



AGENDA

Council Meeting

9:00 AM - Thursday, June 1, 2023
Council Chambers

Page

	A. CALL TO ORDER
	B. ADOPTION OF AGENDA
	C. ADOPTION OF MINUTES
4 - 9	1. <u>County Council Meeting Minutes</u> <u>Council Meeting - 18 May 2023 - Minutes</u>
	D. DELEGATIONS
10 - 16	1. <u>9:30 a.m. - Green Acres Foundation - Dawna Coslovi (CEO) & Jeff Carlson (Board Chair)</u> <u>Green Acres Foundation - Report to the Community 2022</u>
	E. PUBLIC HEARINGS - 10:00 A.M.
17 - 29	1. <u>Bylaw 23-012 - Road Closure, Sale and Consolidation- Public Hearing</u> <u>Bylaw 23-012 - Road Closure, Sale and Consolidation - Public Hearing</u>
	F. SUBDIVISION APPLICATIONS
30 - 39	1. <u>Subdivision Application #2023-0-044 – Green Life Farms Ltd. - NW1/4 36-10-20-W4M</u> <u>Subdivision Application #2023-0-044 – Green Life Farms Ltd. - NW1/4 36-10-20-W4M</u>
40 - 50	2. <u>Subdivision Application #2023-0-043 – Green Life Farms Ltd. - Section 35-10-20-W4M</u> <u>Subdivision Application #2023-0-043 – Green Life Farms Ltd. - Section 35-10-20-W4M</u>
51 - 59	3. <u>Subdivision Application #2023-0-057 – Shimek - NW1/4 22-11-21-W4M</u> <u>Subdivision Application #2023-0-057 – Shimek - NW1/4 22-11-21-W4M</u>

- 60 - 67 4. **Subdivision Application #2023-0-059 – K. Sugimoto & Sons Ltd. - Sec. 12-7-21-W4M**
[Subdivision Application #2023-0-059 – K. Sugimoto & sons Ltd. - Sec. 12-7-21-W4M](#)

G. DEPARTMENT REPORTS

G.1. COMMUNITY SERVICES

- 68 - 78 G.1.1. **Bylaw 23-018 - Reconfigure the land use districts for portions of NW 21-11-20-W4 and Plan 1810343 Block 1 Lot 1 - First Reading**
[Bylaw 23-018 - Re-designate Portions of NW 21-11-20-W4 and Plan 1810343 Block 1 Lot 1- First Reading](#)
- 79 - 87 G.1.2. **Bylaw 23-014 - Road Closure, Sale and Consolidation- First Reading**
[Bylaw 23-014 - Road Closure, Sale and Consolidation - First Reading](#)
- 88 - 368 G.1.3. **Bylaw 23-002 - Country Crossroads Estate Area Structure Plan and Bylaw 23-003 Land Use Bylaw Amendment (Rural Agriculture to Grouped Country Residential) - Second Reading**
[Bylaw 23-002 - Country Crossroads Estate Area Structure Plan and Bylaw 23-003 Land Use Bylaw Amendment \(Rural Agriculture to Grouped Country Residential\) - Second Reading](#)
- G.1.4. **Alberta Advantage Immigration Program - Opportunity for Lethbridge County (Verbal Update from Administration)**

G.2. ADMINISTRATION

- 369 - 370 G.2.1. **Land Acknowledgement Statement**
[Land Acknowledgement Statement](#)

G.3. INFRASTRUCTURE

- 371 - 374 G.3.1. **RAVE Industrial Park Infrastructure Upgrades - Tender Results**
[RAVE Industrial Park Infrastructure Upgrades - Tender Results](#)
- 375 - 378 G.3.2. **Local Improvement Tax - Counter Petitions**
[Local Improvement Tax - Counter Petitions](#)

G.4. PUBLIC OPERATIONS

379 - 380 G.4.1. **2023 Calgary Stampede BMO Farm Family Awards**
[2023 Calgary Stampede BMO Farm Family Awards](#)

381 - 396 G.4.2. **2024 Capital Equipment Purchasing**
[2024 Capital Equipment Purchasing](#)

G.5. FINANCE AND ADMINISTRATION

397 - 400 G.5.1. **Water Pipeline Purchase Borrowing Bylaw 23-016**
[Water Pipeline Purchase Borrowing Bylaw 23-016](#)

H. CORRESPONDENCE

401 - 406 1. **Town of Coaldale - 2023 Coaldale Summer Fest and Candy Parade Invitation**
[Town of Coaldale - 2023 Coaldale Summer Fest Candy Parade Invitation](#)

407 - 408 2. **MP Thomas - Community Builders Awards**
[MP Thomas - Community Builders Awards](#)

409 3. **STARS - Donation Thank You**
[STARS - Donation Thank You](#)

410 - 414 4. **Ukrainian Day Celebration Invitation**
[Ukrainian Day Celebration Invitation](#)

I. CLOSED SESSION

1. **Economic Development Opportunity (FOIP Section 16 - Disclosure harmful to business interests of a third party)**

2. **Administration Meeting with Blood Tribe (FOIP Section 21 - Disclosure harmful to intergovernmental relations)**

3. **Land Request (FOIP Section 21 - Disclosure harmful to intergovernmental relations)**

4. **Chief Administrative Officer Appointment (FOIP Section 19 - Confidential Evaluations)**

J. COUNTY COUNCIL AND COMMITTEE UPDATES

K. NEW BUSINESS

L. ADJOURN



MINUTES
Council Meeting
9:00 AM - Thursday, May 18, 2023
Council Chambers

The Council Meeting of Lethbridge County was called to order on Thursday, May 18, 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 – 9:03 a.m.
Interim Chief Administrative Officer, Larry Randle
Director of Infrastructure, Devon Thiele
Director of Finance & Administration, Jennifer Place
Interim Director of Community Services, Hilary Janzen
Executive Assistant, Candice Robison
Senior Planner, Steve Harty

A. CALL TO ORDER

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

B. ADOPTION OF AGENDA

163-2023 Councillor MOVED that the May 18, 2023 Lethbridge County Council Meeting
Sayers Agenda be adopted as presented.

CARRIED

C. ADOPTION OF MINUTES

C.1. County Council Meeting Minutes

164-2023 Councillor MOVED that the May 4, 2023 Lethbridge County Council Minutes be
VanderVeen adopted as presented.

CARRIED

D. SUBDIVISION APPLICATIONS

**D.1. Subdivision Application #2023-0-040 – 1000824 Alberta Ltd.
- Lot 5, Block 1, Plan 1113171 within W1/2 10-9-21-W4M (Chinook Park)**

165-2023 Deputy MOVED that the Industrial subdivision of Lot 5, Block 1, Plan 1113171
Reeve within W1/2 10-9-21-W4M (Certificate of Title No. 111 286 315 +1), to
Kuerbis create nine industrial lots, ranging in size from 2.89-acres to 12.60-
acres (1.17 to 5.10 ha), two PULs, a registered roadway, and a
residual 83.89-acre (33.95 ha) parcel, from a title of 147.18-acres
(59.56 ha), for both rural general industrial and business light industrial
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 63.29-acres at the market value of \$50,000 per
acre with the actual acreage and amount to be paid to Lethbridge

County be determined at the final stage, for Municipal Reserve purposes.

AND FURTHER that a Deferred Reserve caveat be registered on the remnant 83.89-acre title to reflect the 10% reserve requirement, with the actual acreage and amount to be paid to Lethbridge County be determined at the final stage, 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 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. This agreement may address the provision of roads, drainage, future servicing and the provision of any applicable servicing fees and offsite levy payments applicable.
- 3. That an easement agreement and surveyed drainage easement plan, as prepared by an Alberta Land Surveyor, shall be provided to be registered for a 10-metre strip of land dedicated for drainage along the entire south and east perimeter of the subdivision.
- 4. That a final subdivision plan of survey, as prepared by an Alberta Land Surveyor, shall be provided for final endorsement as approved.
- 5. If not addressed through the terms of the Development Agreement, the applicant is responsible for payment of the applicable servicing and off-site levy fees payments, applicable to their acreage share, including the City of Lethbridge fees.
- 6. That any easement(s) as required by utility companies, or the municipality shall be established.
- 7. That any requirements or conditions of Alberta Transportation be provided.

CARRIED

G. DEPARTMENT REPORTS

G.1. FINANCE AND ADMINISTRATION

G.1.1. Bylaw 23-017 Tax Mill Rate Third Reading

166-2023 Deputy Reeve Kuerbis MOVED that the 2023 Tax Mill Rate Bylaw 23-017 be read a third time.

CARRIED

G.2. ADMINISTRATION

G.2.1. Policy 186 - Committee Members at Large Remuneration

167-2023 Councillor VanderVeen MOVED that County Council approve Policy 186 - Committee Members at Large Remuneration.

CARRIED

G.3. INFRASTRUCTURE

G.3.1. Letter of Support - Town of Coaldale Disaster Mitigation and Adaptation Fund Application (DMAF)

168-2023 Deputy Reeve Kuerbis MOVED that Council approve a letter of support and authorize the Town of Coaldale's application under the Disaster Mitigation and Adaptation Fund for the South Coaldale Regional Stormwater Management Facility project on behalf of the Town of Coaldale, Lethbridge County and the Saint Mary River Irrigation District.

CARRIED

G.4. PUBLIC OPERATIONS

G.5. COMMUNITY SERVICES

H. CORRESPONDENCE

H.1. Eventide Home BBQ & Open House Invitation

Council reviewed the invitation from Eventide Home to attend their BBQ & Open House on May 27, 2023.

H.2. Town of Coaldale - Civic Square Grand Opening Invitation

Council reviewed the invitation from the Town of Coaldale to attend their Civic Square Grand Opening on June 17, 2023.

H.3. Minister of Municipal Affairs

Council reviewed correspondence from the Minister of Municipal Affairs regarding their discussions during their meeting at the Spring RMA Convention.

H.4. Yellowhead County

Council reviewed correspondence from Yellowhead County wherein they were seeking support from municipalities to have Elections Alberta postpone the Provincial Election due to the wildfire situation currently happening in Alberta.

H.5. Town of Coaldale & Tourism Lethbridge - Promoting Tourism in Southern Alberta Networking Event

Council reviewed the invitation from the Town of Coaldale and Tourism Lethbridge to attend the Promoting Tourism in Southern Alberta Networking Event on June 3, 2023.

169-2023	Deputy Reeve Kuerbis	MOVED that any Council members that wish to attend any of the events that invitations have been received for, be encouraged to do so.
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CARRIED

I. COUNTY COUNCIL AND COMMITTEE UPDATES

I.1. Lethbridge County Council Attendance Update - April 2023

Council reviewed the highlights from the Lethbridge County Council Attendance Update for April 2023.

Division 1

Councillor Lorne Hickey

April 5	FCSS Meeting
April 5	FCSS All Councils Meeting
April 6	Lethbridge County Council Meeting
April 18	Audit Committee Meeting
April 18	CAO Candidate Interviews
April 19	CAO Candidate Interviews
April 20	Lethbridge County Council Meeting
April 25	McCain Open House
April 26	Green Acres Board Meeting
April 26	Council Meet & Greet hosted by Picture Butte
April 27	CAO Candidate Interviews

Division 2**Reeve Tory Campbell**

April 5 FCSS All Councils Meeting
April 6 Lethbridge County Council Meeting
April 6 Chinook Arch Board Meeting
April 11 Lethbridge College Road to Ready
April 11 Meeting with MP Thomas
April 11 Fire Services Discussion
April 14 CAO Recruitment Meeting
April 17 Southern Regional Drainage Committee & Governance Meeting
April 18 CAO Candidate Interviews
April 19 CAO Candidate Interviews
April 20 Lethbridge County Council Meeting
April 24 Exhibition Park Ownership Engagement
April 25 McCain Open House
April 27 CAO Candidate Interviews

Division 3**Councillor Mark Sayers**

April 6 Lethbridge County Council Meeting
April 11 Meeting with MP Thomas
April 18 CAO Candidate Interviews
April 19 CAO Candidate Interviews
April 20 Lethbridge County Council Meeting
April 25 Regional Water Commission Meeting
April 25 SouthGrow Meeting
April 26 Council Meet & Greet hosted by Picture Butte
April 27 CAO Candidate Interviews

Division 4**Deputy Reeve John Kuerbis**

April 6 Lethbridge County Council Meeting
April 11 Regional Waste Commission Meeting
April 11 Meeting with MP Thomas
April 18 Audit Committee Meeting
April 18 CAO Candidate Interviews
April 19 CAO Candidate Interviews
April 20 Lethbridge County Council Meeting
April 25 Regional Water Commission Meeting
April 26 Council Meet & Greet hosted by Picture Butte
April 27 CAO Candidate Interviews
April 28 Lethbridge Recovery Center Press Conference

Division 5**Councillor Eric Van Essen**

April 6 Lethbridge County Council Meeting
April 11 Highway 3 Twinning Development Association AGM
April 11 Meeting with MP Thomas
April 13 Picture Butte Chamber of Commerce
April 18 Audit Committee Meeting
April 18 CAO Candidate Interviews
April 19 CAO Candidate Interviews
April 20 Lethbridge County Council Meeting
April 26 Council Meet & Greet hosted by Picture Butte
April 27 CAO Candidate Interviews

Division 6
Councillor Klaas VanderVeen

April 6 Lethbridge County Council Meeting
April 11 Regional Waste Commission Meeting
April 11 Meeting with MP Thomas

Division 7
Councillor Morris Zeinstra

April 6 Lethbridge County Council Meeting
April 11 Meeting with MP Thomas
April 18 CAO Candidate Interviews
April 19 CAO Candidate Interviews
April 20 Lethbridge County Council Meeting
April 26 Council Meet & Greet hosted by Picture Butte
April 27 CAO Candidate Interviews

Reeve Campbell acknowledged the wildfires happening in Central and Northern Alberta.

Reeve Campbell also acknowledged the hiring of the new CAO Cole Beck who will start with Lethbridge County on June 12. Reeve Campbell thanked Richardson Executive Search for their assistance in the CAO selection process and thanked the Interim CAO and staff for their efforts during the transition period.

Reeve Campbell recessed the meeting at 9:54 a.m.

Reeve Campbell reconvened the meeting at 10:02 a.m.

E. PUBLIC HEARINGS

E.1. Bylaw 23-013 - Advertising Bylaw - Public Hearing

Reeve Campbell called a recess to the Council Meeting, for the Public Hearing for Bylaw 23-013 at 10:02 a.m.

170-2023	Deputy Reeve Kuerbis	MOVED that the Public Hearing for Bylaw 23-013 commence at 10:02 a.m.	CARRIED
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The Interim Director of Community Services reviewed Bylaw 23-013.

Reeve Campbell asked if anyone wished to speak in favour or opposition of Bylaw 23-013.

No comments were made.

171-2023	Councillor Hickey	MOVED that the Public Hearing for Bylaw 23-013 adjourn at 10:07 a.m.	CARRIED
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Reeve Campbell reconvened the Council meeting at 10:08 a.m.

172-2023	Deputy Reeve Kuerbis	MOVED that Bylaw 23-013 - Advertising Bylaw be read a second time.	CARRIED
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173-2023	Councillor Sayers	MOVED that Bylaw 23-013 - Advertising Bylaw be read a third time.	CARRIED
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Reeve Campbell recessed the meeting at 10:13 a.m.

Reeve Campbell reconvened the meeting at 10:20 a.m.

F. **DELEGATIONS**

F.1. **10:30 a.m. - Ken van Rootselaar - Fire Response Invoice Appeal**

Ken and Carol van Rootselaar were present to appeal a fire invoice they received for an arson fire of a vacant home on property they own near Coalhurst.

174-2023	Councillor Van Essen	MOVED to direct administration to set up a payment plan as administration sees fit with no accrued interest and not to exceed a three year term.
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CARRIED

J. **NEW BUSINESS**

J.1. **Alberta Agriculture and Irrigation Main Canal**

175-2023	Councillor Van Essen	MOVED to direct administration to draft a letter under the Reeve's signature to the Minister of Agriculture and Irrigation and Minister of Infrastructure communicating the dire consequences that are resulting from the main canal failure and the need to use any and all means possible to make those repairs to get irrigation water flowing as soon as possible.
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CARRIED

K. **CLOSED SESSION**

L. **ADJOURN**

176-2023	Deputy Reeve Kuerbis	MOVED that the Lethbridge County Council Meeting adjourn at 10:42 a.m.
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CARRIED

Reeve

CAO



Report to the Community 2022



Message from the Chair and CEO

Green Acres Foundation has had the privilege of being the top provider for seniors' housing since 1960.

Our Mission, Vision, Values and Guiding Principles are the foundation for our decisions. We make it our commitment to ensure our residents enjoy a high quality of life

Our dynamic, well maintained senior communities are the result of the efforts of the dedicated employees; without a doubt each of whom try to make every senior resident's day a special one. During the pandemic, we were so proud at how we protected the residents and staff and lessened the risks.

As we look forward, Green Acres Foundation will continue to ensure our housing and services meet the needs of our senior clientele. By providing affordable, superior housing and services we will remain "Best of the Best in seniors housing" as voted on by the citizens.



Dawna Coslovi
Chief Executive Officer



Jeff Carlson
Chair, Board of Directors



"Green Acres Foundation has had the privilege of being the top provider for seniors' housing since 1960."

Board of Directors

Green Acres Foundation is governed by a nine member Board of Directors. The board members are appointed by the City of Lethbridge, Lethbridge County, the Towns of Coaldale, Coalhurst, Picture Butte and Nobleford, and the Villiage of Barons. The 2022 board members were:

Jeff Carlson, *Chair*
Don McDowell, *Vice Chair*
Heather Caldwell
Rajko Dodic
Ron Gorzitza
Lorne Hickey
Roger Hohm
Cynthia Papworth
Ryan Parker



Call us
(403) 328-1155



Follow us
@greenacreslethbridge



Check out our Website
greenacres.ab.ca

Who We Are

Our Mission

Green Acres Foundation provides affordable housing and quality services responsive to the needs of clients

Our Vision

To be a fiscally sustainable organization known for innovation, growth, diversity, and recognized as the trusted choice for affordable housing and quality services

Our Values

Integrity, honesty, respect, and loyalty

Our Guiding Principles

- We strive for the provision of service excellence while ensuring the safety, security, and dignity of residents and employees
- We are innovative, attuned, and adapt to the future needs in the housing market place.
- We are open to diversity in programs and service delivery
- We uphold the highest ethical standards
- Affordability is a priority in our decision making
- Partnerships, collaboration, and cooperation are integral to our operations.
- We are a good corporate citizen

Our Strategic Priorities

A Great Place to Live

A Great Place to Work

Strategic Alliances and Partnerships

Organizational Profile

Organizational Growth and Sustainability

We Offer



Housing



Services



Community



Affordability



Security



Activities and Excursions

Alliances and Partnerships

Green Acres Foundation is more than a housing management body - we are a people-first organization that's focused on community leadership, involvement, and volunteerism.

Our innovative partnership with Alberta Health Services (AHS) began in 1999 at Piyami Lodge to deliver housing with health care services in a home-like setting. Now over 20 years later, this partnership has set the provincial model for Designated Supportive Living (DSL) level of care between housing operators and AHS.

To improve the lives of our residents, we actively nurture our community partnerships with AHS, Seniors Community Services Partnership, Lethbridge Elder Abuse Resource Network, and various service groups.

Our partners with schools and other organizations "open doors" for inter-generational learning and interaction.

We partner with a variety of different causes and local organizations to give back, get connected, and make a difference.



\$5,182.91

Donation to the
Westminster Elementary
School Library

\$1,002.00

Donation to Anti-Bullying
(Pink Shirt) Day

\$1,632.50

Donation to Terry Fox/
Silver Fox campaign.

\$1,200.00

Donation to Big
Brothers/Big Sisters

\$1,302.00

+ 295 lbs. of food

Donation to the
Lethbridge Food Bank

"It has made me come to life. I have many friends here"
- Resident

Successes of 2022



Best of the Best

Green Acres Foundation was voted Best of the Best in the Seniors Housing category for the fourth year in a row!

Maintenance and Upgrades

Safety is a top priority. We added a new fence at Garden View Lodge, which was funded in part through the Community Capital Project Grant from the City of Lethbridge. We also replaced the emergency call system at Sunny South Lodge.



New E-Bikes for Our Residents

E-bikes for our residents were funded through our annual charity golf tournament, Lions' Club of Picture Butte, and partial funding by the Community Foundation of Lethbridge and Southwestern Alberta.



Social Media

Since joining the social media world in 2020, the Foundation's presence has organically reached over 40,000 people! Follow us on Instagram and Facebook: @GreenAcresLethbridge



Abbey Road Terrace

We commenced renovations to Abbey Road Terrace and look forward to welcoming our first residents in late spring 2023 at our newest historical apartment location.



Our Future

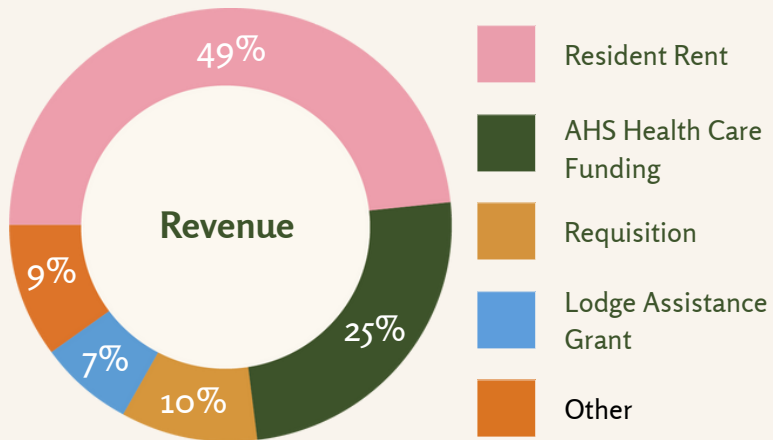
Green Acres has strategically purchased land in various quadrants of Lethbridge, allowing us to be proactive to create additional seniors housing as needed. Our future growth plans align with the Municipal Housing Strategy and the Provincial Stronger Foundations Housing Strategy.



"It's safe, comfortable, everything an old person like me needs. It's great for seniors!" - Resident

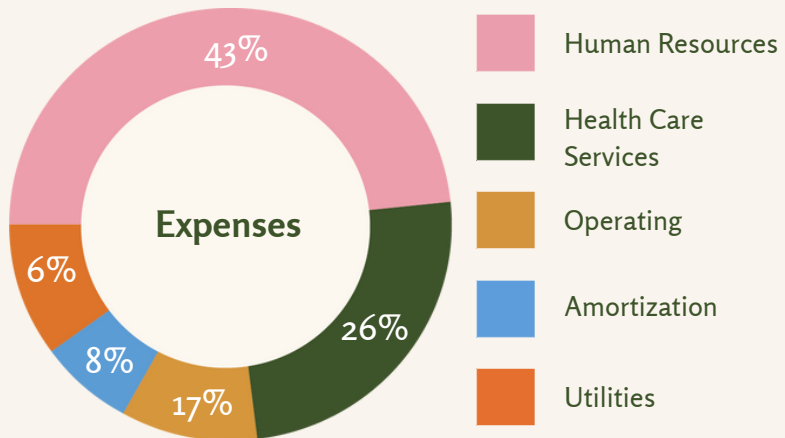
2022 Financial Overview

Other revenue includes provision of the Medication Assistance Program (MAPS) to over 280 residents



\$3,555,000
invested in capital projects

- \$2.52 M Abbey Road Terrace construction
- \$985,000 land purchase
- \$50,000 ramp replacement at Sunny South Lodge



\$2,203.81 / Month

Average Cost to House a Resident



\$1,771.96 / Month

Average Lodge Rent Paid

"I have lived here for 10 years, and I have been extremely happy. The staff are caring and truly supportive of me."

- Resident

2022 Foundation Facts

100%

one hundred percent of residents are satisfied with staff.

99%

Ninety-nine percent of lodge residents feel safe.

96%

ninety-six percent of residents feel at home.

17

Number of centenarian residents we had in 2022.



