the permits and averaging the total yields is a simplistic approach, however, using this method the County may expect 55 65 acres of land consumption, on average, for industrial and commercial uses per year.
- The 55 65 acres figure comprises both isolated uses and the uses that established in the designated industrial parks. Thus, in examining the data and separating the percentages of isolated development (49%) and designated/grouped development (51%), it would be anticipated that 25 30 acres per year may be developed within designated industrial business park areas based on past data trends. However, depending on land availability or lack-thereof in business parks, the amount occurring in the parks may actually decrease in the future.
- Slightly more land than what is typically developed in a year should be available to prospective
 business interests, as it takes time to plan for, obtain necessary approvals, subdivide and service land
 and it cannot be brought to market in a short time frame. A two three year land acreage inventory
 may be considered reasonable.
- The County should recognize that if there is not available an overall minimum of 55 65 acres of readily accessible land amongst the various business parks to accommodate the expected development trends, additional isolated land parcels will likely be needed to provide the land base required to support the same annual level of non-residential development.
- The long-term planning for available land should consider a strategy of situating it in a number of locations rather than one location only, to assist with market choices and locational factors.
- The areas identified for future industrial-commercial growth as types of grouped or clustered land use developments consist of primarily expansions to existing industrial business parks, along with some new areas which are in close proximity to the existing parks (refer to section 5.6).
- As the County does not have its own water treatment facility, the growth of industrial or commercial land use is somewhat dependent on the County obtaining and delivering water, entering into agreements for treatment of the County's water (under its own license), or planning for uses which require limited water supply. It is recognized that overall, any growth area(s) identified will require a water delivery strategy or will be restricted to accommodating low volume water users only.
- Due to likely continued business interest in the Highway 3 Lethbridge-Coaldale Corridor and Broxburn
 area for development and to take advantage of existing transportation systems and synergy
 opportunities, the long-term protection and planning of lands identified for potential future
 industrial-commercial growth should be regarded and the Highway 3 Corridor area should remain a
 'priority' growth area for Lethbridge County and not compromised.
- The south Highway 4 Corridor and Wilson Siding area is considered a "priority" growth area due to
 the area transportation networks, including highway and rail-line, and growing interest in the area
 with existing and expanding businesses. In particular, access to the rail transportation network and
 the possibility of spur-trackage is a significant benefit.

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- The growth areas identified should not be converted to other incompatible land uses, such as grouped country residential, and an attempt should be made to keep them as unfragmented as possible.
- As nearly all potential land identified as preferable for clustered/grouped type industrial-commercial
 development is privately held, there is the reality that the development of such new land could
 become stagnant if the private sector does not participate in the development process. Thus, the
 County will need to observe the situation over time and may need to consider and adjust the longterm approach accordingly to support continued non-residential growth.
- In 2021, the County adopted a joint business park plan in partnership with the Town of Coalhurst. The County should continue to pursue these types of collaborative opportunities in the future.
- The County should actively approach and engage on an on-going basis those private landowners
 whose land is identified as a preferred growth area, to gauge interest in developing the land, selling
 the land, or ascertain long-term interest in using the land, and assist with the process as much as it
 can.
- Presently, the County is limited in the ability to provide water or sanitary sewer service to businesses.
 However, if these circumstances were to ever change in the future, any identified areas which may
 benefit from or be recipients of future water or sanitary sewer service should then be protected and
 reserved at that time for those types of industrial-commercial businesses that require larger volumes
 of water for processing.
- Prior to land development occurring, additional planning exercises will need to be done for the
 undeveloped lands identified as growth areas. This would include the preparation and adoption of
 area structure plans, which typically will include servicing information, engineering evaluation on
 soils, storm water management engineering, and a transportation access management strategy.
 Additionally, the provision of adequate water services will need to be considered in the overall
 planning.
- This report has identified over 2,900 acres of preferred clustered growth land areas for industrial-commercial lands. If approximately 25-30 acres a year on average of industrial-commercial land was developed in business parks, the growth areas identified should provide for a 100-to-120-year land supply. If more new development occurs on isolated parcels outside business parks, then this time frame will be extended out further.
- It is expected that the development of isolated parcels of land (i.e., outside business parks) for
 industrial-commercial land will increase over time, due to the current challenges in providing services
 (particularly water) to business parks, a need for larger parcels of land to accommodate certain types
 of business, the low stock and availability of vacant parcels in existing business parks, and the
 economic objectives of the County to grow and expand the non-residential assessment base.

LETHBRIDGE COUNTY INDUSTRIAL-COMMERCIAL LAND USE STRATEGY

PART ONE | Overview

1.0 Introduction

This *Industrial-Commercial Land Use Strategy* report is to identify issues and opportunities for the development of industrial-commercial lands in Lethbridge County and present solutions or strategies that will help provide for those economic opportunities while respecting the principles of managed growth.

1.1 Background

Over the last decade the County has experienced increased interest and pressure to accommodate non-agricultural (i.e., industrial and commercial) land use activities on parcels of land within the municipality, particularly in proximity to transportation (highway and rail) corridors and urban areas. There has also been an expansion in the local economy relating to the agricultural/food/chemical processing industries and source-point manufacturing/processing with larger and multi-national businesses. New technologies in the alternative energy (such as biofuels, waste to energy) sectors have also created interest in the establishment of these industries within the municipality. With Lethbridge County being situated in the heart of the irrigation zone of southern Alberta, this presents both opportunities and challenges on parcels of land.

In addition to these external economic forces, Lethbridge County also has an interest and desire to expand its non-agricultural tax base. An objective in the current MDP is to "support commercial and industrial development that will diversify employment opportunities within the County. Further intentions are to provide a positive environment for development, encourage development in suitable locations and mitigate potentially negative impacts to local residents and the environment." The MDP also states that the "County shall direct the location of industrial development towards established industrial parks provided that adequate infrastructure servicing is available."

In addition to these external economic forces, Lethbridge County also has an interest and desire to maintain and expand its non-agricultural tax base. An objective in the current MDP is to "plan for and pursue a strategy of growth in the industrial/commercial sector to help provide the County a more balanced, diversified, and healthier tax base, and particularly encourage growth of value-added processing in the region."

An issue for the County is the ability or constraints present in providing adequate potable water and sewage treatment for higher intensity types of developments. The County has recognized that although industrial and commercial growth for the municipality is desirable, it wants to proceed in consideration of good land use planning practices and principles of managed growth.

1.2 Purpose and Intent

The purpose of this strategy report is to identify a long-term vision and policy framework for Lethbridge County, to provide new opportunities for the diversification of the industrial – commercial sector in the County. The intent of the strategy is to guide future planning decisions and policy development related to business development and the creation of a stable, healthy local economy. Ultimately, a main purpose of the strategy is to identify and protect suitable land areas within the municipality that may appropriately be planned to accommodate industrial or commercial development, without unduly affecting other existing uses or conflict with other County policies or goals.

The identified strategies are meant to assist the County in making decisions on land use and guide non-residential type development to appropriate and desirable areas based on rationale planning policies and Lethbridge County strategic growth objectives.

Terms of Reference were created to guide the development of the report and strategy framework.

1.3 Report Context

The compilation of the *Industrial-Commercial Land Use Strategy* study has been based on a thorough review of the existing and past Municipal Development Plans (MDP), Land Use Bylaws (LUB), Area Structure Plans (ASP), land use studies, strategic plans, the County's Sustainable Community Resource plan, and previous General Municipal Plans (GMP). It also involved reviewing transportation studies, economic studies and reports, Stats Canada data, industrial/commercial land use siting planning standards, and historic documents. It has been prepared in consideration of the Municipal Government Act (MGA), the Alberta Land Stewardship Act (ALSA) and involved communication and input from municipal administration, government agencies (e.g., Alberta Transportation) and some County industry players. The South Saskatchewan Regional Plan (SSRP) also requires a municipal council to consider the Strategic Plan and Implementation Plan in the SSRP when carrying out any function in respect of council's powers, duties and responsibilities. Thus, the SSRP has been carefully considered as part of the overall growth strategy.

As a main goal of the strategy is to identify and map suitable land use locations/nodes to accommodate future industrial and commercial development within Lethbridge County, it is recognized that servicing constraints may ultimately direct where and what types of industries may establish.

1.4 Strategy Plan Vision

The primary vision of the strategy report is to create a planning policy framework that will properly plan for and guide the growth of business development in Lethbridge County to help support the creation of a stable, healthy local economy, based on the principles of sustainable, managed growth.

1.5 Strategy Plan Goals

To recognize and promote the importance of industry (business sector) to Lethbridge County.

- 2. To recognize that Lethbridge County as a rural municipality, has the right to non-agricultural and non-residential land use development, and may create policy to support such uses.
- 3. To provide a framework which will facilitate a viable and feasible business sector in the County by addressing land use and locational opportunities and constraints.
- 4. To promote well planned, managed growth when supporting and encouraging the establishment of industrial business parks or centres, while also allowing for the opportunity for businesses to establish on isolated parcels deemed appropriate in relation to the proposed use.
- 5. To promote a strategy and framework for Lethbridge County to provide additional opportunities for industrial-commercial land use development and attract new business ventures to the County.
- 6. To encourage and enable local employment opportunities by expanding and diversifying the local economy and allowing new businesses to establish and succeed.
- 7. To provide flexible and realistic policy framework to enable a successful implementation of the planning strategies.
- 8. To support where suitable the planning for industrial-commercial land use with consideration for the planning principles of nodal or clustered type development, mixed land use, and sustainable planning practices, while allowing for flexibility in considering opportunities for appropriate isolated development.
- 9. To provide for a range of industrial-commercial land use options based on selected land use siting criteria, industry needs, servicing availability, and locational factors.
- 10. To allow additional opportunities to assist with diversifying the County's tax base and enabling a stronger, healthier local economy.
- 11. To recognize the importance of protecting good agricultural land while also allowing opportunities to enhance, expand, and diversify the agriculture industry itself.
- 12. To promote and enable value added agricultural processing to expand and establish within a rural area by creating additional opportunities for businesses and plants to set-up operations within the County closer to the material source.
- 13. To provide businesses and developers with tangible options, realistic land possibilities, and clear policy directions when looking to locate or expand a business in the County.
- 14. To review County plans, policies, and regulations to provide for the recommendations of this report to be implemented.
- 15. To undertake the planning strategies in a manner that considers and protects the Provincial Highway Network as a safe and efficient transportation corridor.

PART TWO | Economic Analysis

2.0 Economic Review

Alberta's economy has consistently been the fastest growing and most stable in the country since 2005, with an exception in the late 2020 to 2021. As a result, it has been experiencing significant population growth and economic expansion. In 2022 Alberta grew by 58,203 residents between the beginning of July and the end of September in 2022, posting a growth rate of 1.28%. While international net migration was the biggest driver of growth, Alberta attracted the most net interprovincial migrants in the country by a large margin, and by 2024 it is expected that Alberta's population will reach five million. Consequently, Lethbridge County will likely also experience positive growth and economic development, albeit at a slower and more stable rate.

At the time this report was originally released, ATB Financial Economics and Research group forecast that real GDP growth for Alberta would be 2.0 percent.¹ They found that livestock prices and a strong agricultural sector would partially offset any negative shocks in the energy sector. These factors should continue to hold true into the future. ATB Financial was of the opinion that non-resource based economies were expected to further benefit from energy cost savings and an accompanying depreciation in the Canadian dollar. It also expected that solid economic growth from the U.S. should also provide a lift to these economies. As this strategy report is updated in 2022 and the global economy has been dealing with the effects of the COVID-19 pandemic, the stability of an agri-business economy should continue to benefit Lethbridge County.

Although the entire province is somewhat impacted by any fluctuations in the energy sector in Alberta, Lethbridge County is fortunate in that its local economy is not heavily dependent on the oil industry directly. The local economy is more diversified and is largely more concentrated on the agriculture sector, food production, and related agri-businesses. These types of businesses may actually see some benefit from energy cost savings and a depreciation in the Canadian dollar. For these reasons, the County needs to continue to move forward in appropriately planning for economic growth. In particular, ensuring there is identified, well-planned, suitably sited commercial/industrial lands, based on the County's principles of managed growth, readily available to potential businesses.

The following section and economic analysis are for the purpose of determining the current context of where Lethbridge County is at and to identify general trends and is not in itself a detailed or complete indicator of overall economic growth and health of the municipality.

Economic Outlook for 2015 Prepared by ATB Financial, Economics and Research, January 5, 2015

2.1 Population

The population in the County increased steadily over the first half of the 30-year period before but began to level off after 2006 as shown in Table 1. Over the past 15 years the population of the County has remained relatively steady, posting a small loss or gain in each census period. It is noted that there were some statistical errors observed in much of Statistics Canada 2011 census data, and the 2011 population may not be entirely accurate.

Population projections as prepared by the ORRSC (based on Statistics Canada 2021 census data) indicate that over the next 25 years, the County's population should remain consistent at around 10,000 residents (figure 1).

TABLE 1
Lethbridge County Population 1991 to 2021

Year	Population	5-Year Rate of Change (%)	Average Change Per Annum (%)
1991	8,442	2.13	0.43
1996	9,290	10.05	2.01
2001	9,930	7.3	1.46
2006	10,302	3.75	0.75
2011	10,061	-2.34	-0.47
2016	10,353	2.90	0.58
2021*	10,120	-2.25	-0.45

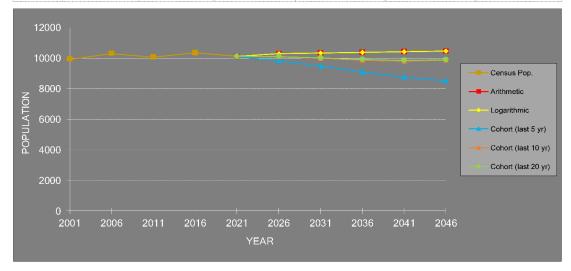
^{*} It is noted that an annexation of land by the Town of Coaldale occurred between the 2016 and 2021 census period which partially accounts for the population decrease reflected in 2021 data.

Population growth itself is not as an important economic health or growth indicator for the County such as it is for urban municipalities. Industry may establish in a rural municipality due to locational factors, source or proximity to resources, transportation linkages, etc., and people employed in these industries may reside in the rural municipality, but they also often reside in neighbouring urban centres and commute for employment purposes.

Figure 1

Lethbridge County Population Projections to 2046

Year	Census Pop.	Arithmetic	Logarithmic	Cohort (last 5 yr)	Cohort (last 10 yr)	Cohort (last 20 yr)
2001	9930					
2006	10302					
2011	10061					
2016	10353					
2021	10120	10120	10120	10120	10120	10120
2026		10283	10283	9832	10088	10102
2031		10326	10327	9479	9989	10022
2036		10369	10372	9089	9859	9909
2041		1 0412	10416	8753	9798	9851
2046		10455	10461	8526	9858	9891



(Prepared by ORRSC based on Statistics Canada 2021 Census data)

2.2 Labour Force

Labour force statistics indicate the changing nature of Lethbridge County and employment as it relates to economic activity. For example, in 2001, 37.7 percent of the labour force was engaged in agriculture. The 2011 census indicated that number fell to just under 28 percent, while the 2021 numbers show a trend reversal with the percentage climbing to over 32 percent. Table 2 indicates the sectors of the economy and the employment in each.

A review of the labour force by industry division illustrates that the overall percentage of labour engaged in agriculture rose over 4 percent from 2011. The labour statistics for the County's agricultural economy convey a trend opposite to its economy as a whole: while the total workforce in Lethbridge County has shrunk since 2011, the County's agricultural sector has expanded by more than 100 workers. This gain amounts to an increase of more than 8 percent over the 10-year review period. The outlook is similarly positive for the County's transportation, warehousing and utility industries. Collectively, these industries posted an impressive gain in the number of workers since 2011 of more than 52 percent—a testament to

the elevated role of logistics in the global economy over the past decade. As of 2021, close to 7 percent of the County's workforce are employed in these industries. In comparison, labour in the mining, quarrying, oil and gas sectors decreased by almost 27% since 2011, the likely culprit being a prolonged period of depressed oil prices leading up to the COVID-19 pandemic. Both the construction as well as the finance and insurance fields remained somewhat level over the 10-year period and did not experience significant growth as far as overall labour force activity.

TABLE 2
Lethbridge County Labour Force By Industry Division 2011 and 2021

Labour Force by Industry Division	2011	% of total	2021	% of total
Agriculture	1,370	27.96%	1,480	32.17%
Mining, quarrying, oil & gas	75	1.53%	55	1.20%
Manufacturing	340	6.94%	225	4.89%
Construction	450	9.18%	465	10.11%
Transportation, warehousing & Utilities	210	4.29%	320	6.96%
Retail and Wholesale	485	9.90%	385	8.37%
Finance & Insurance	115	2.35%	120	2.61%
Business, professional, technical, educational, & Community Services	1,690	34.49%	1,410	30.65%
Public Administration	165	3.35%	140	3.04%
Total All Industries	4,900	100.00%	4,600	100.00%

Source: Statistics Canada 2011 and 2021 Census (numbers may not add up due to rounding)

2.3 Assessment Base

In Alberta, equalized assessment is the means of comparing property wealth in a uniform manner for all municipalities. Alberta uses an ad valorem assessment and tax system where property taxes are based on wealth and wealth is measured by the value of property expressed as an assessment.

The Annual Equalized Assessment Report prepared by Alberta Municipal Affairs breaks property down into five major categories:

- residential
- farmland,
- non-residential (which includes the commercial and industrial),
- linear, and
- machinery and equipment.

Prior to 2020, the provincial framework listed railway as a sixth category of property. In 2020 and subsequent years, railway is a sub-category of the linear category along with telecommunications, electric power generation, power systems, pipeline, wells, cable and gas distribution system.

As noted, commercial and industrial uses are classified as non-residential property assessment as defined in section 297(4)(b) of the Municipal Government Act as:

"linear property, components of manufacturing or processing facilities that are used for the cogeneration of power or other property on which industry, commerce or another use takes place or is permitted to take place under a land use bylaw passed by a council, but does not include farm land or land that is used or intended to be used for permanent living accommodations."

Table 3 illustrates the breakdown of equalized property assessment for Lethbridge County between 2014 and 2023 (for the official provincial reporting year as prepared the previous fall). During this period, non-residential assessment has climbed slightly from 20.7 percent to 21.9 percent of the total assessment levied each year. Previously, between 2002 and 2014, non-residential assessment had remained fairly constant at 20.7 percent of the total assessment.

TABLE 3
Lethbridge County Equalized Assessment 2014 to 2018 (report years)

Type of Assessment	2014	2015	2016	2017	2018
Residential	873,122,024	887,340,738	938,510,371	988,167,418	1,020,248,721
Farmland	156,314,990	156,595,230	157,272,550	157,291,180	157,546,390
Non-residential	358,363,026	379,308,827	398,427,641	442,727,267	448,540,349
Linear	201,980,040	239,109,040	240,647,420	225,840,110	201,357,120
Machinery & Equipment	136,934,120	133,009,410	134,636,480	127,291,660	125,897,650
Railway	5,699,570	5,746,280	5,979,880	6,306,910	6,260,170
TOTAL	1,732,413,770	1,801,109,525	1,875,474,342	1,947,624,545	1,959,850,400

Lethbridge County Equalized Assessment 2019 to 2023 (report years)

Type of Assessment	2019	2020	2021	2022	2023
Residential	1,012,295,469	1,046,386,188	1,079,684,285	1,133,421,872	1,193,711,116
Farmland	156,698,250	156,630,700	157,030,570	157,438,360	157,835,060
Non-residential	403,368,355	409,085,266	416,111,003	433,639,029	469,182,787
Linear	198,705,870	219,764,860	203,401,240	204,709,060	203,523,140
Machinery & Equipment	121,056,680	118,116,740	115,100,870	112,667,890	114,982,920
Railway	6,400,330	-	-	-	-
TOTAL	1,898,524,954	1,949,983,754	1,971,327,968	2,041,876,211	2,139,235,023

Table 4 illustrates how Lethbridge County's provincial equalized assessment compares to other various rural municipalities in Alberta for 2023. More populated rural areas, and those in close proximity to larger urban centres and major transportation routes, such as Red Deer County and Rocky View County, obviously have a much higher non-residential component to their equalized property assessment. Cypress County and Wheatland County also have a larger non-residential assessment than Lethbridge County, as they both likely benefit from being in proximity to major urban cities and have the Trans-Canada Highway traverse through their boundaries.

TABLE 4

Provincial 2023 Equalized Assessment – Rural Municipal Comparison

Municipality	Residential	Farmland	Non-residential	NR Linear Property	Machinery & Equipment	Grand Total
Cypress Co.	1,388,818,537	146,539,110	630,689,503	1,796,224,090	854,102,830	4,816,374,070
Newell Co.	809,044,934	145,308,660	392,400,716	1,995,385,890	563,854,110	3,905,994,310
Red Deer Co.	3,690,019,605	162,169,260	1,457,652,240	806,757,610	236,376,130	6,352,974,845
Rocky View Co.	13,960,035,502	151,428,740	3,903,388,315	1,186,056,440	641,726,350	19,842,635,347
Taber, MD	713,032,128	178,771,400	252,662,662	656,448,530	260,160,490	2,061,075,210
Wheatland Co.	1,240,783,084	199,840,080	582,191,586	1,258,563,940	703,532,670	3,984,911,360
Willow Cr. MD	728,363,802	143,535,240	85,542,995	706,287,020	59,517,790	1,723,246,847
Lethbridge Co.	1,193,711,116	157,835,060	469,182,787	203,523,140	114,982,920	2,139,235,023

The comparison table illustrates that Lethbridge County does have a higher non-residential assessment than the closer rural municipalities of the County of Newell, MD of Taber and MD of Willow Creek. However, it is of interest to note that all three of these have a much higher linear property assessment, and with the exception of the MD of Willow Creek, a higher value for machinery and equipment also.

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2.4 Economic Summary

The previously presented population and economic data is provided to identify overall trends and to gauge how activity and the local economy has changed over the defined study analysis period. This brief review of the economy of the County indicates a diversification of the rural area, however, non-residential growth has not significantly increased its share in the overall growth of the County. Agriculture is still the main economic driver of the County; however, agricultural operations can be seen to be getting larger in scales (i.e. less persons employed directly on farms, but farm sizes and operations are increasing in scope, value and in land holdings). To support the fact that agriculture is the main economic engine, an economic impact study prepared for the County in 2014 found that Lethbridge County is the only County in Alberta that generates over \$1 billion in gross farm receipts.² The report estimated that the County made a contribution of \$1.1 billion to the economy for an impact of \$415 million on Gross Domestic Product.

Over the last decade, industry sectors such as construction, agri-business, retail, service and professional service have experienced increases in activity. Increases in these sectors may, in part, be due to:

- · economic health of the urban areas in the County,
- locational factors,
- slow and stable economy and labour market in southern Alberta,
- · spin-off activity from agriculture, and
- the diversification and establishment of new industries/processes, especially those in relation to agriculture and agricultural bi-products.

Likely these trends will continue, and council should consider providing sufficient and suitable areas for supporting the diversity of uses.

The economic overview also highlights the fact the Lethbridge County does not experience the benefits of having a large 'linear property' or 'machinery and equipment' component to its equalized property assessment base, which helps many other rural municipalities off-set for having a lower non-residential assessment component. Planning for and pursuing a strategy of growth in the non-residential sector will help provide the County a more balanced, healthier tax base.

In December 2022 the County Council approved the Commercial and Industrial Municipal Tax Incentive Bylaw (Bylaw 22-008) to help attract and keep existing businesses in Lethbridge County. This study will help form the basis of helping to promote, support, recruit, and steer businesses to developing in the Country, as it will help highlight industrial-commercial trends and identify potential suitable land areas for businesses and land developers.

² Economic Impact Study by Markus Weber & Michael Krokosh, Serecon Services Inc.

PART THREE | Legislative Review

3.0 Historical Background

Policy directions and decisions pertaining to the development of industrial and commercial land use have occurred over time and using different legislative parameters. The province had established a system of land use planning that depended on various levels of legislative planning documents adopted by bylaw, legislated up until 1995 through the provincial Planning Act, and after that the Municipal Government Act. Since the mid-1970s, the primary change in direction of provincial legislation has been the continued transfer of decision authority from the regional or provincial bodies to the local level.

Another significant change that affected industrial and commercial land use policies related to municipal finances in the 1990s. Major changes and reductions in the provincial funding of municipalities resulted in both urban and rural municipalities having to rely heavily on their own resources to fund the various services provided and property taxes had to support more of the expenditure. It is understandable that industrial and commercial land development is sought after by municipalities because the tax rate applied is higher, resulting in both urban and rural municipalities competing for industrial and commercial tax revenue.

3.1 Provincial Government Rural Industrial Policy Prior to 1995

In January 1981, the Alberta Planning Board and the Minister of Municipal Affairs issued a rural industrial land use policy. The report entitled, "Rural Industrial Land Use; Some Policy Guidelines for the 1980s" outlined what the Provincial Government at the time viewed as suitable criteria for the establishment of industrial development in rural municipalities. In summary, the policy generally suggested:

- rural areas are to take advantage of industrial development,
- industry should be grouped into industrial parks,
- · industrial land should be generally unserviced by the rurals,
- · rural-oriented and land-extensive industries should be accommodated, and
- development should locate close to established transportation routes.

The effect of this policy was to allow and encourage large lot, unserviced agricultural industry into the rural areas and suggest that all other industries would go into urban areas. This was supported in the Regional Plan up to 1995 and in Lethbridge County bylaws until 1998.

3.2 Regional Plan Rural Industrial Policy

The Oldman River Region: Regional Plan, adopted in 1985, and the 1974 Preliminary Regional Plan broadly outlined regional goals and objectives specifically tailored to the needs of the southwest region of the province. The policies contained in the Plan acted as a framework to help guide the physical development of a region. It was the general recommendations from these Regional Plan documents which directed rural and commercial development from before 1985 up to 1995.

The Regional Plan had specific objectives and policies intended to manage rural industrial and commercial development within the region. Prior to the mid-1980s, there was little pressure or demand for industrial or commercial development outside the urban areas of the region. At the time of plan adoption in 1985, consideration to future management strategies were beginning to warrant more attention as the demand for such development was increasing.

Policies that likely had an effect on industrial development in rural municipalities were the policies that outlined criteria for decisions on rural industrial uses. Various criteria outlined what classes of industrial uses may be approved in rural areas which included:

- agriculture-related industries which support agriculture directly in rural areas;
- non-labour intensive industries which required relatively large areas of land, but require minimal on-site improvements, services, and public amenities;
- natural resource extractive uses such as gravel pits which are governed by the location of a natural resource; and
- hazardous, offensive, or noxious industries which cannot co-exist compatibly with other uses in an urban environment.

In the mid-1990s the provincial government undertook major restructuring which included rescinding the Planning Act and planning matters were incorporated into Part 17 of the Municipal Government Act in 1995. The main outcome of these changes was to empower the local municipalities with the authority to wholly decide upon most subdivision and development matters. As a result, industrial and commercial development occurring since 1995 has been guided and directed by individual municipalities and their vision of rural development, or has occurred on a complete ad-hoc basis. Regional planning was reintroduced into Alberta's legislative scheme in 2009 with the proclamation of the Alberta Land Stewardship Act (ALSA). The pertinent ALSA regional plan for Lethbridge County is the South Saskatchewan Regional Plan (SSRP), which was brought into force in 2014. An overview of the SSRP is provided in Section 3.6 of this study.

3.3 Municipal Development Plan

A first General Municipal Plan (GMP) for Lethbridge County was adopted in 1985 and contained policies that reflect provincial policy and were intended to recognize the service center function of urban areas in the County. The plan also promoted clustered rather than strip development, hamlet industrial areas, and locations other than the urban fringe area.

For the most part, these policies appeared to be unsuccessful and in 2000, the County's new Municipal Development Plan (MDP) changed policy to reflect the existing situation. The major changes included:

- broadening the definition of suitable commercial and industrial uses to include most categories including those that would have, in the past, been directed to urban areas;
- suggesting that lands with rail and highway access be promoted for industrial use;
- identifying the portion of Highway 3 between Lethbridge and Coaldale as an area that could accommodate a wide variety of non-residential uses.

These type of policies were further reinforced in the 2010 MDP and also in the 2022 MDP which states the following:

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- To plan for an pursue a strategy of growth in the industrial/commercial sector to help provide the County a more balanced, diversified, and healthier tax base, and particularly encourage growth of value-added processing in the region.
- To plan and direct industrial and commercial growth towards business parks provided that adequate infrastructure servicing is available.
- To consider and apply through policy, the recommendations and direction of the County's Industrial-Commercial Land Use Strategy (2016) in decision making.
- To plan for effective, managed growth when supporting and encouraging the establishment and expansion of industrial business parks or centres and provide some locational certainty to businesses locking to located within the municipality.

3.4 Intermunicipal Development Plans

Lethbridge County has completed Intermunicipal Development Plan (IDP) with all the adjacent municipalities as per the Municipal Government Act Section 631. The Intermunicipal Development Plans amongst other things look at the future land uses within the area, the manner of and the proposals for future development in the area and co-ordination of intermunicipal programs relating to the physical, social, and economic development of the area

The IDP's with the adjacent urban municipalities being the City of Lethbridge, Town of Coalhurst, Town of Nobleford, Town of Picture Butte, the Town of Coaldale, all include policies and areas for future growth and specifically industrial/commercial growth within the County. The Plans speak to working collaboratively with the adjacent municipalities on industrial/commercial ventures that have a regional benefit.

The IDP's with the other rural municipalities, being the MD of Willow Creek, Vulcan County, MD of Taber, County of Warner, and Cardston County, do not include growth areas but do acknowledge each municipalities right to have industrial development where deemed compatible with existing land uses.

3.5 Land Use Bylaws

Up until 2001, the County's Land Use Bylaw only generally allowed three opportunities for industrial uses:

- areas could be designated 'rural grouped industrial' for clustered (i.e. grouped) development;
- under the agricultural district, an isolated industrial use may be allowed as a discretionary use;
 and.
- a 'hamlet industrial district' allowed for higher-density industrial development in hamlets.

Amendments were made to the 2001 Land Use Bylaw to provide for a wider variety of industrial and commercial uses, and this was further expanded in the most recent 2013 bylaw adopted. Land Use Bylaw No. 1404 includes four industrial districts to accommodate various business-industrial type uses and also contains two commercial land use districts.

3.6 Other Municipal Plans

Lethbridge County has a number of other approved municipal documents and plans that reaffirm the goals and objectives of supporting and fostering non-residential development in the County, including the following:

- Over the last number of years County Councils' Strategic Planning documents have outlined the need, desire and direction to actively work towards properly planning for and encouraging economic growth.
- The 2009 Integrated Community Sustainability Plan for the County stated that economic sustainability is a crucial pillar to all elements of sustainability. The plan indicates that the County views sustainable economic development as a balance between agricultural, industrial and commercial sectors.

In 2010 the County also partnered with the Town of Coaldale and created an *Integrated Development Strategy* for the Highway 3 corridor to provide a high-level framework to help guide regional economic opportunities for this area, while also properly managing water and drainage issues. This document focuses on recognizing Broxburn Business Park as an industrial-business centre (i.e. industry-commercial business node) for the area while planning within the context of the future Canamex freeway and service interchange that will be constructed in proximity.

Overall, the most recent planning and municipal documents, including the 2010 updated Municipal Development Plan, approved by Council reflect a desire by the County to expand, properly plan for, and enable wider participation/opportunities in commercial and industrial land use development within the municipality.

3.7 South Saskatchewan Regional Plan

The South Saskatchewan Regional Plan (SSRP) came into effect September 1, 2014. The SSRP uses a cumulative effects management approach to set policy direction for municipalities to achieve environmental, economic and social outcomes within the South Saskatchewan Region until 2024. The SSRP requires a municipal council to consider the Strategic Plan and Implementation Plan in the SSRP when carrying out any function in respect of council's powers, duties and responsibilities. Some of the applicable strategies identified in the SSRP that have been considered in this study (as summarized), include that municipalities:

- 1.1 Maintain an agricultural land base by reducing the conversion and fragmentation of agricultural land;
- 1. 2 Support a diverse and innovative irrigated agricultural and agri-food sector;
- 1.3 Assist the agricultural and agri-food industry to maximize opportunities for value-added agricultural products;
- 5.1 Consider the efficient use of land principles which include, increasing the proportion of new development that takes place within already developed or disturbed lands through infill, redevelopment, shared use; and plan, design and locate new development in a manner that best utilizes existing infrastructure and minimizes the need for new or expanded infrastructure;
- 8.21 Direct non-agricultural development to areas that will not constrain agricultural activities or to areas of lower quality agricultural lands.

Overall, the strategy of the SSRP that emphasizes land-use decisions are to promote the efficient use of land has been carefully respected as part of the overall growth strategy identified in the report.

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PART FOUR | Existing Land Use Analysis

4.0 Review

This analysis is to identify and evaluate the various types of development, specific locational characteristics, and site requirements of existing industrial and commercial developments. By creating a profile of industrial and commercial development, including generating a set of criteria associated with industrial and commercial development, this can be used to help develop a land use strategy to assist in the management and direction of future industrial and commercial expansion to the most appropriate areas of the County.

4.1 Uses Being Reviewed

As this report is to guide the County's municipal land use decision-making process, it will therefore only focus on the industrial and commercial uses that Lethbridge County has decision-making authority over. Both federal and provincial levels of government make decisions on other uses such as:

- · the oil and gas industry,
- · telecommunication towers and systems,
- · railway-lines,
- · wind energy systems and solar collector facilities connecting into the electrical transmission grid,
- any Crown controlled use, (i.e. timber harvesting, gravel pits).

The report also recognizes that in the rural agricultural community there is an informal system of uses that support the agricultural land base and activities, but do not have formal development permits for industrial, commercial or home occupation use. A number of factors which reflect development within these sectors have been examined in order to illustrate the development of industrial and/or commercial activity within the County. Uses in this study have been attempted to be identified through the development permit and subdivision files. It is likely other uses may exist in various areas, as the field work sampled identified areas of the County rather than an intensive land use study. It is recognized that some uses also often cannot be seen from the road unless some signage exists. Thus, some gaps in data may occur.

Both industrial and commercial uses are generally dealt-with and analyzed in a related manner as the impacts, such as traffic, noise, aesthetics, etc. are similar for those types of uses.

4.2 Regional Location

Lethbridge County is located in the heart of southern Alberta approximately 80 km (50 miles) from the border with the United States. Occupying 2338.84 km² (903.1 sq. miles), the municipality is comprised of diverse landforms, soil types, and land uses. According to the 2021 Census of Population, approximately 10,120 people reside within Lethbridge County and many are not only employed within the rural municipality, but also in the six urban municipalities found within the County's boundaries as well as seven unincorporated urban hamlets.

Excellent provincial highways serve Lethbridge County, and the CANAMEX Corridor, one of the first north-south trade routes designated as a High Priority Corridor under the National Highways Systems Designation Act, includes portions of Highways 3 and 4 and represents a major link between the United States and Canada. As well, Highway 3 is a major east-west traffic route linking the region with the west coast and eastern centres through Medicine Hat where it joins the TransCanada Highway.

Canadian Pacific Railway (CPR) provides active rail service both to and through the region. The main eastwest line is located through the southern portion of the County, often in close alignment to Highway 3. As well, rail trackage is available in all four directions so freight can be shipped easily to different markets. A large modern marshalling yard facility, operating at or near capacity in 2015 according to the CPR, is located in the County and is situated a ¼-mile north-west of the Town of Coalhurst adjacent to Highway 3.

4.3 Study Area

For the purpose of analysis, the detailed non-residential development activity data within the entire County was originally collected and examined starting in the year 2013 up to the end of 2021. The data from the original Industrial/Commercial Land Use Strategy completed in 2016 provided a base line of information to compare data. Data was also reviewed from other previous planning studies, dating from 1986 to 1995, which was the time period representing approximately nine years prior to 1995 when rural industrial and commercial policy was provincially directed. Also, a review of data from 1995 to 2000, when the elected officials of Lethbridge County had a greater influence on land use policy and development, was also undertaken.

A primary goal of the analysis was to identify existing patterns of development with regards to the frequency, density and location of industrial and commercial activity, and therefore a review of the following 2013-2021 data was conducted:

- subdivision application approvals which created industrial and commercial lots,
- development permit data pertaining to home occupations approved, and
- development permit approvals for industrial and commercial developments.

The other more specific objectives of the general analysis are:

- to identify the average number of non-residential permits approved on an annual basis;
- to recognize and map trends in location and density in order to build a logical profile of rural industrial and commercial development;
- to identify the average subdivision parcel sizes applied for by developers;
- to use the profile to identify key areas experiencing development pressure;
- to appropriately site and plan for industrial and commercial development within the County in consideration of the areas where businesses most desire to locate, and where the land type and location aligns with broader County policy environments (i.e., Strategic Plan, Municipal Development Plan).

4.4 Subdivision Activity

Subdivision records from the Oldman River Regional Services Commission illustrate that during the study period (2012-2021) Lethbridge County received 331 applications for subdivision from which approximately 34 applications were to create industrial or commercial lots. On average, 3.4 new applications were submitted per year and just over 5.7 new lots created (see Table 5). During this most recent study period, the majority of lots were created for industrial use (56 of the 57 total). The largest number of multi-lot or grouped industrial subdivisions were approved in 2012 (11 of the 57 total), with another 10 new lots in both 2017 and 2019.

TABLE 5
Lethbridge County Subdivision Activity 2012 to 2021

	Total No. of	Total No. of	No. of Lots Approve	Total Lots Created	
YEAR	Applications (all types)	Commercial Industrial Applications	Commercial	Industrial	Commercial & Industrial
2012	42	7	0	11	11
2013	36	4	0	7	7
2014	27	1	0	0	0
2015	37	4	0	4	4
2016	40	2	0	6	6
2017	35	6	1	9	10
2018	25	2	0	1	1
2019	27	3	0	10	10
2020	31	1	0	1	1
2021	31	4	0	7	7
TOTAL	331	34	1	56	57*

^{*}Note: Some applications and lots were applied for but were not approved or were approved but not registered.

The review of subdivision files also indicates the applied-for size of a lot or lots to be subdivided from a parcel of land. The average median size commercial lot created was 6.58 acres, while the average industrial lot was 5.59 acres in size. Table 6 reveals that nearly 46 percent of the lots created for both commercial and industrial use during the study period were between 1.0 and 2.9 acres in size. Overall, exactly 50 percent of the lots were less than 3.0 acres in size and slightly more than 65 percent of the total lots were less than 5.0 acres in size.

TABLE 6
Lethbridge County Parcel Sizes Approved 2012 to 2021

Parcel Size	Percentage of Total	Combined Percentages
Less than 1 acre	4.17%	
1.0 to 2.9 acres	45.83%	50%
3.0 to 4.9 acres	15.28%	05%
5.0 to 9.9 acres	16.67%	
10.0 to 14.9 acres	6.94%	
15.0 to 19.9 acres	6.94%	
20.0 to 49.9 acres	4.17%	
50 acres or more	0.00%	
TOTAL	100.00%	

A mapping exercise was conducted from the subdivision records to illustrate the locations at which non-residential subdivisions have been approved. For purpose of analysis, the scale is such that an entire quarter section is highlighted if a subdivision application or multiple applications have been approved at any location within the quarter-section. The pattern is somewhat scattered; however, the following trends are recognized:

- Most of the subdivisions have been occurring in the southern portion of the County (described as southerly of Highway 519, and primarily south of the Oldman River).
- Subdivision has occurred largely in proximity to the main transportation corridors and also in proximity to urban centres.
- Activity can also be identified at a higher degree between Lethbridge and Coaldale along the Highway 3 corridor, and along Highway 4 towards the southern boundary of the County.
- Similarly, subdivision in quarter-sections that have involved four or more subdivisions have primarily occurred in existing designated grouped industrial park areas and adjacent to the provincial highways.

4.5 Development Permit Applications

Over time, the development permits approved represent a diverse number of uses and the density of uses has also increased as both the County and the urban municipalities in the area have grown and prospered. This would indicate that Lethbridge County appears to be in transition from its traditional role as an agricultural-based municipality to a more diversified, perhaps semi-urban type municipality. Table 7a depicts the number of permits issued between 2000 and 2012 and Table 7b shows the permits issued for the subsequent study period between 2013 and 2021.

Between 2013 and 2021, 1,679 development permits were issued of which 275 were industrial/commercial development permits and 102 were home occupations. On average commercial/industrial permits represent 16 percent of the development permits issued each year. This is higher than what was previously noted for the 2000-2012 timeframe where 12.2 percent of permits issued yearly. Home occupations represent approximately 6 percent of permits issued each year. This number has been relatively consistent over the last two decades.

Maps were created to illustrate the locations at which permits have been applied for and approvals given between 2013 and 2021. As the information on the permits sometimes does not indicate what portion of the quarter-section is being utilized for proposed development, the entire quarter-section was depicted as developed. Where more than one permit has been issued on a parcel or in a smaller area, such as a business park, the number of permits issued has been included on the map. The locational mapping analysis indicates the following trends regarding commercial/industrial developments:

- Commercial and industrial uses are more concentrated along major provincial highways and less so along minor provincial highways.
- The area with most of the development has been along Highway 3 between Lethbridge and Coaldale, with Broxburn Business Park being an area of concentrated growth.
- Home occupations are scattered throughout the municipality but are more likely to be located in the southern portion of the County (i.e. south of Highway 519, south side of Oldman River).
- Industrial uses are more concentrated in industrial cluster areas or designated parks and in proximity to urban centres, such as Broxburn Business Park, Stewart Siding, and Duncan Industrial Park
- Commercial and industrial permit approvals decline in numbers as the distance from the City of Lethbridge increases.
- These trends are similar to what occurred in the 2000 to 2013 study with the area around the City
 of Lethbridge having more development.

TABLE 7A

Commercial/Industrial and Home Occupation Permits 2000 – 2012

Year	Total Development Permits Approved	Total Business Type Permits (all category types)	Industrial / Commercial* Permits Issued	Home Occupation Permits Issued
2000	159	21	10	11
2001	152	36	20	16
2002	120	30	14	16
2003	126	22	14	8
2004	124	30	12	18
2005	146	27	20	7
2006	154	44	28	16
2007	171	33	18	15
2008	128	26	12	14
2009	142	31	20	11
2010	111	26	18	8
2011	131	17	9	8
2012	115	32	22	10
TOTAL	1,779	375	217	158

Source: Lethbridge County Development Records 2000–2012

^{*} Excludes permits issued for non-business uses (e.g., compressor sites) and livestock operations)

TABLE 7B

Commercial/Industrial and Home Occupation Permits 2013 – 2021

Year	Total Development Permits Approved	Total Business Type Permits (all category types)	Industrial / Commercial* Permits Issued	Home Occupation Permits Issued
2013	168	41	30	11
2014	174	49	36	13
2015	187	37	25	12
2016	193	32	23	9
2017	206	47	34	13
2018	177	34	22	12
2019	179	54	38	16
2020	172	44	34	10
2021	266	60	49	11
TOTAL	1,779	374	216	158

Source: Lethbridge County Development Records 2013-2021

4.6 Land Use Conclusions

Four historical and existing broad land use category types relating to approvals of commercial or industrial activity can be identified from the examination of subdivision and development data. These include:

- isolated industrial and commercial uses,
- home occupations,
- hamlet activity, and
- grouped industrial/commercial areas, including airport industry.

By examining past subdivision activity and the issuance of development permits in relation to the location of industrial and commercial development within Lethbridge County, the following general observations can be made:

- The majority of existing industrial and commercial activity is concentrated in the southern portion of the County.
- Industrial and commercial uses have primarily established along main transportation corridors (both highways and rail lines) that allows for visibility and frontage, as well as availability of pavement and ease of access to trucking routes.
- Industrial and commercial activity adjacent to or in close proximity to the urban centres is of significance, and it is likely that location to market and a source for labour pool may play a role.

^{*} Excludes permits issued for non-business uses (e.g., compressor sites) and livestock operations

- A large portion of industrial activity is situated in or in close proximity to the established and designated industrial parks. Proximity to existing industry may also highlight the importance of linkages to associated industries.
- Other than agricultural related developments, non-residential development in the northern portion of the County is limited and the majority of existing development is concentrated along the rail lines and highways.

It is noted that the siting and locational pattern created by the indicators of industrial and commercial development can only imply activity because:

- The act of subdividing land in itself does not guarantee development activity. For example, a large grouped industrial subdivision may be approved but it often takes time to fully engineer, service and market the land, or the lots can sit vacant waiting for a lot purchaser to build on.
- The issuance of a development permit does not guarantee the construction of a proposed project. Over time (and still a current reality), there has been no comprehensive method of tracking if a business or industry is active or not once the development permit has been issued.

As previously mentioned, other industrial type activities may occur within the County, such as resource-based activities, but these often do not require a municipal development permit or are regulated by other levels of government.

4.7 Existing Land Use Overview

4.7.1 Isolated Industrial and Commercial Development

This type of development is the hardest to examine because more detailed permit information has only been kept over the last decade or so (note: this category does not include home occupations). Overall, it is not precisely known exactly what activity is occurring in what location and how intensely. Prior to Land Use Bylaw No. 1404 (October 2013), these types of uses were primarily located in the 'Rural Agriculture' land use district, and they did not require a rezoning to a separate commercial/industrial zoning. In some situations, the land was redesignated from rural agriculture to rural grouped industrial to facilitate certain types of industry to develop as permitted or discretionary uses, typically in respect of potential impacts to neighbours.

Land Use Bylaw No. 1404 would now require most uses to rezone to one of the appropriate commercial/industrial land use districts. Older developments may have also established prior to municipal permitting requirements or were in operation before better records were kept. These uses are both large and small, and some of the larger uses are agricultural produce processors or handlers that often locate on main transportation routes, either highway or railway or both. Often these uses locate on properties owned by the operator who started the operation.

Isolated uses comprise approximately 49 percent of all industrial and commercial development within Lethbridge County. These uses occur in a scattered pattern throughout the County possibly due to either the access to transportation, closeness to markets or previous ownership of the land on which the industry or commercial business has developed. The number of isolated use development permits has slightly dropped since the 2016 report where more than half of the permits issued were for isolated development.

4.7.2 Home Occupations

The Land Use Bylaw allows for issuance of permits for home occupations which are intended to allow a person to have a small-scale enterprise in the house. In the past, only one other person could be employed in the business and there couldn't be a change in appearance in the dwelling. These controls are more important in the hamlets, while in the rural area the definition between home occupation and an industrial or commercial use is less clear. For example, small trucking operations have been approved as home occupations or industrial uses. Land Use Bylaw No. 1404 was expanded to allow for a wider scope of businesses to operate as home occupations, while also allowing a small number of staff to be employed on site.

It is important to take note of these smaller-scale home based developments, as some are in the business 'incubate' stage and may grow and expand into industrial parks in the County. As Lethbridge County does not require business licenses, there is no up-to-date tracking system that allows the County to determine which uses are still operating and where. From reviewing the home occupation permits issued in the study period, it is evident that although these developments are scattered throughout the County, the majority are approved on lands situated in the southern portion.

4.7.3 Hamlet Industrial/Commercial Activity

Within the boundaries of Lethbridge County, eight incorporated communities have been designated as hamlets: Chin, Fairview, Kipp, Monarch, Diamond City, Iron Springs, Turin, and Shaughnessy shown in Figures 2 through 9. These urban settlements within the County provide both services and amenities, and a variety of housing options to County residents.

As outlined in section 59 of the Municipal Government Act, an unincorporated community may be designated as a hamlet if the community:

- consists of five or more buildings used as dwellings on parcels smaller than 1859 m²,
- · has a generally accepted boundary and name, and
- contains parcels of land that are used for non-residential purposes.

Only seven of the eight designated hamlets meet the above criteria of the MGA, as Kipp does not have the required number of dwellings. The province is no longer permitting municipalities to apply for provincially recognized hamlet status for new unincorporated communities. These rural urban areas are largely residential in nature and approvals of industrial uses have, in the past, met with some opposition and complaints from residents. The County has completed growth studies for all the hamlets. These reports look at the current state of the hamlets and some of the reports identify and illustrate non-residential growth opportunities as described below.

Hamlet of Chin Area – located in the NE½ 25-9-19-W4, adjacent to the Municipal District of Taber.

The hamlet lies just north of Highway 3 and the CPR line and occupies approximately 18.97 acres. Chin presently has no commercial or industrial development and no land designated as hamlet commercial or hamlet industrial. There are few vacant lots present, and the majority of the lots have been developed for residential purposes. The growth study for Chin does not include any future commercial or industrial development due to the servicing restrictions and general residential nature of the hamlet. However,

directly south of the hamlet, approximately 140.18 acres has been zoned for rural general industrial development and McCain's Foods operates a large processing plant at that location.

Hamlet of Fairview – located in the NW¼ 34-8-21-W4, adjacent to the eastern boundary of the City of Lethbridge.

The hamlet lies at the junction of Highways 4 (43 St.) and 512 and occupies approximately 37.19 acres. Due to the close proximity of the hamlet to Lethbridge, Fairview has one of the largest commercial and industrial development areas within its boundaries of all of the hamlets. Approximately 5.43 acres are designated as hamlet industrial while much of the commercial development is zoned direct control (2.13 acres). The largest parcel of land, consisting of 4.92 acres is the former site of Hepp Autowreckers. With environmental reclamation work, this site could be repurposed for development provided the hamlet's current infrastructure handling/capacity problems were resolved. Overall, land use survey fieldwork revealed that there are few vacant lots present, and the majority of the lots have been developed for residential purposes. The growth study for the hamlet of Fairview includes an opportunity for infill commercial/industrial development on the east side adjacent to the existing commercial development.

Hamlet of Kipp – located in the SW¼ 29-9-22-W4, between Highway 3 and the CPR line.

The hamlet occupies approximately 2.47 acres and all of the land within the hamlet boundaries is designated as direct control. Although Kipp does not meet the formal criteria for hamlet under the Municipal Government Act, it is still a historically designated hamlet with a name and a boundary defined in the Lethbridge County Land Use Bylaw. A land use survey revealed two residences present and no industrial or commercial development has occurred. All land within the hamlet boundary is privately held or owned by the province (i.e., Alberta Transportation).

Hamlet of Monarch – located in the SW¼ 7-10-23-W4, adjacent to Highway 3A.

The hamlet occupies approximately 92.66 acres of land. Approximately 1.93 acres is designated as hamlet commercial and no land is zoned hamlet industrial. The only main designated commercial development site within Monarch is the former hotel site. In the mid-2000s, the hamlet obtained a municipal wastewater lagoon system and treated water is available from a water line from Lethbridge. Again, the majority of the lots within the hamlet have been developed for residential purposes and there are only a few undeveloped parcels located throughout the community. The relocation of Highway 3 south of the hamlet may have had a negative impact on the commercial and industrial appeal of Monarch. It is noted that there is a 14.8-acre strip of railway land north of the hamlet boundary that currently contains an industrial development. This business takes advantage of the CP rail siding and has seen some expansion in the last few years. The growth study for the hamlet of Monarch looks at future development on the west side of the hamlet and there may be an opportunity for future commercial development in that area. It is noted that the population of the hamlet and area must increase to support any future commercial activity.

Hamlet of Diamond City - located in the SW% 6-10-21-W4, adjacent to Highway 25.

The hamlet occupies approximately 125.89 acres with approximately 0.26 acres of land designated as hamlet commercial and no land is zoned hamlet industrial. A land use survey for the hamlet revealed that the majority of the lots have been developed for residential purposes and vacant parcels are located adjacent to the highway. Over the last decade, the hamlet has benefited from the installation of a treated water line and sewage treatment system although there is presently no additional capacity without an expansion occurring. The growth study for the hamlet of Diamond City looks mainly at residential growth

with a potential for highway commercial development along Highway 25. It is noted that commercial development may not occur until such time that the population of the hamlet and surrounding area can support such uses.

Hamlet of Iron Springs – located in the NW½ 20-11-20-W4 and NE½ 21-11-20-W4, adjacent to Highway 25

The hamlet occupies nearly 47 acres. Approximately 1.24 acres of land in Iron Springs is designated as hamlet commercial and 12.91 acres is designated hamlet industrial. A land use review and survey for the hamlet reveals that there is no active commercial development, but some industrial activity related to agriculture located on the former CPR right-of-way. Again, the majority of the lots within the hamlet have been developed for residential purposes and undeveloped parcels were located in the eastern portion of the community. In the early 2000s, the hamlet benefited from the installation of a treated water line, which supplies the domestic water for the hamlet. The County's 2012 purchase of former railway land and subsequent sale of some of those lands has resulted in industrial development. The growth study for the hamlet of Iron Springs has identified that the land currently owned by the County on the east side of the hamlet would be areas that could see future commercial/industrial growth.

Hamlet of Turin – located in the SE¼ 4-12-19-W4 and SW¼ 3-12-19-W4, adjacent to Highway 25.

The hamlet occupies an area of approximately 67.05 acres. Approximately 0.32 acres of land is designated as hamlet commercial, and 8.6 acres of land is zoned hamlet industrial along the former rail right-of-way. A land use survey for the hamlet reveals here is one active commercial development and some minor industrial activity related to agriculture. Like other hamlets, the majority of the lots within Turin have been developed for residential purposes and undeveloped parcels were located in the eastern portion of the community. Such as Iron Springs, the hamlet has also benefited from the installation of a treated water line, and a municipal wastewater lagoon system was installed in 2011. The growth study for the hamlet of Turin includes opportunities for future commercial and industrial development. Since the creation of the growth study the County has expanded the hamlet industrial area and created 8 lots. Four of the lots which were serviced (water and sewer), were sold but currently remain undeveloped. The remaining four lots are currently not serviced and may be listed for sale in the future once the existing industrial lots have been developed.

Hamlet of Shaughnessy – located in the W½ 30-10-21-W4 and portion of NE¾ 25-10-22-W4, adjacent to Highway 25.

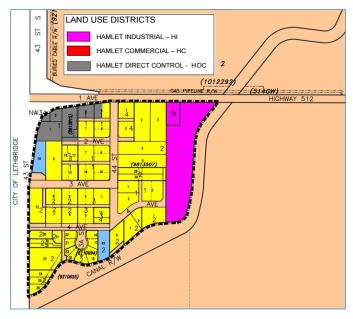
The hamlet occupies approximately 76.78 acres of land. Shaughnessy contains the largest amount of hamlet commercial zoning at approximately 5.56 acres and an additional 2.8 acres of land is zoned hamlet industrial. The majority of the lots within the hamlet have been developed for residential purposes, but parcels located adjacent to Highway 25 form a corridor of non-residential development. The hamlet receives potable water through a regional water line and sewage is handled by a municipal wastewater lagoon system. The growth study for the hamlet of Shaughnessy includes some areas for future commercial development south of the hamlet adjacent to the existing commercial development.