Number of Staff & Volunteers



123

Healthcare



123

Kitchen Food Service



58

Resident Services



67

Support Staff



85

Volunteers

Total 456



1,758

Volunteer Hours



637,290

Meals Served



30,264

Rooms Cleaned

51%

fifty-one percent of employees have 5 to 10 years of service

28%

twenty-eight percent of employees have over 10 years of service

91%

Ninety-one percent of employees say GAF is a great place to work

AGENDA ITEM REPORT



Title: Bylaw 23-012 - Road Closure, Sale and Consolidation- Public Hearing
Meeting: Council Meeting - 01 Jun 2023
Department: Community Services
Report Author: Hilary Janzen

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 15 May 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 sent to the Minister of Transportation for Approval

REASON(S) FOR RECOMMENDATION(S):

After the Public Hearing and prior to receiving second and third reading the Bylaw must be sent to the Minister of Transportation for Approval. Once the Bylaw receives Ministerial approval, second and third reading of the Bylaw can proceed.

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.
- Bylaw 23-012 was read for a first time on April 20, 2023

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.

The notice of public hearing for Bylaw 23-012 was advertised in the May 16 and 23 editions of the Sunny South News.

ALTERNATIVES / PROS / CONS:

County Council may decide not to send the proposed bylaw for Ministerial approval if there were concerns with the proposed road closure that come up during the public hearing.

Pros:

- None identified.

Cons:

- The County would forgo the sale revenue.
- The County would have to manage and maintain the road way.
- The County would have to require the removal of the obstructions from the Right-of-Way.

FINANCIAL IMPACT:

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 ☒ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

[Bylaw 23-012 - Road Closure - Lot 10, BI 6, Plans 6481DI & 8310792](#)
[Bylaw 23-012 Road Closure Application](#)
[Bylaw 23-012 Road Closure Map](#)
[Survey Sketch](#)
[Bylaw 23-012 Signed First Reading](#)

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.

PLAN 6481DI

ALL THOSE PORTIONS OF LANE WITHIN BLOCK 4 AND FOURTH STREET EAST FORMING PART OF LOT 10, BLOCK 6, PLAN _____, CONTAINING 0.135 HECTARES (0.33 ACRES) MORE OR LESS _____,

AND

PLAN 8310792

ALL THOSE PORTIONS OF LANE WITHIN BLOCK 6, FOURTH STREET EAST AND CUTOFFS FORMING PART OF LOT 10, BLOCK 6, PLAN _____, CONTAINING 0.154 HECTARES (0.38 ACRES) MORE OR LESS _____,

EXCEPTING THEREOUT ALL MINES AND MINERALS

GIVEN first reading this _____ day of _____, 2023.

Reeve

Chief Administrative Officer

Public Hearing held on _____

Forwarded to the Minister of Transportation on: _____

Approved this _____ day of _____, 20____

Minister of Transportation

GIVEN second reading this _____ day of _____, 20____.

Reeve

Chief Administrative Officer

GIVEN third reading this _____ day of _____, 20____.

Reeve

Chief Administrative Manager



LETHBRIDGE COUNTY
APPLICATION FOR ROAD CLOSURE

OFFICE USE		
Date of Application: <u>February 28/2023</u>	Assigned Bylaw	No. <u>23-012</u>
Date Deemed Complete: <u>February March 6/2023</u>	Application & Processing Fee:	\$ <u>1500.00</u>
	Assessed Value:	\$ <u>40,000 per acre</u>

APPLICANT INFORMATION

Name of Applicant:	<u>Timothy + Yolanda Smith</u>	
Mailing Address:	<u>Box 22 Iron Springs</u>	Phone: <u>403 911 0528 (Timothy)</u> <u>403 359 1705 (Yolanda)</u>
Postal Code:	<u>T0K 1G0</u>	Email: <u>yolandareimer@gmail.com</u>
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).



APPLICANT

Feb 8, 2023

DATE

*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 foip@lethcounty.ca 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: <Timothydanielsmith94@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
O F F I C I A L R E C E I P T

SMITH, TIMOTHY D. & YOLANDA REIMER
PO BOX 22
IRON SPRINGS AB T0K 1G0
CANADA

GST Reg. #: R106989023
Receipt #: 0342398
Date: 2023/02/28

Account #	Description	Opening Bal	Payment	Amount Due
AR07389	ROAD CLOSURE	1,497.12	1,497.12	.00
			** Payment Total:	1,497.12

INTERAC

Interac Debit Card

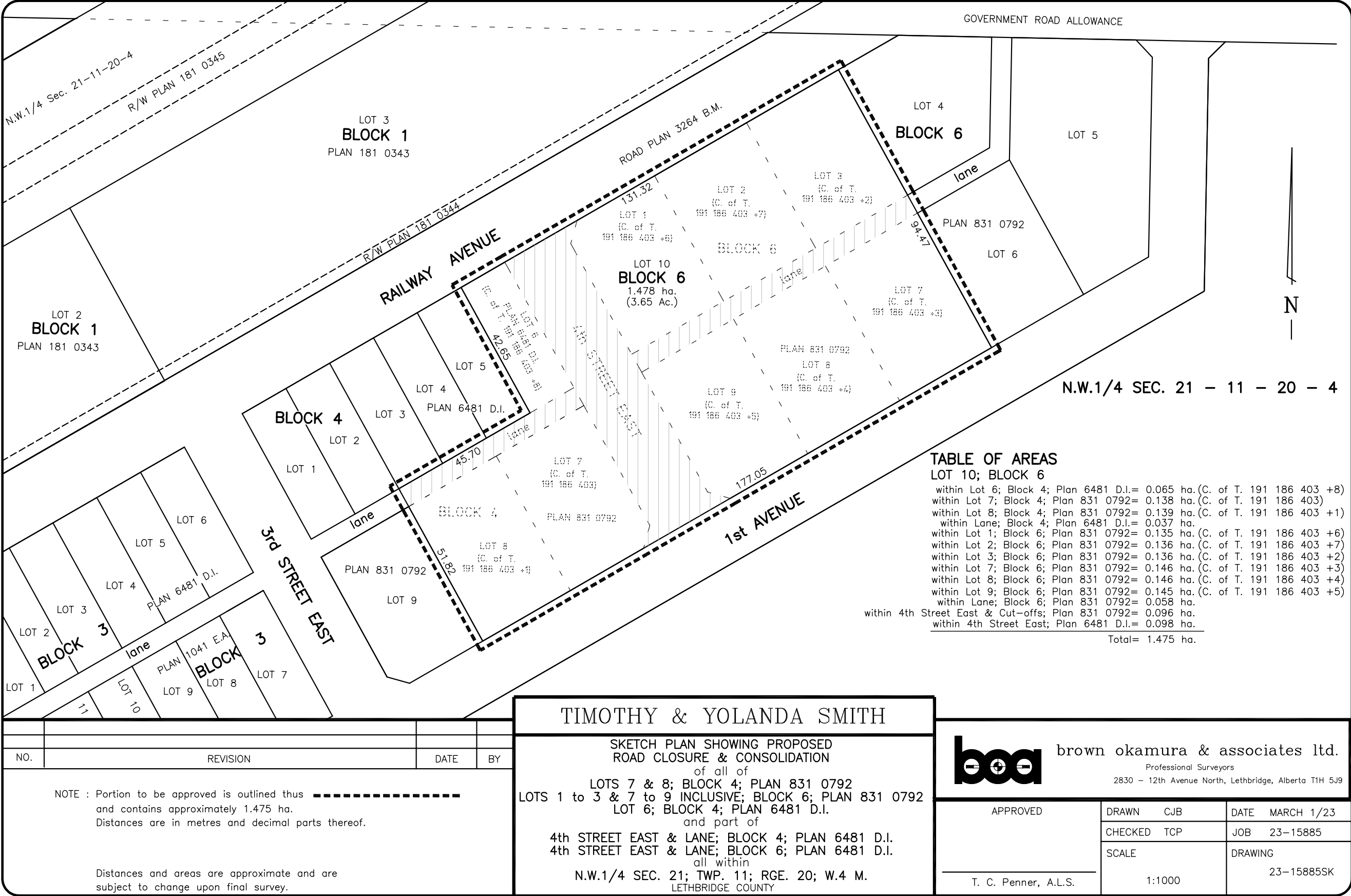
1,497.12

There was a small
credit on acct

Muttner

Bylaw 23-012 Road
Closure - Iron Springs





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.

PLAN 6481DI
ALL THOSE PORTIONS OF LANE WITHIN BLOCK 4 AND FOURTH STREET EAST FORMING PART OF LOT 10, BLOCK 6, PLAN _____, CONTAINING 0.135 HECTARES (0.33 ACRES) MORE OR LESS

AND

PLAN 8310792
ALL THOSE PORTIONS OF LANE WITHIN BLOCK 6, FOURTH STREET EAST AND CUTOFFS FORMING PART OF LOT 10, BLOCK 6, PLAN _____, CONTAINING 0.154 HECTARES (0.38 ACRES) MORE OR LESS

EXCEPTING THEREOUT ALL MINES AND MINERALS

GIVEN first reading this 20 day of April, 2023.



Reeve


Chief Administrative Officer

Public Hearing held on _____

Forwarded to the Minister of Transportation on: _____

Approved this _____ day of _____, 20____

Minister of Transportation

GIVEN second reading this _____ day of _____, 20____.

Reeve

Chief Administrative Officer

GIVEN third reading this _____ day of _____, 20____.

Reeve

Chief Administrative Manager

AGENDA ITEM REPORT



Title: Subdivision Application #2023-0-044 – Green Life Farms Ltd.
- NW1/4 36-10-20-W4M
Meeting: Council Meeting - 01 Jun 2023
Department: ORRSC
Report Author: Steve Harty

APPROVAL(S):

Hilary Janzen, Supervisor of Planning & Development
Larry Randle, Interim Chief Administrative Officer

Approved - 18 May 2023
Approved - 18 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

The purpose of this application is to subdivide a 10.34-acre parcel first subdivision from a title of 152.56 acres for country residential use. The proposal does not meet all the subdivision criteria of the Land Use Bylaw as it would require a policy and parcel size waiver.

RECOMMENDATION:

That S.D. Application #2023-0-044 be approved subject to a parcel size waiver being granted and the conditions as outlined in the draft resolution.

REASON(S) FOR RECOMMENDATION(S):

With consideration for a size waiver based on the merits of the proposal it is the first subdivision from the 1/4-section, meets the required MDS, and otherwise meets the provincial Subdivision and Development Regulations and the municipal subdivision policies as stated in the Land Use Bylaw.

PREVIOUS COUNCIL DIRECTION / POLICY:

- The country residential subdivision policies are within Land Use Bylaw No. 1404 that allow one subdivision per 1/4-section, which the proposed first subdivision complies with.
- LUB No. 1404 criteria stipulate a minimum 2.0-acre to maximum 10.0-acre parcel size to capture existing improvements (thus the 10.34-acres requires a waiver).
- A size waiver may be granted based on the merits of the application, as the proposed 10.34-acre parcel size is comprised of 0.94 acres of the access road area (at 10 m wide) and the other 9.4-acres is the yard squared to the 1/4-section line.
- The Subdivision Authority will need to consider the intent of the subdivision policy that stipulates that the "approval authority shall not approve an application for subdivision for a confined feeding

operation” and its applicability. The subdivision is not for the CFO itself, but it is situated within the same ¼-section the CFO is within and reduces the parcel size associated with that operation.

- The owners have a CFO for 1,700 beef finishers to the northwest. An MDS of 462 m is required and a measured distance of over 472 m exists.

BACKGROUND INFORMATION:

Located 1-mile east of the Highway 845 and 519 intersections, ¼-mile to the north of the Oldman River. The proposal is to accommodate the subdivision of a coulee top area on the very east perimeter of the ¼-section for a new residential yard.

The purpose is to separate the acreage from the agricultural operations, as the ¼-section contains a farm and livestock operation in the very northwest adjacent to the road allowance. The proposed subdivision yard area contains a recently constructed dwelling. Water is provided by the water co-op and sewage is managed by a new individual on-site septic field system situated to the east of the dwelling. Access is provided from the north municipal road allowance with an existing approach and 4.5 m wide driveway that provides access to the yard. The Subdivision Authority will need to determine if the subdivision of the yard is eligible to be subdivided due to the CFO within the same ¼-section. The subdivision reduces the parcel size associated with that operation; however, the yard area and residence are established, and the land area cannot be physically used by the CFO. Additionally, the dwelling setback exceeds the applicable MDS so the subdivision should not negatively impact the CFO.

Overall, the proposal is the first subdivision from the ¼-section but requires a parcel size waiver of the 10.0-acre maximum with respect to the criteria of Land Use Bylaw No. 1404. The area to be subdivided is non-cultivated land and will not affect or remove agricultural land from production. The resulting residual agricultural parcel size meets and exceeds the minimum 70-acres required. The application was circulated to the required external agencies and no easements or objections were expressed regarding the application (at time of agenda report). The province identifies the area potentially contains a historical resource of a HRV category 5a,p. The provincial Historical Resources Administrator stated that Historic Resources Clearance will not be required.

ALTERNATIVES / PROS / CONS:

The Subdivision Authority could decide to not grant the waiver or subdivision and the ¼-section would remain as it currently is.

Pros:

- the County would not be permitting a ¼-section that contains a CFO to be subdivided which appears to be the general intent of the policy

Cons:

- the dwelling and yard area would not be separated on title from the CFO which cannot physically use the land anyways. A refusal decision would be appealed.

FINANCIAL IMPACT:

None, and the existing tax situation will remain as is.

LEVEL OF PUBLIC PARTICIPATION:



Inform



Consult



Involve



Collaborate



Empower

ATTACHMENTS:

[5A Lethbridge County 2023-0-044](#)

[Diagrams for Lethbridge County 2023-0-044](#)

RESOLUTION

2023-0-044

Lethbridge County

Country Residential subdivision of NW1/4 36-10-20-W4M

THAT the Country Residential subdivision of NW1/4 36-10-20-W4M (Certificate of Title No. 091 130 597), to subdivide a 10.34-acre (4.18 ha) first parcel out subdivision from a title of 152.56 acres (61.74 ha) for country residential use; BE APPROVED subject to the following:

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 applicant provides a final Plan of Surveyor to illustrate the exact dimensions and parcel size of the proposed parcel as approved.

REASONS:

1. The proposed subdivision is consistent with the South Saskatchewan Regional Plan and complies with both the Municipal Development Plan and Land Use Bylaw with the waivers granted.
2. The Subdivision Authority is satisfied that the proposed subdivision is suitable for the purpose for which the subdivision is intended pursuant to Section 9 of the Matters Related to Subdivision and Development Regulation.
3. The Subdivision Authority is satisfied that as the first title out of the ¼ section, the proposal is suitable for subdivision.
4. The Subdivision Authority considered the suitability of the parcel size in relation to the yard, land quality, access road and layout, and determined it supports the waiver request (additional 0.34 acres).
5. The Subdivision Authority considered the merit of the proposal in relation to the confined feeding operation situated within the same ¼-section and determined that since the yard and residential dwelling are established and exceed the setback of the applicable MDS, the subdivision will not negatively impact the CFO and may be approved.

INFORMATIVE:

- (a) Since the proposed subdivision complies with Section 663(a) of the Municipal Government Act, Reserve is not required.
- (b) The Subdivision Authority has granted a waiver of the parcel size in accordance with section 654(2) of the MGA.
- (c) That a legal description for the proposed parcel be approved by the Surveys Branch, Land Titles Office, Calgary.
- (d) The applicant/owner is advised that other municipal, provincial or federal government or agency approvals may be required as they relate to the subdivision and the applicant/owner is responsible for verifying and obtaining any other approval, permit, authorization, consent or license that may be required to subdivide, develop and/or service the affected land (this may include but is not limited to Alberta Environment and Protected Areas, Alberta Transportation, and the Department of Fisheries and Oceans.)

- (e) Telus Communications Inc has no objection.
- (f) Thank you for contacting FortisAlberta regarding the above application for subdivision. We have reviewed the plan and determined that no easement is required by FortisAlberta.

FortisAlberta is the Distribution Wire Service Provider for this area. The developer can arrange installation of electrical services for this subdivision through FortisAlberta. Please have the developer contact 310-WIRE (310-9473) to make application for electrical services.

Please contact FortisAlberta land services at landserv@fortisalberta.com or by calling (403) 514-4783 for any questions.

- (g) In reference to the above request, please be advised of ATCO Gas' response and notify the landowner of the following:

ATCO Gas has no objection

ATCO Gas' existing and future lines are protected by an existing Utility Right of Way

ATCO Gas would also like to make the MD/County and Landowner/Developer aware of the following:

- If conducting any ground disturbance on the subject property, the landowner/developer must ensure the location of all utilities by contacting Utility Safety Partners at 1-800-242-3447 or <https://utilitysafety.ca/>
- For any ground disturbance within 30m of an existing gas line please contact Crossings@atcogas.com to obtain permission (submit locate slip as back up)
- ATCO Gas requires a minimum of 6 months' notice to design and construct a new gas line, or alter an existing gas line. New Service installations, pipeline alterations, and Main extensions will be performed at the landowner/developers expense.
- If the landowner requires a single gas service please visit <https://gas.atco.com/en-ca/products-services-rates/new-services-changes/new-natural-gas-line.html>

Any further questions please email southlandadmin@atco.com.

- (h) Alberta Health Services has no concerns.

- (i) Lethbridge Northern Irrigation District (LNID) – Alan Harrold, General Manager:

"The above noted Application for Subdivision has been reviewed by the Lethbridge Northern Irrigation District (LNID) and is approved subject to the following conditions:

1. Payment in full of any outstanding irrigation rates that may be assessed on the original parcel at the time of finalization of the subdivision.
2. Payment of the District's subdivision administration fee. The current fee is \$630.00 including GST.
3. A water agreement suitable to meet the needs of the proposed 10.34 acre subdivision may be required if the proposed new subdivision requires the use of irrigation water. In addition, since the delivery would be from the Lateral H8 Pipeline, a landowner construction contribution would be required at the time of signing a Water Agreement for this parcel. The current 2023 low pressure pipeline rate is \$3,150.00 including GST plus the cost of a water delivery turnout, if one is required.
4. Since the original parcel is part of an irrigable unit, the subdivided portion must be discharged from that irrigable unit. The current discharge fee is \$105.00 including GST, per discharge.
5. An Easement for the proposed 10.34 acre subdivision for access to water from the District's works must be in place prior to the supply of domestic/yard usage water.
6. Any alteration to District works required as a result of this subdivision is subject to District approval and payment by the applicant of all applicable costs.

Thank you for the opportunity to comment. If you require more information or would like to set up an appointment to discuss the conditions above, please contact Janet Beck, Administration & Land Manager, at the Lethbridge Northern Irrigation District Office, 403-327-3302."

- (j) Alberta Transportation – Leah Olsen, Development/Planning Technologist:

“This will acknowledge receipt of your circulation regarding the above noted proposal. The subdivision application would be subject to the requirements of Sections 18 and 19 of the Matters Related to Subdivision and Development Regulation (The Regulation), due to the proximity of Highway(s) 519, 845

Transportation and Economic Corridors offers the following comments with respect to this application:

The requirements of Section 18 are met, therefore no variance is required. While no variance is required, the department expects the municipality will mitigate the impacts from this proposal to the highway system, pursuant to Policy 7 of the Provincial Land Use Policies and Section 648(2)(c.2) of the Municipal Government Act.

The requirements of Section 19 are met, therefore no variance is required.

Further, should the approval authority receive any appeals in regard to this application and as per Section 678(2.1) of the Municipal Government Act and Section 7(6)(d) of the regulation, Transportation and Economic Corridors agrees to waive the referral distance for this particular subdivision application. As far as Transportation and Economic Corridors is concerned, an appeal of this subdivision application may be heard by the local Subdivision and Development Appeal Board provided that no other provincial agency is involved in the application

Transportation and Economic Corridors has the following additional comments and/or requirements with respect to this proposal:

1. 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, pursuant to Policy 7 of the Provincial Land Use Policies and Section 618.4 of the Municipal Government Act

Please contact Transportation and Economic Corridors through the [RPATH Portal](#) if you have any questions, or require additional information.”

- (k) Historical Resources – Barry Newton, Land Use Planner:

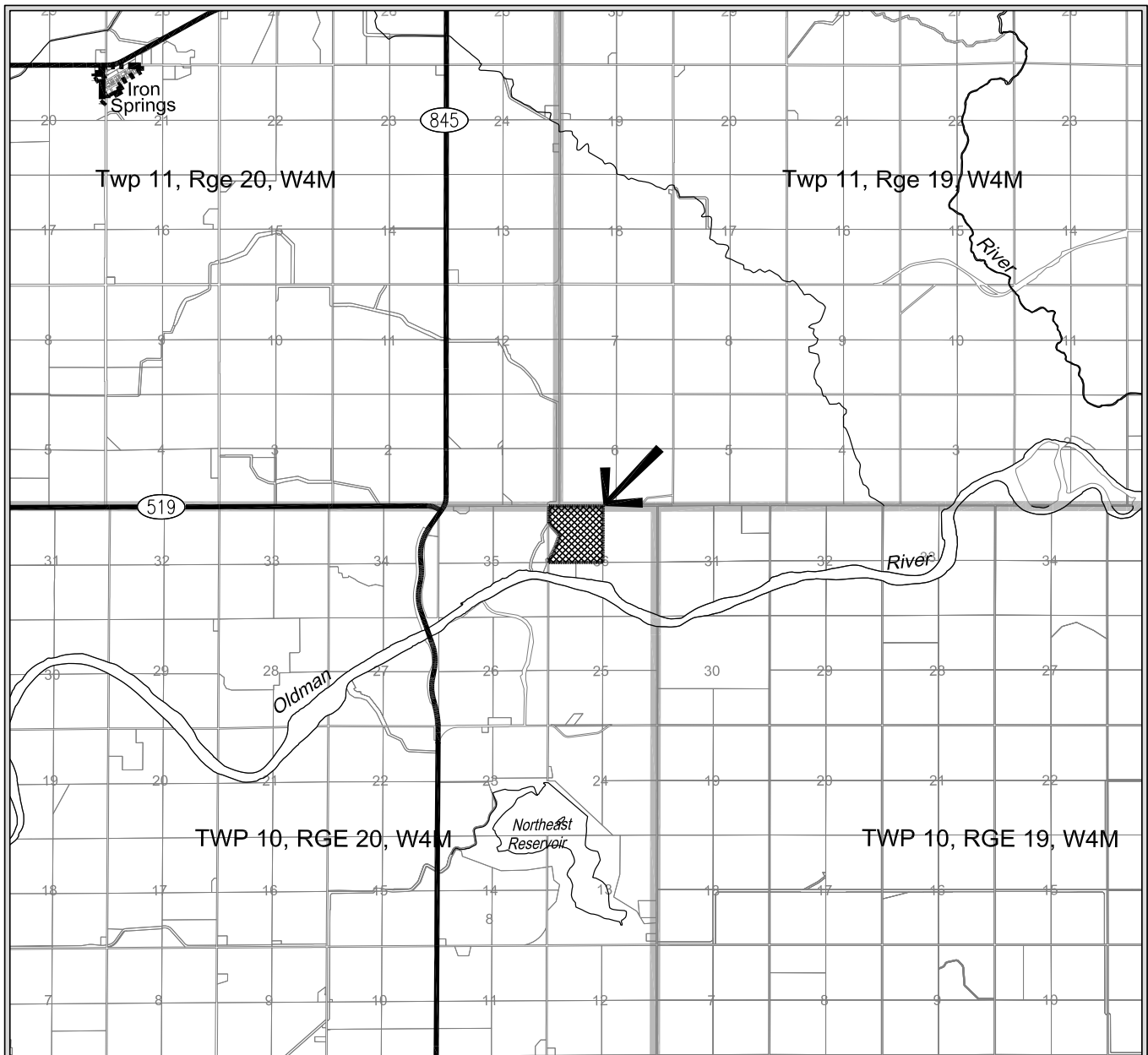
“We have reviewed the captioned subdivision application and determined that in this instance formal *Historical Resources Act* approval is not necessary, and submission of a Historic Resources application is not required.”

- (l) Alberta Agriculture and Irrigation, Water Infrastructure and Operations Branch has reviewed the lands in question and has no comments concerns to add.