HAMLET MAPS

Figure 2: Hamlet of Chin Area from Land Use Bylaw



Figure 3: Hamlet of Fairview from Land Use Bylaw



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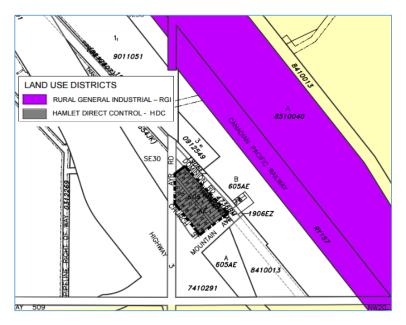
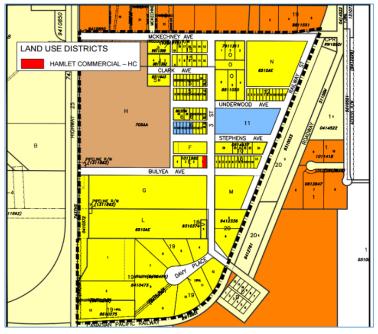


Figure 4: Hamlet of Kipp from Land Use Bylaw





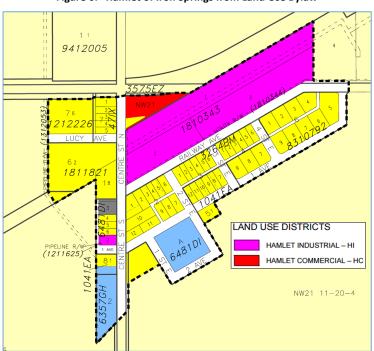


Figure 6: Hamlet of Iron Springs from Land Use Bylaw





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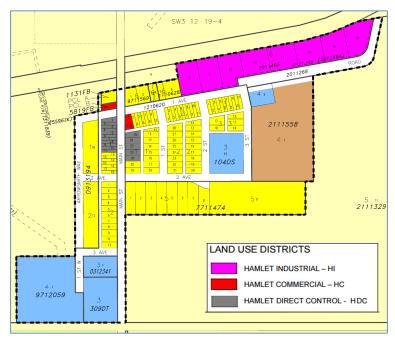
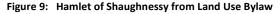


Figure 8: Hamlet of Turin from Land Use Bylaw



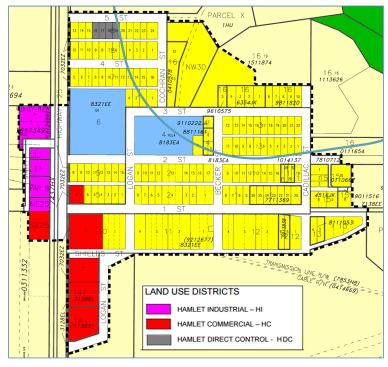


TABLE 8

Hamlet - Designated Commercial/Industrial Land Use 2022

Hamlet	Industrial land Existing Acres	Commercial land Existing Acres	Vacant Industrial Acres	Vacant Commercial Acres
Chin	0.0	0.0	0.0	0.0
Fairview	5.43	0.0*	3.5	0.0
Kipp	0.0	0.0	0.0	0.0
Monarch	0.0	1.93	0.0	0.2
Diamond City	0.0	0.26	0.0	0.0
Shaughnessy	2.8	5.56	0.0	1.83
Iron Springs	12.91	1.24	5.7	0
Turin	8.6	0.32	8.6	0.0
TOTAL	29.74	9.05	17.8	2.03

Source: ORRSC Land Use Analysis 2022

4.7.4 Grouped Industrial/Commercial Areas

For the purpose of this study, grouped industrial or commercial areas have been defined as those areas where development has been approved, by either zoning, subdivision or both, into clustered industrial business park type developments. Within Lethbridge County, ten such formal and established sites exist which include:

- Stewart Siding Industrial Park
- RAVE Industrial Park
- Chinook Industrial Park
- Broxburn Business Park and Corridor Area
- Railside Business Park
- Kipp Marshalling Yard Area
- Duncan Airport Industrial Park
- Airport Lands Lethbridge Regional Airport
- Taylor Business Park
- Viterra/Transmark

^{*} Fairview has land designated as Direct Control (2.13 acres) which contains commercial type developments.

Stewart Siding

Stewart Siding is located east and south of the City of Lethbridge limits on Highway 4 and was originally surveyed in 1911. In 1978, County Council decided to formally allow light industrial development to occur and consequently, an area structure plan was prepared and adopted in 1981. Stewart Siding became the first rural area within the County to be comprehensively planned and developed as an industrial park. Stewart Siding's potential as a light industrial area and its subsequent rezoning from rural agriculture to light industrial use in 1978 was based on a number of site characteristics:

- the area is well-defined and self-contained due to severe physical barriers (e.g. roads, highway, irrigation canal, railway);
- there is good access from a provincial highway;
- the area has a high water table and poor drainage and is not suitable for other non-agricultural development — although this may appear problematic, it enabled higher value use to the land allowing for improvements to occur;
- land ownership pattern was fragmented.

Stewart Siding is approximately 200 acres in size and the area, most of which forms part of the plan registered in 1911, was originally divided into 5-acre parcels. Further subdivision of the area occurred in 1980, 1982, 1986, 1990 and most recently in 2010. An additional 31.26 acres of undeveloped land was zoned and added to Stewart Siding in 2013, increasing it in size from the previous 169 acres. Currently, there are approximately 60 lots within the area structure plan boundary, 27 more than were depicted in the original 1981 plan.

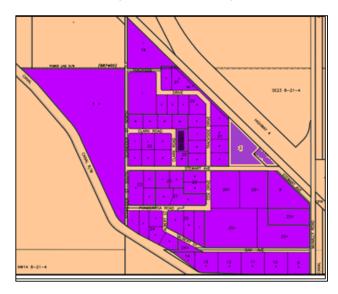


Figure 10: Stewart Siding

RAVE Industrial Park

The RAVE Industrial Park is located on approximately 60.0 acres of land adjacent to the east side of 43rd Street North, between 5th and 9th Avenues (NW 3-9-21-W4). Ideally located with excellent access via Highway 3 and 43rd Street, the property was zoned industrial by Lethbridge County in 1968, primarily for light industry. An area structure plan was prepared for the area in 1982 and subdivisions occurred in 1987, 1988 and 1993. A 10-acre serviced area immediately north of RAVE was designated to Direct Control for parking lot use in 2013, and a public utility lot was constructed to help manage surface drainage in the area. These lands are now officially within Chinook Industrial Park, which was approved in 2018.

The existing developments in RAVE are serviced with water and sanitary sewer by the City of Lethbridge through an agreement with the County. The City of Lethbridge recently has indicated that there is no present additional city capacity to service this area. Issues with the proper control of surface drainage run-off have also been a problem in the past. Currently, the RAVE subdivision is primarily fully developed with 15 lots of various sizes with development taking place on the majority of lots. There is little internal room for in-fill development unless some existing uses or buildings were to be redeveloped or removed.



Figure 11: Rave Industrial Park

Chinook Industrial Park

The Chinook Industrial Area Structure Plan (Bylaw 18-012) was adopted in 2018 by the County. The subject land is comprised of 202.25 acres for future business light industrial and general industrial use and is located east of the Lethbridge Industrial Park and directly north of Rave Industrial Park. This location benefits from access to 43rd Street, which is one of the major transportation points for the industrial area. Parcels along 43rd Street will provide for business light industrial uses, while the remaining lands in Chinook Industrial Park will accommodate rural general industrial, which is a valid land use siting decision and should be beneficial for a variety of businesses looking to establish in the industrial park. Roads will be paved and meet municipal standards to allow for truck access. There has been development along the south side of the area for Southland Industries, but the remainder remains undeveloped. It is anticipated that the area will be serviced with potable water from the City of Lethbridge but access to the wastewater system will be limited due to the constraints on the City's wastewater system.

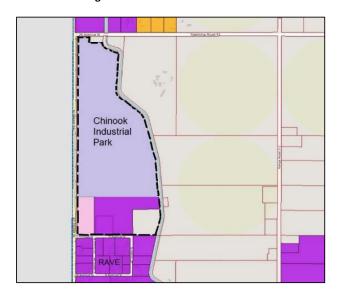


Figure 12: Chinook Industrial Park

Highway 3 Corridor Area (west of Broxburn)

In proximity to the Broxburn Business Park are some other parcels of land that have begun to develop unofficially as part of the Highway 3 corridor commercial-industrial area. Almost a half-mile west of Broxburn on the southside of the highway is approximately 69 acres of land designated as rural general industrial, used entirely at this time by Corteva (formerly Pioneer Seeds). Further development is likely to occur in these areas if further planning is undertaken. Applicable to this area is the *Integrated Development Strategy* report which recognized the potential of the Highway 3 corridor to be developed to support economic development for the region, albeit in a clustered, orderly and managed fashion.

Directly to the north of Corteva and east of Marshall Auto wreckers is a cluster of parcels that include a mix of residential and light industrial businesses. This area is seen as a future development area and has seen increased light industrial activity with the expansion of Advantage Trailers. The Advantage Trailers parcel is designed business light industrial. This area is seen as transitional and will require that an area structure plan be created and approved to create a framework for the future subdivision and development of this area for light industrial/commercial purposes.

Figure 13a: Marshall Auto

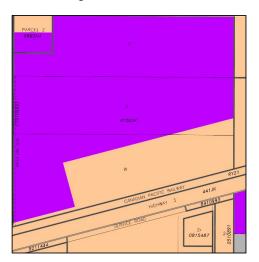
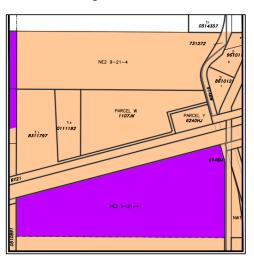


Figure 13b: Corteva



Broxburn Business Park

The Broxburn Business Park is located in the NE¼ 1-9-21-W4, adjacent to east-bound lanes of Highway 3 between Lethbridge and Coaldale. The area was originally approximately 122 acres in size and was first rezoned to grouped rural industrial in the 1970s with no serious attempts to develop the area until the early 2000s. The property became known as the McKay Brothers Industrial Area, who subdivided approximately 15 acres for a church development and prepared an area structure plan to guide future development on the remainder. This land development later changed ownership once again and later took-on the Broxburn Business Park name in which it is now known by. The average lots range in size from 1.3 acres to 10 acres and the highway frontage lots will see the highest traffic counts in southern Alberta. Although there are currently eight lots sitting vacant, the majority of lots have been sold and likely will be built upon in the short-term. Some larger lots (e.g. 4 - 10 acres) may potentially be resubdivided, but overall, Broxburn Business Park has very limited further development capacity.

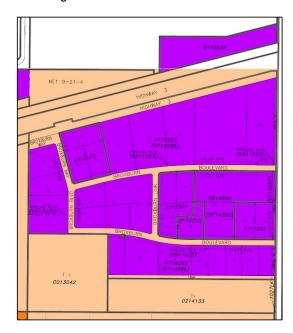


Figure 14: Broxburn Business Park Area

Railside Business Park

East of Broxburn on the north side of the Highway 3 corridor to Coaldale, a portion of the SE 7-9-20-W4 (approximately 70 acres) was redesignated to 'Rural Grouped Industrial' in 2016 for an expansion to the Railside Business Park. This parcel is immediately adjacent to and west of the existing business park. The parcel is the land lying between the west title boundary and future CANAMEX area, the existing Railside Business Park to the east. Approximately 18 acres has been developed for the initial park along with the internal road and storm pond land included. The business park does not take access directly from the highway, but from a private internal local service road. The redesignation in 2016 excluded the westernmost 160 meters to address Alberta Transportation's requirements and ensure that the CANAMEX corridor remains in the Rural Agriculture district. Railside Business Park comprises of small bay industrial buildings, Andres Trailer Sales, Ditech Corporation, large cold storage units and the Superior bulk propane. There is approximately 11 acres of vacant land within this area that is zoned rural general industrial.



Figure 15: Railside Business Park / Andres Trailers

Kipp Marshalling Yards

The Kipp Marshalling Yards consist of 90 acres of land located adjacent to the Hamlet of Kipp and Highway 3. The yards are managed by Canadian Pacific Railway (CPR) as their southern Alberta operations hub. The lands are primarily used for the transportation operations of the CPR itself and have been operating at capacity (2013-2014). Although the CPR lands themselves may not be presently utilized by other private business, there may be future opportunity for compatible land uses on lands in the vicinity.

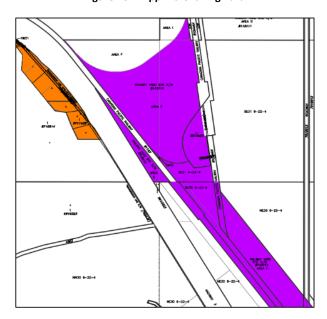


Figure 16: Kipp Marshalling Yard

Duncan Airport Industrial Park

The Duncan Airport Industrial Park is located adjacent to the Lethbridge County Airport along the east side of Highway 5. This area consists of approximately 95 acres of unserviced industrial lots. The grouped industrial development evolved from an original proposal to subdivide a 7.4-acre parcel from an 80-acre parcel for a hay compaction plant. In 1978, further subdivision occurred and the property (approximately 75 acres) was rezoned from rural agriculture to rural grouped industrial as required by the County Bylaw at the time. The lots are mainly 4.0 acres in size, and most are developed but may have some undeveloped portions of the lot used for storage. Some private land owners own 2 or 3 adjacent titles. In 2011 expansion started to occur into the north 80-acre title, as 23.10 acres was designated to RGI. This area may be suitable for growth subject to additional long-term planning and design work being undertaken.

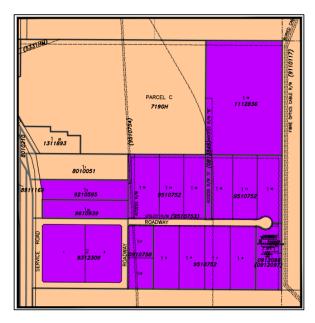


Figure 17: Duncan Airport Industrial Park

Lethbridge Airport

The Lethbridge Airport is located approximately 5 km south of the City of Lethbridge adjacent to Highway 5 (south of Mayor Magrath Drive in the city). These 37 acres of industrial airport land originally established in 1939, and currently plays host to several different businesses and organizations. Existing commercial development is concentrated to the northeast of Runway 12-30 and is a cluster of both aviation related and non-aviation related development. The City of Lethbridge took over ownership of the airport in 2018 and is in the process of creating a new Master Plan for the airport lands. If at some point the airport lands are annexed into the city, the commercial business portion would no longer contribute to the County non-residential assessment base.

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Taylor Business Park

The Taylor Business Park is located on the north side of Highway 508 west of Highway 4. There have been some grain handling facilities adjacent to the CPR tracks for decades, and in 2008 some preliminary subdivision to allow for some other business uses occurred. In 2015, an area structure plan was prepared and adopted and over 96 acres of land was designated to Rural General Industrial use for the Taylor Business Park. This industrial park—has seen recent subdivision and development activity with the expansion of the Ritchie Brothers Auction and some industrial bays being developed. Future development phases will see the creation of up to 25 parcels for industrial/commercial uses. Due to Highway 4 and 508 and future transportation access issues that need to be addressed, approximately 55 of the 96 acres may be developed in an initial first phase. Once longer term planning and transportation strategies have been formalized, there is the potential for expansion to the north of this in the future.



Figure 18: Taylor Business Park

SW & NW 27-7-20-W4 - Viterra/Transmark

Southeast of Lethbridge situated adjacent to Highways 4 and 845 and the CPR line are lands being used for some industrial use. In 2014 Viterra purchased the former Lethbridge Inland Terminal Ltd. grain handling facility which is situated on 200 acres of land adjacent to Highway 845. To the northeast, and parallel to the rail-line, a 65-acre parcel is owned by Transmark Ltd. which is presently designated as RGI. Both Transmark and Viterra actively utilize a siding of the CP Rail. Transmark have 20-spur tracks and can accommodate a full unit train off the mainline along with storage capacity for up to 600 rail cars. This is an area of interest for further expansion of this type of commodity handling/industrial land use activity by Transmark. The area is substantially developed with Transmark having added railcar storage and a laydown area for wind turbines, while Viterra has also expanded and has plans for a loop rail track next to the grain elevators. As a result, although this is a large land area there is not much surplus vacant land available for other industries due to Transmark and Viterra's own growth plans. The Area Structure Plan was approved in 2016 with the objective of allowing for the future development and subdivision on this area for industrial uses. There is a small, currently undeveloped, 2.5-acre parcel north of the Transmark property that is designated rural commercial.



Figure 19: Viterra/Transmark

Intermunicipal Development Plan (IDP) Areas

The County has also identified new commercial/industrial areas in accordance with some Intermunicipal Development Plan agreements with neighboring urban municipalities, including Nobleford, Coalhurst and Picture Butte. These areas are largely undeveloped at this time and remain in agricultural use, with some additional planning and servicing work required prior to industrial conversion. These would be considered longer-term development and growth areas. These areas will be further discussed in the Land Use Strategy section of this report.

Summary

As a snapshot in the present time (2022 year-end) it is estimated that there is approximately 379 acres of designated vacant land currently available within the nine designated grouped/clustered business parks zoned to accommodate industrial use. Some of the vacant lands are presently raw parcels with no roads or servicing, and although they are considered for industrial-commercial use, they would require additional planning processes to occur, including subdivision and in some cases an Area Structure Plan update. It is noted that Taylor Business Park may initially only develop 55 acres, so the actual total available in the foreseeable future may be closer to 324 acres.

Table 9 illustrates a summary of existing land use and land availability.

TABLE 9
Grouped/Clustered/Designated Industrial Land Use 2022

Industrial / Business Park	Total Area Zoned for Industrial / Commercial (acres)	Existing Area Occupied (acres)	Existing Vacant Developable Land (acres)*
Stewart Siding	169.0	97.7	71.3
RAVE	60.00	58.00	2.00
Chinook Industrial Park	202.25	38.08	164.17
Broxburn Business Park	95.00	77.32	17.68**
Railside Business Park	70.00	59.00	11.00
Kipp Marshalling yards	90.00	90.00	0.00
Duncan Airport Industrial Park	81.00	70.74	10.26
Taylor Business Park	137.70	38.4	99.5
Viterra/Transmark	278.7	275.8	2.9
TOTAL	1183.65	805.04	378.81

Source: ORRSC Land Use Analysis 2022

^{*} Vacant developable land refers to both vacant and unplanned internal unsubdivided raw land that could be developed if accordingly planned

^{**} Some of the parcels have approved development permits but construction has not commenced, so vacant land availability in reality is likely much lower

PART FIVE | Land Use Strategy

5.0 Introduction

The previous sections of this report contained an overview and analysis of past and present economic and land use conditions pertaining to industrial/commercial land use development in Lethbridge County. That data forms the basis of guiding and planning for future land use to support economic growth in the County. The County desires to attract good, sustainable industry that will be a "net positive" for the municipality, that overall, the business will bring in more tax revenue than it will cost to provide services.

This section is to address the main purpose of the report which is to identify and protect suitable land areas within the municipality that may appropriately be planned to accommodate industrial or commercial development, without negatively affecting other existing uses or conflict with other County policies or goals.

5.1 Identification of Economic and Land Use Trends

In 2018 Lethbridge County undertook a business retention and expansion survey to assess existing businesses satisfaction within Lethbridge and where there are areas where the County may improve upon or assist in the retention and expansion of those businesses. The survey indicated that for the most part businesses within the County are satisfied with being within Lethbridge County. Some areas that were noted as concerns were the investment with internet infrastructure, availability of skilled labour and general internet services. The survey noted that over 50 percent of respondents were planning to expand within the next two years and would do so within Lethbridge County.

5.1.1 Broad Industrial and Economic Processes

There has been a considerable change to urban industrial development during the twentieth century which scholars have attributed to three different processes: de-industrialization (traditional industries declining in the face of international competition), decentralisation (the movement of manufacturing industries to better locations outside of urban core areas), and decongestion (decentralisation of manufacturing to suburban locations)³. These processes have resulted in significant amounts of industry relocating from inner city locations to outer locations with better access to highways.

It is obvious that good location is strongly desired for businesses and supports industrial development. However, what constitutes a 'good' location differs by industry and business, but proximity to highways is of growing importance. Major industries increasingly do not want to be located in inner urban areas, due to potential land use conflicts and congestion, and instead prefer close proximity to highways.

Many industrial businesses also desire larger parcels of land in order to accommodate their horizontaldesign buildings along with sufficient space for other uses such as parking, loading and storage. Additionally, businesses will characteristically acquire more land than they initially require in order to

³ Daniel J Graham, *Identifying urbanization and localisation externalities in manufacturing and service industries*, *Imperial College London – Centre for Transport Studies*. 2007.

accommodate potential future expansion of business. Businesses typically want the opportunity to expand their facility at their existing site rather than experiencing the disruption associated with relocating to another site. Some industrial uses have significant negative impacts (such as noise, vibration, smell, traffic, etc.) which can be offensive to surrounding land uses, especially residential.

Transportation access and infrastructure improvements are major drivers of industrial development. Development is very site specific, and what may be possible in one location may not be possible in another. As land prices increase, some industrial users that can relocate to other lower cost jurisdictions will do so, while other industrial users that are local serving will need to remain in the region. Availability of servicing, as required by the type of business or use, will also factor into locational decision making.

Other general industrial land use concepts that the County should consider and may influence or be beneficial for industrial businesses to locate on a larger parcel of rural land, include:

- Logistics Intermodal Transportation Facilities/ Logistics Centres
- Industrial intensification
- Industrial symbiosis / localization
- Clustered/ Nodal Development
- · Growth in Alternative Energy Sources
- Eco-Industrial Parks

Intermodal Transportation Facilities / Logistics Centres are where intermodal shipping containers are off-loaded or on-loaded from trains to semi-trucks for distribution. Intermodal distribution (logistics) centres are large facilities that combine intermodal railway terminals with nearby warehouse distribution and freight facilities. Both the transfer and storage operations are combined on one site and these facilities also require easy access to major highways. These inland "terminals" can be large scale, typically a minimum of 200-300 acres in size (often over 500 acres), contain massive warehouses and often represent a collaboration between the shipping companies, rail companies, development companies and various levels government. These complexes are designed to handle goods brought by rail from coastal ports and then transfer them by truck to on-site warehouses for storage and are then eventually transported to distant retail outlets, distribution centres and manufacturing plants.

Industrial intensification optimizes land potential by allowing industrial sites to achieve higher density forms of development, and by facilitating new growth through the re-development of existing underutilized sites. The benefits of industrial land intensification are to reduce the pressure to convert agricultural and rural lands to industrial uses by using lands and resources more efficiently, reducing impact on the environment, accommodating an increase in economic and employment activity on a limited land base, using transportation infrastructure more efficiently, and generally extending the lifespan of available industrial lands.

Industrial symbiosis / localization refers to industrial interaction or sharing of by-products between industries, depending upon what type of industries are developed in the area. Symbiosis may occur for example, when an industry produces waste by-products (i.e., heat, toxic chemicals) that are useful to other industries located in proximity. Instead of these industries functioning separately, these industries can create an association that is mutually beneficial to one another and function in a format similar to natural biological processes. In order for industrial symbiosis to work properly there must be a grouping or cluster of industries in relatively close geographical proximity to one another, with commonality

between certain uses in their inputs and outputs, and an intricate, connected infrastructure network between the uses (i.e. pipes between facilities). Using agricultural processing waste or bi-mass processes to generate geo-thermal heating is a simple example.

Localization refers to many businesses in the same industry locating close to each other, as geographical proximity increases the ease of communication facilitating 'technological spillovers' and innovation between firms within the same industry, and often results in greater efficiency through increasing return of scale in intermediate inputs for a product at lower costs.⁴ The introduction of related services in industrial areas also often makes them more attractive to larger employers.

Clustered/ Nodal Development refers to a planning and development land use approach that encourages using land resources and services more efficiently (i.e., compact building forms, infill development etc.) and concentrates uses in close proximity, typically adjacent to major transportation corridors or nodes (intersections), appropriately planned to preserve adjacent agricultural land or greenspace. Site specific, buildings are also in close proximity together on a portion of the site, often sharing common yard space, to allow the remaining land to be used for recreation, open space, agriculture or preservation of historically or environmentally sensitive lands.

Growth in Alternative Energy Sources, which refers to renewable or sustainable energy that is generally derived from natural sources (for example, the earth, sun, wind, water), are ideal to be located in rural municipalities and are compatible with agricultural land use. For example, wind turbine farms utilize a small footprint on the land and the structures can still be grazed or farmed around. Large solar panel farms also often require a large land base and do not want to be located in high density urban settings. Where traditional services (i.e., electricity, gas heat) are deficient, alternative energy sources may be developed or used as a by-product of large-scale alternative energy facilities. The growth in other alternative energy industries, such as biomass or bio-fuel production, also benefit from being close to a raw crop or nutrient source/stock which is provided by agricultural producers.

Eco-Industrial Parks refer to a business or industrial park that is designed to help achieve sustainable development, with the intention of increasing economic gains and improving environmental quality. It typically attempts to integrate a variety of preservation and renewable energy technologies throughout the park. This may be desirable in a rural setting, as a well-designed eco-park can assist with storm water management for an area by introducing a more natural wetland system and can utilize different servicing tools where providing traditional services may be challenging, such as sanitary sewage treatment. For example, an eco-park may be designed to employ an alternative wastewater system that will utilize wetlands. Some parks have been designed to use a "Small Bore Sanitary Sewer System (SBS)" in which a clarifier tank is located on each lot which provides primary treatment of sewage. SBS also uses high density polyethylene pipes, which is a trenchless technology that minimizes construction surface disturbance. The use of "grey" water may also be encouraged, where non-potable water can be used. Typically, the buildings in the park have double plumbing to carry both potable and non-potable water, such as is done in the Broxburn Business Park in Lethbridge County. Grey water may also come from wastes created by industrial processes or from an on-site local wastewater treatment plant.

⁴ Daniel J Graham, Identifying urbanization and localisation externalities in manufacturing and service industries, Imperial College London – Centre for Transport Studies. 2007.

5.1.2 Local Economic Factors

The agricultural services industry is a major contributor to the Lethbridge County and regional economy. It is obvious there is a strong correlation between the profitability of primary agriculture in the County and the high number of businesses that service it. Over time, the acreage of specialty crops processed in Lethbridge County has been increasing due to their high value, improved plant breeding, machine development, processing and marketing options, low grain prices, and restrictive quotas for grain delivery. The achievement of better crop yields and a wider variety of crop production has also led to the substantial growth of seed and forage industry within the County. It is apparent that much of the present innovation that is occurring in the local economy is associated to the number of companies that focus on research and development to enhance the growth cycle and fortitude of the seeds and inputs associated with crop production. The "bio-industrial" sector is establishing an interest in the Lethbridge area which is not surprising, given that it can benefit from synergies with local producers, educational institutions, and the research centre.

Additionally, there are many other businesses and opportunities for growth and investment outside of the primary agricultural industry. This includes the growth of industries related to transportation, warehousing, construction, manufacturing and food processing. There are also numerous local trucking and shipping firms offering local, provincial, national and international freight services.

The Canadian Pacific Railway (CPR) company has also recently indicated that it envisions there to be long-term local growth in the transportation of rail freight. However, the CPR itself is not contemplating developing any major intermodal transportation facilities in the Lethbridge area and will likely locally focus on increasing its share of bulk shipping (grains, potash etc.). Canadian Pacific, however, does recognize there may be potential opportunities for additional spur lines that would serve local industries or the setting up of a smaller-scale transloading facility. A benefit to Lethbridge County regarding this, is the fact that the main marshalling yards for the region are located at Kipp, and logistics or transloading centres, even smaller-scale, do benefit from synergies of being located near highways and in proximity to other related uses.

It is recognized that agri-business is an important industrial sector for Lethbridge County and is both closely associated to and is a complimentary industry to agriculture. This is an ideal and logical industry sector to establish and expand in a rural municipality, as the industry is processing products or by-products close to the supply source. Examples such as cheese processing (Agropur and Crystal Springs Cheese), potato processing (McCain's), etc., are prime examples of agri-businesses operating in the County. A prime factor in locating these industries, in addition to proximity to source/supply and major transportation networks, is access to a municipal water source that can provide the volume of water needed for processing. Depending on the processing business, access to a suitable sewage treatment system may also be important. It is noted in the 'Growth Strategy' section in this report, that agribusiness industry is not specifically singled-out, but is included in the general description category of "industrial" land use.