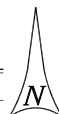
MOVER

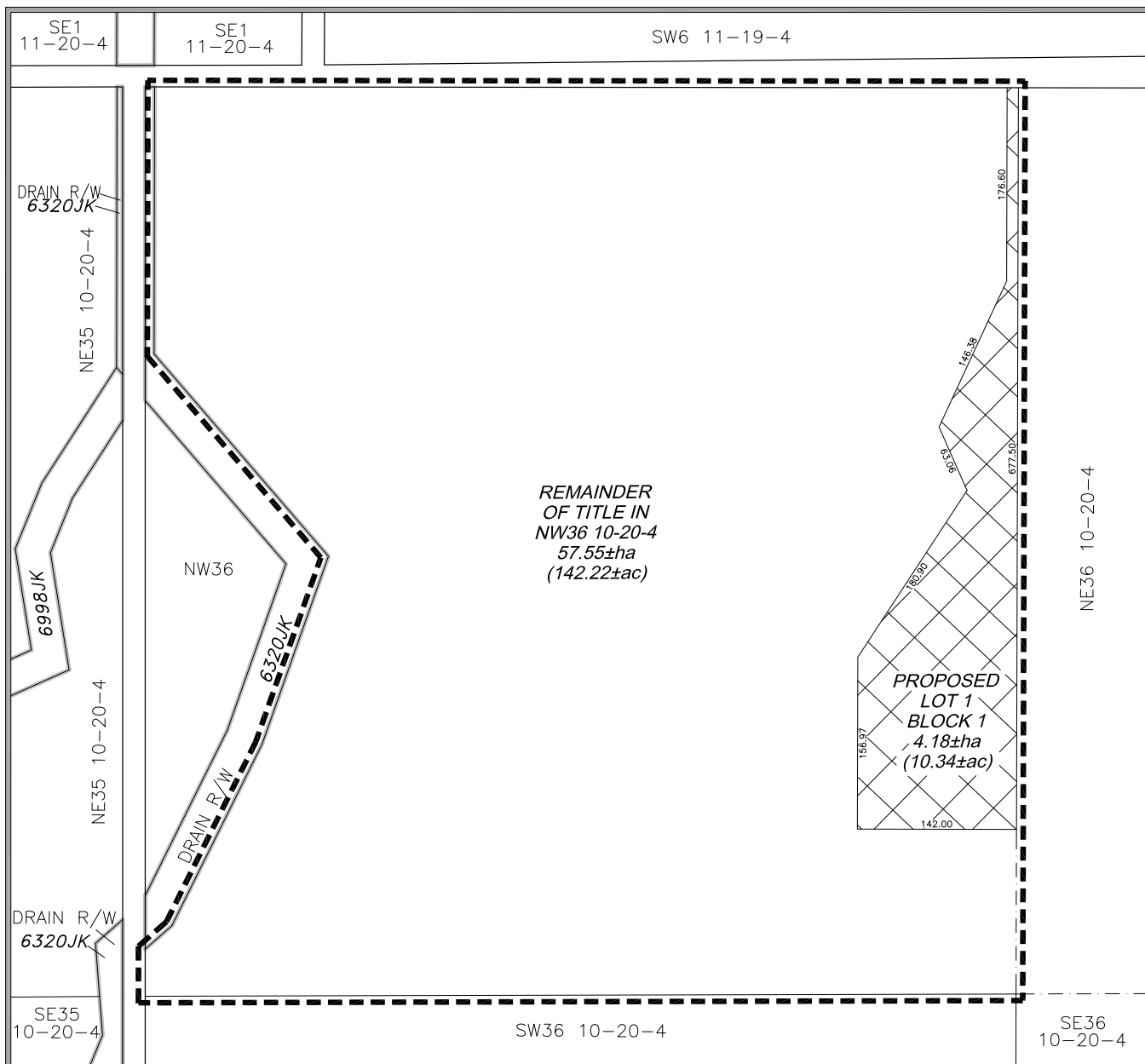
REEVE

DATE



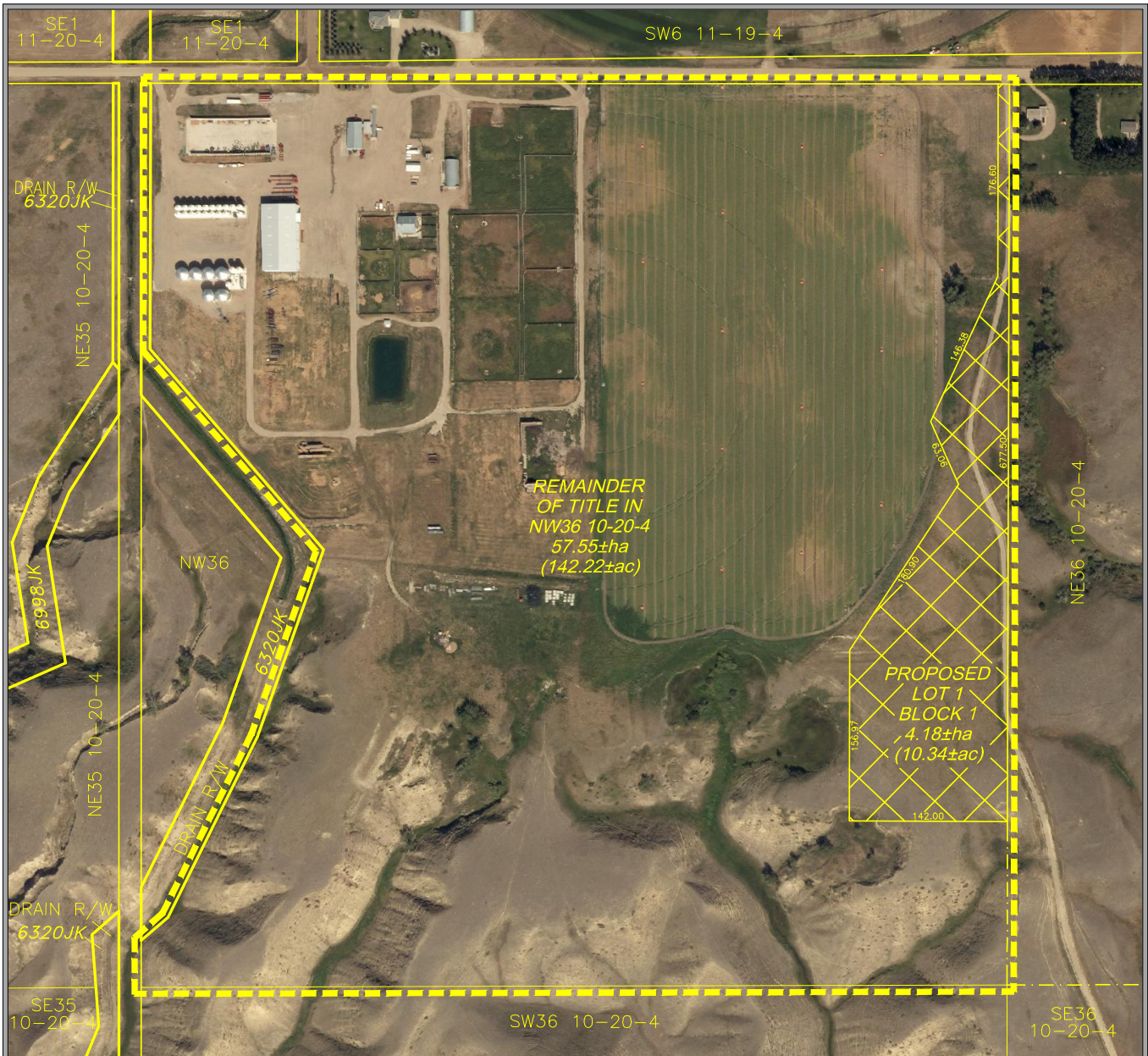
SUBDIVISION LOCATION SKETCH
WITHIN NW 1/4 SEC 36, TWP 10, RGE 20, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: APRIL 6, 2023
FILE No: 2023-0-044





SUBDIVISION SKETCH
 WITHIN NW 1/4 SEC 36, TWP 10, RGE 20, W 4 M
 MUNICIPALITY: LETHBRIDGE COUNTY
 DATE: APRIL 6, 2023
 FILE No: 2023-0-044

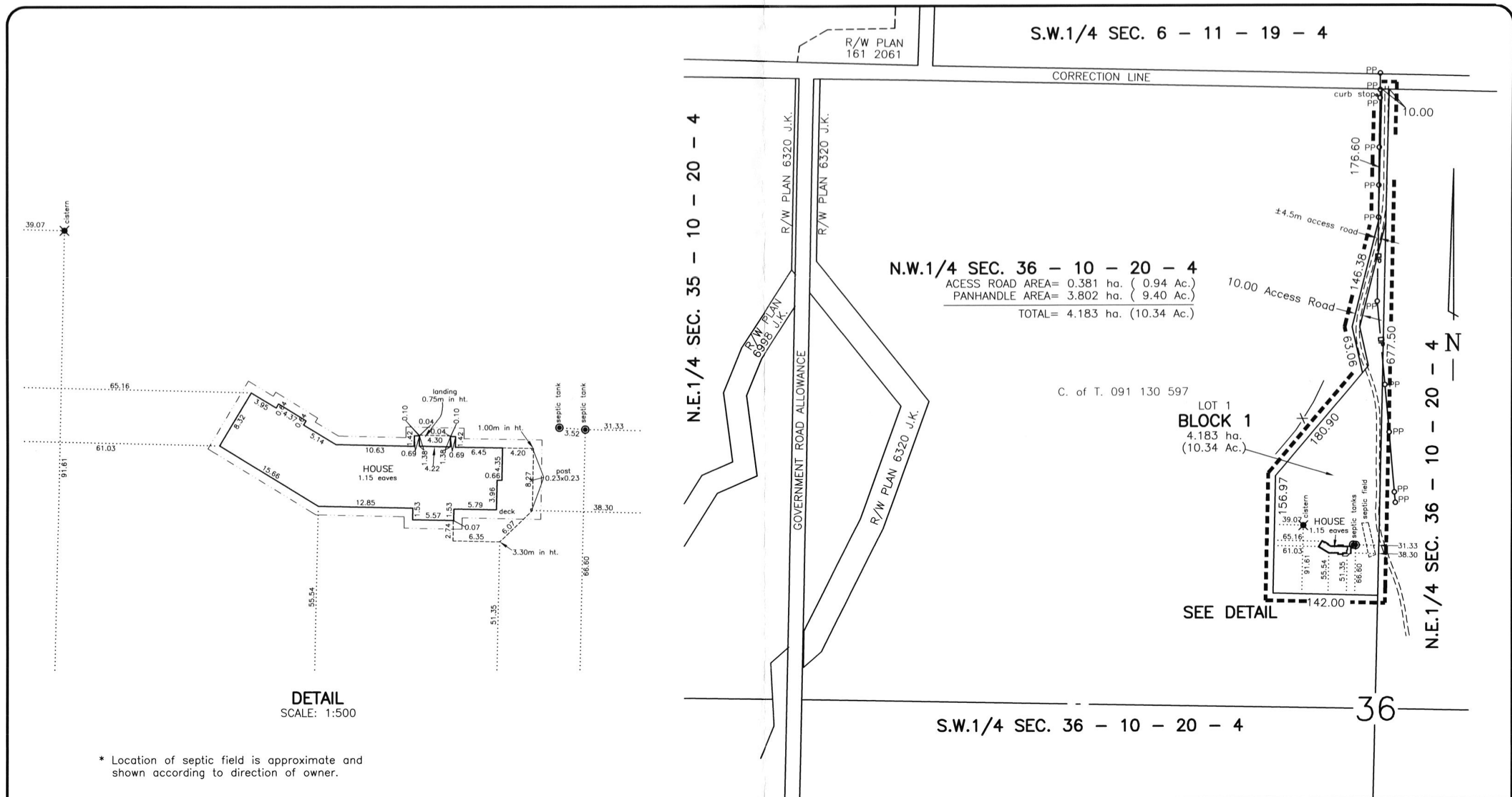




SUBDIVISION SKETCH
WITHIN NW 1/4 SEC 36, TWP 10, RGE 20, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: APRIL 6, 2023
FILE No: 2023-0-044



AERIAL PHOTO DATE: 2018



				GREEN LIFE FARMS		 brown okamura & associates ltd. Professional Surveyors 2830 – 12th Avenue North, Lethbridge, Alberta			
NO.	REVISION	DATE	BY	TENTATIVE PLAN SHOWING SUBDIVISION of part of N.W.1/4 SEC. 36; TWP. 10; RGE. 20; W.4 M. LETHBRIDGE COUNTY		APPROVED		DRAWN CJB	DATE MARCH 24/23
Improvements shown were surveyed on March 8th, 2023 NOTE : Portion to be approved is outlined thus ----- and contains approximately 4.183 ha. Distances are in metres and decimal parts thereof. Overhead line is shown thus -----OP-----OP----- PP stands for utility pole. Fence lines are shown thus -----X-----X----- Distances and areas are approximate and are subject to change upon final survey.						CHECKED ZJP	JOB 23–15944		
						Z. J. Prosper A.L.S.		SCALE 1:5000	DRAWING 23–15944T

AGENDA ITEM REPORT



Title: Subdivision Application #2023-0-043 – Green Life Farms Ltd.
- Section 35-10-20-W4M
Meeting: Council Meeting - 01 Jun 2023
Department: ORRSC
Report Author: Steve Harty

APPROVAL(S):

Hilary Janzen, Supervisor of Planning & Development
Larry Randle, Interim Chief Administrative Officer

Approved - 18 May 2023
Approved - 18 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

The application is to subdivide and reconfigure portions of four ¼-sections within Section 35-10-20-W4M by creating a new 12.87-acre lot for country residential use, and consolidating the residuals to create two agricultural titles, 232.79 and 199.17 acres respectively in size. The proposal does not meet all the subdivision criteria of the Land Use Bylaw as the acreage would require a parcel size waiver.

RECOMMENDATION:

That S.D. Application #2023-0-043 be approved subject to a parcel size waiver being granted and the conditions as outlined in the draft resolution.

REASON(S) FOR RECOMMENDATION(S):

With consideration for a size waiver based on the merits, the proposal otherwise meets the provincial Subdivision and Development Regulations and the municipal reconfiguration subdivision policies as stated in the Land Use Bylaw.

PREVIOUS COUNCIL DIRECTION / POLICY:

- LUB No. 1404 contains policies that enable the subdivision and consolidation of land in consideration of reconfiguration of titles, with no additional titles being created above what presently exist. With the consolidation, there will also be an overall reduction in titles in the Section of land, from five down to four.
- A size waiver is required for the 12.87-acre parcel as it exceeds the 10-acre maximum size of LUB No. 1404 criteria for country residential subdivisions. Consideration may be based on the rationale that titled area includes 2.96-acres of land for the access road.
- The adjusted agricultural parcel sizes comply with the bylaw's minimum 70-acre size stipulations (with exceptions on title).

- A consolidation of land is required to enable the 12.87-acre yard parcel to be subdivided as there is an existing 4.99-acre title subdivided out of the NW-quarter.

BACKGROUND INFORMATION:

Located east of the Highway 845 and 519 intersections, immediately to the north of the Oldman River. The proposal is to enable a land title reconfiguration between the adjacent ¼-sections and enable the subdivision of an existing residence in the middle.

The yard contains a dwelling, shop building and barn. The septic field for the dwelling is situated west of the house and will be within the confines of the subdivided property. As the yard is setback a significant distance from the north municipal road, the proposed 12.87-acre title includes the land area for the private access driveway (15 m wide) to the yard. This will provide the legal and physical access required for the lot. The enlarged agricultural titles both physically connect to the north municipal road allowance (Twn Rd 11-0) for access. The proposed 199.17-acre agricultural land being consolidated from the NW and NW ¼-sections contains an irrigation pivot system that crosses over between the two quarters. The remainder of the agricultural land is primarily pasture and coulee land with the southern portions bordering the Oldman River boundary. The proposal meets the MDS (462 m is required) to a confined feeding operation to the east (1,700 beef finishers) as over 1,000 m exists.

Overall, the proposal meets the criteria of the County's Land Use Bylaw No. 1404 for a reconfiguration/realignment of titles and no additional titles are being created. A size waiver is required for the 12.87-acre parcel as it exceeds the 10-acre maximum. The application was circulated to the required external agencies with no objections but FORTIS requests a utility easement. The province identifies the area for historical resources of a category HRV 4a & 5p. However, Alberta Culture states the subdivision will not require Historical Resources Act approval.

ALTERNATIVES / PROS / CONS:

The Subdivision Authority could decide to not approve if it is determined the proposal is not suitable and the titles would remain as is.

Pros:

- there are no advantages to denying the subdivision as it meets the subdivision criteria of the County with a waiver consideration

Cons:

- there would not be a reduction in overall titles for the section and the decision would likely be appealed by the applicants

FINANCIAL IMPACT:

None.

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

[5A Lethbridge County 2023-0-043](#)
[Diagrams for Lethbridge County 2023-0-043](#)

RESOLUTION

2023-0-043

Lethbridge County

Agricultural & Country Residential subdivision of Sec. 35-10-20-W4M

THAT the Agricultural & Country Residential subdivision of Sec. 35-10-20-W4M (Certificate of Title No. 141 132 946), to subdivide and reconfigure portions of four ¼-sections within Section 35-10-20-W4M and create a new 12.87-acre (5.21 ha) lot for country residential use, and consolidate the residuals to create two agricultural titles, 232.79 and 199.17 acres (94.21 & 80.60 ha) respectively in size; BE APPROVED subject to the following:

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 to create the yard title and the consolidation of the agricultural parcels 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 easement as required by FORTIS Alberta shall be provided prior to finalization.

REASONS:

1. The proposed subdivision is consistent with the South Saskatchewan Regional Plan and complies with both the Municipal Development Plan and Land Use Bylaw.
2. The Subdivision Authority is satisfied that the proposed subdivision with the consolidation is suitable for the purpose for which the subdivision is intended pursuant to Section 9 of the Matters Related to Subdivision and Development Regulation.
3. The Subdivision Authority has determined the subdivision conforms to the County's subdivision criteria as a realignment/reconfiguration of titles and with the consolidation, there will also be an overall reduction in titles in the Section of land, from five down to four.
4. The Subdivision Authority has granted a size waiver for the 12.87-acre yard title (as it exceeds the bylaw 10-acre maximum) on the basis that parcel area includes approximately 2.96-acres of land for the access road. The resulting agricultural parcel sizes both exceed the bylaw's minimum size stipulation.

INFORMATIVE:

- (a) The proposed subdivision complies with Section 663 of the Municipal Government Act and due to the reconfiguration and the reduction in titles for the land, Reserve is not required.
- (b) The Subdivision Authority has granted a waiver of the maximum parcel size in accordance with section 654(2) of the MGA.
- (c) That a legal description for the proposed parcel be approved by the Surveys Branch, Land Titles Office, Calgary.

(d) The applicant/owner is advised that other municipal, provincial or federal government or agency approvals may be required as they relate to the subdivision and the applicant/owner is responsible for verifying and obtaining any other approval, permit, authorization, consent or license that may be required to subdivide, develop and/or service the affected land (this may include but is not limited to Alberta Environment and Protected Areas, Alberta Transportation, and the Department of Fisheries and Oceans).

(e) Telus Communications Inc has no objection.

(f) Easements are required for this development. The developer can initiate the process of securing an easement for the proposed subdivision by contacting the undersigned. FortisAlberta is requesting that the county defer its subdivision approval until such time as this easement process is complete and the developer has entered into an appropriate easement agreement with FortisAlberta and the easement has been properly registered with Land Titles (Alberta). FortisAlberta will notify the county once these steps have been completed and confirm that FortisAlberta no longer has any concerns with approval of this subdivision.

FortisAlberta is the Distribution Wire Service Provider for this area. The developer can arrange installation of electrical services for this subdivision and for the easement by contacting FortisAlberta at 310-WIRE (310-9473) to make application.

Please contact FortisAlberta land services at landserv@fortisalberta.com or by calling (403) 514-4783 for any questions. Please contact FortisAlberta land services at landserv@fortisalberta.com or by calling (403) 514-4783 for any questions

(g) In reference to the above request, please be advised of ATCO Gas' response and notify the landowner of the following:

ATCO Gas has no objection

ATCO Gas' existing and future lines are protected by an existing Utility Right of Way

ATCO Gas would also like to make the MD/County and Landowner/Developer aware of the following:

- If conducting any ground disturbance on the subject property, the landowner/developer must ensure the location of all utilities by contacting Utility Safety Partners at 1-800-242-3447 or <https://utilitysafety.ca/>
- For any ground disturbance within 30m of an existing gas line please contact Crossings@atcogas.com to obtain permission (submit locate slip as back up)
- ATCO Gas requires a minimum of 6 months' notice to design and construct a new gas line, or alter an existing gas line. New Service installations, pipeline alterations, and Main extensions will be performed at the landowner/developers expense.
- If the landowner requires a single gas service please visit <https://gas.atco.com/en-ca/products-services-rates/new-services-changes/new-natural-gas-line.html>

Any further questions please email southlandadmin@atco.com.

(h) Alberta Health Services has no concerns.

(i) Lethbridge Northern Irrigation District (LNID) – Alan Harrold, General Manager:

"The above noted Application for Subdivision has been reviewed by the Lethbridge Northern Irrigation District (LNID) and is approved subject to the following conditions:

1. Payment in full of any outstanding irrigation rates that may be assessed on the original parcel at the time of finalization of the subdivision.
2. Payment of the District's subdivision administration fee. The current fee is \$630.00 including GST.

3. A water agreement suitable to meet the needs of the proposed 12.97 acre subdivision may be required if the proposed new subdivision requires the use of irrigation water. In addition, since the delivery would be from the Lateral H8 Pipeline, a landowner construction contribution would be required at the time of signing a Water Agreement for this parcel. The current 2023 low pressure pipeline rate is \$3,150.00 including GST plus the cost of a water delivery turnout, if one is required.
4. Since the current title 141 132 976 comprising of Sec. 35-10-20-4 will be subdivided into three (3) proposed new parcels, the irrigable unit (#218) registered as 151 225 571, will remain on the proposed Lot 3, Block 2, Plan 231 _____ and a partial discharge will be required for the proposed Lots 1 and 2, Block 2, Plan 231 _____. The current discharge fee is \$105.00 including GST, per discharge.
5. An Easement for the proposed 12.97 acre subdivision for access to water from the District's works must be in place prior to the supply of domestic/yard usage water.
6. Any alteration to District works required as a result of this subdivision is subject to District approval and payment by the applicant of all applicable costs.

Thank you for the opportunity to comment. If you require more information or would like to set up an appointment to discuss the conditions above, please contact Janet Beck, Administration & Land Manager, at the Lethbridge Northern Irrigation District Office, 403-327-3302."

(j) Alberta Transportation – Leah Olsen, Development/Planning Technologist:

"This will acknowledge receipt of your circulation regarding the above noted proposal. The subsequent subdivision application would be subject to the requirements of Sections 18 and 19 of the Matters Related to Subdivision and Development Regulation (The Regulation), due to the proximity of Highway(s) 519, 845

Transportation and Economic Corridors offers the following comments with respect to this application:

The requirements of Section 18 of the Regulation are not met. The department anticipates minimal impact on the highway from this proposal. Pursuant to Section 20(1) of the Regulation, Transportation and Economic Corridors grants approval for the subdivision authority to vary the requirements of Section 18 of the Regulation.

The requirements of Section 19 of the Regulation are not met. Pursuant to Section 20(1) of the Regulation, Transportation and Economic Corridors grants approval for the subdivision authority to vary the requirements of Section 19 of the Regulation.

Transportation and Economic Corridors has the following additional comments and/or requirements with respect to this proposal:

1. 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, pursuant to Policy 7 of the Provincial Land Use Policies and Section 618.4 of the Municipal Government Act
2. Transportation and Economic Corridors accepts no responsibility for the noise impacts or other impacts of highway traffic upon any development or occupants thereof. The subdivision design should include adequate physical features to ensure that the proposed use of land is compatible with the adjacent provincial highway system. Some of these features might, for example, include landscaping and/or berming, to provide noise attenuation and visual screening from the highway. Implementation of these features is the responsibility of the owner/municipality.
3. The existing access may remain on a temporary basis. All direct highway accesses are to be considered temporary. No compensation shall be payable to the landowner, or their assigns or successors when Alberta Transportation removes or relocates the access or if highway access is removed and access provided via a municipal road or service road.