5.2 Classification of Industry Land Use Types

The previous land analysis identified various types of industrial and commercial developments that have been occurring in the County, and include the following six general categories:

- 1. Isolated Agriculture Related Industry
- 2. Resource Extraction or Point Source Industry
- 3. Home Occupations
- 4. Hamlet Industrial or Commercial
- 5. Isolated Industrial or Rural Commercial
- 6. Clustered or Grouped Industrial or Commercial

5.2.1 Isolated Agriculture Related Industry

These types of uses are listed as discretionary land uses within the Rural Agriculture land use district of the Land Use Bylaw and may occur without the need to redesignate the parcel. Typically, these include uses associated with agricultural activity, such as seed processing facilities, garden markets, feed mills, etc., and they may establish anywhere in the County. Some more intense uses are required to redesignate to an appropriate industrial land use district. These are important secondary industries to agriculture and should be permitted to continue on a site-specific basis.

5.2.2 Resource Extraction or Point Source Industry

Resource extraction uses are difficult to predict where or what frequency they may occur, as they are very specific to the site of a desirable resource (e.g., gravel source) and are very dependent on market conditions for the resource. Thus, they are often dealt with in a reactionary basis by a municipality, with regard given to land use impacts, such as environmental considerations, impacts to neighboring uses, etc. Some uses, such as oil and gas activity, are also under the jurisdiction of the provincial government to regulate. Thus, these uses will continue to operate throughout all areas of Lethbridge County, and the latest Land Use Bylaw (Bylaw No. 1404) was updated to better manage, where possible at the local government level, many of these types of uses.

5.2.3 Home Occupations

Home Occupations are found to be located all over the County, but the majority are closer to the City of Lethbridge where more residential development occurs. This category of land use includes a wide diversity of businesses, such as a home office, while others are more intense such as welding shops, automotive/machinery repair, etc. Many are related to servicing the agricultural producers in an area. Between the years 2013 and 2021, 102 development permits were issued for home occupations (16.5 per year average). This is above what had been previously observed where there was 12% of development permit were issued for home occupations. This could be due to the updates in the Land Use Bylaw No. 1404 which broadened the scope of home occupations allowing for more employees on the site, along with limited outdoor storage and commercial vehicles. This is important as many of these smaller scale home-based developments are in the business 'incubate' stage and may eventually grow and expand into industrial parks in the County. These types of uses should continue to be allowed wherever deemed appropriate, with the County reviewing and monitoring their success or constraints over time, wherever

possible. At some point in future time, some uses that have grown or need to expand should be encouraged to relocate to established industrial areas.

5.2.4 Hamlet Industrial or Commercial

As noted, the majority of hamlets are largely residential in nature and approvals of industrial uses have, in the past, met with some opposition and complaints from residents. Based on historical trends, it is foreseen that except for perhaps a couple of hamlets that may experience interest in additional industrial/commercial development, such as on lands adjacent to highways, the majority will experience slower growth and cater to a more local service area, either to the urban residents or agricultural producers in the general area. Most future new growth will likely occur adjacent to areas or parcels already designated for such uses. Any industrial uses approved within a designated hamlet should be compatible with existing development.

To expand the hamlet industrial/commercial land base, additional studies on expansions to hamlet infrastructure services and capacities may need to occur. Thus, except for some general areas described, the majority of potential hamlet industrial/commercial land use considerations should be addressed in subsequent hamlet growth studies, as previously identified by Lethbridge County as a future planning exercise.

This study and land use emphasis is to primarily highlight the following two land uses as the main focus of Lethbridge County's strategy.

5.2.5 Isolated Industrial or Rural Commercial

These types of land uses may be found in all areas of the municipality. They are often very site specific, depending on the use or needs of the business. Examples are McCain Foods located adjacent to the Hamlet of Chin or the Corteva facility on the south side of Highway 3 on the Lethbridge County-Coaldale highway corridor. Often siting criteria is based on proximity to suppliers/producers, proximity to major transportation corridors, availability of required size of raw-land parcel, availability of servicing for the need, and price of the land. Rural commercial uses are typically very dependent on being adjacent to a highway, have good access available to the highway, high traffic volumes present, and the availability of water. These are more difficult to preplan locations for, as often the business is very specific in their needs, and it is very dependent on the developer's ability to negotiate the purchase of the land.

Some areas may be predetermined as being acceptable, such as near major intersections of transportation corridors; however, others will need to be reviewed on a site-specific basis and on the merits of the proposal. Lethbridge County should continue to allow for these opportunities, but the management of such may primarily need to be accomplished through the application of general land use and siting criteria to guide decision makers as well as prospective developers in locating suitable sites. General land use and siting criteria for isolated commercial and industrial uses that may be considered are outlined in the next section.

Alternative energy developments, such as wind or solar farms, may also be categorized as isolated industrial developments. These are very dependent on the availability of large parcels of unfragmented land, proximity to transmission lines, capacity in the system, and little conflict with other land uses, including irrigation systems.

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5.2.6 Clustered or Grouped Industrial or Commercial

The primary focus of this study and accompanying strategy is to identify and appropriately plan for well managed industrial and commercial uses, as located in clustered or grouped business parks. As identified, seven such formal and established sites presently exist within Lethbridge County. The strategy will attempt to focus business and industrial/commercial growth to strategic locations based on clustered/nodal development concepts, sensitivity and integration with the agricultural landscape, and adjacent land uses. Industrial localization and intensification optimize the industrial land potential by enabling more efficient servicing, takes advantage of existing infrastructure that may be present, uses land more efficiently, allows sites to achieve higher density forms, may facilitate new growth through the re-development of existing underutilized sites, and helps preserve agricultural land in other areas of the municipality.

5.3 Defining Land Use Criteria

A main purpose of the strategy is to identify and protect suitable land areas within the municipality that may appropriately be planned to accommodate industrial or commercial development growth, without impacting other existing uses or conflict with other County policies or goals. There will always be a certain level of potential conflict between industrial land uses and other uses, such as residential and sometimes agricultural; however, appropriate siting, design and spatial separation can help to mitigate many of these conflicts to a manageable degree. Identification of suitable lands to accommodate industrial/commercial growth is based on the following principles and criteria:

5.3.1 Isolated Industrial and Commercial Uses

Defined/located according to the following criteria:

- Strategic location of highway business based on proximity to highways, especially intersections and interchanges
- Direct to cut-off or poor quality agricultural lands wherever feasible
- The proposal compatibility with existing development and the land
- Higher quality agricultural lands should only be considered if they are parcels adjacent to major transportation corridors
- Availability of existing infrastructure/services
- Ability to obtain/install infrastructure/services
- Future considerations for the land and lands adjacent to them
- The potential to mitigate any negative impacts of the development

Additionally, for **commercial** uses the following should also be considered:

- Location should be based on service centre role, service being provided to the general public
- · Parcels with visibility and frontage along highway a priority
- Ease of access to paved roads
- Recreational uses may be considered suitable commercial uses

5.3.2 Regional or Clustered Industrial and Commercial Uses (Business Parks)

Defined/located according to the following criteria:

- Existing policy areas
 - As identified in the Municipal Development Plan (MDP) and Intermunicipal Development Plans (IDPs)
 - Existing and designated industrial parks in accordance with the Land Use Bylaw (infill or expansion)
- Identification or expansion of lands based on principles of clustered/nodal development
- Market demand/ developer preference, as aligned with County policy directives and planning policies
- · Possibility of access or proximity to rail
- Availability of existing infrastructure/services
- · Ability to obtain/install infrastructure/services
- The potential to mitigate any negative impacts of the development at the location
- Future considerations for adjacent land uses
- Availability of suitable land (e.g. not susceptible to flooding, environmentally sensitive land, etc.)
- Land use does not conflict with other land uses or other County policies
- Close proximity or connection to the provincial highway network
- · Connection to or ease of access to the local road network

In identifying and siting business park locations it is recognized that highway locations offer the following advantages:

- Transport savings speed of transport brings economies in transport costs and saves time
- Visibility allows prominent sites with exposure
- Semi-truck circulation highways can readily accommodate the traffic of heavy trucks
- Traffic safety less congestion with the public and other general vehicle traffic than within a higher density urban setting

Overall, as part of the strategy, identifying a number of industrial sites in a variety of locations instead of one large concentrated area is advantageous to:

- Provide a choice of business environments
- Avoid large concentrations of industrial traffic in one location
- Provide a variety of locations with different transport orientations, and some with rail access and some without
- Help limit potential off-site impacts by reducing the scale or concentration of development in one area

- Reduce transportation distances or costs for some businesses that need to be in a certain area or in proximity to a specific supply or market
- Enable more competitive land sales and market conditions
- Take advantage of symbiosis that may exist by associating with existing industrial users

5.4 Business Park and Layout Design

The establishment or expansion of industrial business parks or centres should be planned for and consider a wide variety of uses, but there are some basic trends or best practices/factors that should be considered. Many planning studies have indicated that warehousing and distribution activities rather than production facilities are easier to plan for and often are the dominant use in industrial parks. These activities do not typically generate nuisances (noise, odour and smoke), usually require less servicing such as water, and they are usually dependent on good access and ability to accommodate large truck traffic.

Commercial businesses may be located within industrial parks and provide a number of beneficial services but are much more dependent on water and sewer services. Depending on the size and location of the park, hotels, restaurants, and gas stations may be suitably located and planned in conjunction with industrial land use if they can be adequately serviced. Typically, these types of commercial uses are located at the entrance to the parks and adjacent to major transportation corridors.

The planning process for industrial areas should be ongoing and reviewed regularly. Improvements in transportation, shifts in tenant mix, technological advancements in providing services, technological changes in processing or communication, and other economic factors may modify the range of uses, the layout, the structures, and the function of the area. Also, special consideration is needed for promoting industrial growth adjacent to rail lines and in proximity to highway and municipal road crossings due to safety and traffic issues. Often, rail crossing protection infrastructure will need to be installed, which is typically done at the developer's expense.

5.4.1 Design Considerations

The establishment of new industrial business parks or the expansion of existing ones should be based on a cost effective and suitable design, in conjunction with servicing considerations. The industrial site should be effectively laid out for efficient road network considerations and the accommodation of storm water management. In designing and/or approving plans for the expansion or establishment of industrial parks, the following criteria should be considered at a minimum:

- A gridiron or modified-grid system layout is preferred, as planning and industrial land use studies
 indicate layouts which create a road network with square and rectangular parcels are best suited
 for industrial development and for warehouse use in particular (See figure 20).
- Lot depth is more important than lot width and a 200-foot depth is often not deep enough for yards that must accommodate semi-truck traffic. Thus, industrial parks should ideally be designed so parcels can have 300 to 400 feet minimum depth. Minimum site dimensions should be 200 feet of width and 300 feet of depth, and a minimum 500 feet of depth should be considered for parcels backing onto a highway.

- Designing square and rectangular parcels or 'blocks' no less than 12 20 acres in size offers flexibility, as one business may require a large site, but these blocks can also be further subdivided to accommodate small area users (e.g., 1 2 acres), if properly designed at the start.
- Property frontages should be landscaped, two-thirds of the area is a common standard, and storage in the rear only, parking and loading space should not permitted in the front yard. Parking should be limited to customers in the front yard and employee or main equipment inventory in the rear.
- Arterial or main business park roads should be designed at a minimum 30 m width, with a wider carriage way, instead of the traditional 20 m.
- There should be no dead-end roadways or small cul-de-sacs in the subdivisions. For growth areas, future access and connectivity to adjacent lands that may also be developed must be considered.
- A Floor Area Ratio (FAR) of 0.50 is encouraged (i.e., this relates to site coverage), as this assures sufficient space for parking, loading, and unloading facilities without using public streets, and encourages the reservation of additional land for future facility expansion.
- Mixed-use (both vertical and horizontal) should be encouraged office space above buildings, multi-use or lease bays, condominium plans.
- If commercial sites are included, they should ideally be placed at the entrance of the subdivision or business park.
- Best environmental practices for industrial development, like those espoused in the Efficient Use of Land Implementation Tools Compendium published by the Government of Alberta, should be incorporated wherever feasible. These include clustering the layout of buildings to minimize the development footprint and total surface area required for roads, utilizing joint logistics facilities and on-site amenity spaces, integrating technology that reduces the dependency on raw materials by enabling the reuse of by-products and waste materials within the industrial park, designing wetlands as part of the storm water management system, reusing water where possible and incorporating recreational opportunities in green space or buffer areas.
- The layout and design of the business park should be based on best siting and engineering
 practices and consideration of the topography of the land, with storm water management
 containment systems sited in the logical catchment area and be designed to accommodate
 expansion if required.
- Area structure plans should be designed to allow for logical phasing of subdivision or development.

Highway Issues – For proposals in proximity to highways, Alberta Transportation will need to be consulted and the department's requirements taken into consideration as it is the approval authority relating to access on the highway and manages control over how development and traffic may impact the integrity of the highway system. Alberta Transportation's mandate, under the Highways Development and Protection Act, is to facilitate a practical network of safe transportation routes in the province. Access management strategies will need to be considered as part of the additional planning and design of business parks. ASPs within referral distances that require circulation to Alberta Transportation should be considered for Ministerial approval prior to redesignation.

With respect to safety, the number and the physical design of access points onto primary highways are major concerns. These factors are considered by Alberta Transportation when subdivision and

development occur within 300 m (1,000 feet) of a highway. Roadside permit approvals are also required from the department for any development within the right-of-way or within 300 metres beyond the limit of the highway or within 800 metres from the centre point of the intersection of the highway and another highway. In order to satisfy the department's goal of supplying safe transportation, Alberta Transportation will consider minimizing the number of access points onto the highway by closing existing intersections of municipal roads onto the highway as it determines necessary.

Rail-line Considerations – Developments desiring rural service for spur-trackage must conform to the requirements of the CPR. Thus, close contact with rail company officials is desirable throughout any process of planning for access to trackage. Consideration of setbacks and potential impacts of industry adjacent to the safe operation of the rail line should also be taken into consideration. The County's land use bylaw contains setback standards based on the *Guidelines for the Federation of Canadian Municipalities for Development Adjacent to CPR Lands*.

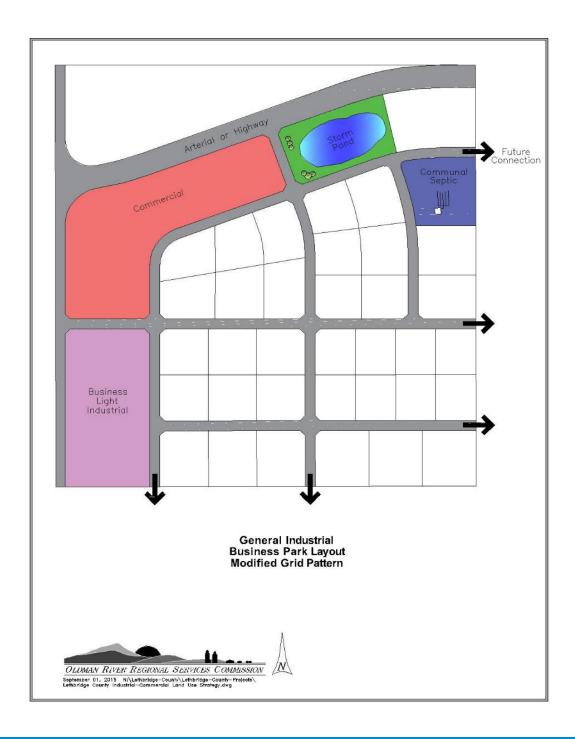


Figure 20: General Industrial Business Park Layout Modified Grid Pattern

5.4.2 Servicing Considerations

The availability of servicing, or the potential to feasibly service, are important considerations in the planning for efficient industrial-commercial growth areas. Thus, a strategy that involves expanding existing business park areas or clustering development in specific areas offers a number of advantages including at the very least, the ability to take advantage of existing infrastructure or expand existing systems rather than develop all new. This enables efficiencies and economies of scale with less roads and pipe, less infrastructure to maintain and manage, etc. The installation of services for a business park should be completed up-front before individual lots are sold and is typically provided at the expense of the developer and constructed to municipal standards.

Sewage Treatment

Without a municipal piping and treatment sewage facility, there are a number of viable options available for industry and the County to consider. On-site individual septic treatment systems may be used for isolated industries or low volume waste/effluent producers with a 2.0-acre minimum lot size. To potentially reduce the lot size, other technologically advanced septic systems which have been proven to be more efficient may be considered such as the "FAST system" (Fixed Activated Sludge Treatment) process to treat and denitrify wastewater, or a "Small Bore Sanitary Sewer System (SBS)" in which a clarifier tank is located on each lot.

For grouped industrial/ business parks, it may be more ideal for the County to encourage communal/municipal treatment systems which may be implemented in a variety of forms (e.g., leach field, mound system, lagoons, aerobic digesters, etc.) with the County ultimately taking control of the infrastructure. Also, a business eco-park plan may be designed to employ an alternative wastewater system that will utilize wetlands as part of the process. Depending on the industry, some businesses may also capture and reuse some processing water as part of their internal system which reduces the ultimate volume of wastewater produced which leaves the plant.

Water

Water is needed to service industrial-commercial developments, but the amount will vary to different degrees of need and volume. Some businesses are very low volume users and only require it for a staff /coffee room and washroom facilities for employees, while others require larger volumes for processing or manufacturing. As the County does not have its own water treatment facility, the growth of industrial or commercial land use is quite dependent on the County obtaining and delivering water, entering into agreements for treatment of the County's water (under its own water license), or planning for uses which require limited water supply. There may also be opportunity for considering raw water delivery through agreements with the irrigation districts. This may be utilized in business parks in conjunction with dual piping systems required for buildings, or eventual package water treatment plants being constructed. The County has been looking a developing a water strategy to provide guidance with regards to water needs for all types of development within the County.

Fire Protection

A method of providing fire protection will need to be considered in the design of business parks. Historically, this has been provided in the form of a dugout or fire pond for the subdivision. Often in County rural subdivisions, a dry hydrant has been required to be installed in the pond. Access to water and availability on a year-round basis is required for adequate fire protection, and therefore, depending on dugouts can be problematic. Some businesses install sprinkler systems in buildings as part of their

safety system, but such infrastructure does not help with fires external to the building or property. Often, a fire pond properly engineered and designed in combination with the storm water management (pond) system is effective for serving this purpose. Thus, the provision of water needs to be addressed in conjunction with the fire suppression needs of an isolated industrial/commercial development or the overall design of a new or expanding business park.

Land use siting practices should also be implemented for the proper siting and separation of more volatile or hazardous industries (e.g., processing chemicals, fertilizers, fuels), from other types of land uses.

Storm Water Management

The management of storm water drainage must be addressed as part of the planning process. Engineered storm water management plans will be required at the area structure plan stage, or in some cases subdivision or development stages for isolated developments. Traditionally, it has been the developer who has been responsible for providing the engineers report and obtaining any Alberta Environment approvals. In some cases, the overall strategy will need to align with larger County storm water management initiatives, such as the Malloy Drainage Basin Master Plan. The County should encourage, wherever practicable, combining storm management ponds with fire supply methods. Additionally, encouraging low impact design principles, such as developing more natural wetland systems, should also be considered if feasible.

5.5 Land Use Assumptions and Projections

5.5.1 Land Demand

Forecasting land demand is a difficult exercise for rural municipalities and may be somewhat limited in value because of:

- inaccuracy of calculations,
- · the large amount of land available gives considerable flexibility,
- · fluctuating economic conditions,
- lands usually not serviced can usually be brought on stream relatively quickly.

Cities often forecast general industrial development growth based on a ratio of square feet of industrial floor space per capita. In many Western Canadian municipalities, this ratio appears to be between 95 - 110 square feet, while smaller population centres have an industrial floor space of 80 - 90 square feet per capita respectively. Making such forecasts on this method is difficult for a rural municipality, as industry activity is not directly related to local population. Also, basing it on previous annual average growth rates for general industrial development based on square feet of industrial building space is difficult for the County since it has not been recorded or tracked in the past.

Big-box commercial development typically requires large vacant tracts of relatively inexpensive, serviced land that is located along major transportation arteries and is easily accessible from major highways. Thus, some areas of the County would be suitable strictly on parcel size, price and possible location. However, it is unlikely significant commercial development would occur outside of the urban boundaries, especially the city, due to lower population densities, distance to market clientele, and the lack of availability of adequate services.

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Overall, the anticipated amount of retail/service commercial development that can be expected in the County is low based on past trends and servicing constraints. Water and sewer servicing to surrounding City of Lethbridge municipalities (i.e., Coaldale, Lethbridge County, Coalhurst, etc.) is also provided and controlled by the city through various agreements.

The amount of light-industrial/commercial type land use (e.g. shop buildings, trade contractors, equipment service and sales) has traditionally been somewhat higher than industrial processing/manufacturing uses. This trend will likely continue into the foreseeable future. The agribusiness and bio-industrial sectors continue to grow and are compatible rural industrial land uses. Parcels or areas located within 10 km of the city appear to be most desirable based on past trends and data analysis.

5.5.2 Land Projections

The preparation of land use projections and forecasting likely industrial-commercial land demand for Lethbridge County is based on the analysis of past data and some assumptions about the future.

- In order to give some impression of likely land consumption, it may be assumed that 27 development permits per year on average may be approved. This represents the average number of industrial-commercial permits approved yearly between 2013 and 2021. Based on the data analysis it appears the average (median) use occupies 5.0 acres, but the range varies widely, with half being 3.0 acres or less. Applying the range of sizes to the 27 permits and averaging the total yields is a simplistic approach, however, using this method the County may expect 80 100 acres of land consumption, on average, for industrial and commercial uses per year.
- The 80 100 acres figure comprises both isolated uses and the uses that established in the
 designated industrial parks. Thus, in examining the data and separating the percentages of
 isolated development (49%) and designated/grouped development (51%), it appears that 40 50
 acres may be anticipated per year within designated industrial business park areas based on
 previous data trends. This is dependent on the scenario that the vacant land is actually available
 in the various business parks.
- Planning for available land should consider situating it in a number of locations rather than one
 location only, to assist with market choices and locational factors. Thus, slightly more land than
 what actually may be developed on a yearly basis needs to be considered overall as part of the
 planning and economic strategy.
- In the future, the percentage of industrial-commercial land likely to be in designated business parks should stay consistent in relation to the percentage of isolated uses, as the County is actively promoting and encouraging both types of development to establish.
- For business park growth activity, it is anticipated that the build-out of Stewart Siding area, Taylor
 Business Park and the new Chinook (Frontier) Business parks with vacant land supplies available
 will be the areas of preferred interest in the foreseeable future.
- Broxburn Business Park is substantially completed but there will likely continue to be interest in
 the Highway 3 Lethbridge-Coaldale Corridor and Broxburn area for development due to the
 advantages of existing transportation systems and synergy opportunities, the close proximity to
 the City of Lethbridge. Therefore, long-term protection and planning of lands identified for
 potential future industrial-commercial growth should be respected and the Highway 3 Corridor
 area should remain a 'priority' growth area for Lethbridge County and not compromised.

Slightly more land than what is typically developed in a year should be available to prospective
business interests, as it takes time to plan for, obtain necessary approvals, subdivide and service
land and it cannot be brought to market in a short time frame. A two-to-three year land acreage
inventory may be considered reasonable.

As part of the strategy the County should try to ensure there is continually available an overall minimum of 70 - 80 acres of readily accessible land amongst the various business parks to accommodate development. This estimated amount of land should only be used as a target amount and with closer monitoring over time, better estimates can be made in the future. If more isolated industrial parcels are being developed over the next few years, this figure may be slightly lower.

5.6 Growth and Expansion Areas

5.6.1 Agricultural Land Considerations

From the provincial South Saskatchewan Regional Plan land use strategies through to the local Land Use Bylaw and Municipal Development Plan, protection of agricultural land is a priority. Agriculture, although it has a changing role, is still the major use and economic driver of the County. It still needs to be considered as a primary use and in all decisions must be protected as best possible from other uses that may conflict or unnecessarily remove land from production. Although most of the soils within the growth areas are considered fertile, the majority of the entire undeveloped area, if properly managed, represents good quality productive agricultural land. The Irrigation Districts (LNID and SMRID) administer irrigation in much of the areas encompassed by the growth strategy and many parcels have irrigation or water rights.

The bylaws allow industrial and commercial uses on better-quality land if deemed appropriate, however, a balance is required and may be difficult to achieve. An industrial/commercial policy should take into account land quality and wherever possible to direct uses to poorer-quality lands. However, a goal of the strategy is that by encouraging and clustering development to specific areas, and in particular by promoting the expansion of non-agricultural development in existing industrial areas, agricultural land in other areas of the County will be preserved from being removed from production and being converted to other uses. Both infill and expansion wherever feasible and logical, should be a high priority.

5.6.2 Overview - Primary Growth Areas

It is noted that as part of the growth strategy, access to or the availability of water is not the highest locational factor consideration due to present conditions within Lethbridge County. Treated water is currently limited to specific areas or existing developments, and the County is somewhat dependent on existing agreements with urban neighbors as the County has no treatment facility of its own. So overall, any growth area(s) identified, will require a water delivery strategy or will be restricted to accommodating low volume water users only. Sewage is not as major of constraint, as treatment can be handled through various means as identified earlier in this report, including on-site individual treatment systems for low volume producers, lagoon systems, package sewage treatment plants, or communal systems.

As in the past, it is suggested that in the future industrial and commercial uses will locate in:

• hamlet areas, as appropriately planned for;

- isolated uses located in the general rural areas, as deemed suitable; and
- designated grouped or clustered industrial/commercial areas, both existing and new.

It is anticipated that in moving forward, the majority of industrial-commercial uses will be located in designated business parks. The primary focus of the land use strategy will be to appropriately plan for and manage industrial/commercial growth in designed and designated grouped or clustered areas.

5.6.3 Areas Identified in IDPs

The County has completed Intermunicipal Development Plans with all if its urban neighbors. In some of the plans, areas have been identified in the agreements where the County may grow and develop land for non-agricultural purposes. It is of importance to note that although these areas have been identified, little additional planning, engineering or subdivision work has occurred in these areas to make them turn-key ready for business.

Nobleford West Area

The 2012 Intermunicipal Development Plan between the County and the Village of Nobleford identified an area west of the village that could be planned and utilized for industrial-commercial development. The area is bordered on the west by Highway 23, on the south by Highway 519, on the east by the CPR and the village. This area is highly visible, has good access to major transportation routes (both highway and rail) and nearby access to municipal services such as water and sanitary sewer that may be extended from the village in the future (if agreed to and available). There are presently several commercial/agri-business operations located within this area. Both municipalities agreed that the acceptable types of uses for the corridor are highway commercial type businesses and/or business/light industrial uses. Approximately 140 acres of undeveloped could be planned for additional non-agricultural land use development, with potential future growth lands also available to the north. In accordance with the IDP, an Area Structure Plan (ASP) would be needed to be prepared and an addendum Traffic Impact Assessment that should include approval of the Minister of Transportation as well as the County prior to the redesignation of any parcel of land.

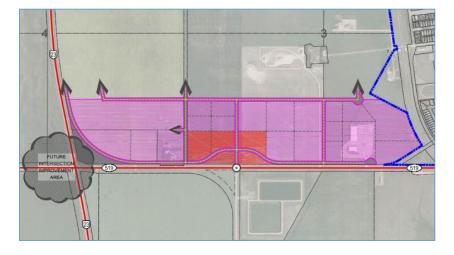


Figure 21

Coalhurst North-Kipp Road Area and Highway 25 Area

The 2014 Intermunicipal Development Plan between the County and the Town of Coalhurst identified areas around Coalhurst that could be planned for County industrial-commercial uses. Primarily, the IDP identified the western portion, north of the town and adjacent to the CPR rail-line, as the focus for industrial type uses. The west portion of this area is identified as suitable for industrial type land uses, as there are a number of such uses already established in the area. It has convenient access to major transportation routes (both highway, local pavement and rail) and the area south of the Kipp Road is in proximity to municipal services such as water and sanitary sewer that may have the potential to be extended in the future when feasible (if agreed to and available).

In 2020 the Town of Coalhurst and Lethbridge County approved the North Coalhurst – Kipp Area Structure Plan which provides details on the future development of this area and the provision of services. The Plan divides the area into two main sections, with the area north of Kipp Road being unserviced industrial lots that would be to a rural standard and the area south of Kipp Road being an area were servicing may be put in if feasible and more urban style development would be constructed.