4. The subject land is within the permit area of a highway as outlined in the Highways Development and Protection Regulation. Proposed development on the subject will require the benefit of a Roadside Development Permit from Alberta Transportation.
5. Further, should the approval authority receive any appeals in regard to this application and as per Section 678(2.1) of the Municipal Government Act and Section 7(6)(d) of the regulation, Transportation and Economic Corridors agrees to waive the referral distance for this particular subdivision application. As far as Transportation and Economic Corridors is concerned, an appeal of this subdivision application may be heard by the local Subdivision and Development Appeal Board provided that no other provincial agency is involved in the application

Please contact Transportation and Economic Corridors through the [RPATH Portal](#) if you have any questions, or require additional information.”

- (k) Historical Resources – Barry Newton, Land Use Planner:

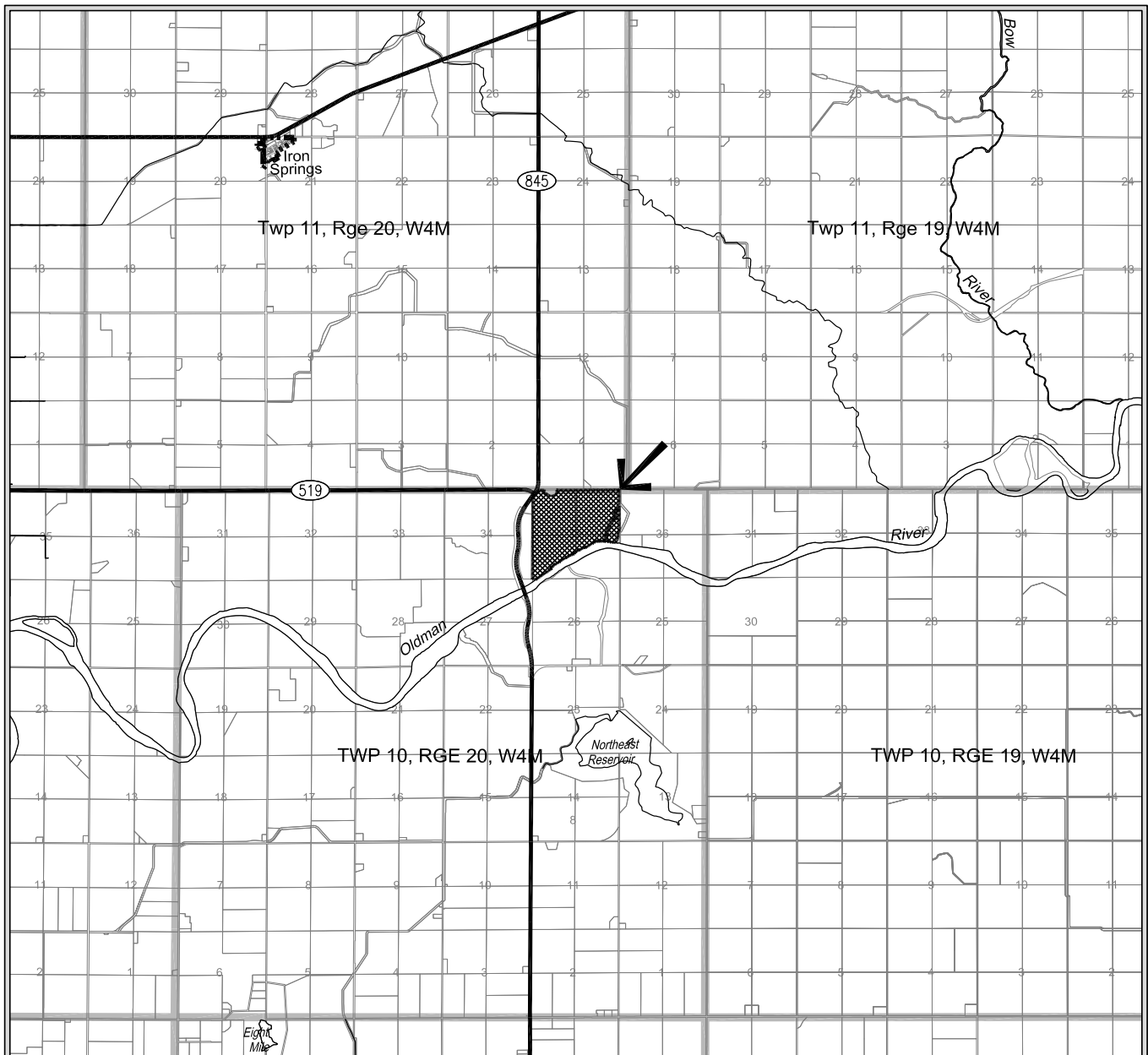
“We have reviewed the captioned subdivision application and determined that in this instance formal *Historical Resources Act* approval is not necessary, and submission of a Historic Resources application is not required.”

- (l) Alberta Agriculture and Irrigation, Water Infrastructure and Operations Branch has reviewed the lands in question and has no comments concerns to add.

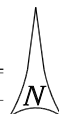
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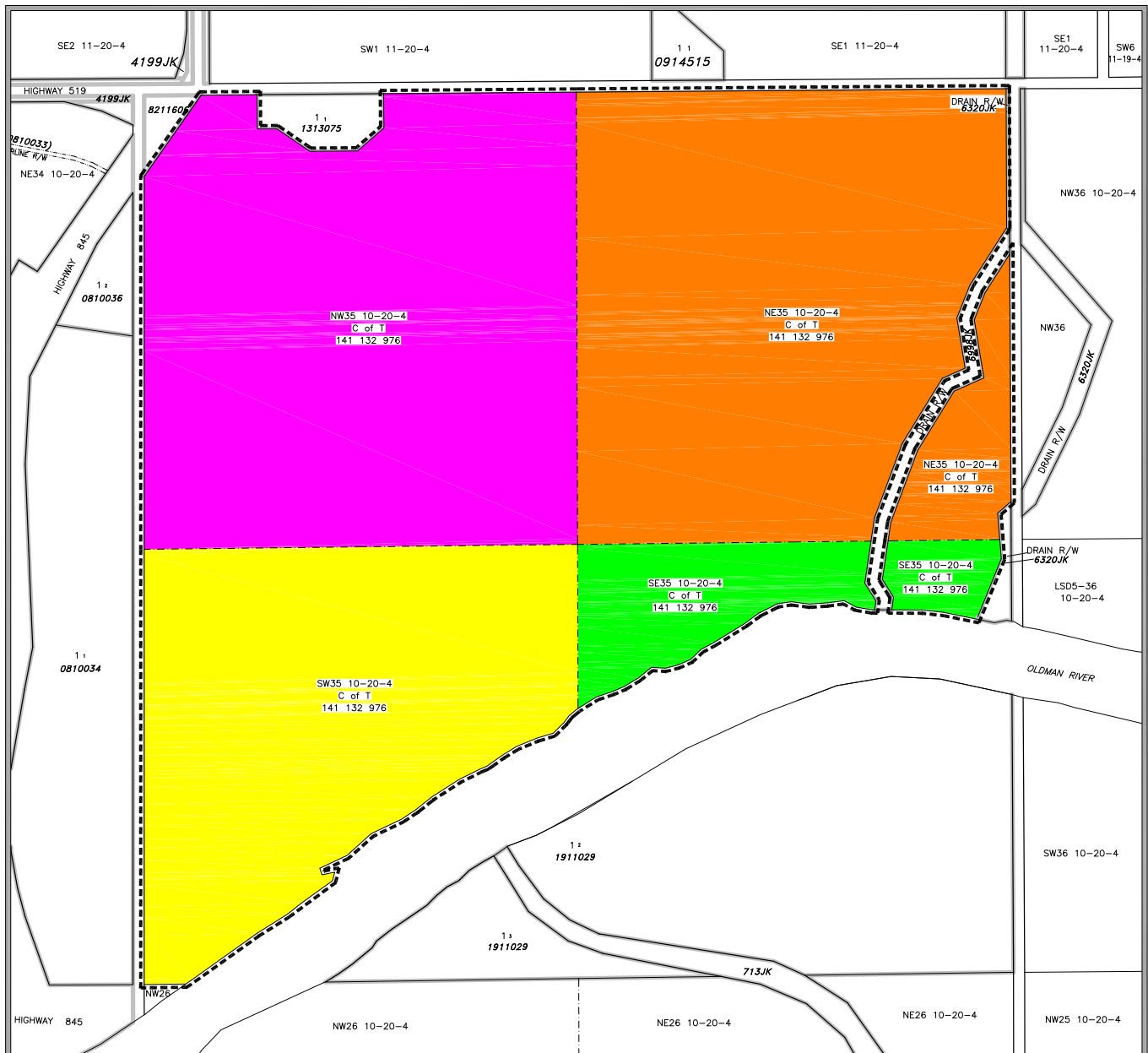
REEVE

DATE



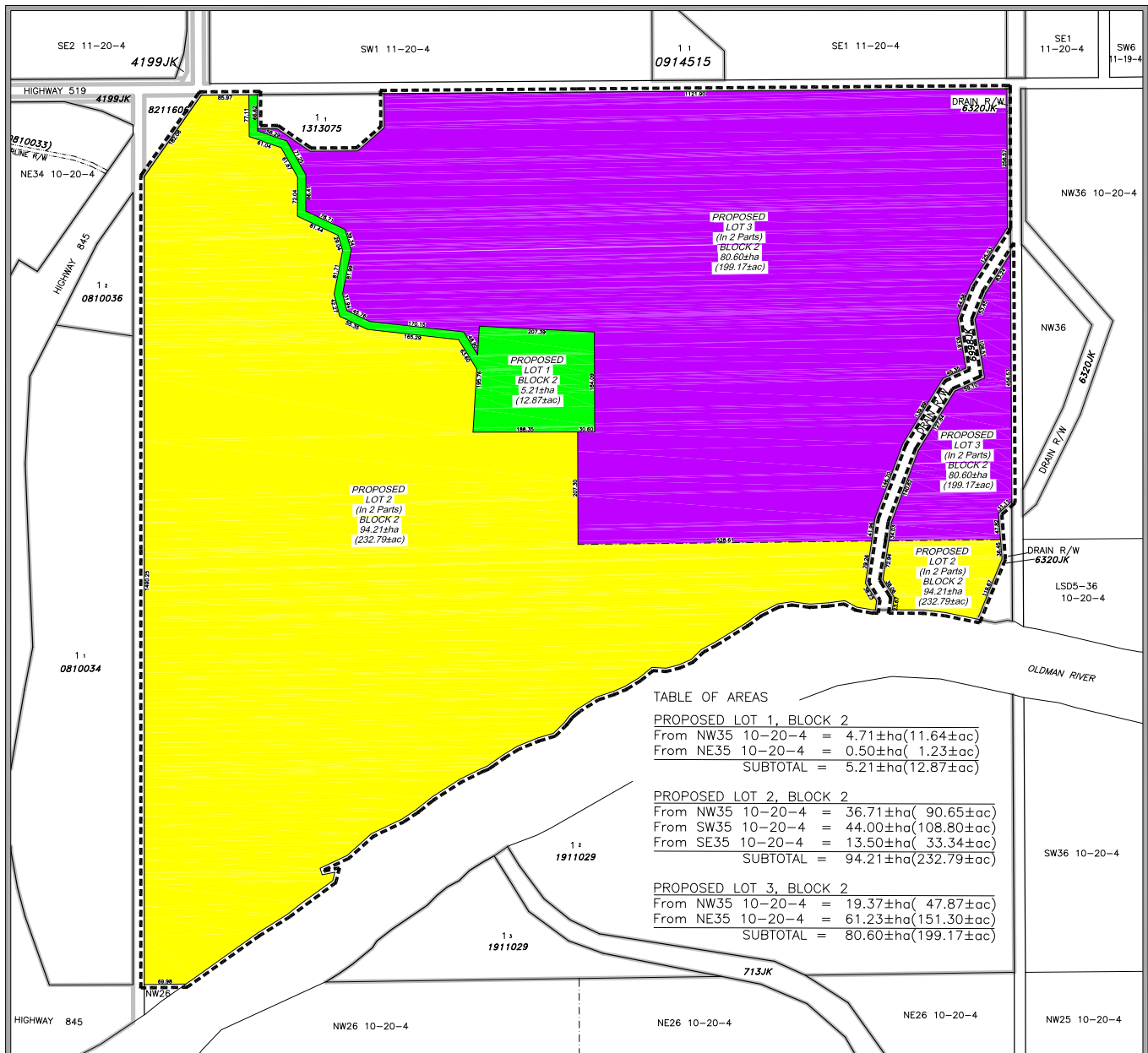
SUBDIVISION LOCATION SKETCH
WITHIN SEC 35, TWP 10, RGE 20, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: APRIL 5, 2023
FILE No: 2023-0-043





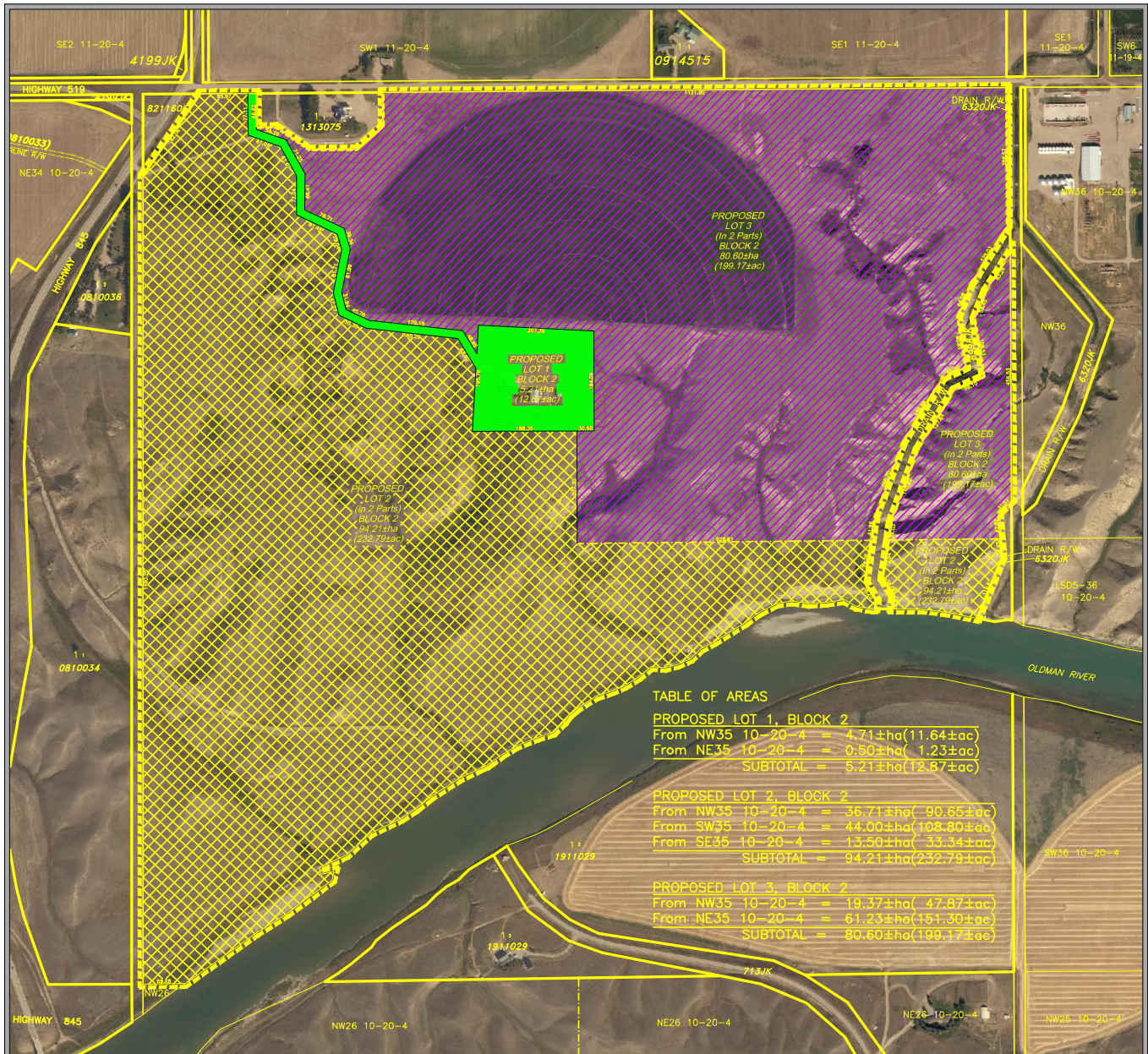
SUBDIVISION SKETCH - EXISTING
 WITHIN SEC 35, TWP 10, RGE 20, W 4 M
 MUNICIPALITY: LETHBRIDGE COUNTY
 DATE: APRIL 5, 2023
 FILE No: 2023-0-043





SUBDIVISION SKETCH - PROPOSED
 WITHIN SEC 35, TWP 10, RGE 20, W 4 M
 MUNICIPALITY: LETHBRIDGE COUNTY
 DATE: APRIL 5, 2023
 FILE No: 2023-0-043





SUBDIVISION SKETCH - PROPOSED
 WITHIN SEC 35, TWP 10, RGE 20, W 4 M
 MUNICIPALITY: LETHBRIDGE COUNTY
 DATE: APRIL 5, 2023
 FILE No: 2023-0-043



AERIAL PHOTO DATE: 2018

AGENDA ITEM REPORT



Title: Subdivision Application #2023-0-057 – Shimek
- NW1/4 22-11-21-W4M
Meeting: Council Meeting - 01 Jun 2023
Department: ORRSC
Report Author: Steve Harty

APPROVAL(S):

Hilary Janzen, Supervisor of Planning & Development
Larry Randle, Interim Chief Administrative Officer

Approved - 18 May 2023
Approved - 18 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

The application is to reconfigure the layout (property boundary) and title size of an existing 6.57-acre title and realign its boundaries to create a title reduced in size to 6.08-acres, for country residential use. The proposal meets the subdivision criteria of the Land Use Bylaw.

RECOMMENDATION:

That S.D. Application #2023-0-057 be approved subject to the conditions as outlined in the draft resolution.

REASON(S) FOR RECOMMENDATION(S):

The proposed subdivision meets the provincial Subdivision and Development Regulations and the municipal reconfiguration of title subdivision policies as stated in the Land Use Bylaw.

PREVIOUS COUNCIL DIRECTION / POLICY:

- The realignment is in support of agriculture, as the east boundary adjustment is to maximize an irrigation pivot area and is being returned to the agricultural land title.
- LUB No. 1404 contains policies and subdivision criteria to allow a realignment/reconfiguration of titles and property lines without an increase in titles.
- The LUB No. 1404 reconfiguration of titles policy enables land boundaries to be realigned based on factors such as improvements present, agricultural use, encroachments, and the rationale of the land swap.
- Private septic systems are required to be entirely contained within property boundaries of the dwelling and this proposal rectify an encroachment issue of the septic system.

BACKGROUND INFORMATION:

Located 2½-miles north of Picture Butte and ½-mile west of Highway 25 (and 843). The proposal is to enable a land swap and property line adjustment between the country residential title and the adjacent agricultural title.

The main purpose is to realign the east property line to account for the irrigation pivot and return irrigable land (1.43-acres) to the adjacent agricultural parcel from the acreage lot. There are no buildings or other improvements located in this part of the yard and it is farmed as part of the cultivated land. The second component is to extend the southern east property boundary approximately 54 m to the east to capture the septic field. The dwellings private septic field system is situated to the east of the present property line and sits entirely on the separate agricultural parcel title. The yard's dwelling and main improvements are located on the southern portion while the northern portion contains a large Quonest building and some grain bins. Access is from the west municipal road allowance and will be unaffected. There are no abandoned gas wells that impact the land. There is an AER approved gas transmission pipeline on the very east perimeter of the agricultural parcel, but it is 670 m and does not affect the reconfiguration.

Overall, the proposal meets the criteria of the County's LUB No. 1404 for a reconfiguration/realignment of titles or boundaries subdivision. The application was circulated to the required external agencies with no concerns expressed and no utility easements are requested. Alberta Transportation has no objections.

ALTERNATIVES / PROS / CONS:

The Subdivision Authority could decide to not approve if it is determined the proposed boundary reconfiguration is not suitable and the titles would remain as is.

Pros:

- there are no advantages to denying the subdivision as the County's bylaws are met

Cons:

- Irrigable land would not be added to the agricultural title and the septic field encroachment would remain

FINANCIAL IMPACT:

None.

LEVEL OF PUBLIC PARTICIPATION:

☒ **Inform** ☐ **Consult** ☐ **Involve** ☐ **Collaborate** ☐ **Empower**

ATTACHMENTS:

[5A Lethbridge County 2023-0-057](#)

[Diagrams for Lethbridge County SD 2023-0-057](#)

RESOLUTION

2023-0-057

Lethbridge County

Agricultural and Country Residential subdivision of Lot 1, Block 1, Plan 9010254 and a portion of the NW1/4 22-11-21-W4M all within NW1/4 22-11-21-W4M

THAT the Agricultural and Country Residential subdivision of Lot 1, Block 1, Plan 9010254 and a portion of the NW1/4 22-11-21-W4M all within NW1/4 22-11-21-W4M (Certificate of Title No. 901 033 612, 901 033 612 +1), to reconfigure an existing 6.57-acre (2.66 ha) title and realign its boundaries to create a title reduced in size to 6.08-acres (2.46 ha) for country residential use; BE APPROVED subject to the following:

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 applicant submits a plan as prepared by an Alberta Land Surveyor that certifies the exact location and dimensions of the parcels being subdivided and consolidated. The titles and portions of land to be subdivided and consolidated to reconfigure the boundaries (property line) of the two adjacent parcels, is to 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 any easement(s) as required by utility companies, or the municipality shall be established.

REASONS:

1. The proposed subdivision is consistent with the South Saskatchewan Regional Plan and complies with both the Municipal Development Plan and Land Use Bylaw.
2. The Subdivision Authority is satisfied that the proposed reconfigured subdivision is suitable for the purpose for which the subdivision is intended pursuant to Section 9 of the Matters Related to Subdivision and Development Regulation.
3. The realignment is deemed to be suitable to both rectify the septic situation and account for the irrigation pivot, and it complies with the subdivision criteria as a property realignment/reconfiguration of titles.
4. The Subdivision Authority finds the reduced parcel at 6.08-acres complies to the 2.00-acre bylaw minimum parcel size.

INFORMATIVE:

- (a) The payment of Municipal Reserve is not applicable on the parcel with respect to Section 663 of the MGA, and as it a reconfiguration of titles with no additional titles created.
- (b) That a legal description for the proposed parcel be approved by the Surveys Branch, Land Titles Office, Calgary.
- (c) The applicant/owner is advised that other municipal, provincial or federal government or agency approvals may be required as they relate to the subdivision and the applicant/owner is responsible for verifying and obtaining any other approval, permit, authorization, consent or license that may be required to subdivide, develop and/or service the affected land (this may include but is not limited to Alberta Environment and Protected Areas, Alberta Transportation, and the Department of Fisheries and Oceans.)

2023-0-057
Page 1 of 2

(d) Telus Communications Inc has no objection.

(e) Alberta Transportation – Leah Olsen, Development/Planning Technologist:

“This will acknowledge receipt of your circulation regarding the above noted proposal. The subdivision application would be subject to the requirements of Sections 18 and 19 of the Matters Related to Subdivision and Development Regulation (The Regulation), due to the proximity of Highway(s) 843, 25 Transportation and Economic Corridors offers the following comments with respect to this application:

The requirements of Section 18 of the Regulation are not met. The department anticipates minimal impact on the highway from this proposal. Pursuant to Section 20(1) of the Regulation, Transportation and Economic Corridors grants approval for the subdivision authority to vary the requirements of Section 18 of the Regulation.

The requirements of Section 19 of the Regulation are not met. There is no direct access to the highway and there is sufficient local road access to the subdivision and adjacent lands. Pursuant to Section 20(1) of the Regulation, Transportation and Economic Corridors grants approval for the subdivision authority to vary the requirements of Section 19 of the Regulation.

Transportation and Economic Corridors has the following additional comments and/or requirements with respect to this proposal:

1. 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, pursuant to Policy 7 of the Provincial Land Use Policies and Section 618.4 of the Municipal Government Act
2. Transportation and Economic Corridors accepts no responsibility for the noise impacts or other impacts of highway traffic upon any development or occupants thereof. The subdivision design should include adequate physical features to ensure that the proposed use of land is compatible with the adjacent provincial highway system. Some of these features might, for example, include landscaping and/or berming, to provide noise attenuation and visual screening from the highway. Implementation of these features is the responsibility of the owner/municipality.
3. Further, should the approval authority receive any appeals in regard to this application and as per Section 678(2.1) of the Municipal Government Act and Section 7(6)(d) of the regulation, Transportation and Economic Corridors agrees to waive the referral distance for this particular subdivision application. As far as Transportation and Economic Corridors is concerned, an appeal of this subdivision application may be heard by the local Subdivision and Development Appeal Board provided that no other provincial agency is involved in the application

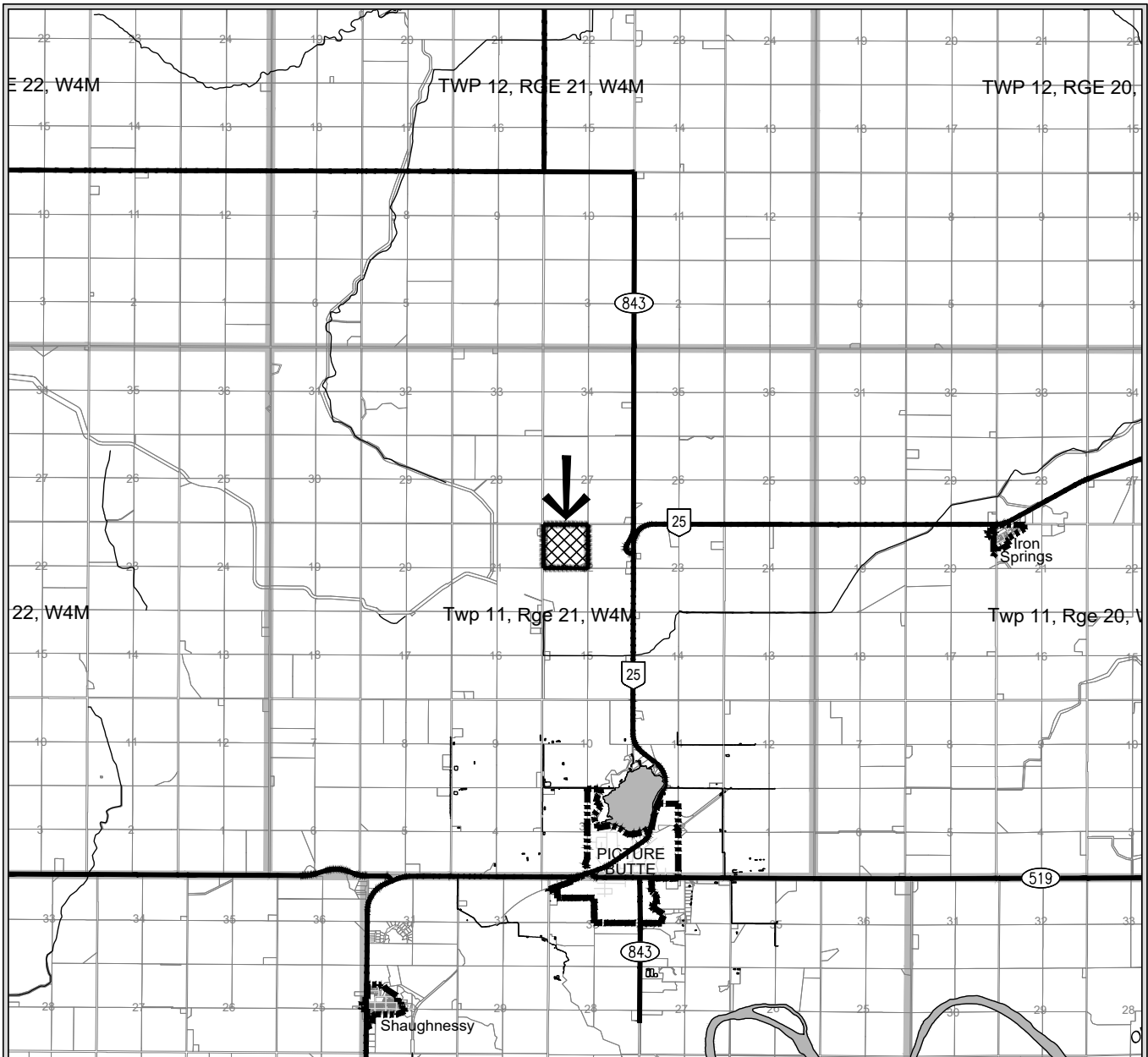
Please contact Transportation and Economic Corridors through the RPATH Portal if you have any questions, or additional information.”

(f)

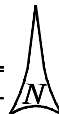
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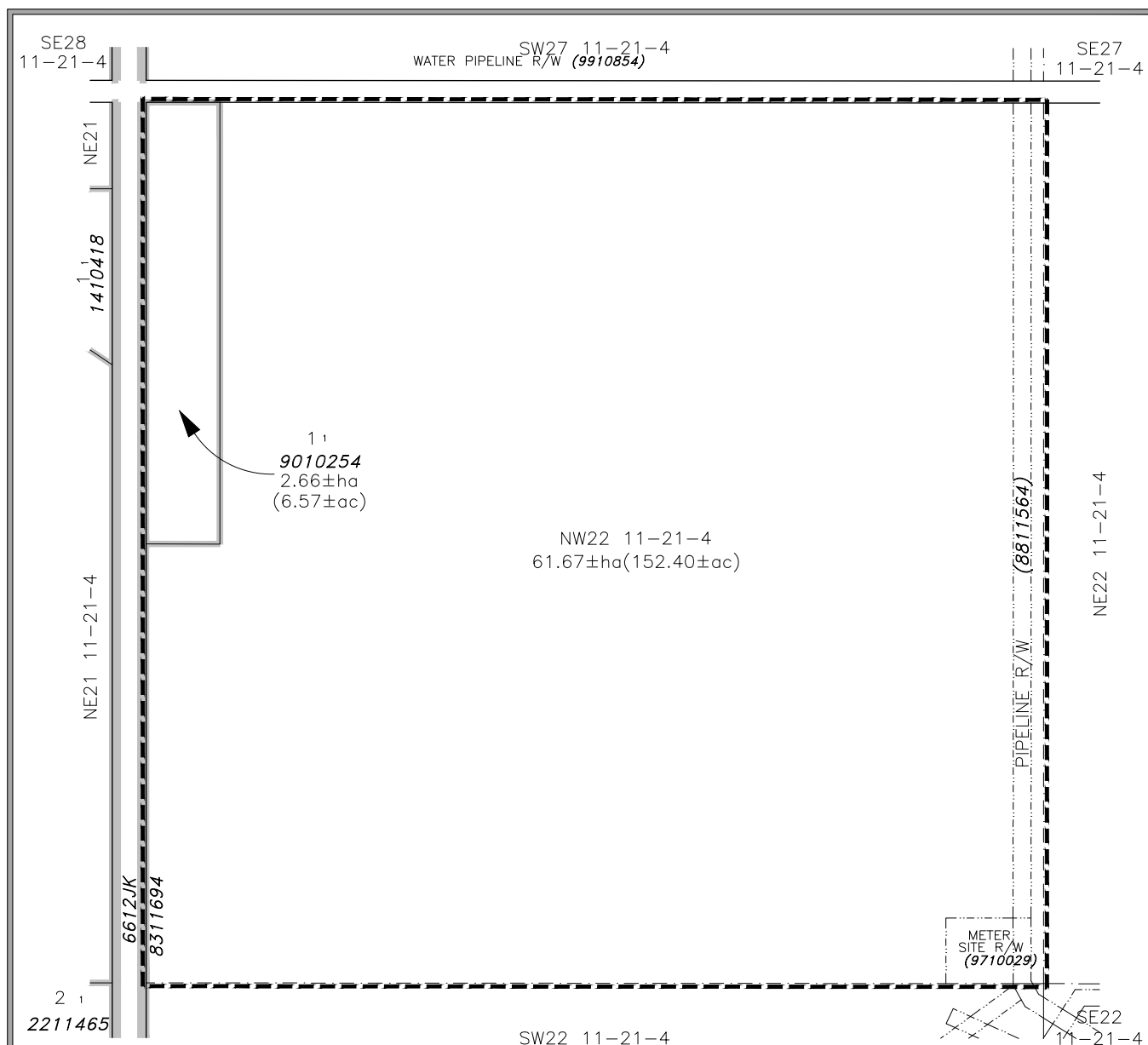
REEVE

DATE



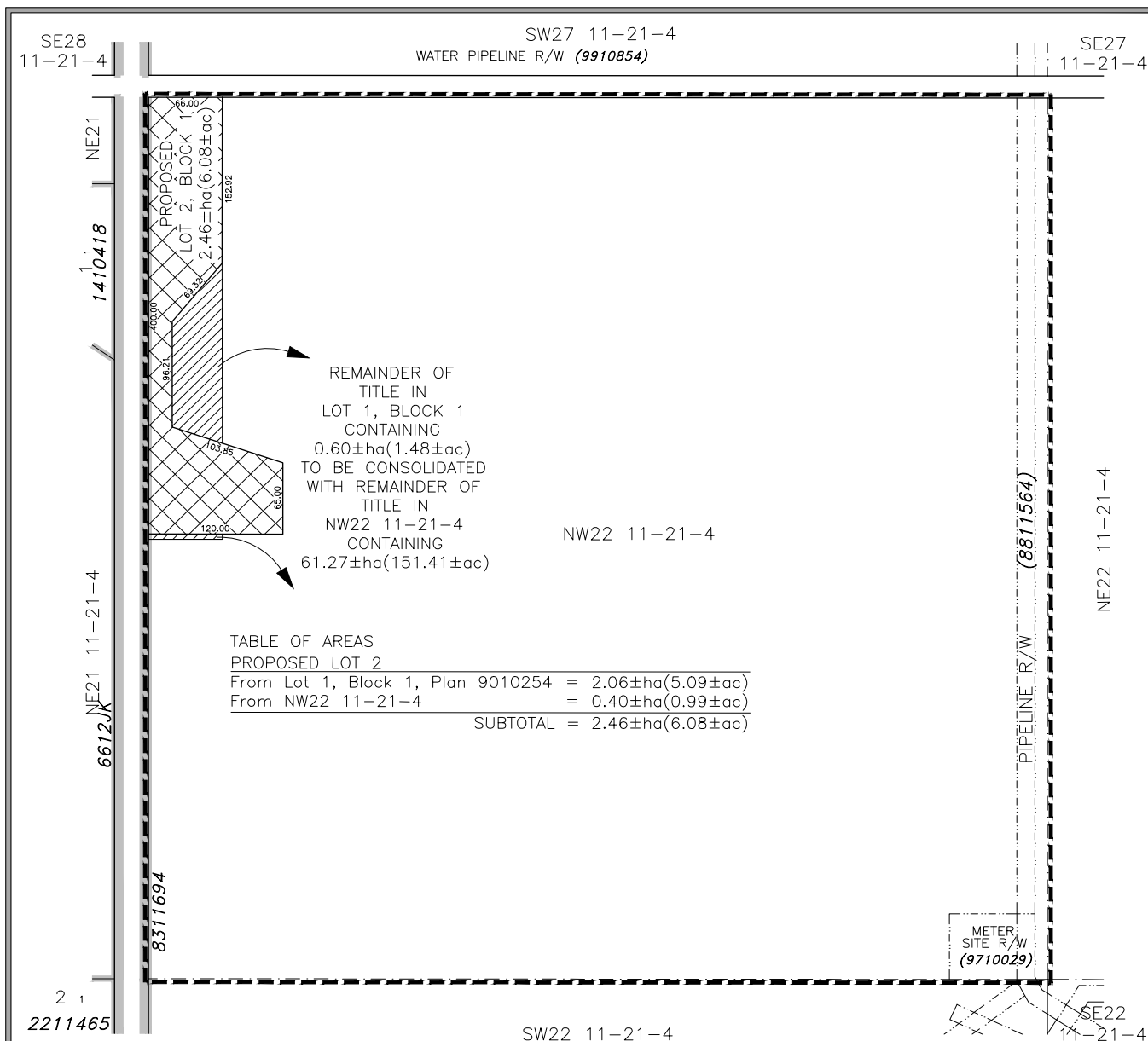
SUBDIVISION LOCATION SKETCH
LOT 1, BLOCK 1, PLAN 9010254 &
NW 1/4 SEC 22, TWP 11, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: MAY 1, 2023
FILE No: 2023-0-057





SUBDIVISION SKETCH - EXISTING

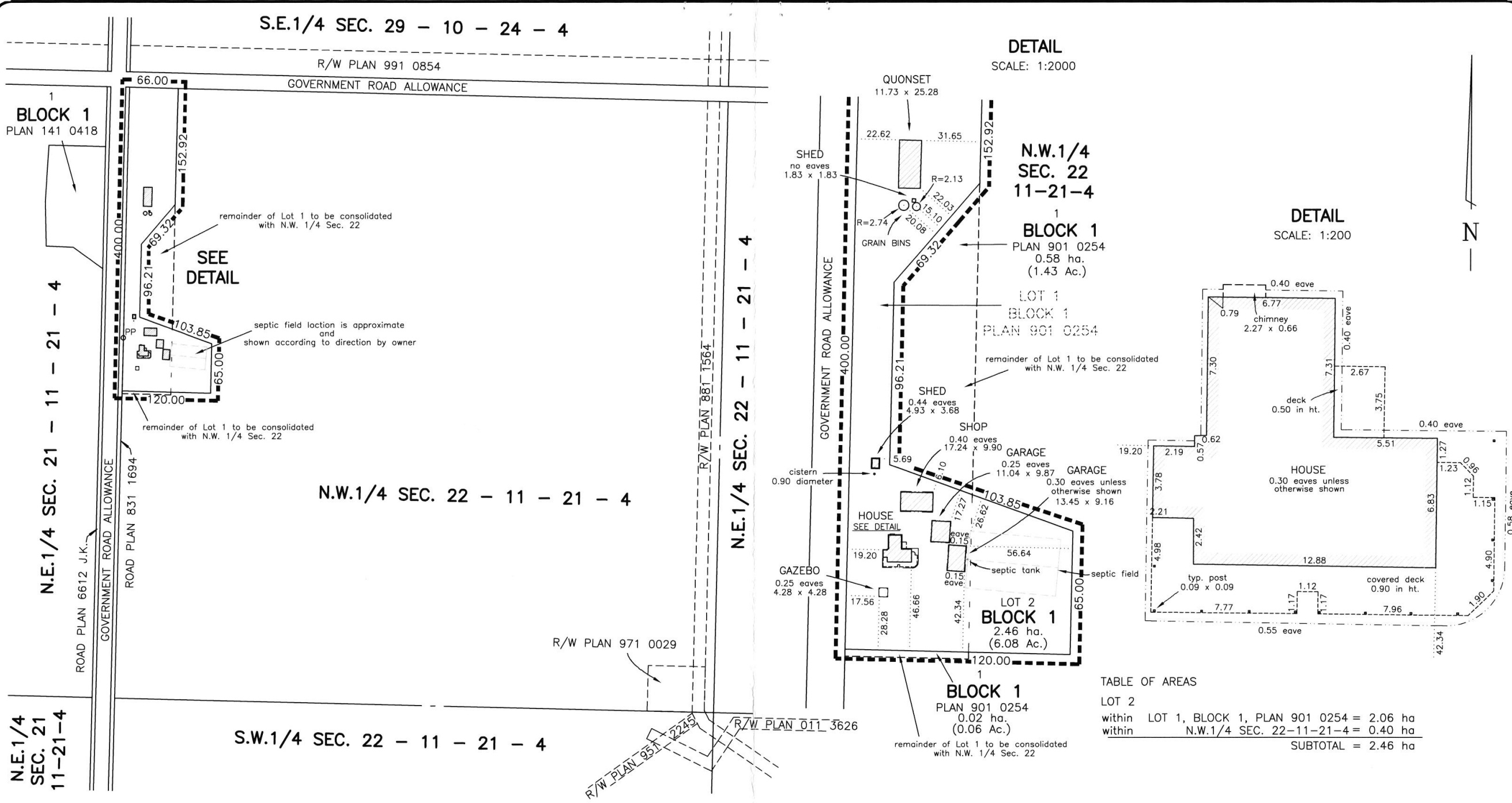
LOT 1, BLOCK 1, PLAN 9010254 &
 NW 1/4 SEC 22, TWP 11, RGE 21, W 4 M
 MUNICIPALITY: LETHBRIDGE COUNTY
 DATE: MAY 1, 2023
 FILE No: 2023-0-057



SUBDIVISION SKETCH - PROPOSED

LOT 1, BLOCK 1, PLAN 9010254 &
NW 1/4 SEC 22, TWP 11, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: MAY 1, 2023
FILE No: 2023-0-057





NOTE : Portion to be approved is outlined thus -----
and contains approximately 2.45 ha.
Distances are in metres and decimal parts thereof.
Distances and areas are approximate and are
subject to change upon final survey.

DON & COLLEEN SHIMEK

TENTATIVE PLAN SHOWING SUBDIVISION
of part of
LOT 1, BLOCK 1, DESCRIPTIVE PLAN 901 0254
N.W.1/4 SEC. 22, TWP. 11, RGE. 21, W.4 M.
all within
N.W.1/4 SEC. 22, TWP. 11, RGE. 21, W.4 M.
Lethbridge County

boa brown okamura & associates ltd.
Professional Surveyors
2830 - 12 Avenue North, Lethbridge, Alberta

APPROVED Z.J. Prosper, A.L.S.	DRAWN BB	DATE MARCH 27/23
	CHECKED ZJP	JOB 23-15958
	SCALE 1:5000	DRAWING 23-15958T

AGENDA ITEM REPORT



Title: Subdivision Application #2023-0-059 – K. Sugimoto & Sons Ltd.
- Sec. 12-7-21-W4M
Meeting: Council Meeting - 01 Jun 2023
Department: ORRSC
Report Author: Steve Harty

APPROVAL(S):

Hilary Janzen, Supervisor of Planning & Development
Larry Randle, Interim Chief Administrative Officer

Approved - 19 May 2023
Approved - 19 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

The application is to both subdivide and reconfigure the property boundaries of three adjacent agricultural titles 286.30, 80.0 & 27.77 acres in size through subdivision and consolidation, thereby creating four new titles 92.75, 113.95, 101.67 & 85.70 acres respectively in size, all for agricultural use. The proposal meets the subdivision criteria of the Land Use Bylaw.

RECOMMENDATION:

That S.D. Application #2023-0-059 be approved subject to the conditions as outlined in the draft resolution.

REASON(S) FOR RECOMMENDATION(S):

The proposed subdivision meets the provincial Subdivision and Development Regulations and the municipal subdivision policies as stated in the Land Use Bylaw.

PREVIOUS COUNCIL DIRECTION / POLICY:

- LUB No. 1404 contains policies that enable the subdivision and consolidation of land in consideration of a reconfiguration of titles. In this situation, the titles are being arranged to create four agricultural titles.
- The resulting agricultural parcel sizes exceed the minimum 80-acre agricultural parcel size requirements of the bylaw criteria as established by Council.
- Reconfigurations are considered in terms of suitability, and the land swap/reconfiguration between the adjacent agricultural titles will better align the boundaries to how it is farmed. Additionally, it will rectify an access issue as the remnant of the SE ¼-section is permanently severed from the parent title by the canal.

- Lethbridge County has an Intermunicipal Development Plan (IDP) with the County of Warner that is applicable, and the proposal conforms to the IDP policies.

BACKGROUND INFORMATION:

Located 6-miles south of the City of Lethbridge, 2-miles east of Highway 5 and four miles west of Highway 845, on the boundary with the County of Warner. The proposal is to enable a land swap and reconfiguration between the adjacent agricultural titles and better align the boundaries to the cultivated land and how it is farmed.

The land consists of both cultivated cropland, hay, and pasture. The existing 286.30-acre parcel is an odd configuration and contains land amongst the NW, NE, and SW ¼-sections. Additionally, the existing 27.77-acre parcel along the west side of the irrigation canal (IRR58N) is a cut-off remnant of the SE ¼-section permanently severed from the parent title by the canal and it currently has no physical or legal access. There are corrals and agricultural buildings located on the northwest parcel that will become the 92.75-acre title. To the immediate south, south of the ¼-section line, is the owner's residential yard with a dwelling. The existing dwelling's servicing will not be affected or change with the subdivision reconfiguration. Access is available to the north municipal road for the parcels in the NW. There is existing access to the west road allowance for the farmyard in the NW and the SW yard (to be on the proposed 101.67-acre title), and the proposed southerly 85.70-acre agricultural parcel can also access this road. The new reconfiguration will resolve the lack of access issue for the 27.77-acre title adjacent to the canal (which will now form part of the south 85.70-acre title).

Overall, the proposal meets the criteria of the County's LUB No. 1404 for both an agricultural and a reconfiguration/realignment of titles subdivision. The application was circulated to the required external agencies with no concerns expressed. No utility easements have been requested (at time of agenda report). The County of Warner has not responded.

ALTERNATIVES / PROS / CONS:

The Subdivision Authority could decide to not approve if it is determined the proposed subdivision is not suitable and the titles would remain as is.

Pros:

- there are no advantages to denying the subdivision as it meets the subdivision criteria of the County

Cons:

- the agricultural parcels would not align with how they are farmed, one title would not have access, and a refusal would be appealed by the applicants

FINANCIAL IMPACT:

None.

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

[5A Lethbridge County 2023-0-059](#)

[Diagrams for Lethbridge County 2023-0-059](#)

RESOLUTION

2023-0-059

Lethbridge County

Agricultural subdivision of Sec. 12-7-21-W4M

THAT the Agricultural subdivision of Sec. 12-7-21-W4M (Certificate of Title No. 121H233, 121H234, 121H237), to both subdivide and reconfigure the property boundaries of three adjacent agricultural titles 286.30, 80.0 & 27.77 acres (115.86, 32.4 & 11.24 ha) in size, by subdividing and consolidating thereby creating four new titles 92.75, 113.95, 101.67 & 85.70 acres (37.53, 46.11, 41.14 & 34.68 ha) respectively in size, all for agricultural use; BE APPROVED subject to the following:

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 reconfigure the boundaries (property lines) of the agricultural parcels be done by a plan prepared by a certified Alberta Land Surveyor in a manner such that the resulting title cannot be further subdivided without approval of the Subdivision Authority.
4. That the applicant provides an up-to-date Surveyor's sketch to illustrate the exact dimensions and parcel size and the location of the three improvements closest to the NW and SW ¼-section line. Additionally, the applicant is required to submit a final plan as prepared by an Alberta Land Surveyor that corresponds to the subdivision approval.
5. That if the Surveyor's sketch illustrates any encroachments over the property line (¼-section line), the applicant shall remove the encroachments or provide an encroachment agreement to the satisfaction of the Subdivision Authority prior to final endorsement of the subdivision.
6. That any easement(s) as required by utility companies, or the municipality shall be established.

REASONS:

1. The proposed subdivision is consistent with the South Saskatchewan Regional Plan and complies with both the Municipal Development Plan and Land Use Bylaw.
2. The Subdivision Authority is satisfied that the proposed subdivision is suitable for the purpose for which the subdivision is intended pursuant to Section 9 of the Matters Related to Subdivision and Development Regulation.
3. The Subdivision Authority is satisfied that the subdivision conforms to the criteria as both an agricultural subdivision and a reconfiguration of titles. The agricultural parcels adjusted title sizes all comply with and exceed the land use bylaw's minimum size stipulation.
4. The Subdivision Authority has determined the land swap and reconfiguration between the adjacent agricultural titles will better align the boundaries to the cultivated land and how it is farmed. Additionally, it will rectify an access issue as the remnant of the SE ¼-section is permanently severed from the parent title by the canal.
5. The subdivision is determined to align with the Intermunicipal Development Plan (IDP) with the County of Warner, as the subdivision and reconfiguration of land under the agricultural policies is permitted.