As well, approximately 60 – 70 acres of land adjacent to the Kipp Road and Highway 25 intersection is identified for potential commercial/light industrial use (see Diagram 1 and Figure 22). The types of uses deemed appropriate will be dependent on servicing capabilities/constraints. It should be noted that the development of this cluster would be based on a more detailed land use concept that would require the development of a paralleling or internal service road off Highway 25 from the Kipp Road. Similarly, to the Nobleford IDP area situation, any future large scale or multi-lot development in the Coalhurst area is subject to future planning and engineering work as undertaken in the preparation of an ASP, as the land is presently undeveloped and primarily used for agriculture.

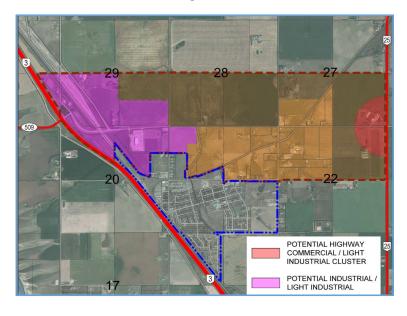


Figure 22

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Picture Butte East Area

The County and Town of Picture Butte started the discussions to prepare an IDP in 2014 and the IDP was ultimately adopted in May 2018. The IDP identified areas that may be suitable for different types of land use and development. Planning Area 1 in the IDP encompasses a stretch of lands along the west of the Town as well as a significant extent of surrounding lands located in the County. The potential for highway commercial uses is earmarked in Planning Area 1A (north of Highway 25) and Planning Area 1B (south of Highway 25), both of which are within the County. IDP policy observes that these areas (see figure 23a) may be well suited for the development of highway commercial as an intermunicipal joint venture. An area east of the Town, depicted as Planning Area 4 in the IDP, is identified as a suitable location for industrial-commercial growth on account of its adjacency to the Town's existing industrial area as well as its convenient access to Highway 519, a major transportation route. The IDP envisions predominantly industrial and light-industrial uses for Planning Area 4, with some possibility for highway commercial uses on land fronting Highway 519. Highway commercial is also contemplated in a portion of Planning Area 3A, which is situated west of Planning Area 4 and south of Highway 519 (see figure 23b). Development in Planning Area 4 is projected to occur incrementally, with lands furthest from the Town earmarked as an Agriculture Holding Area. The County's financial contribution to the existing improvements along Factory Drive that were completed in 2011 is a preliminary gesture toward an equitable, shared vision for growth and economic development that sets the stage for a potential joint business park venture in partnership with the Town.

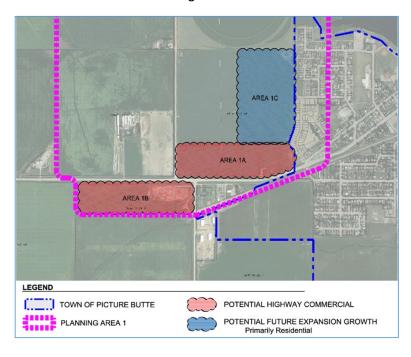
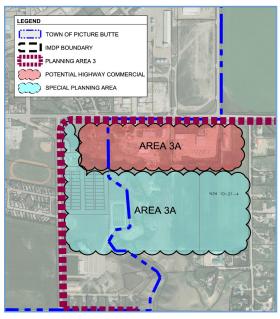
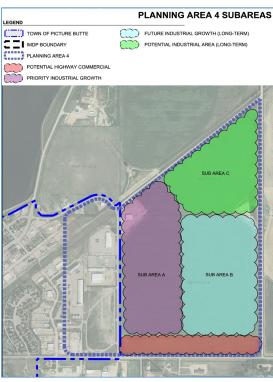


Figure 23a

Figure 23b





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Coaldale Fringe Area

As part of the Intermunicipal Development Plan with the Town of Coaldale areas along Highway 3 and north-east of the town have been designated for future industrial/commercial uses. These areas align with the industrial/commercial development proposed within the Town of Coaldale.

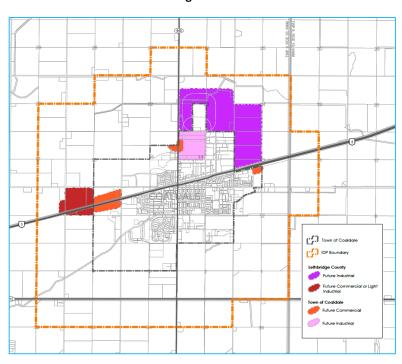


Figure 24

5.6.4 CANAMEX Interchanges

Highway 843 (43 Street North)

- Highway Commercial Cluster (see diagram 2)

As part of the long-term growth strategy, the area around or in proximity to the future CANAMEX service interchange northeast of the City of Lethbridge, north-end of 43 Street (Highway 843), may be considered for a future commercial (highway commercial) land use cluster. The planning for such is subject to discussions with City of Lethbridge which have been taking place in the form of updating the IDP between the two municipalities. The City has also expressed some interest in development in this area. The issues of servicing, connectivity between uses and municipal jurisdictions, long-term planning, the detailed design plans and the time-frame of the provincial government in constructing the CANAMEX will need to be addressed. As a result, the questions of how much land, exactly where, and how the land may be developed are long-term planning considerations. In the interim, this interchange area should be reserved for future commercial type use and protected from significant fragmentation or incompatible land uses being allowed.

Highway 25 Interchange

 Highway Commercial Cluster (see diagram 3)

Similar to the previous identified area, the land around or in proximity to the future CANAMEX service interchange north of the City of Lethbridge on Highway 25 may also be considered for a future commercial (highway commercial) land use cluster. Correspondingly, the issues of being dependent on the provincial government to complete the detailed design plans and determining the time frame to actually construct the CANAMEX will factor into planning for and allowing land use in proximity. How much land, exactly where, and how the land may be serviced and developed are long-term planning considerations. It is anticipated that due to locational factors, this would likely be a smaller area and take longer to develop than the 43 Street (Highway 843) area. However once again, in the interim this interchange area should be reserved and considered for future highway commercial type land uses as being considered the most desirable land uses.

5.6.5 Grouped/Clustered Industrial-Commercial Areas

The areas identified for future industrial-commercial growth as types of grouped or clustered land use developments consist of primarily expansions to existing industrial business parks, along with some new areas which are in close proximity to the existing parks. As part of the land use and growth strategy, the diagrams depict and refer to three categories of growth lands: 'Priority – Initial', 'Successive – Secondary', and 'Prospective – Future'. The rationale for this three-tier approach is to identify the most logical areas that may be suitable for accommodating initial industrial-commercial development growth in the near future, and to protect long-term growth lands in the immediate vicinity in respect of the clustering/expansion land use planning concepts. Generally, the three-tier categories radiate out from the existing "core" built-up area. The 'Priority – Initial' areas are lands that are adjacent to existing designated industrial lands and may potentially connect to the existing road network and other infrastructure. They logically should be the first or primary areas to be developed. The 'Prospective – Future' growth areas are in consideration of very long-term growth in the County and should remain as agricultural lands until such time they may be needed. These long-term areas identified should not be converted to other incompatible land uses, such as grouped country residential, and an attempt should be made to keep them as unfragmented as possible.

It is important to note, that although the growth strategy identifies the three-tier categories for growth lands, they do not necessarily have to be strictly developed in this manner and the reference is to act more as a plausible guide. As the County moves forward in the process and consults with landowners and developers, land categorized as 'Successive – Secondary' or 'Prospective – Future' may actually be developed earlier (or even before Priority – Initial' lands), as some land owners may choose not to be involved in the land development process, or servicing issues/opportunities may evolve that may make one area more advantageous to develop over another. Thus, a practice of exercising flexibility with respect to a managed growth approach should be employed when possible.

RAVE Industrial Park - NW 3-9-21-W4 and SW 10-9-21-W4 (see diagram 4)

The RAVE Industrial Park is fully developed with the exception of possibly minor infill, and any growth would logically occur to the north, on the east side of 43 Street. There is potentially 2.0-acres available for new development and re-development in the existing RAVE Industrial Park. The north is an ideal area

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to expand (into SW 10-9-21-W4) as it is compatible with the adjacent land use and an area structure plan has now been prepared (refer to next section on Chinook). The City has indicated that potable water can be accessed but that any additional sewer hook-ups are unlikely due to a capacity issue.

Chinook Industrial Park

(see diagram 4)

This area has been identified in the Lethbridge County/City of Lethbridge IDP as a Lethbridge County Growth Node. An Area Structure Plan for the 202.25 acres comprising Chinook Industrial Park (recently marketed as Frontier Business Park) was created and approved by County Council in 2018. A 38.08-acre phase at the south end of has been developed, along with a 10.77 acres developed for a storm water management pond. It is anticipated that the remaining 164.17 acres will be developed in as many as three additional phases, with development occurring south to north. This area will not be serviced by City wastewater but there is an opportunity to request City potable water for non-intensive water use only.

Duncan Airport Industrial Park – SW 10-8-21-W4, E½ 9-8-21-W4 and NW 10-8-21-W4 (see diagrams 5 & 6)

The Duncan Airport Industrial Park (east side of Highway 5) is approximately 80% developed out. Some business or land owners are only utilizing a portion of their lot, and some own the adjacent one or two titles, which may accommodate future expansion plans. There may be some infill development potential if some of the large lots were resubdivided, and presently there is approximately 23 acres of undeveloped land that could be made available for development, if the landowners are willing to sell.

This area has been identified in the Lethbridge County/City of Lethbridge IDP as a Lethbridge County Growth Node. An initial 73.93 acres (Priority - Initial) immediately north could developed, and 84.21 acres (Successive - Secondary) across from the airport adjacent to Highway 5 with some potential for Highway Commercial use. A long-term area to protect for future growth (Prospective – Future) contains approximately 107 acres. This industrial area is unserviced, and if water services in particular cannot be provided, this area will likely experience slower growth and would cater to less intense, storage type uses. To expand Duncan Industrial Park, an area structure plan, with servicing, drainage and a transportation/access strategy being addressed, would need to be prepared.

Lethbridge Airport Infill and Expansion

The Lethbridge Airport (adjacent to Highway 5) is owned and operated by the City of Lethbridge and contains commercial lands for lease. The County transferred ownership of the Airport to the City in 2018 and it is anticipated that the City will request to annex in the airport lands into the City at some point in the future. Upon annexation these lands will no longer be available to Lethbridge County to support economic development and business growth.

Stewart Siding – Section 23-8-21-W4 (see diagram 7)

Stewart Siding (east and south of the City of Lethbridge on Highway 4) is approximately 68% developed. This area has been identified in the Lethbridge County/City of Lethbridge IDP as a Lethbridge County Growth Node. In addition to the 32.85 acres of potential infill and 31.26 acres (SW 23-8-21-W4) already designated as RGI and as illustrated on Diagram 7 as "Priority – Initial", another 39.27 acres has been identified for future expansion into the NW 23-8-21-W4 (Successive - Secondary). To the west of this is 54.88 acres of land which fronts onto the County road allowance on the boundary with the City of

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Lethbridge, identified as a "Prospective – Future" growth area. After this, Stewart Siding would effectively be developed out, as no additional adjacent land is available for expansion due to many physical constraints including the SMRID canal, CPR rail-line, Highway 4, location of City of Lethbridge municipal boundary, and acreage development to the south.

This industrial area is unserviced and it has also experienced some public perception issues in the past with a number of unsightly premises. This business park is in good location but would benefit from applying and enforcing development standards in the future. Also, if secure water servicing cannot be provided, this area will likely continue to cater to less intense, shop building and storage type uses. To expand Stewart Siding, an updated area structure plan with servicing, drainage and an internal road network/access strategy being addressed, would need to be prepared.

Broxburn Area – Highway 3 Coaldale Corridor

(see diagrams 8 – 9)

Broxburn Business Park and Corridor Area

The Broxburn Business Park (NE½ 1-9-21-W4), adjacent to east-bound lanes of Highway 3 between Lethbridge and Coaldale, has experienced both good interest and growth. Approximately 90% of the lots have been sold and close to 80% have either been developed or are planning to do so in the near future. At the time of this report, 20.43 acres of land is currently vacant, but many of those parcels have development/building plans being formalized for them.

Having been identified in the Integrated Development Strategy and in the IDP update discussions with the City as a commercial-industrial area with unique capacity to support economic development, the Highway 3 Corridor should be a 'priority' growth area for the County. This is a logical area for growth due to many factors: existing area transportation networks, intersection improvements being installed at Highway 3 & Broxburn Road, future CANAMEX and interchange plans, number of fragmented parcels, proximity to two urban centres, and opportunities for enhancement of servicing, storm water management, and the symbiosis of industry.

The Integrated Development Strategy (see diagram 8) identifies 155.58 acres to the immediate south and east of Broxburn Business Park as 'Priority – Initial' growth lands, 68.08 acres as 'Successive – Secondary', and 249.74 acres as 'Prospective – Future'. Generally, the three-tier categories radiate out from the existing "core" built-up area. The 'Priority – Initial' areas are lands that are adjacent to existing designated industrial lands and may potentially connect to the existing road network and other infrastructure. The growth lands identified should not be converted to other incompatible land uses and an attempt should be made to keep them as unfragmented as possible for future planning. As stated previously, that although the growth strategy identifies the three-tier categories for growth lands, they do not necessarily have to be strictly developed in this manner. Some land owners may not want to participate or be included in the process. (It must also be noted that the total acreage identified is a raw land number and the actual acreage that may be available for development would be smaller, as some land may have development constraints and between 20 -30% may be utilized for roads, utility right-of-ways, and other infrastructure, such as storm water management systems and fire ponds.) The *Integrated Development Strategy* identified approximately 150 acres of land adjacent to the proposed CANAMEX as a future storm water management area.

To the east and north east of the future CANAMEX and Highway 3 interchange, lands have been identified for future commercial or light industrial type use. The actual area available may likely not be determined

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until the detailed design plans for the CANAMEX have been finalized. However, on the north side of Highway 3 approximately 20 acres of the 51.86 acres identified has already started to be developed. There is also 78.97 acres located immediately south of Broxburn Business Park identified as a potential "Prospective – Future" growth area. This land would have to be carefully planned, likely with more business light industrial and commercial type use, as there is a grouped country residential subdivision located to the immediate west.

Railside Business Park

(see diagram 8)

A conceptual design scheme was provided in 2016 in support of the redesignation that expanded the Railside Business Park, but it did not fully address all future considerations of what the land may ultimately become and be used for. However, the County may request additional details, engineering and information be provided at future proposal stages, including both development and subdivision. The County may also require a more detailed area structure plan be provide at future subdivision stages to also address this aspect, along with the provision of architectural controls to be applied and registered on title. The southwest portion of Railside Business Park contains 11 acres of vacant land to accommodate future development.

Highway 3 Corridor – Sunny Side Road to Broxburn (see diagram 9)

There exists a number of parcels parallel to the highway that are fragmented and/or contain existing industrial or agri-business uses. Most of these areas have either been discussed with the City of Lethbridge as part of the IDP discussions or have been referenced in the *Integrated Development Strategy*. Part of the strategy is to further plan and allow development and infill on these parcels. Approximately 116 acres of undeveloped land exists in the northside Highway 3 / Marshall Auto Wreckers area that could be used for potential additional industrial and commercial development. Existing businesses, such as Marshall Auto Wreckers and Corteva, may not further develop their excess undeveloped land areas, or may use them for their own future business expansion. Due to existing land utilization by businesses, the overall land acreage may not be as large as depicted in the diagrams and table. However, there is 83.77 acres of raw land identified as a 'Priority – Initial' growth area immediately to the west of Broxburn Business Park and south of Highway 3, which would be an ideal extension of the core Broxburn development area. Across the highway to the north, on the west side of Sunny Side Road, is 20.20 acres that has started to be developed for light industrial agri-business use.

It is recognized that none of the potential growth areas identified have had any professional plans (e.g., area structure plans) prepared for them to facilitate subdivision or higher density industrial-commercial development in the foreseeable future. Additionally, the provision of adequate water services will need to be considered in the overall planning. To expand the Broxburn and Highway 3 Coaldale Corridor area, Area Structure Plans, with servicing, drainage and a connected transportation/access strategy being addressed, would need to be prepared.

Wilson Siding and Highway 4 Corridor (see diagrams 10 – 13)

This should be considered as a "priority" growth area for Lethbridge County to encourage industrial-commercial development due to the area transportation networks, including highway and rail-line, and

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growing interest in the area with existing and expanding businesses. Access to the rail transportation network and the possibility of spur-trackage is a significant benefit, with room to expand and grow.

Taylor Business Park – Section 5-8-20-W4 (see diagram 10)

The Wilson Siding Area (west of Highway 4) at Highway 508 has approximately 30 acres of land presently used adjacent to the rail-line for existing businesses. The new Taylor Business Park contains over 115 acres of land with an approved area structure plan, but no land developed. Initially only 55 acres may be developed in a first phase, primary due to future transportation and intersection issues that will need to be addressed with Highways 4 and 508 if the industrial park was fully developed. The strategy identifies the initial 71.15 acres as a 'Priority – Initial' growth area, and 41.99 acres as 'Successive – Secondary'. The Taylor Business Park Area Structure Plan outlined that water would be both raw irrigation and cistern delivered, and sewage treatment will be a communal mound system. There is also 90.83 acres of land identified to the immediate north, which may be planned for and developed in the future ('Prospective - Future") in conjunction with the Taylor Business Park. These land areas should be reserved for industrial-commercial use pending consideration for the long-term transportation management strategy that will be implemented for the Highway 4 and Highway 508 area. This is an area that will require consultation and discussion with Alberta Transportation.

Highway 845 - Viterra/Transmark SW & NW 27-7-20-W4 (see diagram 11)

Situated adjacent to Highways 4 and 845 and the CPR rail-line are over 343 acres of land. An Area Structure Plan was approved for this area in 2016 showing the potential development for the area. Since that time most of the lands have been developed by both Transmark and Viterra for their respective businesses. The Viterra grain terminals are situated on 115 acres of land adjacent to Highway 845, most of which is being used as they have recently installed a loop track on the site. There could be some development adjacent to highway 845 but that would be very limited. To the northeast and east, Transmark Ltd. owns a 97-acre parcel presently designated as RGI. The remaining lands to the north of the Viterra/UFA facilities includes a 57-acre parcel currently being used by Transmark for storage purposes (i.e. wind turbines). At the intersection of Highway 4 and 845 there is a vacant 2.9 acre parcel zoned Highway Commercial. As this area is mostly developed, the strategy identifies 126.42 acres in the SE 27-7-20-W4 is identified as long-term 'Prospective – Future' growth lands.

Diagrams 12 and 13 illustrate some lands in the Wilson Siding area, section 33-7-20-W4 (NW and SE 33-7-20-W4) and a portion in NE 32-7-20-W4 comprising approximately 219.72 acres, as long-term 'Prospective – Future' growth lands. These lands themselves would likely be a low priority area, other than perhaps some land parallel to the rail-line. However, the important aspect of identify this is that they may be considered as part of a larger planning exercise. These lands may provide a possible access and service road solution to the issues affecting the Taylor Business Park and Highway 508, and future restrictions to Highway 4 and the future development of the CANAMEX (see diagram 13).

Other than the Taylor Business Park area, all other identified growth areas would require an Area Structure Plan to be prepared, with servicing, drainage and a transportation/access strategy being addressed. In this Wilson Siding/Highway 4 area, consultation with Alberta Transportation is of pertinent importance.

Kipp - Coalhurst Area

(see diagram 14)

Additional opportunities are situated in the Highway 3, Kipp and Coalhurst area in proximity to the CPR Marshalling Yards. Earlier, 189.88 acres was identified immediately north of the Town of Coalhurst, along the Kipp Road, as outlined in the IDP with Coalhurst. This is recommended as a 'Priority – Initial' growth area, as the Town of Coalhurst has agreed to this concept, and the town has expressed some interest in collaborating with the County in facilitating its development. An additional, 262.71 acres is identified as potential 'Successive – Secondary' and 240.11 acres as 'Prospective – Future' growth areas, located primarily north of the existing marshalling yards. These areas are realistically long-term; however, they should be reserved for industrial growth due to their location as they are ideal to either expand the marshalling yards if ever needed, or they may accommodate inter-modal rail facilities that may benefit from the proximity to both the railway and highway. The future CANAMEX will have a system interchange at Highway 3 which will be near the growth area.

Chin – Highway 3 Area – SE 25-9-19-W4 (see diagram 15)

This is a small area in proximity to the Hamlet of Chin that is worth noting due to locational factors. This land is part of the McCain holdings, just north of Highway 3 and the CPR rail-line. The area consists of 26.18 acres and is identified as a 'Prospective – Future' growth area. If McCain's deems this to be surplus land to their business operations and is partial to selling it, this site is a suitable size to accommodate a business, especially an agri-business, which may desire good highway access. It is noted that the parcel across the municipal road allowance to the east is in the MD of Taber and contains a bio-mass processing facility. Such or similar uses would also be considered a compatible land use on the Lethbridge County side.

TABLE 10

Growth Areas – Potential Land Available for Industrial-Commercial Land Use

Industrial / Business Park Growth Area	Priority – Initial (acres)	Successive – Secondary (acres)	Prospective – Future (acres)
IDP & Other Special Areas			
Nobleford West	40.00	100.00	
Coalhurst – Kipp North	189.88	262.71	240.11
- Kipp - Highway 25 Commercial	70.00		
Picture Butte IDP	unknown	unknown	unknown
CANAMEX – Highway 25	unknown	unknown	unknown
CANAMEX – 43 Street N	unknown	unknown	unknown
Chin – Highway 3			26.18
Sub-Total Sub-Total	299.88	362.71	266.29
Grouped / Clustered Areas			
RAVE			2.00
Chinook Industrial Park	39.15	40.91	105.77
Duncan Airport Industrial Park	73.93	84.21	107.01
Stewart Siding	31.26	39.27	54.88
Broxburn - CANAMEX Corridor	155.58	96.84	328.70
- East of interchange	51.86	28.76	
Highway 3 Lethbridge – Coaldale Corridor	103.97	19.95	81.08
Railside Business Park			11.00
Taylor Business Park	66.20	41.99	74.83
Viterra/Transmark - Highways 4 & 845	2.93		126.42
Wilson Siding – Highway 4			265.89
Sub-Total	524.88	351.93	1,157.58
TOTAL	824.76	714.64	1,423.87

Source: ORRSC Land Use Analysis 2022

- If approximately 30 acres per year of industrial-commercial land was developed in business parks, the growth areas identified should provide for a 100 to 120 year land supply.
- If approximately 20 acres per year of industrial-commercial land was developed in business parks, the growth areas identified should provide for over 150 to 170 year land supply.

PART SIX | Strategy and Recommendations

6.1 Primary Strategy

In moving forward with preparing a land use strategy for Lethbridge County, the question is how may the County attempt to meet the goals of this report, and in particular, assist in the diversification of the local economy? The County's Industrial-Commercial Land Use Strategy is a framework for guiding actions and considering policies that may need to be adopted to implement the goals and strategies of the plan. Over time, these also may eventually need to be updated to respond to changing requirements and market conditions. The primary elements of the general strategy, which are associated with the goals of this report, are listed below.

- The growth plan is to provide a framework which will facilitate the development of a viable and feasible business sector in the County by addressing land use and locational opportunities and constraints, by effectively planning for a suitable and readily available land supply at realistic marketing and consumption rates.
- To plan for effective, managed growth when supporting and encouraging the establishment and expansion of industrial business parks or centres and provide some locational certainty to businesses looking to locate within the municipality.
- 3. To identify and outline the required land use planning activities to facilitate the development and redevelopment of industrial areas in an orderly, cost-effective way, and ensure land development opportunities are continually available.
- 4. To reserve and protect those areas within the municipality identified as the logical and suitable areas to be utilized for future growth and expansion of industrial/commercial activities, so that they may appropriately be planned to accommodate industrial or commercial development.
- 5. To use the recommended planning framework to guide and plan for the building of transportation, drainage and other infrastructure in industrial areas at the rate required to meet demand for industrial/commercial land and to enable the services to be efficiently provided that support business activity.
- 6. To assist in diversifying the local economy and allow new businesses to establish, by providing developers tangible options and ensuring land is available for development possibilities.
- 7. To have a clear land use plan that can be used to form and participate in strategic partnerships and programs to create or capitalize on economic development opportunities that are associated with industrial/commercial land development.

6.2 Key Principles and Recommendations

In addition to the previously identified general strategy objectives, several key principles and recommendations are suggested for Council's consideration, in order to successfully implement the overall strategy and help plan for land use decisions regarding industrial/commercial land development.

This report makes a number of recommendations based on the investigation that occurred as interpreted by the authors and as discussed with County administrative staff. It is important that Council continue the process beyond this point and this section provides suggestions on how to proceed after the report is accepted for information.

6.2.1 Economic

- 1. The County should maintain an up-to-date and reliable information database on vacant industrial land, land absorption rates and market trends.
- Attempts should be made, wherever possible, to assist landowners, businesses and prospective new industrial-commercial developers through providing up-to-date potential land sites and parcel details, development process information, and enhanced communication to help facilitate the development of industrial land and buildings with potential developers.
- 3. The County should actively approach and engage those private landowners whose land is identified as a preferred growth area, to gauge interest in developing the land, selling the land, or ascertain long-term interest in using the land.
- 4. If a future secured water supply is secured for a specific business park or area, the County should strive to reserve those areas for industries that require water for processing or manufacturing, and appropriately direct potential business to those areas, and direct non-water users to other areas that may be suitable.

6.2.2 Land Use and Planning

- 1. It should be ensured that there is a minimum two-three year supply of ready or serviced industrial commercial land in various industrial areas, based on current trends and local absorption rates (for the most recent five-year period).
- 2. It is recommended that slightly more land than what is typically developed in a year should be available to prospective business interests, as it takes time to plan for, obtain necessary approvals, subdivide and service land and it cannot be brought to market in a relative short time frame.
- 3. As part of the strategy the County should try to ensure there is continually available a minimum of 70 80 acres of readily accessible land amongst the various business parks and suitable isolated parcels to accommodate development.
- 4. Home occupations should continue to be allowed wherever deemed appropriate, with the County reviewing and monitoring their success or constraints over time. At some point in future time, those home occupations that have successfully grown or desire to expand should be encouraged to relocate to established industrial areas. The County may also wish to expand the parameters of home occupations to enable more flexibility for landowners to operate a commercial business on their property.
- The Highway 3 Lethbridge-Coaldale Corridor and Broxburn area have future development potential, taking advantage of existing transportation systems and synergy opportunities. The long-term protection and planning of lands identified for potential future industrial-commercial growth should

Page | 74

be considered and the Highway 3 Corridor area should remain a 'priority' growth area for Lethbridge County.