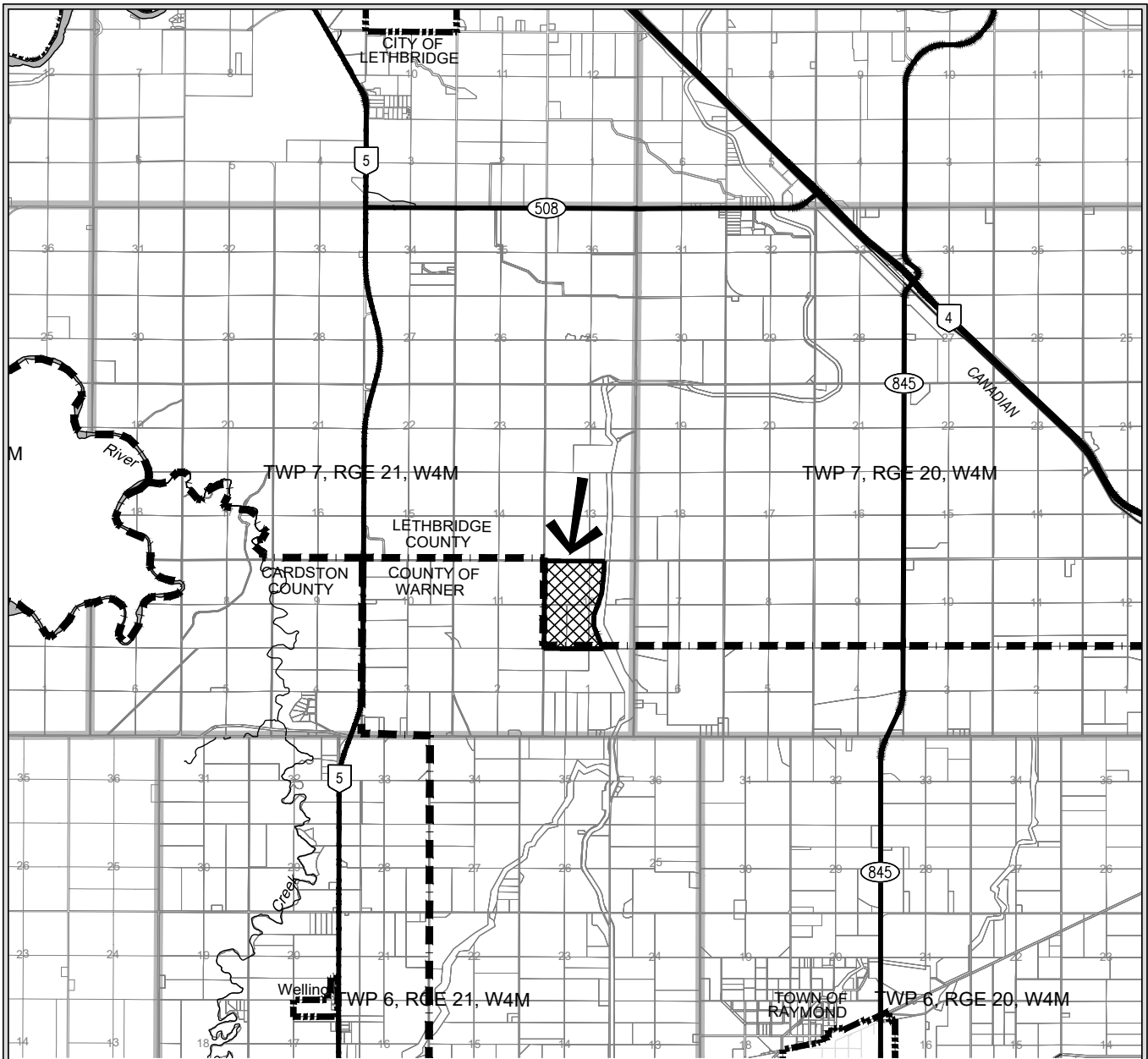
INFORMATIVE:

- (a) Since the proposed subdivision complies with Section 663(b) of the Municipal Government Act, Reserve is not required.
- (b) That a legal description for the proposed parcel be approved by the Surveys Branch, Land Titles Office, Calgary.
- (c) The applicant/owner is advised that other municipal, provincial or federal government or agency approvals may be required as they relate to the subdivision and the applicant/owner is responsible for verifying and obtaining any other approval, permit, authorization, consent or license that may be required to subdivide, develop and/or service the affected land (this may include but is not limited to Alberta Environment and Protected Areas, Alberta Transportation, and the Department of Fisheries and Oceans.)
- (d) Telus Communications Inc has no objection.

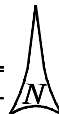
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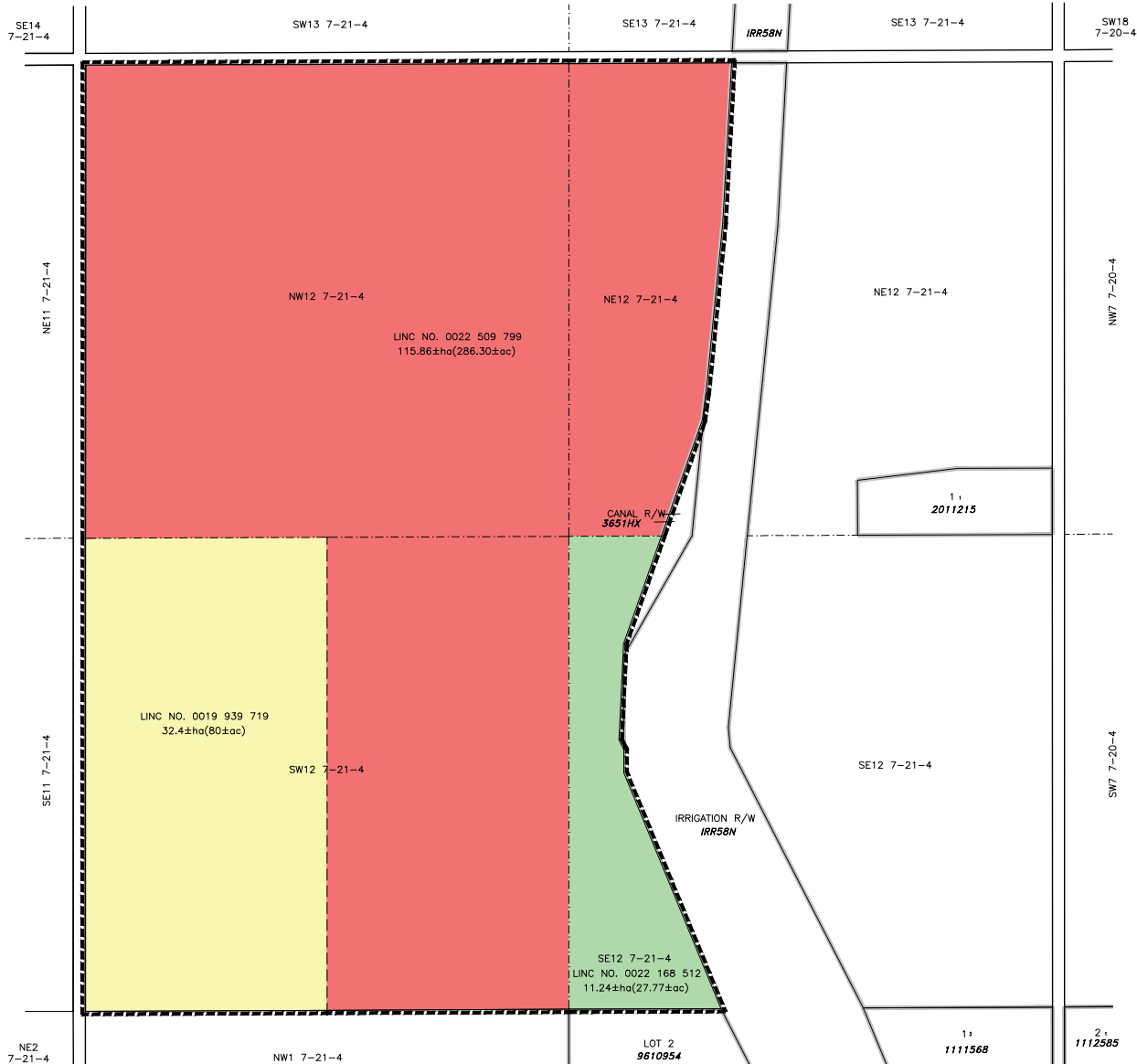
REEVE

DATE



SUBDIVISION LOCATION SKETCH
W 1/2 & PORTIONS OF
E 1/2 SEC 12, TWP 7, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: MAY 2, 2023
FILE No: 2023-0-059





SUBDIVISION SKETCH - **EXISTING**

W 1/2 & PORTIONS OF E 1/2 SEC 12, TWP 7, RGE 21, W 4 M

MUNICIPALITY: LETHBRIDGE COUNTY

DATE: MAY 2, 2023

FILE No: 2023-0-059



May 02, 2023 N:\Subdivision\2023\2023-0-059.dwg

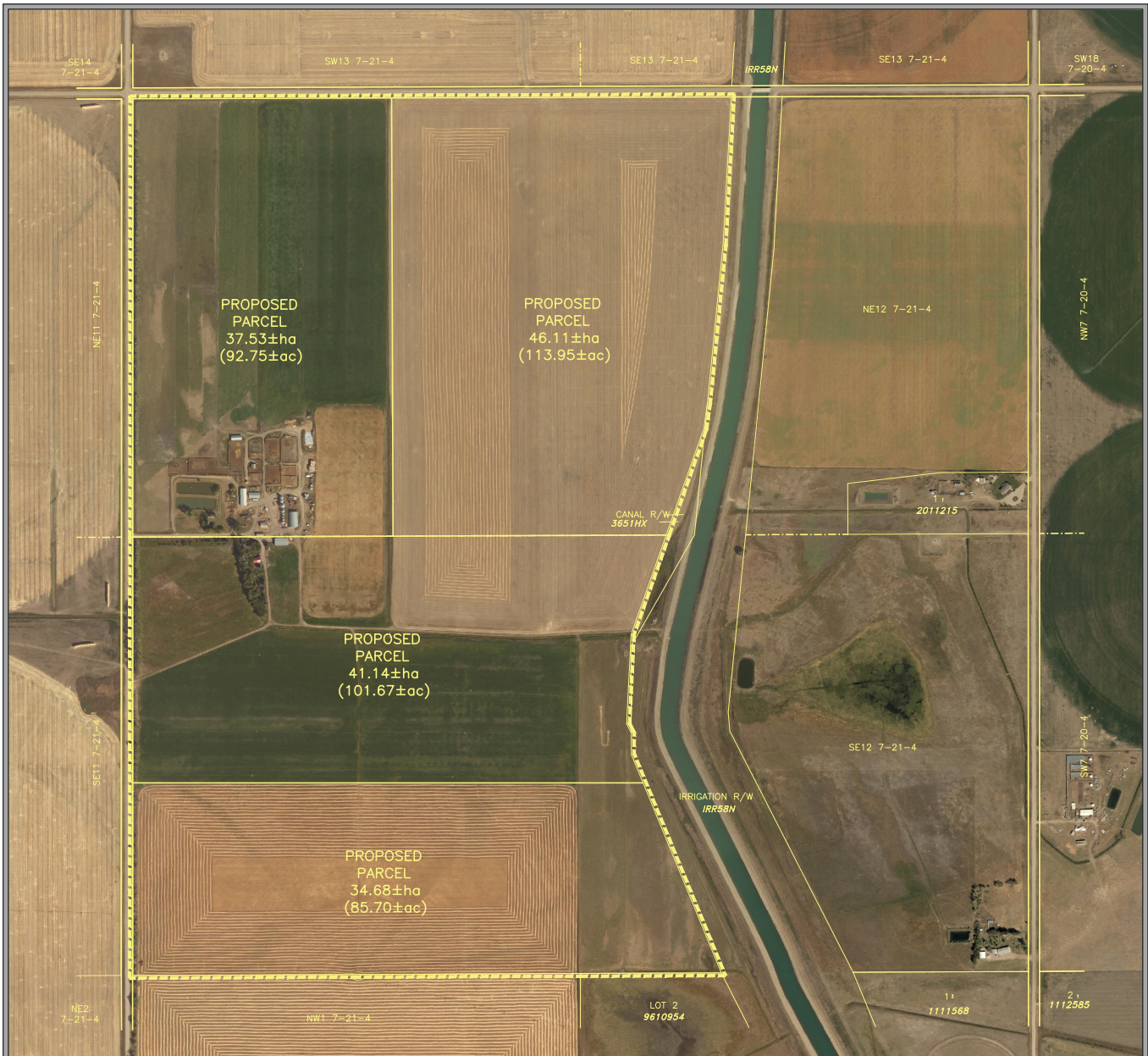




SUBDIVISION SKETCH - PROPOSED
W 1/2 & PORTIONS OF
E 1/2 SEC 12, TWP 7, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: MAY 2, 2023
FILE No: 2023-0-059

**AREAS DERIVED USING CADASTRAL
MAPPING AS SUPPLIED BY ALTALIS**





SUBDIVISION SKETCH - PROPOSED
W 1/2 & PORTIONS OF
E 1/2 SEC 12, TWP 7, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: MAY 2, 2023
FILE No: 2023-0-059

**AREAS DERIVED USING CADASTRAL
MAPPING AS SUPPLIED BY ALTALIS**



AERIAL PHOTO DATE: 2018

AGENDA ITEM REPORT



Title: Bylaw 23-018 - Reconfigure the land use districts for portions of NW 21-11-20-W4 and Plan 1810343 Block 1 Lot 1 - First Reading
Meeting: Council Meeting - 01 Jun 2023
Department: Community Services
Report Author: Hilary Janzen

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 15 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

An application has been submitted to reconfigure the land use districts for portions of NW 21-11-20-W4 and Plan 1810343 Block 1 Lot 1.

RECOMMENDATION:

That Bylaw 23-018 be read a first time.

REASON(S) FOR RECOMMENDATION(S):

The proposed rezoning meets the requirements as outlined in the Municipal Development Plan and the Grouped Country Residential Strategy.

PREVIOUS COUNCIL DIRECTION / POLICY:

- The Municipal Development Plan policy 4.13 states that landowners/developers may apply to Lethbridge County to initiate a re-designation process for parcels of land in support of development proposals that may not conform to the existing land use designation.

BACKGROUND INFORMATION:

An application has been submitted to reconfigure the land use districts for portions of NW 21-11-20-W4 and Plan 1810343 Block 1 Lot 1 as shown on the attached sketch. The land use districts change as follows:

- Hamlet Residential – from 0.14 acres to 2.57 acres
- Hamlet Commercial – from 1.24 acres to 0.64 acres
- Hamlet Industrial – from 5.70 acres to 3.86 acres

The re-designation will allow the applicant to adjust the property lines and have a larger building area for their residence while still allowing the Hamlet Commercial and Hamlet Industrial Districts.

It is anticipated that the public hearing for Bylaw 23-018 will be held in July 2023.

ALTERNATIVES / PROS / CONS:

County Council may refuse first reading of the Bylaw. Refusing the bylaw 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 upon first reading of the bylaw. The public hearing process allows County Council the opportunity to hear all positions (in favour and opposed) on the bylaw and make an informed decision. If first reading of the bylaw is not given the applicant could appeal that decision to the Alberta Court of Appeal.

FINANCIAL IMPACT:

If the bylaw was approved, future development would be taxed at the County's tax rate. There are no additional costs to the County (i.e. maintenance of infrastructure) that would arise if that bylaw were approved.

LEVEL OF PUBLIC PARTICIPATION:

☐

Inform

☒

Consult

☐

Involve

☐

Collaborate

☐

Empower

ATTACHMENTS:

[Bylaw 23-018 - Application](#)

[23_018_HI_HR_Ortho](#)

[Bylaw 23-018 - Amendment to LUB - Penner](#)



LETHBRIDGE COUNTY
APPLICATION FOR A
LAND USE BYLAW AMENDMENT
Pursuant to Bylaw No. 1404

Form C

OFFICE USE		
Date of Application: <u>April 21/2023</u>	Assigned Bylaw	No. <u>23-018</u>
Date Deemed Complete: <u>April 24/2023</u>	Application & Processing Fee:	\$ <u>1500.00</u>
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 Supervisor of Planning and Development 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 INFORMATION

Name of Applicant: Mary Penner Martin Penner
Mailing Address: Box 92 Phone: 403 634 9701
Iron Springs Phone (alternate): 403 732 5473
Postal Code: T0K 1G0 Fax: _____
Is the applicant the owner of the property? ☒ Yes ☐ No

IF "NO" please complete box below

Name of Owner: _____	Phone: _____
Mailing Address: _____	Applicant's interest in the property:
_____	☐ Agent
_____	☐ Contractor
_____	☐ Tenant
Postal Code: _____	☐ Other _____

PROPERTY INFORMATION

Municipal Address: 21 Center Street, Iron Springs
Legal Description: Lot(s) 5 Block 1 Plan 1810343 a-d
OR Quarter 1/4 Section 21 Township 11 Range 20, w 4 m

AMENDMENT INFORMATION

What is the proposed amendment?

☐ Text Amendment

☒ Land Use Redesignation

IF TEXT AMENDMENT:

For text amendments, attach a description including:

- The section to be amended;
- The change(s) to the text; and
- Reasons for the change(s).

IF LAND USE REDESIGNATION:

Current Land Use Designation (zoning):

Hamlet Residential, Hamlet Industrial, Hamlet commercial

Proposed Land Use Designation (zoning) (if applicable):

Same as above, just reconfigured

SITE DESCRIPTION:

Describe the **lot/parcel dimensions** _____ and **lot area/parcel acreage** _____
Indicate the information on a scaled PLOT or SITE PLAN: (0-4 acres at 1" = 20'; 5-9 acres at 1" = 100'; 10 acres or more at 1" = 200')

☐ Site or Plot Plan Attached

☐ Conceptual Design Scheme or Area 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.

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.***

Mary and Martin Penner 
APPLICANT REGISTERED OWNER
(if not the same as applicant)

DATE: 4/18/23

IMPORTANT: This information may also be shared with appropriate government/ other agencies and may also be kept on file by the agencies. This information may also be used by and for any or all municipal programs and services. Information provided in this application may be considered at a public meeting. The application and related file content will become available to the public and are subject to the provisions of the Freedom of Information and Protection of Privacy Act (FOIP). If you have any questions about the collection of this information, please contact Lethbridge County.

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.
3. 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.

We are planning to reconfigure the lots to make a bigger yard. In the future we want to build a house on the lot. The proposal is consistent with the growth study, and compatible with the surrounding activities.

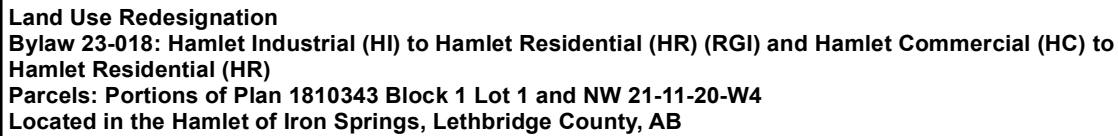
LETHBRIDGE COUNTY
#100, 905 - 4 AVENUE SOUTH
LETHBRIDGE, ALBERTA
T1J 4E4
TELEPHONE: (403) 328-5525
FAX: (403) 328-5602
O F F I C I A L R E C E I P T

PENNER, MARY

GST Reg. #: R106989023
Receipt #: 0344546
Date: 2023/04/21

Account #	Description	Opening Bal	Payment	Amount Due
1.3.599.10.5.00	REZONING		1,500.00	

		** Payment Total:	1,500.00	
CASH	Cash			1,500.00



- 
Lethbridge County, 2020
- The information contained in this document is for information and therefore prepared only for Lethbridge County and not for third parties. Any errors or omissions are to be identified for reference only. This document may not be copied or redistributed in any form without prior consent from Lethbridge County.
- 

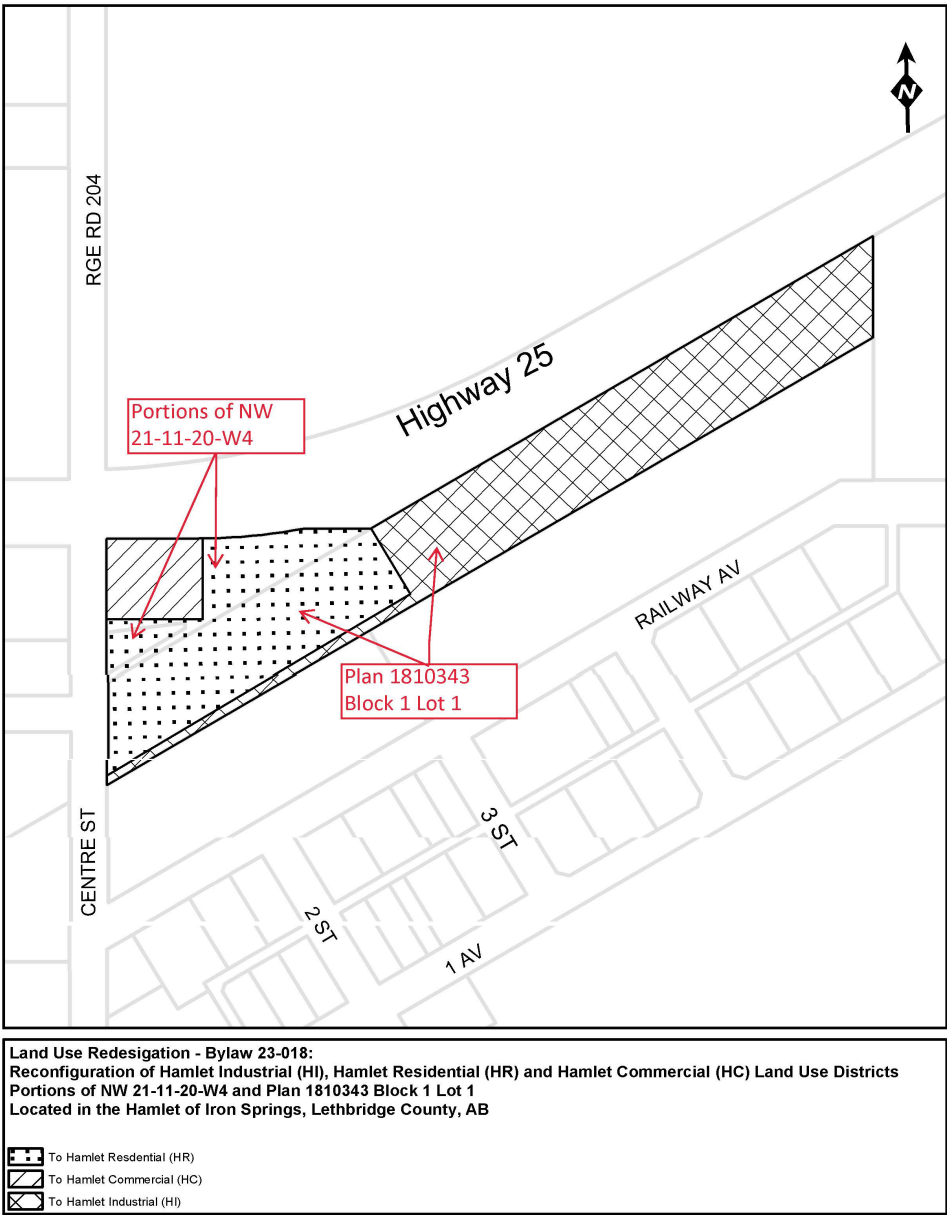
**LETHBRIDGE COUNTY
IN THE PROVINCE OF ALBERTA
BYLAW NO. 23-018**

Bylaw 23-018 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 23-018 is to reconfigure the land use districts being Hamlet Residential, Hamlet Commercial and Hamlet Industrial for portions of NW 21-11-20-W4 and Plan 1810343 Block 1 Lot 1;

AND WHEREAS the re-designation of the lands will allow for parcels to be subdivided and allow for the future development of the parcels;

AND WHEREAS the municipality must prepare an amending bylaw and provide for its notification and consideration at a public hearing;



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 1st day of June 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	June 1, 2023
2 nd Reading	
Public Hearing	
3 rd Reading	

AGENDA ITEM REPORT



Title: Bylaw 23-014 - Road Closure, Sale and Consolidation- First Reading
Meeting: Council Meeting - 01 Jun 2023
Department: Community Services
Report Author: Hilary Janzen

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 16 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

An application has been made to close all of Township Road 9-4A.

RECOMMENDATION:

That Bylaw 23-014 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 Township Road 9-4A directly adjacent to the SE 25-9-19-W4 (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 and the closure does not impact any other landowners.

If the road closure were successful, the road 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 July 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.

FINANCIAL IMPACT:

The applicant will be required to pay the assessed land value (\$15,000 per acre) for the roadway and prorated rate for the paving of a portion of Township Road 9-4A (\$143,285.350). The total payable amount would be \$232,508.35.

LEVEL OF PUBLIC PARTICIPATION:☐

Inform

☒

Consult

☐

Involve

☐

Collaborate

☐

Empower

ATTACHMENTS:[Road Closure Application](#)[Bylaw 23-014 Road Closure Map](#)[Bylaw 23-014 - Road Closure - McCains](#)[AT Comments - May 11 2023](#)



LETHBRIDGE COUNTY APPLICATION FOR ROAD CLOSURE

OFFICE USE		
Date of Application: <u>April 11, 2023</u>	Assigned Bylaw	No. <u>23-014</u>
Date Deemed Complete: <u>April 12, 2023</u>	Application & Processing Fee:	\$ <u>1500.00</u>
	Assessed Value:	\$

APPLICANT INFORMATION

Name of Applicant:	<u>Clement Dubois</u>		
Mailing Address:	<u>One Tower Lane, 11th Floor</u>	Phone:	<u>312.485.0759</u>
	<u>Oakbrook Terrace, IL, USA</u>		
Postal Code:	<u>60181</u>	Email:	<u>clement.dubois@mccain.com</u>
Name of Owner:	<u>McCain Foods Limited</u>		
(if not the applicant)			
Mailing Address:	<u>439 King Street West, 5th Floor</u>	Phone:	<u>416.955.1700</u>
	<u>Toronto, ON, Canada</u>		
Postal Code:	<u>M5V 1K4</u>	Email:	<u>clement.dubois@mccain.com</u>

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).

Clement Dubois

2023-03-13

APPLICANT

DATE

*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 foip@lethcountv.ca 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.

BYLAW NO. 23-014
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.

PUBLIC WORKS PLAN 9813399, SERVICE ROAD WITHIN SE 25-9-19-4
CONTAINING 2.41 HECTARES (5.95 ACRES MORE OR LESS)
EXCEPTING THEREOUT ALL MINES AND MINERALS

GIVEN first reading this _____ day of _____, 2023.

Reeve

Chief Administrative Officer

Public Hearing held on _____

Forwarded to the Minister of Transportation on: _____

Approved this _____ day of _____, 20____

Minister of Transportation

GIVEN second reading this _____ day of _____, 20____.

Reeve

Chief Administrative Officer

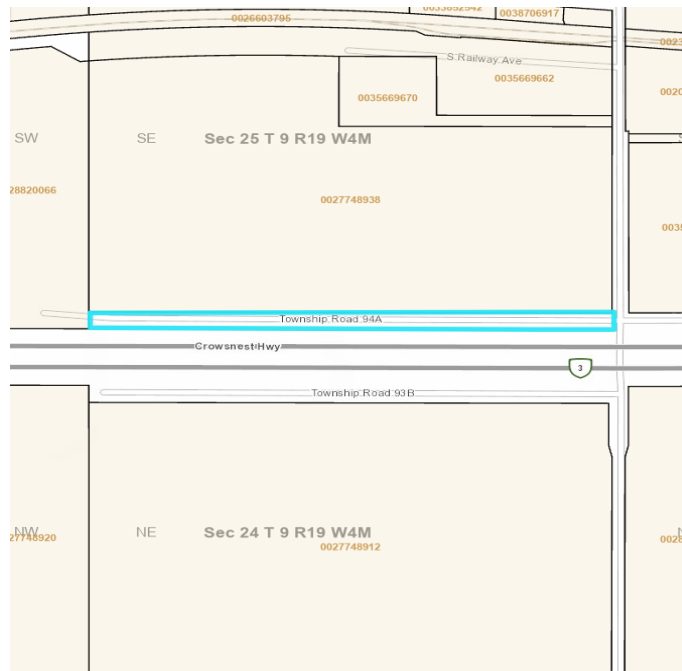
GIVEN third reading this _____ day of _____, 20____.

Reeve

Chief Administrative Manager

Alberta Transportation and Economic Corridors Notice of Referral Decision **Road Closure Request**

Municipality File Number:		Highway(s):	3
Legal Land Location:	QS-SE SEC-25 TWP-009 RGE-19 MER-4	Municipality:	Lethbridge County
Decision By:	Evan Neilsen	Issuing Office:	Southern Region / Lethbridge
Issued Date:	2023-05-11 08:19:33	AT Reference #:	RPATH0034409
Description of Development:	Application has been made to close, sale, and consolidate Township Road 9-4A.		



This will acknowledge receipt of the above referenced road closure application, which is subject to the requirements of the Municipal Government Act.

Following the public hearing, please submit the bylaw package to Alberta Transportation and Economic Corridors through the RPATH Portal, referencing the RPATH number noted above. The hard copy of the road closure package shall be sent directly to:

Road Closure Coordinator
Alberta Transportation and Economic Corridors
Technical Standards Branch
2nd Floor, Twin Atria Building
4999 98 Avenue NW
Edmonton, Alberta T6B 2X3

Additional information is available for road closure by bylaw, or by resolution.

Please contact Alberta Transportation and Economic Corridors through the [RPATH Portal](#) if you have any questions, or require additional information



Issued by **Evan Neilsen**, , on **2023-05-11 08:19:33** on behalf of the Minister of Transportation and Economic Corridors pursuant to *Ministerial Order 52/20 – Department of Transportation Delegation of Authority*

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) - Second Reading

Meeting: Council Meeting - 01 Jun 2023

Department: Community Services

Report Author: Hilary Janzen

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 17 May 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, as amended, with the consultant submitting the final updated ASP as per the revised site plan.

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.
- Public Hearing for Bylaw 23-002 and 23-003 was held on April 20, 2023. County Council postponed second reading of the Bylaws requesting further information on availability of potable water, lot sizes that are currently listed under 2 acres, and sewage disposal on the size of the lots proposed.

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 Public Hearing was held on April 20, 2023 and attended but the applicant, consultant, and several adjacent landowners. Many of the adjacent landowners had concerns with with the proposed development including density, creating a more urban than rural environment, increase noise, traffic, and crime, and a reduce quality of life for the adjacent landowners.

There were some adjacent residents who supported the application, with the reasons that the area was suitable for development and the lands were not viable agricultural land.

County council approved the postponement of second reading of the bylaw in order to get additional information regarding the availability of potable water, the lots that were under 2 acres in size, and sewage disposal on the size of lots proposed (if dugouts were to locate on each of the parcels).

The applicant's consultant has submitted a revised site plan that increases the lots sizes to account for the situation whereby a dugout would need to be located on each of the parcels for potable water purposes. Their proposal reduces the number of parcels from 25 to 22. The applicant's consultant also confirmed that the County of Lethbridge Rural Water Association has no water units available for the County Crossroad Estate development at this time and that the plan is to purchase water units when they become available. The other option for potable water will be irrigation water that would be stored in individual dugouts and treated in-house by each owner.

ALTERNATIVES / PROS / CONS:

1. 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.

2. County Council may request that the lot sizes be increased.

Pros

- This may alleviate some concerns from the adjacent landowners with regards to the density of the development.
- Larger lot size may be more compatible with adjacent lot sizes.

Cons:

- The developer would have fewer lots to recover the cost of development.

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
 ☒ 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](#)

[Consultant Email - RE Country Crossroads Estate May 16 2023](#)

**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”.

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

Reeve

CAO

GIVEN second reading this _____ day of _____, 20____.

Reeve

CAO

GIVEN third reading this _____ day of _____, 20____.

Reeve

CAO

1 st Reading	March 16, 2023
2 nd Reading	
Public Hearing	
3 rd Reading	

Country Crossroads Estate

AREA STRUCTURE PLAN

SW $\frac{1}{4}$ Sec.05 - 8-20-W4M

February 2023



Prepared for: Jody Nakamura
Prepared by: Martin Geomatic Consultants Ltd.

MARTIN
GEOMATIC CONSULTANTS

082154CE

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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,
- Exxon 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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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 $\frac{1}{4}$ 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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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 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).”

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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,

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

- 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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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**.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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**;

COUNTRY CROSSROADS ESTATE AREA STRUCTURE 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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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. '

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

11.0 ARCHITECTURAL CONTROLS

11.1 PURPOSE OF CONTROLS

The developer of County Crossroad Estates will establish a set of architectural 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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

COUNTRY CROSSROADS ESTATE 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

COUNTRY CROSSROADS ESTATE AREA STRUCTURE PLAN

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.

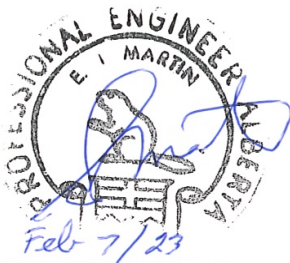
The ASP provides the framework for how the development is to proceed. Just because the ASP is approved it does not mean servicing all the lots at one time. With respect to this development, the owners have about 5 buyers that are interested in purchasing now. As such his plan is to service all 5 to 10 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

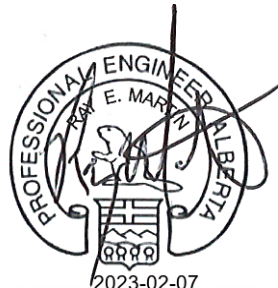
We are pleased to present to you the Crossroads Country Estates Area Structure Plan.

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

Respectfully submitted February 1, 2023.



Prepare by
Ed Martin, P.Eng.

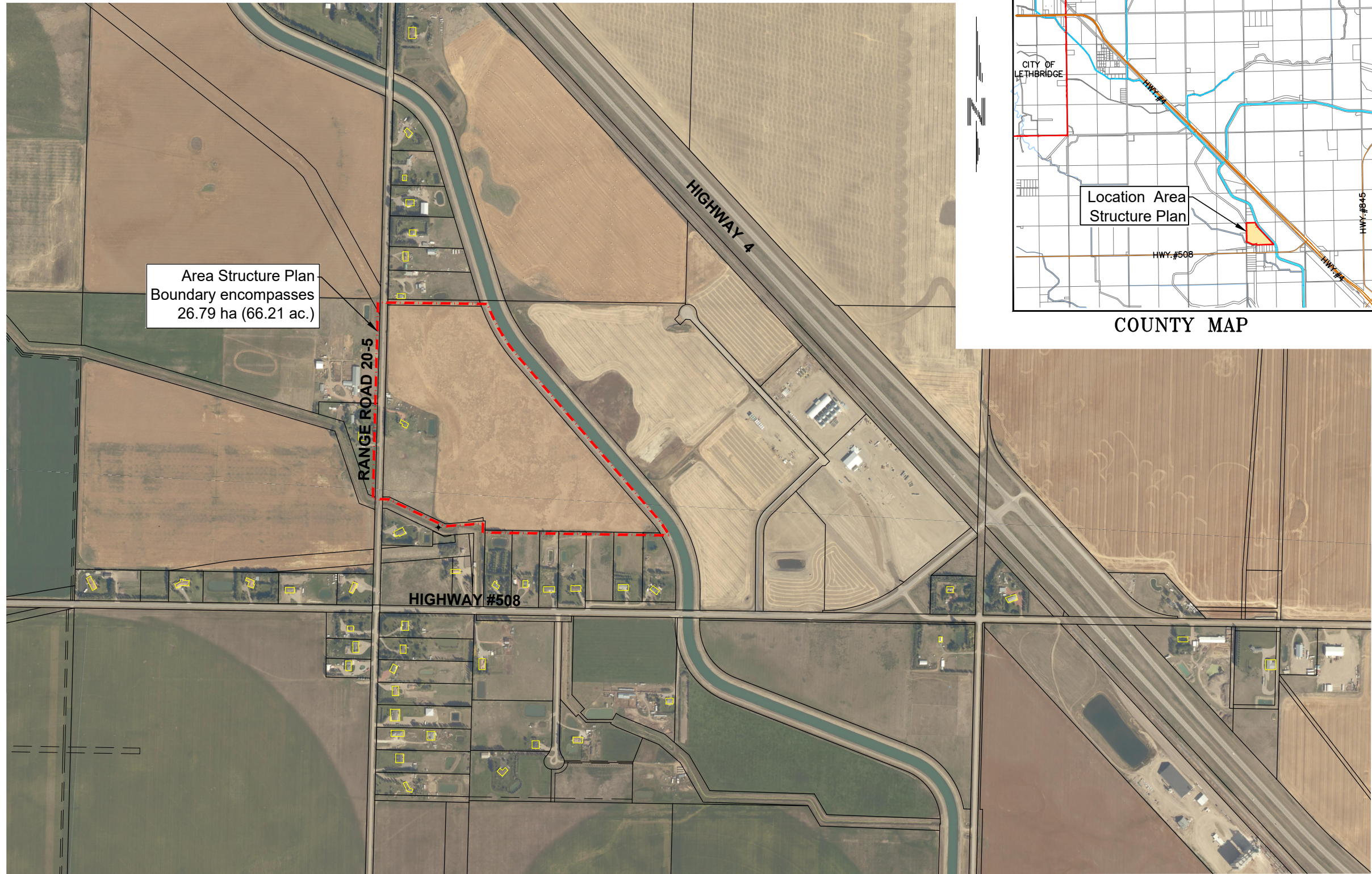


Reviewed by
Ray Martin, P.Eng.

PERMIT TO PRACTICE
Martin Geomatics Consultants Ltd.
Signature: 
Date: 2023-02-07
PERMIT NUMBER: P 5852
The Association of Professional
Engineers and Geoscientists of Alberta

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

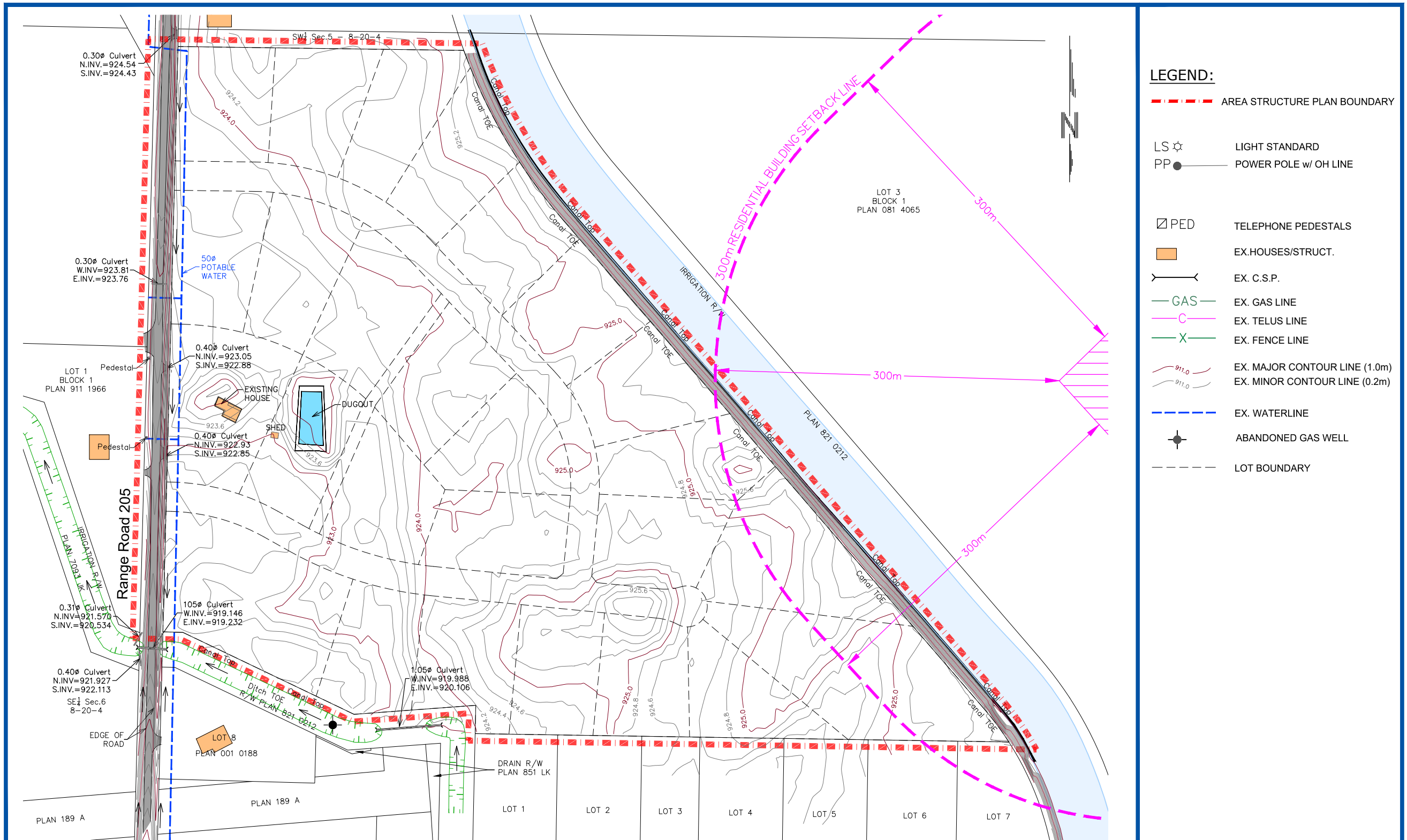
AREA STRUCTURE PLAN

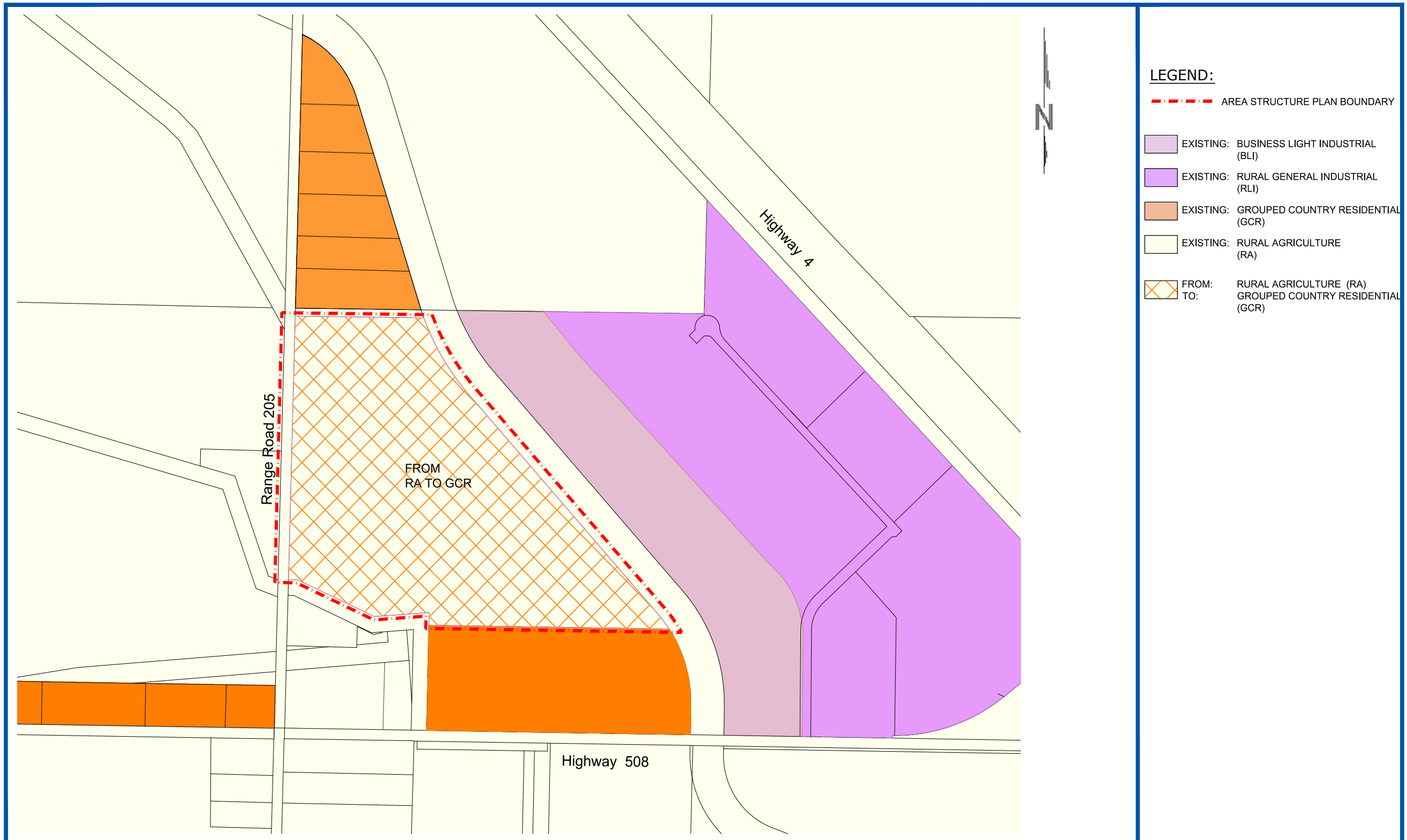
Feb 06, 2023

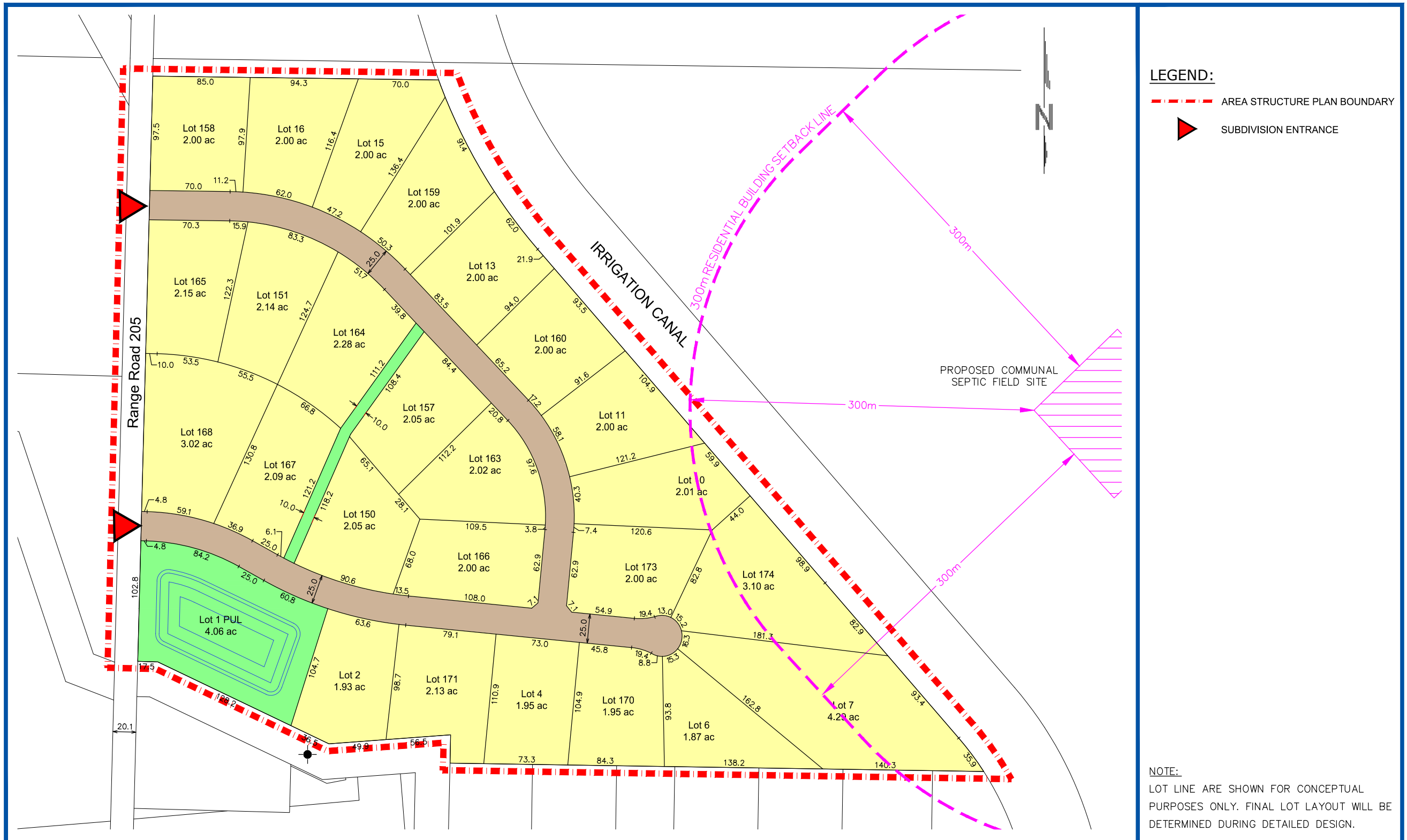
LOCATION PLAN
FIGURE 1.0

MARTIN
GEOMATIC CONSULTANTS
Consulting Engineers, Planners, and Land Surveyors
255-31st Street North Lethbridge, Alberta T1H 3Z4
Ph: (403) 329-0050 E-mail: geomart@mgcl.ca Fax: (403) 329-6594