- 6. The south Highway 4 Corridor (Taylor Business Park, Wilson Siding area) is considered a "priority" growth area due to the area transportation networks, including highway and rail-line, and growing interest in the area with existing and expanding businesses (refer to Diagrams 8 & 9). In particular, access to the rail transportation network and the possibility of spur-trackage are a significant benefit.
- 7. The long-term planning for available land should consider a strategy of situating it in a number of locations rather than one location only, to assist with market choices and locational factors. Thus, slightly more land than what actually may be developed on a yearly basis needs to be considered overall as part of the planning and economic strategy.
- 8. To continue to support, where deemed suitable, the opportunities for appropriate isolated development to occur, especially for those that enable value added agricultural processing to expand and establish within a rural area closer to the material/commodity source.
- 9. Isolated parcels may be considered for industrial-commercial use, especially those that are agricultural related or support agri-business. Such consideration should include that it is determined the site is appropriate, any servicing required in relation to the proposed need can be provided, roads will not be significantly impacted, and the use is determined not to negatively affect any preestablished residents in proximity.
- 10. All industrial land uses which are considered by the approving authority to be detrimental to public health, safety, and welfare, or those uses which, because of their toxic gases, noxious smells, noise, odour, dust or smoke emissions are incompatible with other developments, should be located on lands specifically established for such uses through the land use designation of the land use bylaw (e.g. zoned 'Rural Heavy Industrial' or 'Direct Control').
- 11. For applications pertaining to isolated industrial uses, the County should request as complete of information as possible on the proposal in order to better track, manage and even direct uses to appropriate locations. Redesignation or development application information should include:
 - data on the use such as number of employees, area required, buildings and signs, traffic impact;
 - site plan which is accurate and shows existing structures, proposed structures, proposed storage area;
 - structure elevations;
 - proposed storage and screening;
 - source of water supply and firefighting supply;
 - drainage plan prepared by an engineer;
 - a statement explaining why the location is requested and why the use should be allowed outside a hamlet or designated clustered/grouped industrial area.
- 12. Where or when development of new industrial land appears stagnant by the private sector, the County may consider playing a strategic and active role either by engaging proactively with landowners or providing assistance in preplanning processes (e.g., undertaking Concept Plans or Area Structure Plans).

- 13. The County has Intermunicipal Development Plans (IDPs) with all if its urban neighbors and in some of the plans areas have been identified where the County may grow and develop land for non-agricultural purposes. The most likely areas to be developed should be considered first for additional planning, engineering or subdivision work that will need to occur by developers prior to selling lots.
- 14. The type of new industrial or commercial business likely to establish in the County may depend on its water usage needs as water availability is limited and the County has no water treatment facility itself. As part of the long-term strategy, the County should continue to examine and pursue all options and arrangements possible to help establish and develop a long-term and stable strategy regarding the provision of water for industry. In consideration of this reality, the ability to expand the industrial and commercial land use sector may be more limited to those uses that only need a limited water supply.
- 15. As part of the strategy, any potential areas which may in the future benefit from or be recipients of water and/or sanitary sewer service should it become available, should be reserved for industrial-commercial land use and not prematurely converted to some other type of use, especially residential.
- 16. The County should be proactive and wherever possible seek new funding methods or sources, and consider new technology for developing major infrastructure required to service industrial/commercial development.
- 17. The design of business parks needs to allow for phasing of subdivision or development in a logical and feasible fashion, so too much land is not removed from agricultural production and is sitting vacant for long periods of time.
- 18. The lands identified as industrial-commercial growth areas should be reserved for those uses and they should not be used for grouped county residential use or other incompatible land uses.
- 19. County Council may consider predesignating in the land use bylaw some priority growth area lands to industrial in order to prevent other unwanted land uses from establishing on the identified lands, and to help streamline the development process for land developers.
- 20. It is recognized that nearly all of the future growth lands identified are presently in an undeveloped raw land state, primarily being utilized for agricultural purposes by private landowners. Therefore, additional consultation, planning and development steps must be undertaken prior to any of these areas being brought on-line for development purposes and these processes will take significant time. In respect of this, the County should timely and actively consult landowners, especially in the 'priority" areas about the development possibilities, and assist with the process as much as it can.
- 21. Prior to land development occurring, additional planning exercises will need to be done for the undeveloped lands identified as growth areas. This would include the preparation and adoption of area structure plans, which typically will include servicing information, engineering evaluation on soils, storm water management engineering, and a transportation access management strategy.
- 22. The County may consider preparing some higher level concept design schemes in specific areas, that illustrate desired design elements and a transportation road network that aligns with adjacent land parcels and both the local municipal and provincial road networks in the vicinity. Any area structure plans subsequently prepared would then be required to "align" with the overall higher concept plan for the larger area. This will help guide planning and ensure cohesiveness between planning areas that will likely be developed over time or in phases.

- 23. The County needs to actively engage and consult with Alberta Transportation as it is the approval authority relating to access on the highway and manages control over how development and traffic may impact the integrity of the highway system, as the majority of identified industrial business parks are adjacent to the provincial highway network.
- 24. The County needs to be in close contact with CPR rail company officials throughout any process of planning adjacent to rail-lines or where access to trackage is desired, especially at the Area Structure Plan stages. All rural service and spur-trackage must conform to the requirements of the CPR and the County adheres to the setback guidelines as prepared and agreed to by the Federation of Canadian Municipalities and the CPR.
- 25. The County may consider undertaking some enhanced form of proactive public pre-engagement for specific industrial-commercial areas when development plans arise, in order to better explain County initiatives and the proposal itself, especially when the land is in proximity to residential uses. Proposed industrial-commercial uses may raise concerns for residents, especially if all the information or plans are not fully known or understood.
- 26. This report may be viewed as the first step in the preparation of a comprehensive policy framework for the promotion and development of an enhanced industrial and commercial sector in Lethbridge County. An overall framework should include policy or strategies related to:
 - protection of higher quality agricultural lands by strategically developing in accordance with the strategy,
 - providing logical and suitable land areas for future business development,
 - reserving and protecting identified future development areas for industrial-commercial uses,
 - managing or guiding future planning processes, such as area structure plan preparation, to be prepared in accordance with this report,
 - applying development standards as provided for in the Land Use Bylaw to approvals, and
 - undertaking the active promotion of Lethbridge County as a choice location for industrialcommercial uses.
- 27. The information and data in this report is based on a snapshot in time and should be reviewed over a period of time, to help better gauge active land development that is occurring and adjust the strategy as deemed necessary. For example, the projection of land consumption is based on past trends and variable data and after a period of time (e.g., 5 years) the estimate may need to be revised.

REFERENCES

Agarwal, A. and Strachan, P. "Is Industrial Symbiosis only a Concept for Developed Countries?" *The Journal for Waste & Resource Management Professionals*, 2008.

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Daniel J Graham, *Identifying urbanization and localisation externalities in manufacturing and service industries*, Imperial College London – Centre for Transport Studies. 2007.

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Lethbridge County: Integrated Community Sustainability Plan, prepared by Oldman River Regional Services Commission, October 2009.

Lethbridge County: Land Use Bylaw No. 1404, October 2013, prepared by Oldman River Regional Services Commission.

Lethbridge County: Municipal Development Plan Bylaw No. 22-001, March 2022, Lethbridge County.

Lethbridge County & City of Lethbridge: Intermunicipal Development Plan, prepared by Oldman River Regional Services Commission, August 2004 (rescinded October 2016); and, new Lethbridge County & City of Lethbridge: Intermunicipal Development Plan, collaboratively prepared by both municipalities, October 2016.

Lethbridge County & Town of Coalhurst: Intermunicipal Development Plan, prepared by Oldman River Regional Services Commission, October 2014 (amended in 2021).

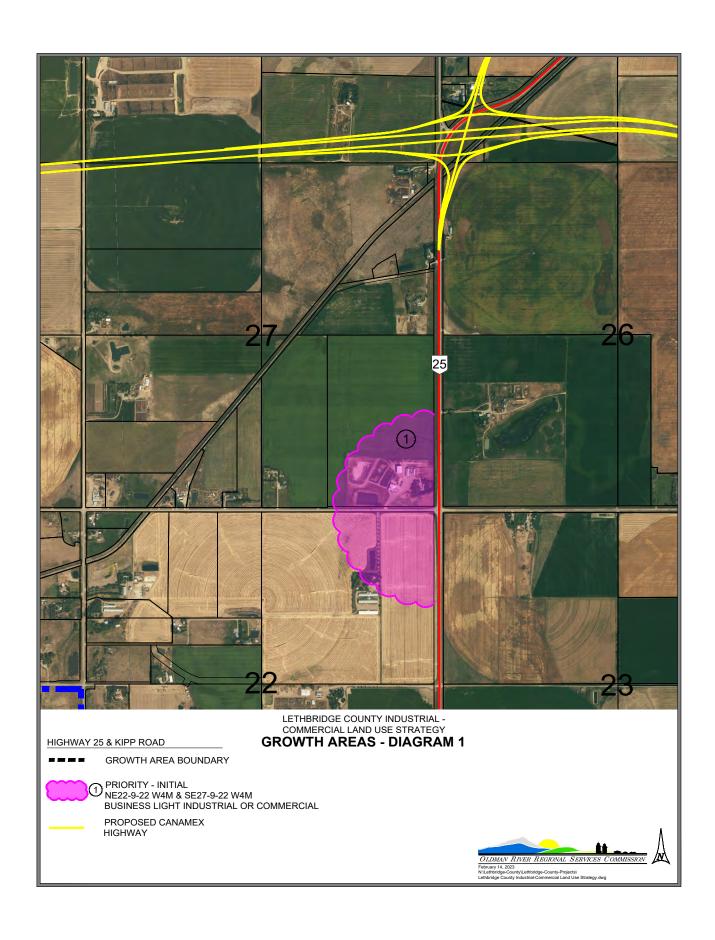
Lethbridge County & Village of Nobleford: Intermunicipal Development Plan, prepared by Oldman River Regional Services Commission, August 2012 (amended in 2019).

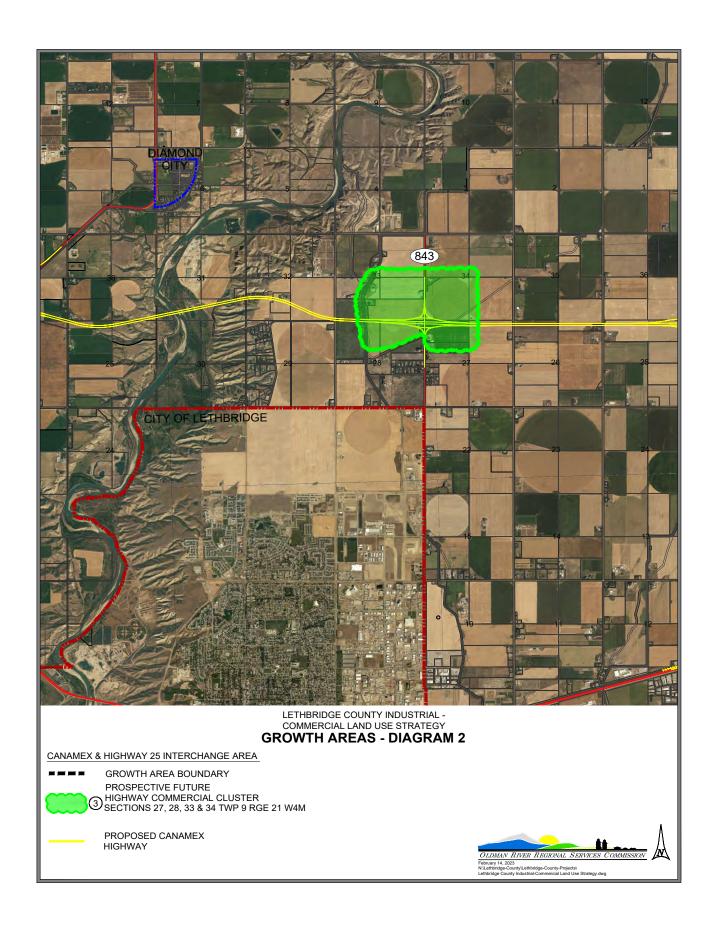
Lethbridge County & Town of Picture Butte: Intermunicipal Development Plan, prepared by Oldman River Regional Services Commission, April 2018

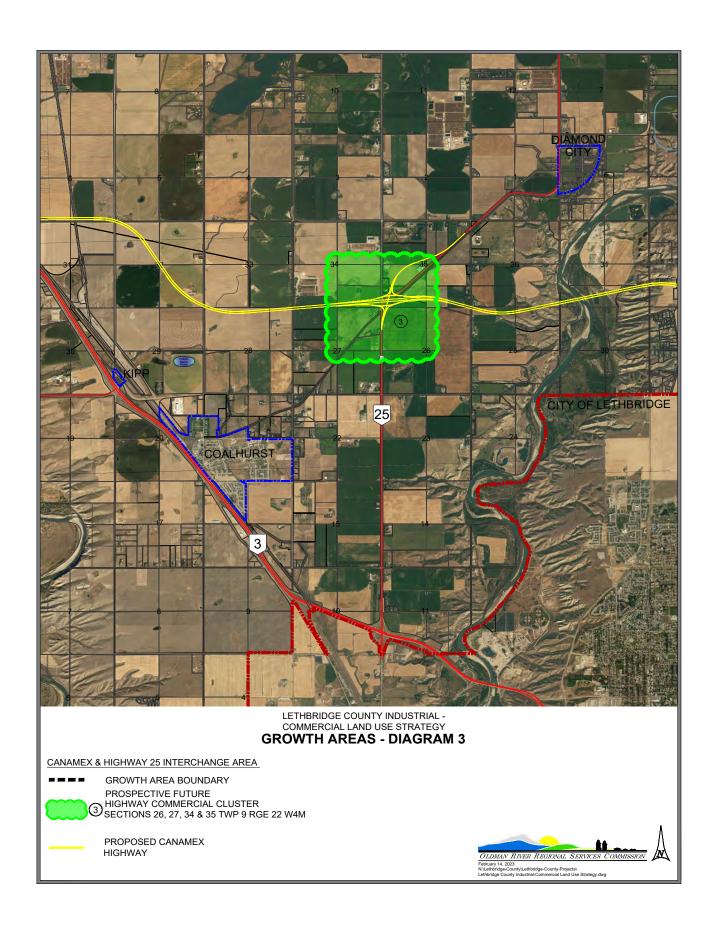
Lethbridge County & Town of Coaldale: Intermunicipal Development Plan, prepared by Lethbridge County and the Town of Coaldale, March 2023

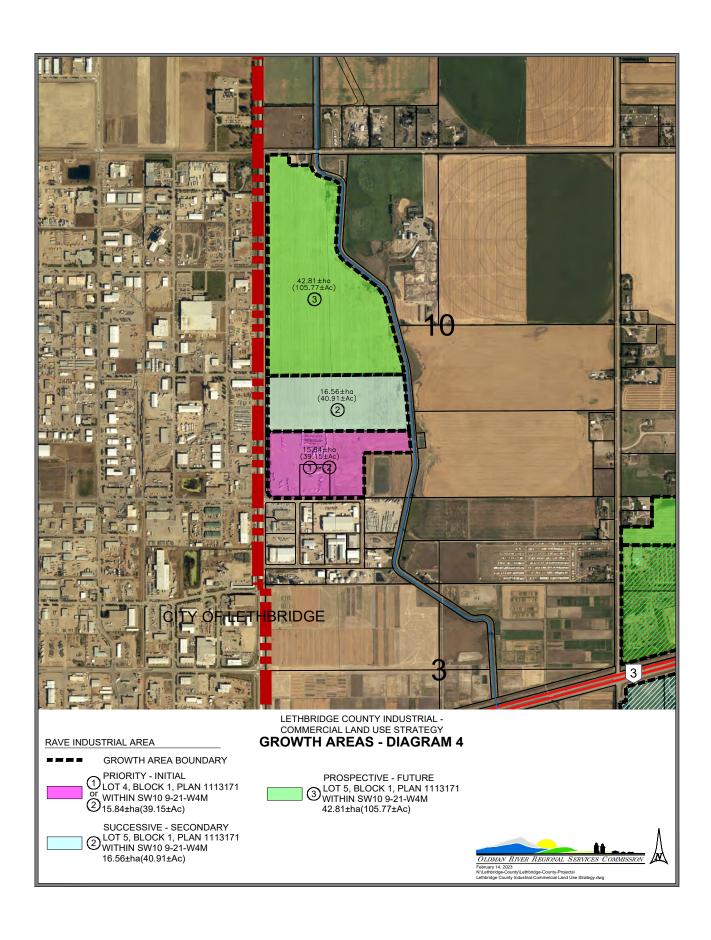
APPENDIX A

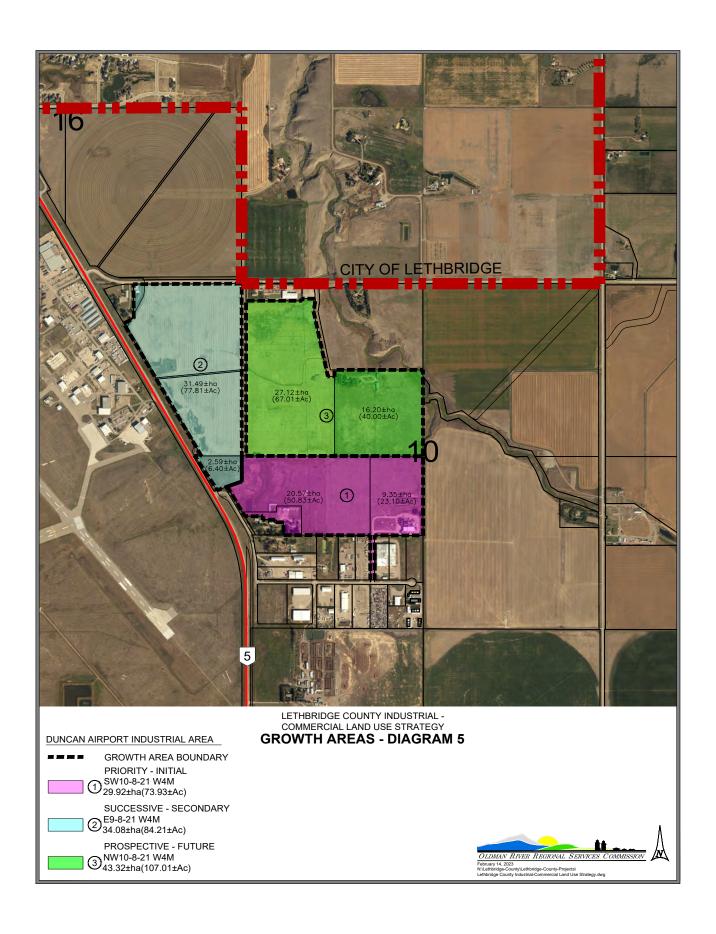
BACKGROUND ANALYSIS MAPS

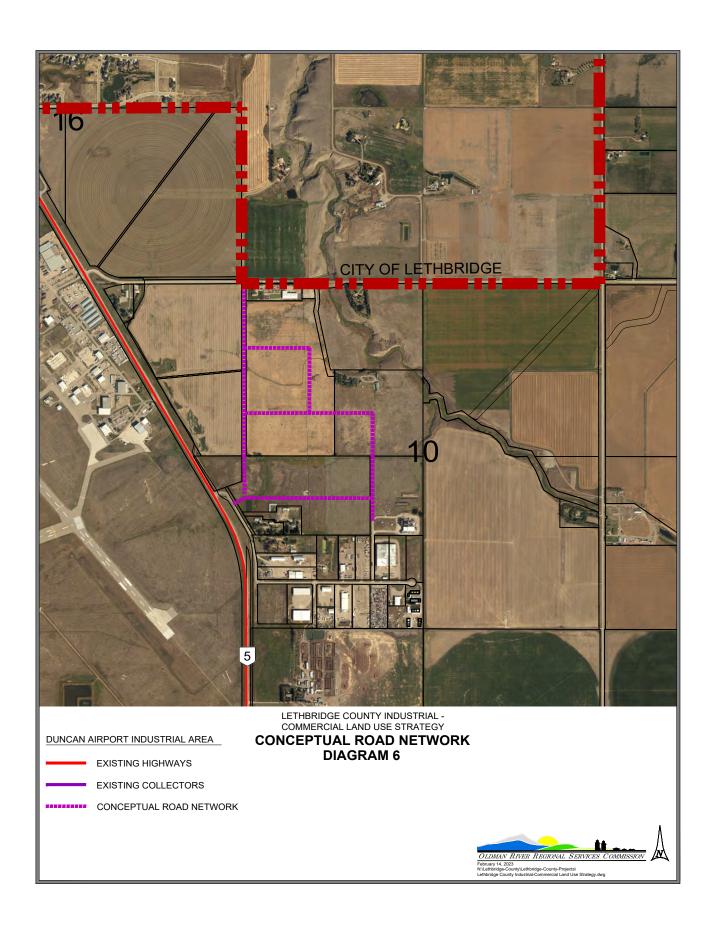


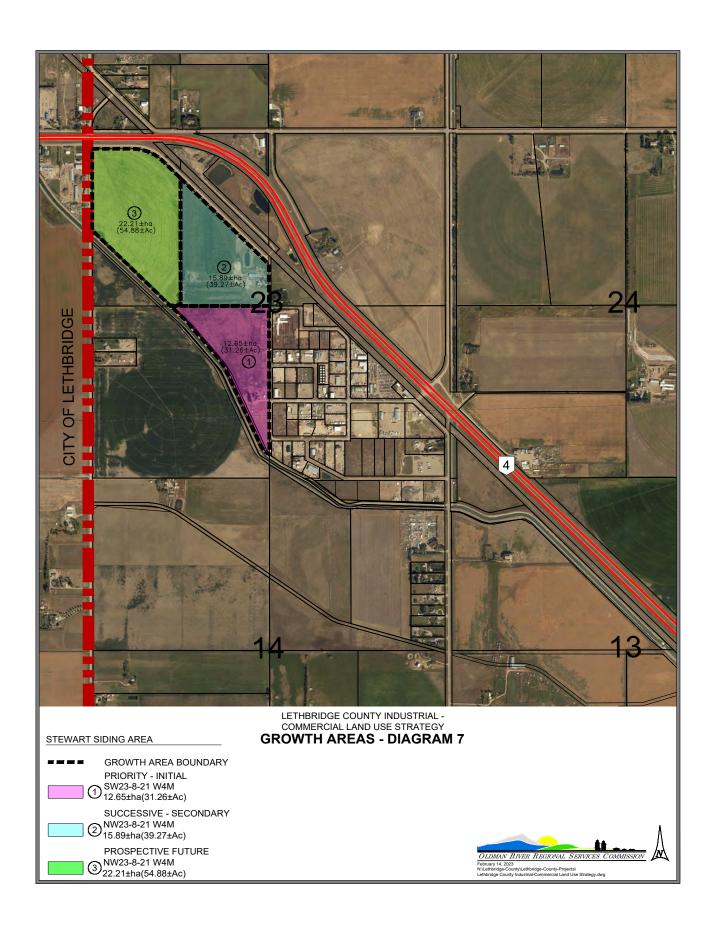


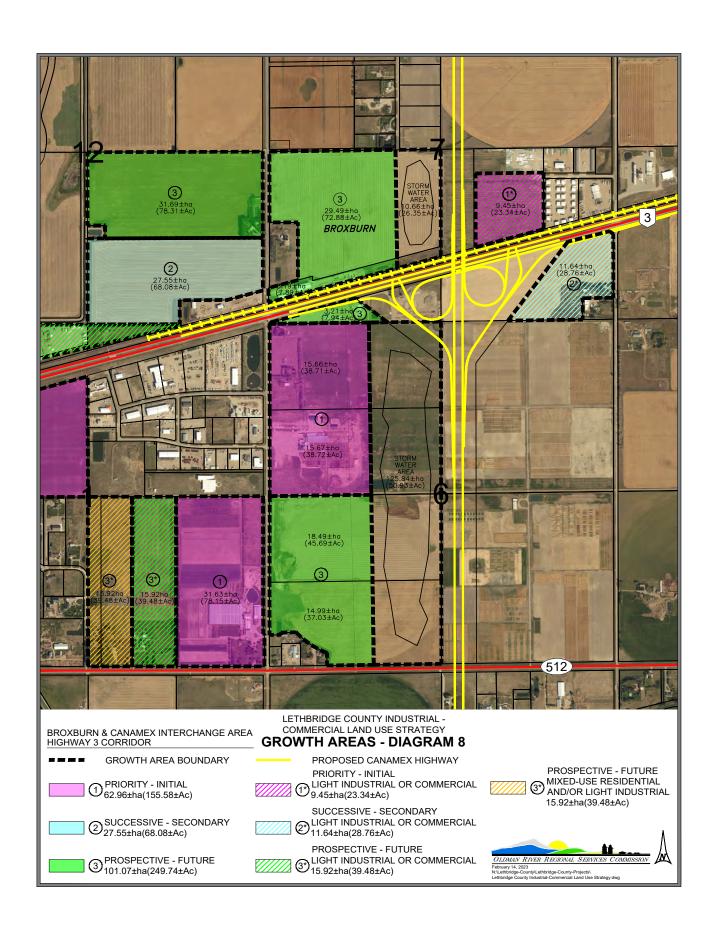


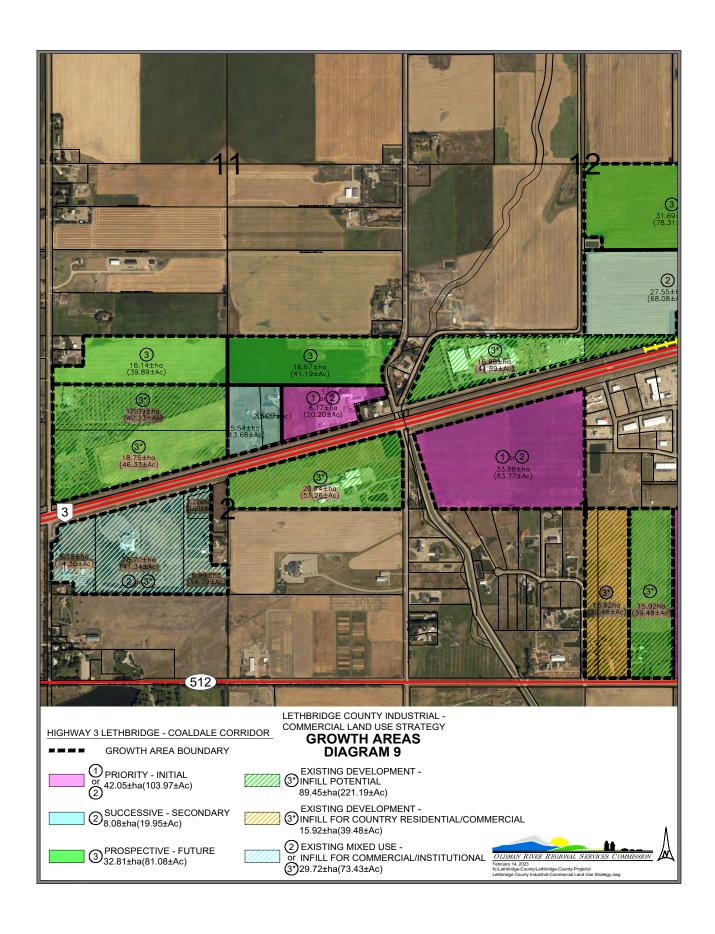


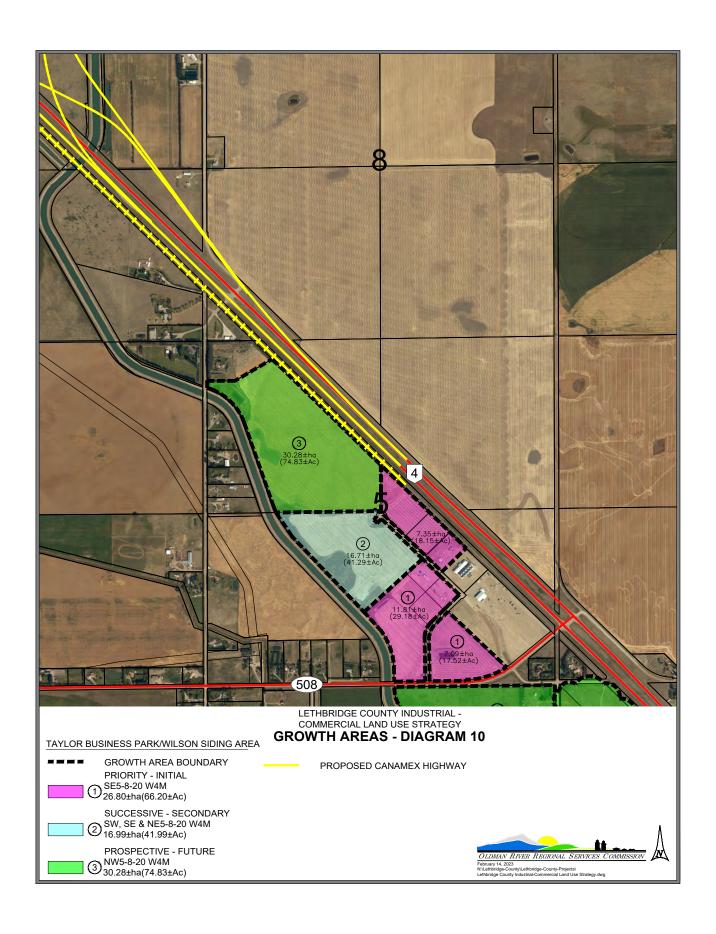


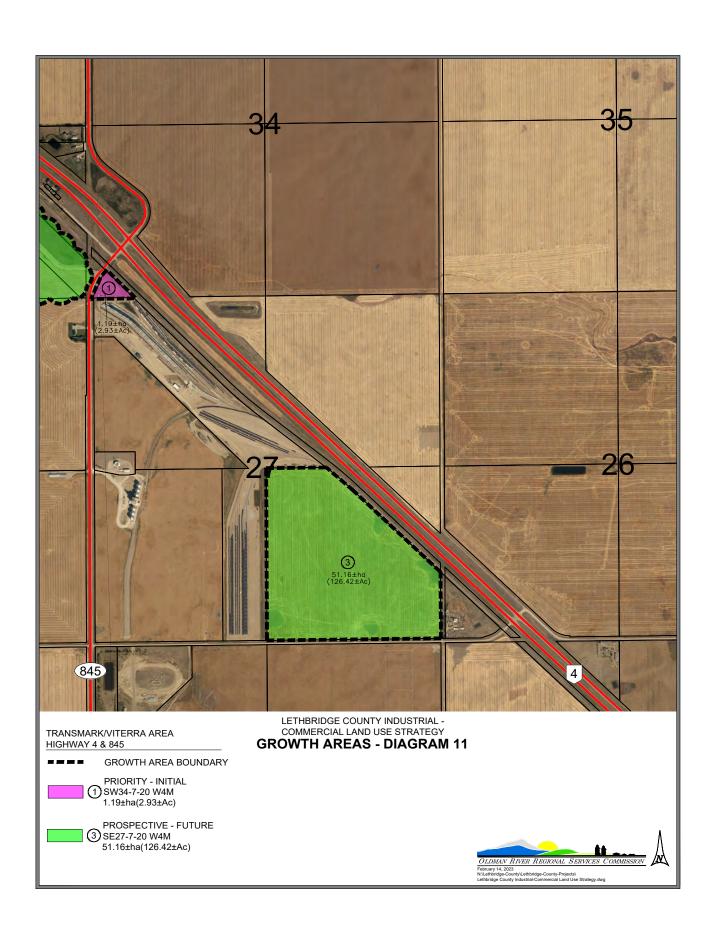


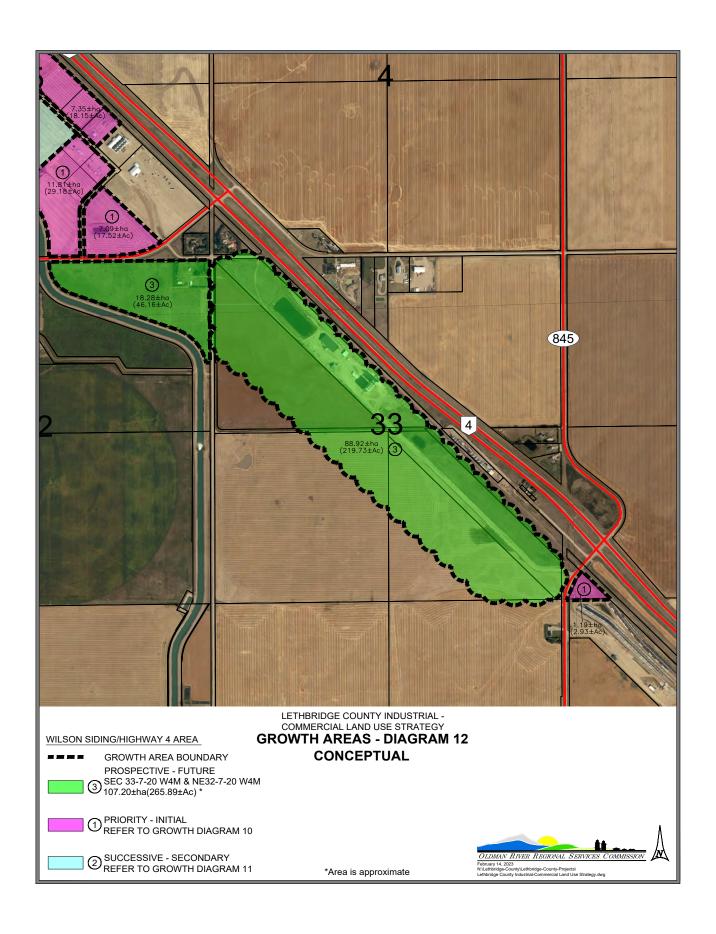


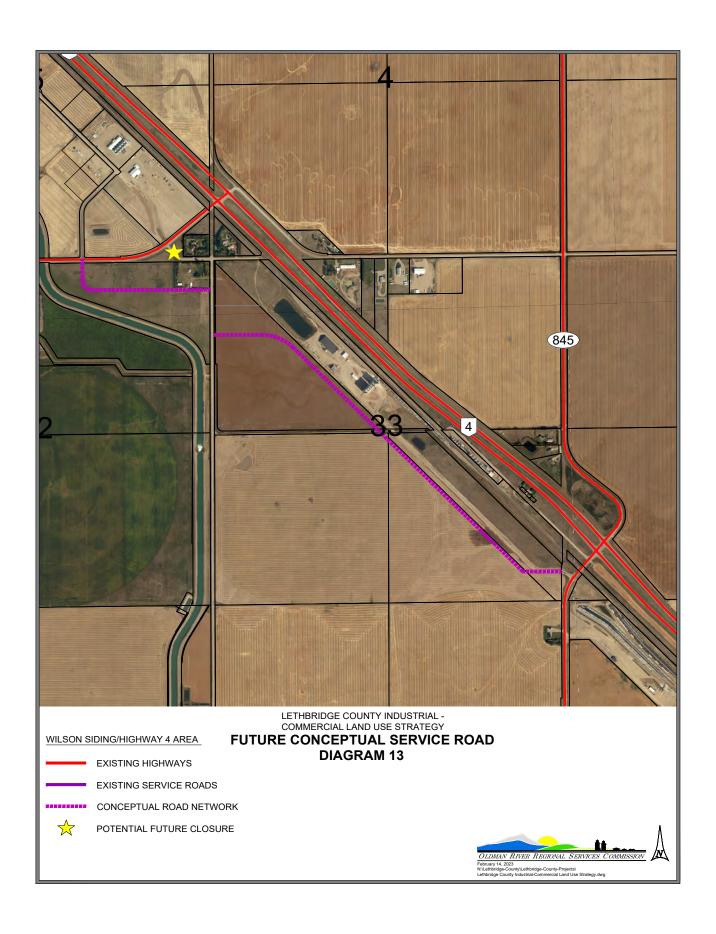


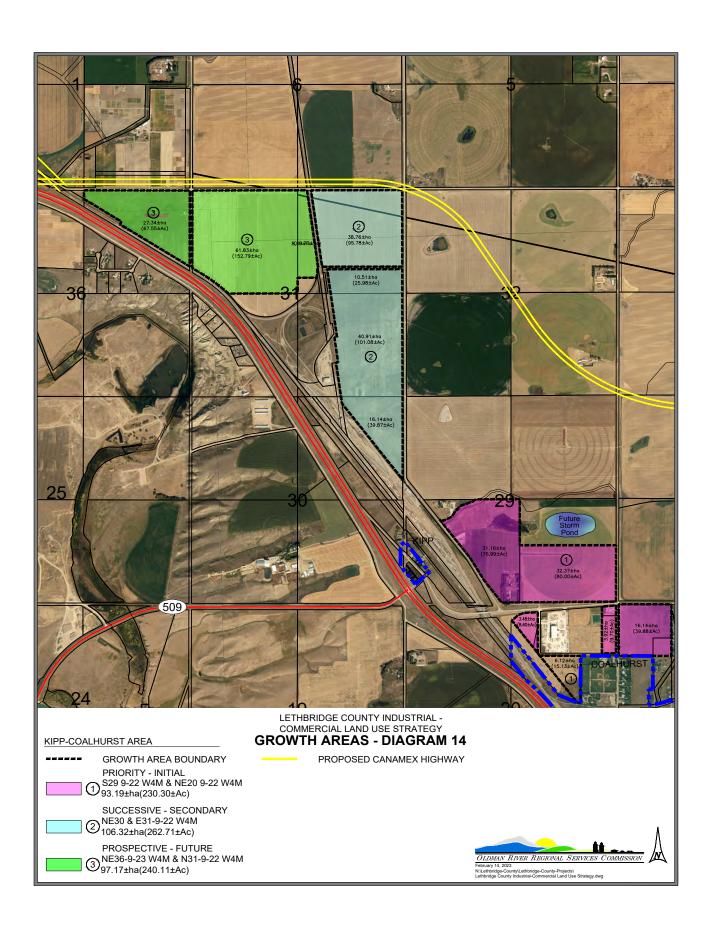


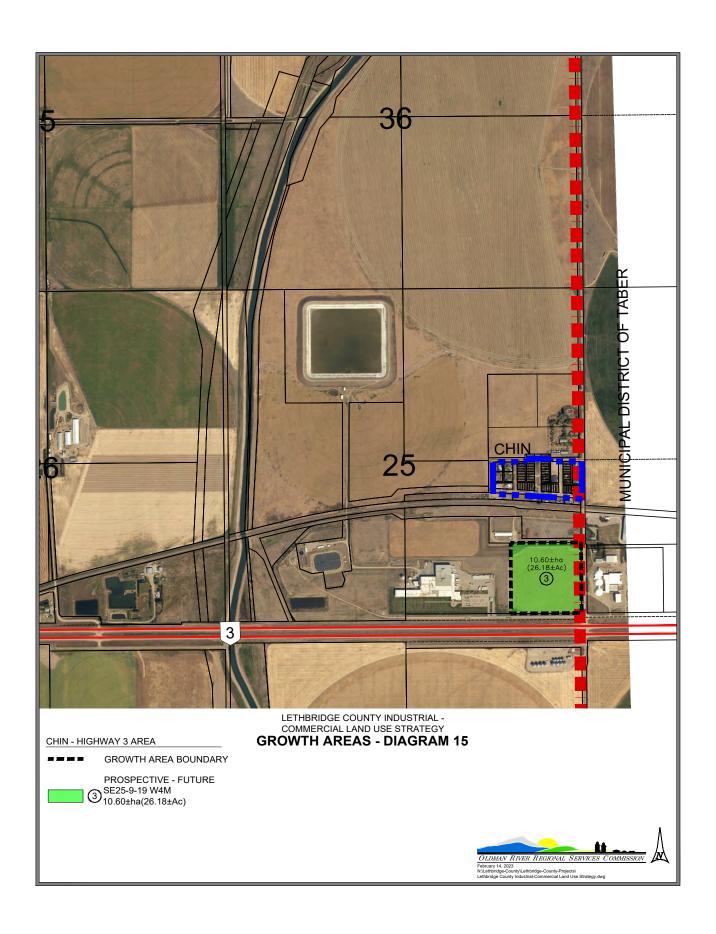












AGENDA ITEM REPORT



Title: Bylaw 23-012 - Road Closure, Sale and Consolidation- First Reading

Meeting: Council Meeting - 20 Apr 2023

Department: Community Services

Report Author: Hilary Janzen

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 11 Apr 2023

STRATEGIC ALIGNMENT:









Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

An application has been made to close all of 4th Street and the adjacent laneways in Iron Springs by the adjacent landowner.

RECOMMENDATION:

That Bylaw 23-012 be read a first time.

REASON(S) FOR RECOMMENDATION(S):

Proceeding with first reading of the bylaw will allow County Administration to set up the Public Hearing time and date and send out the notices to the adjacent landowners and the utility companies.

PREVIOUS COUNCIL DIRECTION / POLICY:

 Policy 109A - Road Allowance Closure and Sale approved by County Council on March 6, 2014 with revisions approved on November 5, 2020.

BACKGROUND INFORMATION:

An application has been made to close all of 4th Street and the adjacent laneways by the adjacent landowner in Iron Springs (as shown on the enclosed map). It has been determined that this road is no longer required as part of the Lethbridge County road network.

If the road closure were successful, the lands would be consolidated with the adjacent properties and all the titles will be consolidated onto one title. Alberta Transportation has been circulated with the proposed road closure and has no objections with the County proceeding with the closure, sale and consolidation.

It is anticipated that the Public Hearing for the road closure will be held during a council meeting in June, 2023.

ALTERNATIVES / PROS / CONS:

County Council may deny first reading of the bylaw if there are concerns with the proposed road closure. This would be contrary to legal advice which has been that first reading of the bylaw shall be given as the applicant and the public have the right to attend and speak at a Public Hearing which is set up upon first reading of the bylaw. The Public Hearing process allows County Council the opportunity to hear out all positions on the bylaw and make an informed decision. If first reading is not given, the applicant would have the right to appeal that decision to the Court of Appeal of Alberta.

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The applicant will be required to pay the assessed land value (\$40,000 per acre) for the roadway and lanes. The total acreage is 0.71 acres so the payment would be \$28,400.

LEVEL OF PUBLIC	PARTICIPATION:			
☐ Inform	X Consult	Involve	Collaborate	Empower

ATTACHMENTS:

Bylaw 23-012 - Road Closure - Lot 10, Bl 6, Plans 6481DI & 8310792

Bylaw 23-012 Road Closure Application

Bylaw 23-012 Road Closure Map

Survey Sketch

BYLAW NO. 23-012

OF LETHBRIDGE COUNTY IN THE PROVINCE OF ALBERTA

A BYLAW OF **LETHBRIDGE COUNTY** FOR THE PURPOSE OF CLOSING TO PUBLIC TRAVEL AND CREATING TITLE TO AND DISPOSING OF PORTIONS OF A PUBLIC HIGHWAY IN ACCORDANCE WITH SECTION 22 OF THE MUNICIPAL GOVERNMENT ACT, CHAPTER M26, REVISED STATUTES OF ALBERTA 2000, AS AMENDED.

WHEREAS, the lands hereafter described are no longer required for public travel.

WHEREAS, application has been made to Council to have the roadway closed, and;

WHEREAS, the Council of LETHBRIDGE COUNTY deems it expedient to provide for a bylaw for the purpose of closing to public travel certain roads or portions thereof, situated in the said municipality and thereafter creating title to and disposing of same and;

WHEREAS, notice of intention of Council to pass a bylaw has been given in accordance with Section 606 of the Municipal Government Act, and;

WHEREAS, Council was not petitioned for an opportunity to be heard by any person claiming to be prejudicially affected by the bylaw;

NOW THEREFORE BE IT RESOLVED that the Council of LETHBRIDGE COUNTY in the Province of Alberta does hereby close to Public Travel and creating title to and disposing of the following described highways, subject to rights of access granted by other legislation.

riginio or dococo grantou by outer tog	jiolatioi II	
	E WITHIN BLOCK 4 AND FOURTH ST OT 10, BLOCK 6, PLAN 0.33 ACRES) MORE OR LESS	REET
AND		
	WITHIN BLOCK 6, FOURTH STREET OF LOT 10, BLOCK 6, PLAN 0.38 ACRES) MORE OR LESS	
EXCEPTING THEREOUT ALL MINI	ES AND MINERALS	
GIVEN first reading this	day of, 2023	3.
	Reeve	
	Chief Administrative Officer	-

X:\Executive Files\115 Bylaws\2023 Bylaw\Bylaw 23-012 - Road Closure - Lot 10, BI 6, Plans 6481DI & 8310792.doc



LETHBRIDGE APPLICATION FOR ROAD CLOSURE

	OFFICE USE	
Date of Application: February 20/2023	Assigned Bylaw	No. 23 -012
Date Deemed Complete:	Application & Processing Fee:	\$ 1500-00
	Assessed Value:	\$ 40,000 per acre

APPLICANT INFORMATION

Name of Applicant:	Timothy + Yolanda Smi	th	
Mailing Address:		Phone:	403 977 0528 (Timothy)
Postal Code:	TOK 1610 Springs	Email:	403 359 1705 (Yolanda) Yolandareimer D. gmail.com
Name of Owner: (if not the applicant) Mailing Address:		Phone:	
Postal Code:		Email:	

ROAD CLOSURE INFORMATION

The applicant shall provide the following information:

- A map showing proposed road closure area and the applicant's property,
- Copy of the certificate of title(s) to which the road closure would be consolidated to,
- Legal Description of the proposed Road Closure (acceptable at the Land Titles Office)
- If there are other adjacent landowners provide written confirmation that they have been consulted with on the proposed road closure,
- Provide the reasons for the road closure request, and
- Application fee payment (See Schedule of Fees).

DECLARATION OF APPLICANT/AGENT

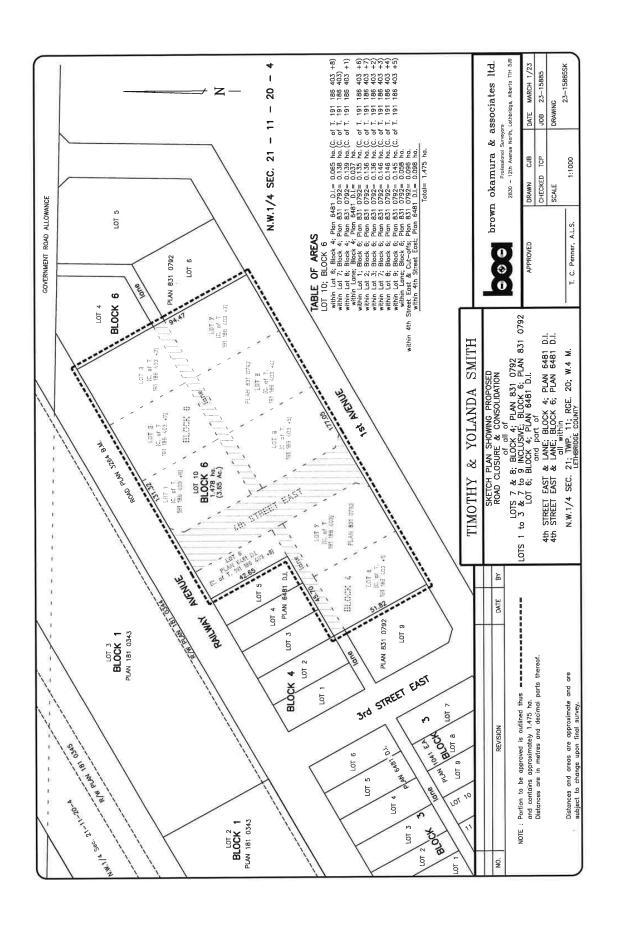
The information given on this form is full and complete and is, to the best of my knowledge, a true statement of the facts in relation to the application.

The applicant is responsible for all road closure costs including the road closure application fee, all costs associated with the Transfer of Land (surveying costs, transfer documents, registration, etc.), land purchase costs (based on the assessed value).

PPLICANT

FOIP STATEMENT: Personal information on this form is collected under the authority of section 33(c) of the Freedom of Information and Protection of Privacy (FOIP) Act. The information collected here will be used to by Lethbridge County for the purposes of reviewing the Road Closure application. **This form is a public record that is available to anyone.** All information contained on this form (including personal information) is disclosed by Lethbridge County to anyone requesting a copy in according with Lethbridge County Policy No. 173 (Freedom of Information and Protection of Privacy (FOIP)). For further information about the collection and use of this information please contact the Lethbridge County FOIP Coordinator at <u>foip@lethcounty.ca</u> or call (403) 328-5525 or come into the office #100, 905-4th Avenue South, Lethbridge Alberta, T1J 4E4.

Note: Information provided or generated in this application may be considered at a public meeting.



Hilary Janzen

From: Yolanda Reimer <yolandareimer@gmail.com>

Sent: March 1, 2023 9:57 AM

To: Hilary Janzen

Subject: Fwd: Note from adjacent land owner

----- Forwarded message -----

From: Timothy Smith < timothydanielsmith94@gmail.com >

Date: Thu., Feb. 16, 2023, 12:47 p.m.

Subject: Fwd:

To: Yoli babe < yolandareimer@gmail.com >

----- Forwarded message ------

From: Abe Wall abrahamironsprings@gmail.com>

Date: Thu., Feb. 16, 2023, 12:46 p.m.

Subject:

To: < Timothydanielsmith 94@gmail.com >

hi this is abe wall I live at 102 3rd st east iron springs and I'm writing this email here on behalf of Tim Smith for him to be able to buy the land in the back alley. I have no interest in buying it so from my side he can buy it.

LETHBRIDGE COUNTY #100, 905 - 4 AVENUE SOUTH LETHBRIDGE, ALBERTA T1J 4E4

TELEPHONE: (403) 328-5525

FAX: (403) 328-5602 OFFICIAL RECEIPT

SMITH, TIMOTHY D. & YOLANDA REIMER PO BOX 22

IRON SPRINGS AB TOK 1G0

CANADA

GST Reg. #: R106989023 Receipt #: 0342398 Date: 2023/02/28

Description Opening Bal Payment Amount Due Account # ___________ ROAD CLOSURE 1,497.12 1,497.12 .00 AR07389

** Payment Total: 1,497.12

1,497.12 Interac Debit Card INTERAC

> There was a small credit on acct Muthe



AGENDA ITEM REPORT



Title: Proclamation of 'Economic Development Week' - May 8-12, 2023

Meeting: Council Meeting - 20 Apr 2023

Department: Community Services

Report Author: Larry Randle

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 17 Mar 2023

STRATEGIC ALIGNMENT:









Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

May 8-12 is 'Economic Development Week' for 2023. For the third year in a row, Alberta Municipalities and Rural Municipalities of Alberta are joining Economic Developers Alberta to encourage municipalities, large and small, to formally recognize and celebrate Economic Development Week.

RECOMMENDATION:

That Lethbridge County proclaim May 8-12, 2023 as 'Economic Development Week'.

REASON(S) FOR RECOMMENDATION(S):

Lethbridge County can continue to provide leadership and influence at no cost by joining other Alberta municipalities in proclaiming 'Economic Development Week' in 2023. It is a symbolic and positive message to county residents, businesses, neighboring municipalities and the province that economic development is of recognized importance to Lethbridge County.

PREVIOUS COUNCIL DIRECTION / POLICY:

Lethbridge County has previously recognized and proclaimed 'Economic Development Week'.

BACKGROUND INFORMATION:

'Economic Development Week' is observed annually in early-to-mid May, and is a chance for economic development professionals, organizations and municipalities to highlight the importance of economic development and growth for the continued prosperity and sustainability of communities, provinces and countries. The week is typically recognized with proclamations, news releases, social media postings, etc.

ALTERNATIVES / PROS / CONS:

Alternative: Do not proclaim 'Economic Development Week' for 2023.

FINANCIAL IMPACT	:			
There is no cost involv 8-12, 2023.	ed in Lethbridge Co	ounty proclaiming	Economic Developme	ent Week' from May
LEVEL OF PUBLIC I	PARTICIPATION:			
⊠ Inform	Consult	☐ Involve	Collaborate	☐ Empower
ATTACHMENTS:				
ATTACHMENTS:				

2023 Econmic Development Week Proclamation



ECONOMIC DEVELOPMENT WEEK PROCLAMATION

May 8 - May 12, 2023

WHEREAS, communities rely on economic development professionals to promote economic well-being and quality of life; for communities like Lethbridge County that means coordinating activities that create, retain, and expand jobs in order to facilitate growth, enhance wealth, and provide a stable tax base; and

WHEREAS, economic developers stimulate and incubate entrepreneurism in order to help establish the next generation of new businesses, which is the hallmark of Alberta's economy; and

WHEREAS, economic developers are engaged in a wide variety of settings including rural and urban, local, state, provincial, and federal governments, public-private partnerships, chambers of commerce, universities, and a variety of other institutions; and

WHEREAS, economic developers attract and retain high-quality jobs, develop vibrant communities, and improve the quality of life in their regions; and

WHEREAS, economic developers work in Lethbridge County within the Province of Alberta.

NOW THEREFORE BE IT RESOLVED, that Lethbridge County recognizes May 8 through May 12, 2023 as Economic Development Week, and reminds individuals of the importance of this community celebration which supports expanding business opportunities and making lives better.

Reeve		

AGENDA ITEM REPORT



Title: Water Co-op Liaison Committee Bylaw and Terms of Reference

Meeting: Council Meeting - 20 Apr 2023

Department: Municipal Services

Report Author: Larry Randle

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 13 Apr 2023

STRATEGIC ALIGNMENT:











Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

Council has directed Administration to draft a bylaw and Terms of Reference for the establishment of a council committee that will work more closely with water co-ops located in the county. The attached bylaw and Terms of Reference are for council's consideration.

RECOMMENDATION:

That Water Co-op Liaison Committee Bylaw No. 23-015 be read a first time.

That Water Co-op Liaison Committee Bylaw No. 23-015 be read a second time.

That third reading of Water Co-op Liaison Committee Bylaw No. 23-015 be considered.

That Water Co-op Liaison Committee Bylaw No. 23-015 be read a third time.

That Water Co-op Liaison Committee Terms of Reference be approved.

REASON(S) FOR RECOMMENDATION(S):

In accordance with the Municipal Government Act section 145, a committee of council must be established by bylaw. Terms of Reference help to further refine the specific purpose, scope, composition, goals, authority and other administrative details of a committee.

PREVIOUS COUNCIL DIRECTION / POLICY:

Previously, there has not been a committee or formalized practice for communicating with and enhancing working relationships with the water co-ops.

BACKGROUND INFORMATION:

At the April 6, 2023 council meeting, the following resolution was adopted:

MOVED to direct administration to draft a bylaw and Terms of Reference for the formation of a committee for the purpose of working with the water co-ops.

Over the past year or more, council has periodically discussed opportunities for improving the county's working relationships with the water co-ops. The water co-ops provide potable water to customers in Lethbridge County and it is therefore, beneficial to ensure that the county and the water co-ops work closely together to maximize cooperation, resources and to enhance service delivery efficiency.

The creation of a Water Co-op Liaison Committee with a mandate to provide recommendations to Council on the development of administrative policies and bylaws respecting water co-ops will greatly assist with this goal. The committee will work closely with the water co-ops in a spirit of cooperation that recognizes the mutual benefits that working more closely together toward common goals and interests brings.

ALTERNATIVES / PROS / CONS:

Option 1: Establish a Water Co-op Liaison Committee by bylaw and Terms of Reference.

Pros: Should enhance the county's ability to meet more frequently as needed with water co-ops and thereby improve communication and working relationships.

Establishing the committee is supported by council's Strategic Plan.

Cons: No drawbacks to establishing the committee have been identified.

Option 2: Maintain the status quo and do not establish a Water Co-op Liaison Committee.

Pros: There would be one fewer council committees to occupy council members' time and energy.

Cons: Forgoes the opportunity to try something new and to improve relationships with external stakeholders.

	_			
FINANCIAL IMPAC	T:			
No direct financial im	pact from establishir	ng the committee is	s anticipated.	
'		0	•	
LEVEL OF PUBLIC	PARTICIPATION:			
LLVLL OI FOBLIC	FAITHGIFATION.			
⊠ Inform		□		□_
△ Inform	L Consult		Collaborate	□ Empower
·				
ATTACHMENTS:				

Bylaw 23-015 - Water Co-op Liaison Committee Bylaw 04-09-2023 Water Co-op Liaison Committee Terms of Reference

LETHBRIDGE COUNTY IN THE PROVINCE OF ALBERTA

BY-LAW NO. 23-015

A BYLAW OF LETHBRIDGE COUNTY, IN THE PROVINCE OF ALBERTA, TO ESTABLISH A WATER CO-OP LIAISON COMMITTEE

WHEREAS, pursuant to the Municipal Government Act, RS.A. 2000, c M-26, section 145, a Council may pass bylaws in relation to the establishment, functions and procedures to be followed by council Committees and other bodies:

NOW THEREFORE, the Council of Lethbridge County, duly assembled hereby enacts as follows:

1. BYLAW TITLE

1.1 This bylaw shall be cited as "Water Co-op Liaison Committee Bylaw No. 23-015".

2. EFFECTIVE DATE

2.1 This Bylaw shall come into force and effect after it receives third reading and has been signed.

3. NAME

3.1 The Committee established under this bylaw shall be named the "Water Co-op Liaison Committee."

4. **DEFINITIONS**

- 4.1 In this Bylaw, unless the context otherwise requires
- a. "Council" means the Council of Lethbridge County
- b. "Committee" means the Water Co-op Liaison Committee
- c. "Water Co-op" may include any or all of the following:
 - Lethbridge North County Potable Water Co-op (LNCPWC)
 - County of Lethbridge Rural Water Association (COLRWA)
 - Iron Springs Water Association

5. PURPOSE

5.1 The Water Co-op Liaison Committee represents Council in providing effective municipal governance by meeting with, communicating with, and working generally with Water Co-ops in Lethbridge County on matters relating to compliance with all regulatory requirements, safeguarding of municipal and Co-op assets as they relate to the treatment and distribution of potable water, and the efficient, effective and where feasible, coordinated use of resources.

The Committee provides communication between Council and Water Co-ops. It works cooperatively with Water Co-ops to help facilitate the objective, impartial, and most beneficial potable water management practices.

6. AUTHORITIES GRANTED

6.1 The Committee shall only act upon direction of council and at all times, represent the position of council regarding all matters related to the Water Co-ops. The Committee may make recommendations to council which council may then adopt, reject, amend and adopt or provide further instructions to the Committee before making a decision and providing direction on the Committee's recommendation.

7. TERMS OF REFERENCE

7.1 The Committee Terms of Reference are established separately by Council and may be amended and approved only by a majority vote of all Council members.

8. COMMITTEE COMPOSITION AND TERM OF APPOINTMENT

8.1 The Committee shall consist of three Council members who shall be elected and subsequently appointed upon creation of the Committee, and thereafter at the annual Organizational Meeting of Council. The term for each Committee member shall be until the next Organizational Meeting or until a successor is elected. The Committee shall select its chairperson from among its members. A quorum shall be any two Committee members.

9. AMENDMENT AND REPEAL

- 9.1 This bylaw may be amended or repealed by Council at a duly called meeting only when either:
 - a. notice of the intended amendment or repeal has been made at the previous regular council meeting; or
 - b. the proposed change(s) is clearly indicated on the agenda for the meeting at which it is intended to occur, and the agenda has been distributed to all council members in advance of the meeting, in accordance with the Council Procedural Bylaw. A majority vote in the affirmative must be achieved for any changes to be adopted.

10. SEVERABILITY

10.1 If any portion of this bylaw is declared invalid by a court of competent jurisdiction, then the invalid portion must be severed and the remainder of the bylaw is deemed valid.

GIVEN first reading this day of _	, 2023
	Reeve
	Chief Administrative Officer
GIVEN second reading thisday o	f, 2023
	Reeve
	Chief Administrative Officer
GIVEN third reading this day of	, 2023
	
	Reeve

Chief Administrative Officer



Lethbridge County Water Co-op Liaison Committee Terms of Reference

Purpose

The purpose of the Water Co-op Liaison Committee (hereinafter referred to as the Committee) Committee is to advise and assist County Council on matters that relate to Water Co-op activities and regulatory service issues in Lethbridge County. The Committee was established by Council to facilitate communication and policy making with respect to the administrative and governance opportunities and challenges of providing services to Water Co-ops. The Committee will have the responsibility to provide recommendations to Council on the development of administrative policies and bylaws respecting Water Co-ops that reflect the County's best interests, as established by Council. Another primary role of the Committee is to work closely with the Water Co-ops in a spirit of cooperation that recognizes the mutual benefits that working together toward common goals and interests brings.

The Committee will, at its discretion, submit program and policy recommendations to County Council for final approval.

Scope

The Committee will:

- •Act as an advisory body and to assist the council and the Water Co-ops in matters of mutual concern.
- Promote, enhance, and protect practical and sustainable potable water provision with a view to improving the economic viability of the County and the Water Co-ops.
- Develop and promote potable water policies to help meet the needs of the municipality.

Official Formation & Participants

The Committee is established as per the Municipal Government Act Section 145.

The Committee is comprised of three Council members, appointed in accordance with Water Co-op Liaison Committee Bylaw No 23-015. Members of Council will be appointed at the Annual Organizational Meeting.

A Committee Chair will be appointed by the Committee members at its inaugural meeting and shall be reviewed on or at the first meeting after its anniversary date, at which time the appointment may change. All members of the Committee are voting members. The County Reeve is an Ex-officio non-voting member, unless he is appointed to the Committee in which case he shall have all the rights, privileges and obligations of the other Committee members.

The Committee will also include County administrative staff members, as follows:



- The Chief Administrative Officer (CAO)
- The Director of Public Operations
- The Executive Assistant or alternately appointed person

Administrative staff are non-voting committee members. They are responsible to provide the Committee administrative and technical support, as necessary to meet the Committee's needs.

The Director of Public Operations in conjunction with the Executive Assistant to the CAO or delegate are responsible to schedule meetings, prepare agendas and maintain meeting notes or minutes.

Goals and Objectives

The Committee will evaluate the current effectiveness of its working relationships with the Water Co-ops and recommend applicable changes for presentation to County council. The objective is to address mutual local and regional challenges, research new opportunities and make recommendations that support the County's Strategic Plan while also supporting the mission of the Water Co-ops.

Governance

Decisions will be reached by majority vote of Committee members.

Meetings

The Committee is responsible to Council and will report its deliberations and actions to Council through meeting minutes and, verbally by the Committee Chair, as needed.

Meetings among the Committee itself are held regularly, with a minimum of twice per year. Additional meetings will be identified, as required, by the Chair. Meetings with the Water Co-ops shall be held as required and agreed upon by the Committee and the Water Co-ops.

Agendas for the meetings will be distributed by email to committee and administrative staff members at least 3 days prior to the meeting date. On the day of the meeting a hard copy will be provided, by request of Committee members, at least 1 day in advance of meeting.

Authority and Responsibilities

The Committee is accountable to Council and is not entitled to sub-delegate all or any of its delegated powers and authorities. The Committee may not implement or authorize any action that is the responsibility of Council.

Quorum

A quorum requires a minimum attendance of two voting Committee members.

Review

The Committee Terms of Reference will be reviewed every five (5) years, from the date of approval.

AGENDA ITEM REPORT



Title: Donation Request - Courageous Companions

Meeting: Council Meeting - 20 Apr 2023

Department: Community Services

Report Author: Larry Randle

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 08 Apr 2023

STRATEGIC ALIGNMENT:











Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

A donation request from Courageous Companions has been received to support their 2023 campaign for their annual edition of Courageous K9 Magazine.

RECOMMENDATION:

That Council donates \$570.00 to Courageous Companions for a banner ad in their Courageous K9 Magazine, in accordance with Donations Policy No. 161.

REASON(S) FOR RECOMMENDATION(S):

This request by Courageous Companions aligns with the general content and intent of the County's donations policy.

PREVIOUS COUNCIL DIRECTION / POLICY:

The County's Donations to Community Organizations, Programs, Events & Activities Policy No. 161 lays out the criteria for Council donations.

BACKGROUND INFORMATION:

A request to provide a donation to a registered and established charitable fundraising organization has been received. Courageous Companions is an extraordinary organization which provides certified service dogs to military veterans and first responders who suffer with physical and/or psychological injuries as a result of their service.

Service dogs are provided at no charge, which is why Courageous Companions relies entirely on the support of individuals, service organizations and the business community. Without this support, this important publication would not be possible. Courageous Companions are a 100% volunteer-driven organization that strives to restore dignity, rebuild confidence, and increase the quality of life for our brave men and women who serve in uniform.

ALTERNATIVES / PROS / CONS:
Option 1. Provide a \$570.00 donation.
Pros:
Aligns with the County's donation policy.
Aligns with the "Relationships" pillar in the County's Strategic Plan.
Cons:
Reduces the donations reserve by \$570.00.
Option 2. Deny the request for a \$570.00 donation.
Pros:
Maintains the current balance in the donations reserve.
Cons:
Difficult to justify denying the request based on the donations policy.
Alternative: Donate a different amount selected by Council. Other options include:
Back Covers - \$2200.00
Inside Covers - \$1600.00
Full Page - \$1300.00
1/2 Page - \$870.00
1/4 Page - \$670.00
Banner - \$570.00
1/8 Page - \$395.00
Business Card - \$295.00
FINANCIAL IMPACT:
The County's donation reserve balance is currently \$151,918.61. If Council supports the request, this
would decrease by \$570.00.
LEVEL OF PUBLIC PARTICIPATION:
☐ Involve ☐ Collaborate ☐ Empower
ATTACHMENTS:
Courageous Companions
Donations Policy 161

Subject: Courageous K9 Advertising Information

Dear Council,

We hope to have our request added to the agenda for an up coming Council meeting. Please accept this email as our official sponsorship request for the 2023 campaign. Thank you for your time and consideration. Please feel free to email or call the office at 1-866-767-1731. We hope to have Lethbridge County join us in support of Courageous Companions. We look forward to hearing from you. Have a wonderful day! www.courageousk9.ca

Courageous Companions is an extraordinary organization which provides certified service dogs to military veterans and first responders who suffer with physical and/or psychological injuries as a result of their service. Service dogs are provided at no charge, which is why Courageous Companions relies entirely on the support of individuals, service organizations and the business community. Please help by placing a sponsorship ad or message of support in our upcoming annual edition of Courageous K9 Magazine. In return, we will send you a full colour copy of the yearbook once it has been published. To learn more and to see our rates and stories from our last edition, please visit our website, www.courageousk9.ca. Without the support of the business community, this important publication would not be possible. We hope to count on your participation.

Yours truly, Stacey Biekx T: (866) 767-1731

E: sponsor@courageousk9.ca
W: www.courageousk9.ca

Back Covers \$2200.00 Inside Covers \$1600.00 Full page \$1300.00 1/2 page \$870.00 1/4 page \$670.00 Banner \$570.00 1/8th page \$395.00 Business Card \$295.00



EFFECTIVE: August 1, 2013 SECTION: 100 NO. 161 Page 1 of 7

APPROVED BY: County Council SUBJECT: Donations to Community

Organizations, Programs,

Events & Activities

REVISED DATE: November 24, 2014

Purpose

> To establish consistent guidelines for Council to donate financial resources or provide in-kind support to community programs, organizations, events & activities.

- > To provide the authority to the Chief Administrative Officer (CAO) regarding requests for donations up to a value of \$200.
- > To provide clear procedures for Administration and Council to provide and respond to requests for donations.

Policy Statement

Lethbridge County appreciates the positive contributions that community organizations make to the quality of life in the County, and recognizes that municipal government support may be required to help further the goals of community programs, organizations, events and activities.

Policy Guidelines and Procedures

1. Eligibility

- a. Consideration of providing support of community programs, organizations, events and activities through donations shall be limited to those that demonstrate any of the following:
 - (i) a need for financial support or specific in-kind from the County;
 - (ii) are held for the enjoyment and benefit of the general public;
 - (iii) are hosted on a yearly basis or recognize significant milestones events; and/or
 - (iv) take place within the County boundaries.
- b. The following are not eligible for support under this policy
 - (i) private functions;
 - (ii) capital facilities and equipment including requests for gravel donations;



EFFECTIVE: August 1, 2013 SECTION: 100 NO. 161 Page 2 of 7

APPROVED BY: County Council SUBJECT: Donations to Community

Organizations, Programs,

Events & Activities

REVISED DATE:

youth and adult sports teams and associated programs/events, activities and school reunions; and

- (iv) programs, organizations, events and activities that receive support from the County through other programs or policies.
- (v) major County and inter-County events (eg. Lethbridge International Air Show).
- c. Requests for financial assistance for capital items should be made through the Land Trust Reserve Fund Grant Program. Applicants who receive funding through the Land Trust Reserve Fund Grant Program are not eligible to also receive support under this Policy in the same calendar year.

2. Donations

- a. Donations may be cash or in-kind contributions
- b. In-kind contributions are donations that do not involve a direct cash contribution but instead might include providing promotional items or County services or other materials or supplies.

3. Criteria

- a. In evaluating each application, decisions will be based on merit with consideration being given to the following:
 - (i) evidence for the need:
 - (ii) number of local residents served;
 - (iii) quality of management (established track record, proposal well thought out, etc.);
 - (iv) number of local volunteers;



EFFECTIVE: August 1, 2013 SECTION: 100 NO. 161 Page 3 of 7

APPROVED BY: County Council SUBJECT: Donations to Community

Organizations, Programs,

Events & Activities

REVISED DATE:

- mitigation of barriers to services for people with mental and physical disabilities and minority groups;
- (vi) level of involvement with other community partners;
- (vii) agreement to acknowledge the County's contribution in all publicity related events or activities relating to the event.

4. Funding Allotment & Allocation

- a. The County shall support this policy through an annual budget allotment to establish the amount of cash or goods and services in-kind that the County is able to donate, based on the following:
 - \$0.50 per capita based on the current year's official population of Lethbridge County. Applicants are able to request a maximum amount of \$500 or up to \$1,000 for in-kind donations.
 No gravel will be granted. The funds will be provided from the Donations Reserve. Any donations exceeding the policy limits will be allocated from Councillor's Discretionary Reserve funds.

5. Grant Applications

- a. Applications must be completed in full and contain the following:
 - (i) name, address and contact information for the organization;
 - (ii) the amount of financial support being requested;
 - (iii) a description of the program, event or activity and associated dates and timelines:
 - (iv) a budget identifying the proposed revenue and expenditure pertinent to the request;
 - (v) an explanation of how the County's support will be recognized during the program, event or activity.



EFFECTIVE: August 1, 2013 SECTION: 100 NO. 161 Page 4 of 7

APPROVED BY: County Council SUBJECT: Donations to Community

Organizations, Programs,

Events & Activities

REVISED DATE:

- (vi) completed application forms must be submitted to the County. If the application is not properly filled-out, the grant application will not be considered.
- (vii) must be received at least 30 days before the date of the need for support.
- b. County Council shall be the deciding authority on all applications, except for donation requests of \$200 or less, which the CAO will have the authority to approve.

6. Accountability of Funds

- a. Applicants will be notified in writing once a final decision on their application has been made.
- b. Applicants who are provided with support pursuant to this policy shall be accountable for the expenditures of funds provided.
- c. The entire amount of financial support provided must be used exclusively for the program, organization, event or activity identified in the application.
- d. The community programs, activities and events must be conducted within six months of the date the donation is approved.
- e. If the community programs, activities or events do not occur within the allotted time, a written letter of request for an extension must be submitted. If an extension is not received, or if an extension is not granted, the community organization or group shall return all the funds provided by the County.
- f. The County's support must be recognized during the program, event or activity in the manner described in the application.



Lethbridge County Policy Handbook

EFFECTIVE: August 1, 2013 SECTION: 100 NO. 161 Page 5 of 7

APPROVED BY: County Council SUBJECT: Donations to Community

Organizations, Programs,

Events & Activities

REVISED DATE:

g. Organizations, programs, events and actives receiving support pursuant to this policy must be conducted in accordance with all applicable laws, statutes, and regulations.

7. Door Prizes

a. If the request is for a door prize, silent auction item or other similar promotional item, a written request is required. Funds for door prizes, silent auctions items or promotional items of a value of a \$200 or less shall be decided upon by the CAO.



Lethbridge County Policy Handbook

--- DONATION REQUEST APPLICATION ---

Community Organization:
Name:
Address:
Phone Number/Cell Number:
Board of Directors (Names & Positions):
Amount of Funding Requested or Description of In-Kind Donation Requested:
\$
Description of Request including Timelines:
Other sources of funding:
Total cost of program, event or activity: \$
Total Budget:



Lethbridge County Policy Handbook

Description of how Lethbridge County's contribution may be recognized:		
Other supporting information (Please attach separate sheet if necessary):		
Name (please print)		
Signature on behalf of Community Organization		
Date		
Phone Number:		
Email:		
Address:		
*** Donations made by Lethbridge County are not to be regarded as a commitment by the County to continue such donations in the future.		



The journey from burn patient to burn survivor is a long and painful one. It is sustained by confidence, passion and unparalleled courage. Confronting the challenges imposed by a lifetime of pain and disfigurement is just the beginning for most burn survivors. They must also struggle to heal the emotional and psychological trauma that can be equally painful and overwhelming.

The Alberta Fire Fighters' Burn Camp hosts a weeklong camp every summer for young burn survivors. This time at camp is a special time when young burn survivors can just be kids again. There is no one staring, teasing or making fun of them, in fact there is no special attention paid to physical appearance at all.

Our campers come from all areas of Western Canada to experience a week of learning new skills in a safe, yet challenging environment and leave with a sense of achievement and appreciation of their own abilities. Doctors, Nurses and Firefighters donate their time as organizers, medical staff, counselors and mentors. They participate in group activities such as swimming, hiking, challenge ropes, archery and a special water fight with the local Fire Departments, including Redwood Meadows, Calgary, Kananaskis and Edmonton. However; camp is not all fun and games, campers also create that valuable network of friends and mentors that aid them in their continued recovery as a burn survivor.

Burn Camp is heavily dependent on the donations it receives through its parent organization, The Edmonton Firefighters Burn Treatment Society, and is proud of the relationships that have been built with many of Alberta's communities and their fire departments. The Alberta's Firefighters' Burn Camp for Children is fully funded through the donations received through previous letter campaigns and the funds generated from our fundraising events. With that said, we are reaching out and asking for your generous support in continuing Burn Camp's 35 year legacy with a small donation. Whether it's sponsoring a camper for a day at \$200, or for the full week at \$1000; your donation will make a young burn survivor's wish of attending camp a reality. Thank you in advance for your generosity.

If you have questions about The Alberta Fire Fighters' Burn Camp for Children or you would like additional information about making a donation, volunteering or joining us for the water fight at camp please feel free to contact me.

Thank you for your continued support,

Laura Vey BScN, RN

Director of Camp

The Alberta Fire Fighters' Burn Camp for

Camp@efbts.ca | 780 691 0447

The Edmonton Firefighter's Burn Treatment Society

Suite 1, 7024 - 101 Avenue, NW Edmonton, Alberta, Canada. T6A 0H7



The Alberta Fire Fighters' Burn Camp for Children 2023

The Alberta Fire Fighters' Burn Camp for Children 2023

In conjunction with

THE EDMONTON FIREFIGHTER'S BURN TREATMENT SOCIETY

Suite 1, 7024 101 Ave, NW. Edmonton, Alberta. T6A 0H7.

Registered Charity #118915933-RR-0001

Please accept this donation on behalf of:

Name:		
Address:		
Phone:	Email:	
	nes payable to the Edmonton Firefighter's Burn Tr please contact Laura Vey, Director of Burn Camp. <u>Camp@e</u>	



Our communities are founded on the expertise, compassion and strength of nurses.

Let's CELEBRATE that.

If anything, the last few years have shone a light on what industry-insiders have always known. Nurses are the backbone of Alberta's healthcare system. Vibrant, critical, indispensable – filled with character, grace and compassion, nurses are the heart and soul of the whole operation.

May 8-14 is National Nursing Week: Our Nurses. Our Future.

A time to come together, stand proud, share our stories, laugh, listen, grow, support and celebrate. We encourage towns and cities across Alberta to reflect on the impact nurses have in your communities. Take the opportunity to build awareness, celebrate and highlight the diversity of nurses and the roles they play in Alberta. **Print, post, and share the poster attached** to inspire your community to celebrate nursing week. Use hashtags to contribute and to help grow the collective. #OurNursesOurFuture #IKnowANurse #NationalNursingWeek, or find your community's own unique way to celebrate nurses!

If you'd like more information on the Alberta Association of Nurses or Nursing Week, please visit albertanursing.ca or connect with us on social media at @alberta_nursing.



The Alberta Association of Nurses (AAN) was created to support, promote and advocate for ALL nurses. LPNs, NPs, RPNs, RNs, nursing students and retired nurses...belong here.

We've seen generous growth since our May 2022 inception, with over 10,000 nurses adding their voices to the collective. We strive to be the go-to resource for all things professional development, but equally important, we encourage our members to connect with each other, building a supportive, vibrant engaged nursing community.

Unrsing Week

May 8-14, 2023

albertanursing.ca | @alberta_nursing





International Nursing Week is an annual celebration that the Alberta Association of Nurses (AAN) is excited to be a part of. With 10,000 members and counting, we have a lot to celebrate!

This year, the theme for Nurses Week is **Our Nurses, Our Future**. The Canadian Nurses Association shares, "This theme showcases the many roles that nurses play in a patient's health-care journey. The pandemic brought to light the courage and commitment that nurses work under every day and showed the important role that nurses play in the community."

This Nursing Week, we encourage you to reflect on the progress that has been made in nursing and healthcare, celebrate the nurses around you, and get inspired for the future of nursing in Canada.

How to celebrate Nursing Week if you are a...

NURSE

- Share photos and stories that highlight the diversity of your role, your team and your work in healthcare
- <u>Nominate a "Notable Nurse"</u> that AAN should recognize
- Share your "Words of Wisdom" with AAN for us to highlight and share with the nursing community
- Register for Spark 2023 taking place May 4 & 5 and join other Alberta nurses to explore nursing's most pressing issues
- Take advantage of local deals offered during Nurses Week
- · Celebrate by decorating your nursing station





- Organize a breakfast, party, or ceremony for your nursing team
- Make note cards available for the nurses on your unit to send to their colleagues, highlighting what they appreciate most about the nurses on their team
- Put together a care basket for your team to enjoy, or small personal gifts for each nurse
- Set up a photo booth for nurses and post the pictures on your unit and hospital bulletin boards
- Provide tools and resources for stress management (host a yoga or meditation moment, on-site massage chair, access to health apps, helpful articles)





Find information and download assets here.

COMMUNITY MEMBER

- Send a "thank you" card to a nurse
- Drop a package of snacks and personal care items off at your local healthcare office or hospital
- Raise public awareness of Nursing Week by posting about it on social media
- Get in touch with your political representatives to voice support for nurses (<u>Take Action with CNA</u>)

AGENDA ITEM REPORT



Title: Lethbridge County Council Attendance Update - March 2023

Meeting: Council Meeting - 20 Apr 2023

Department: Administration Report Author: Candice Robison

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 08 Apr 2023

STRATEGIC ALIGNMENT:









Governance

Relationships

Region

Prosperity

EXECUTIVE SUMMARY:

To remain transparent to its citizens, Lethbridge County Council members report on their activities and events attended throughout the month.

RECOMMENDATION:

No motion required.

REASON(S) FOR RECOMMENDATION(S):

To remain transparent to the citizens of Lethbridge County.

PREVIOUS COUNCIL DIRECTION / POLICY:

A County Council update is provided monthly.

BACKGROUND INFORMATION:

In order to remain transparent to its citizens, Lethbridge County Council members provide a monthly report on their activities and events for the prior month.

ALTERNATIVES / PROS / CONS:

By not reporting activities and events attended by members of Council, citizens are unaware of the events occurring within the region and are unaware of the participation of Council with regards to community events.

FINANCIAL IMPACT:

None at this time.

LEVEL OF PUBLIC PARTICIPATION:

⊠ Inform	Consult	☐ Involve	Collaborate	☐ Empower
ATTACHMENTS:				

<u>Lethbridge County Council Attendance - March 2023</u>

Lethbridge County Council Attendance March 2023

Division 1 Councillor Lorne Hickey

March 1	FCSS Meeting
March 2	Lethbridge County Council Meeting
March 3	CAO Search Meeting
March 6	CAO Search Meeting
March 9	Industrial Commercial Land Use Strategy Workshop
March 15	Lethbridge County/City of Lethbridge IDP Meeting
March 16	Lethbridge County Council Meeting
March 19-22	RMA Spring Convention
March 22	Green Acres Finance Meeting
March 28	ASB Meeting
March 29	Green Acres Board Meeting
March 31	CAO Search Meeting

Division 2 Reeve Tory Campbell

March 1	Virtual Meeting with CAO Search Firm
March 2	Lethbridge County Council Meeting
March 2	Rotary Scholarship Dinner
March 3	CAO Search Meeting
March 3	Mayors and Reeves
March 3	Canada's Premier Food Corridor Meeting
March 6	CAO Search Meeting
March 7	Meeting re: Draft CAO Contract with Legal Advice
March 7	Virtual RMA Meeting re: Unpaid Oil & Gas Taxes
March 7	Media
March 8	Exhibition Park Board Meeting
March 9	Industrial Commercial Land Use Strategy Workshop
March 9	"From the Field" Virtual Oldman Watershed Event
March 13	CAO Search Meeting
March 14	Exhibition Park Ottawa Trade Mission De-brief
March 15	Lethbridge County/City of Lethbridge IDP Meeting
March 15	EDL AGM
March 16	Lethbridge County Council Meeting
March 17	Safety Audit Interview
March 17	Chinese Consul General Meeting
March 17	Horsefly Regional Emergency Spillway Groundbreaking Ceremony
March 20-22	RMA Spring Convention
March 23	Virtual Meeting with CAO Search Firm
March 27	Bursary Voiceover Recording
March 28	Highway 3 Infrastructure Virtual Meeting

March 28	Virtual Meeting with CAO Search Firm
March 29	Meeting with McCain Representatives
March 30	Southern Alberta Economic Development Forum
March 31	Virtual Meeting with CAO Search Firm & Council
March 31	Deputy Fire Chief Gettman Retirement Send-off

Division 3

Councillor Mark Sayers

March 2	Lethbridge County Council Meeting
March 3	CAO Search Meeting
March 6	CAO Search Meeting
March 11	Coaldale Library Open House
March 19-22	RMA Spring Convention
March 30	Southern Alberta Economic Development Forum
March 31	CAO Search Meeting

Division 4

Deputy Reeve John Kuerbis

March 2	Lethbridge County Council Meeting
March 3	CAO Search Meeting
March 6	CAO Search Meeting
March 9	Industrial Commercial Land Use Strategy Workshop
March 15	Lethbridge County/City of Lethbridge IDP Meeting
March 15	Lethbridge County/Town of Nobleford IDP Meeting
March 16	Lethbridge County Council Meeting
March 20-22	RMA Spring Convention
March 24	Safety Audit Interview
March 28	ASB Meeting
March 31	CAO Search Meeting

Division 5

Councillor Eric Van Essen

March 2	Lethbridge County Council Meeting
March 3	CAO Search Meeting
March 6	CAO Search Meeting
March 9	Picture Butte Chamber of Commerce
March 9	Industrial Commercial Land Use Strategy Workshop
March 15	Lethbridge County/Town of Nobleford IDP Meeting
March 16	Lethbridge County Council Meeting
March 20-22	RMA Spring Convention
March 28	ASB Meeting
March 31	CAO Search Meeting

Division 6

Councillor Klaas VanderVeen

March 2	Lethbridge County Council Meeting
March 3	CAO Search Meeting
March 6	CAO Search Meeting
March 16	Lethbridge County Council Meeting
March 19-22	RMA Spring Convention
March 20	EOEP Course
March 24	SAEWA Meeting
March 28	ASB Meeting
March 30	Southern Alberta Economic Development Forum
March 31	CAO Search Meeting

Division 7 Councillor Morris Zeinstra

March 2	Lethbridge County Council Meeting
March 3	CAO Search Meeting
March 6	CAO Search Meeting
March 8	Prairie Tractor Annual Meeting
March 9	Industrial Commercial Land Use Strategy Workshop
March 16	Lethbridge County Council Meeting
March 19-22	RMA Spring Convention
March 31	CAO Search Meeting