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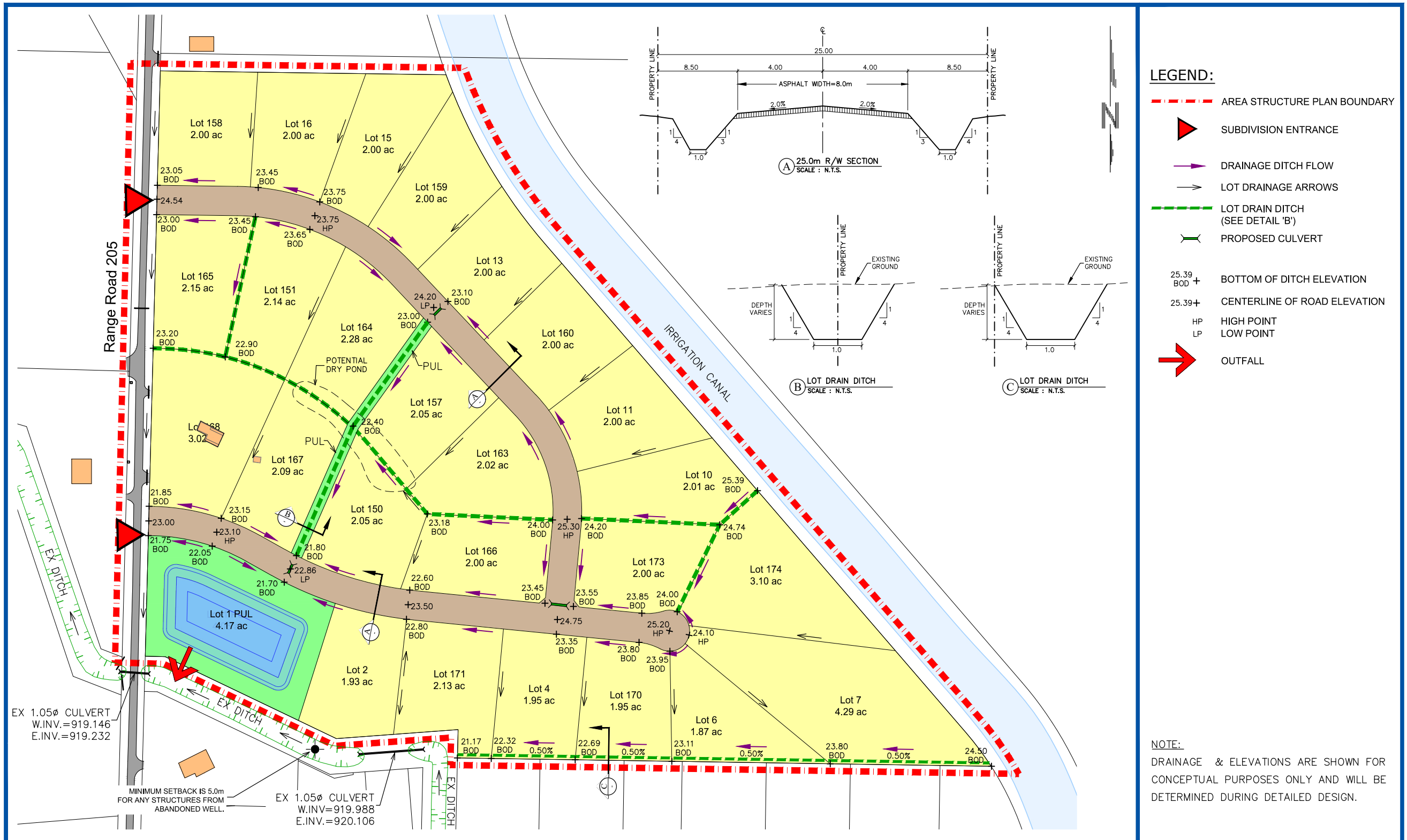


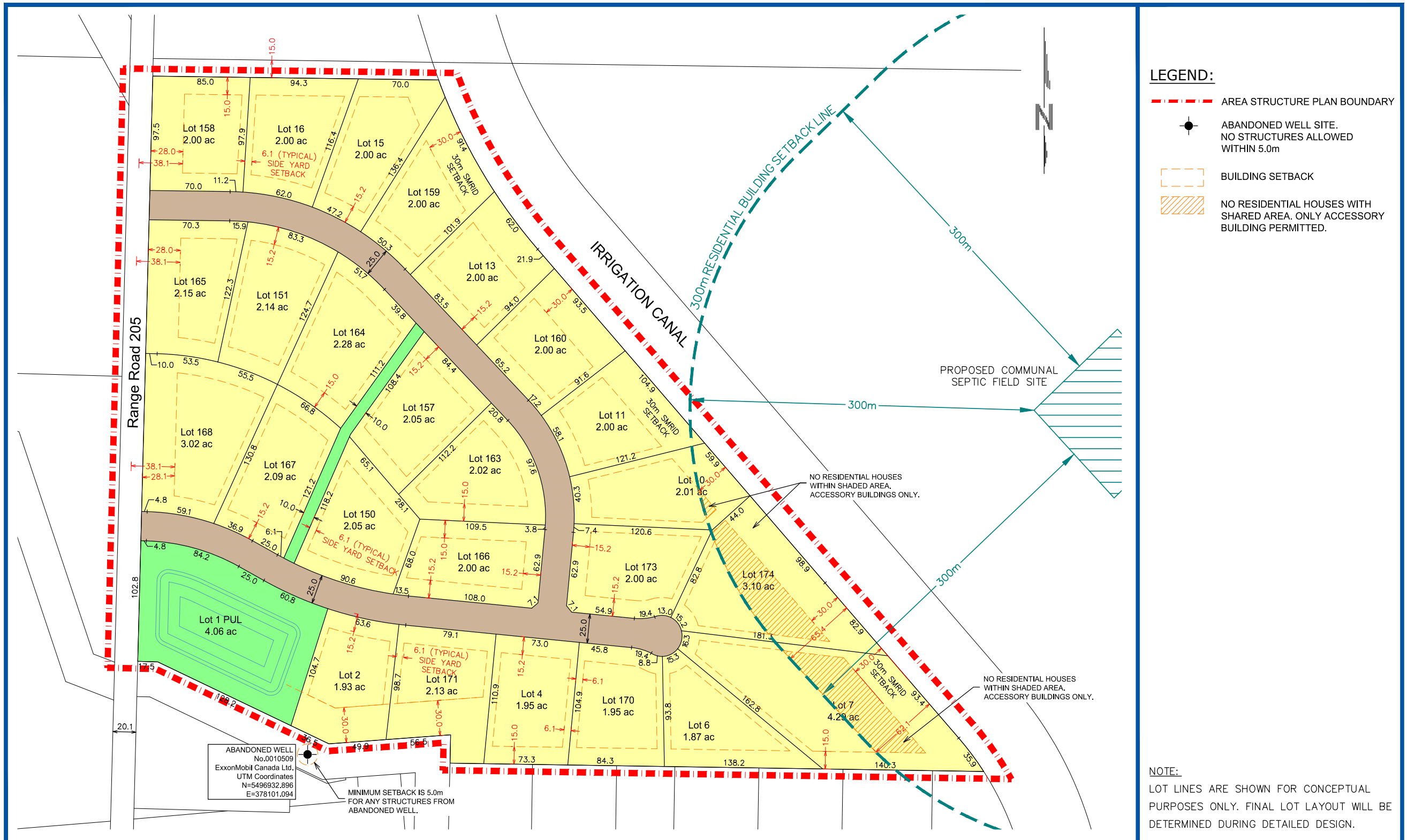


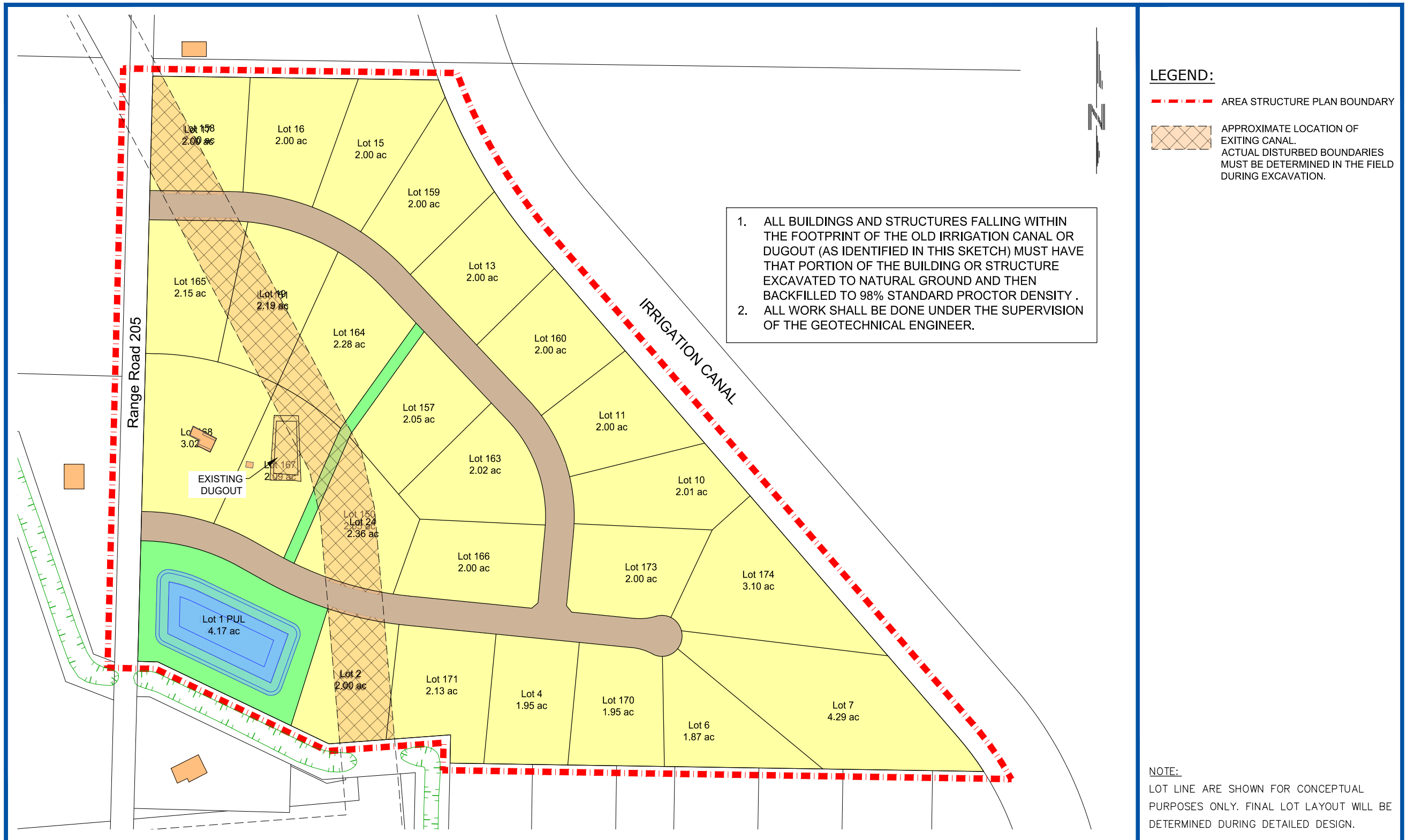
Country Crossroads Estate
 AREA STRUCTURE PLAN
 Feb 06, 2023

PROPOSED LOT LAYOUT
 FIGURE 5.0

MARTIN
 GEOMATIC CONSULTANTS
 Consulting Engineers, Planners, and Land Surveyors
 255-31st Street North Lethbridge, Alberta T1H 3Z4
 Ph: (403) 329-0050 E-mail: geomart@mgcl.ca Fax: (403) 329-6594







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
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
051 470 968

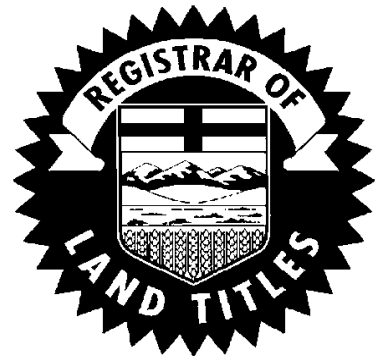
REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
1485KX .	21/06/1971	IRRIGATION ORDER/NOTICE THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT
3432U .		RESTRICTIVE COVENANT
3903EM .	24/10/1934	CAVEAT CAVEATOR - ALBERTA RAILWAY AND IRRIGATION CO..
941 261 421	07/10/1994	UTILITY RIGHT OF 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.

(CONTINUED)

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).

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 stripping, 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, γ , kN/m ³	18.5 kN/m ³
Active Earth Pressure Coefficient, k_a	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 dilatancy 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 3 ¹
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 recompact 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 be 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:

$$p = k_o (\gamma h + q)$$

where: p = lateral earth pressure in kPa acting at a depth h
 k_o = lateral at-rest earth pressure coefficient (use $k_o = 0.50$),
 γ = unit weight of backfill (use $\gamma = 18.5 \text{ kN/m}^3$ 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 Practice 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 re-circulating 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.

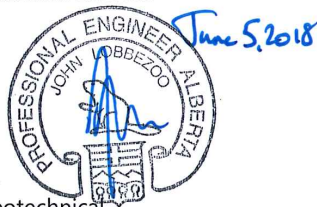
This report has been prepared in accordance with generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made.

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



Reviewed by:
Kevin Spencer, M.Eng., P.Eng.
Senior Associate Geotechnical Engineer

Attachments:

Figure 1 Borehole Location Plan
Borehole Logs
Explanation of Symbols and Terms

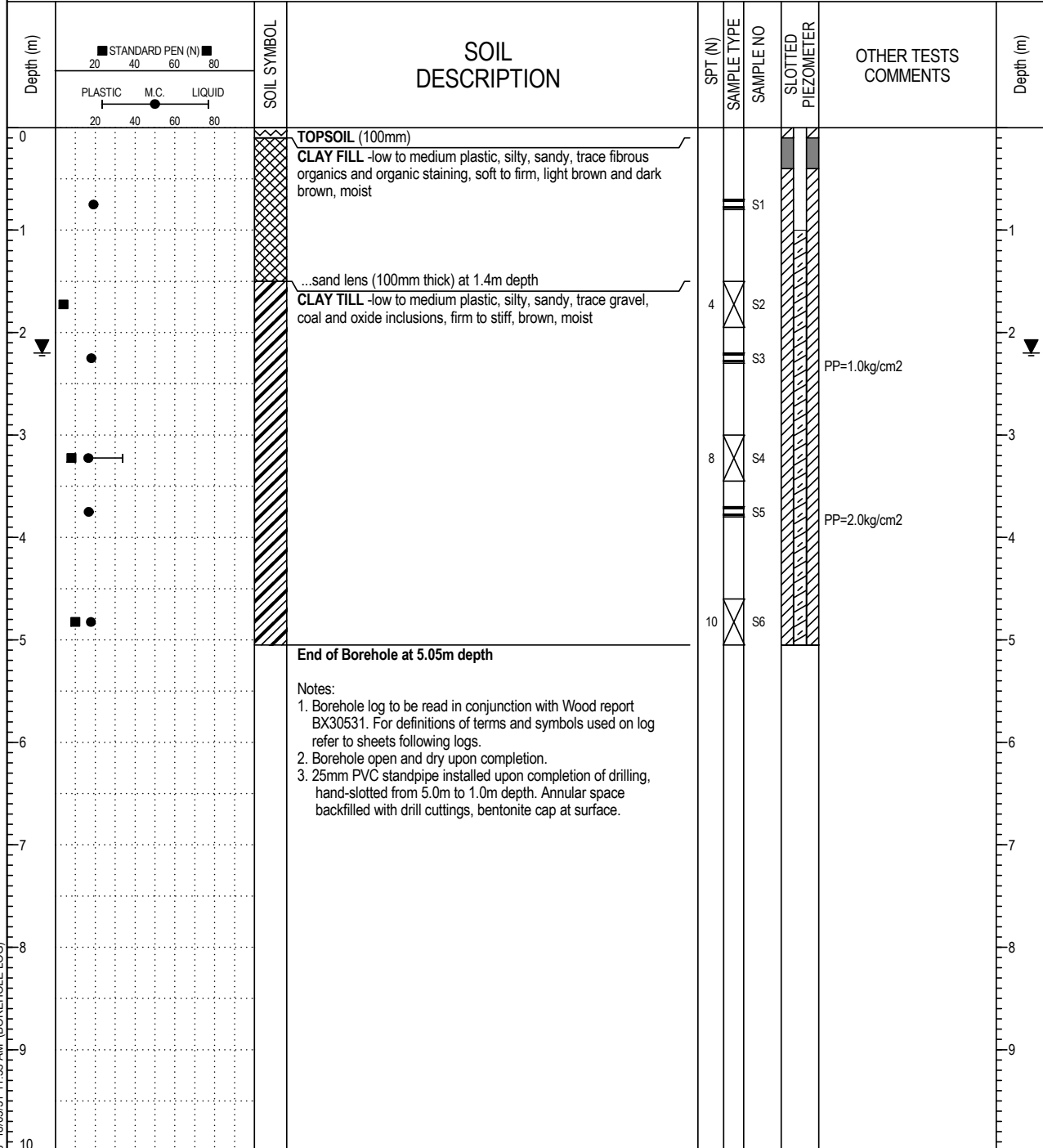
Permit to Practice No. P-04546



	CLIENT LOGO	CLIENT: Martin Geomatic Consultants Ltd.		DWN BY:	BJ	TITLE BOREHOLE LOCATION PLAN	DATE:	MAY 2018
				CHK'D BY:	BM		PROJECT NO:	BX30531
				DATUM:	NA		PROJECT Geotechnical Investigation Rural Residential Subdivision - SW5-8-20-W4M County of Lethbridge, Alberta	REV. NO.:
		PROJECTION:	NA	FIGURE 1				
		Wood Environment & Infrastructure Solutions 469 - 40th Street South Lethbridge, Alberta CANADA T1J 4M1 Tel. (403) 327-7474 Fax (403) 327-7682				SCALE:	NTS	

PROJECT NAME: Proposed Residential Subdivision	DRILLER: Chilako Drilling Services Ltd.	BOREHOLE NO: BH18-01
CLIENT: Martin Geomatic Consultants Ltd.	DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA	PROJECT NO: BX30531
LOCATION: See Figure 1.		ELEVATION: --

SAMPLE TYPE	☒ Shelby Tube	☐ No Recovery	☒ SPT Test (N)	☐ Grab Sample	☐ Split-Pen	☐ Core
BACKFILL TYPE	☒ Bentonite	☐ Pea Gravel	☐ Slough	☐ Grout	☐ Drill Cuttings	☐ Sand



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LOGGED BY: BM
REVIEWED BY: JL

COMPLETION DEPTH: 5.05 m
COMPLETION DATE: 4/5/18

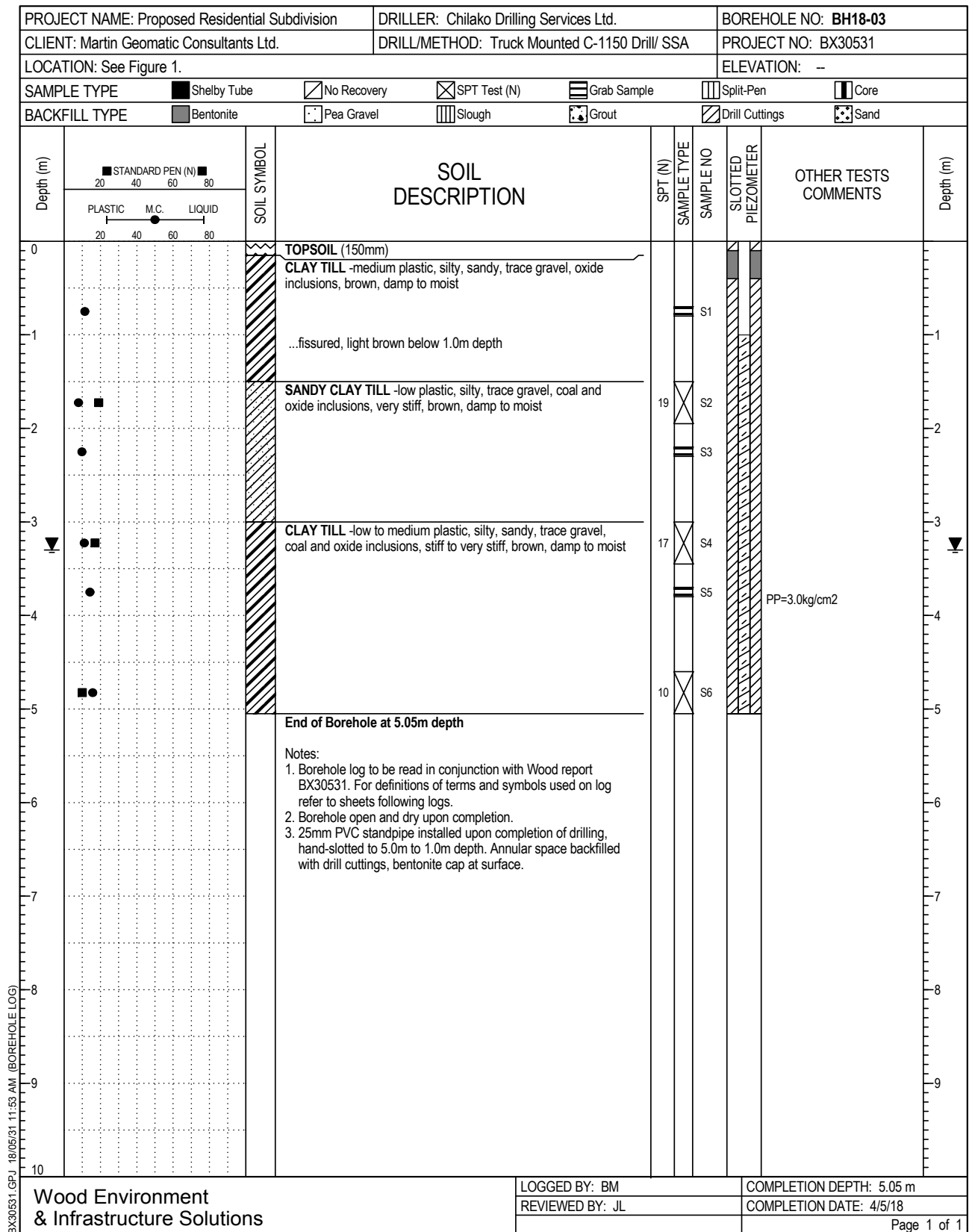
Page 1 of 1

PROJECT NAME: Proposed Residential Subdivision		DRILLER: Chilako Drilling Services Ltd.		BOREHOLE NO: BH18-02	
CLIENT: Martin Geomatic Consultants Ltd.		DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA		PROJECT NO: BX30531	
LOCATION: See Figure 1.				ELEVATION: --	
SAMPLE TYPE		☒ Shelby Tube ☐ No Recovery ☒ SPT Test (N) ☐ Grab Sample ☐ Split-Pen ☐ Core			
BACKFILL TYPE		☐ Bentonite ☐ Pea Gravel ☐ Slough ☐ Grout ☒ Drill Cuttings ☐ Sand			

Depth (m)	STANDARD PEN (N) 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	SOIL SYMBOL	SOIL DESCRIPTION	SPT (N)	SAMPLE TYPE	SAMPLE NO	OTHER TESTS COMMENTS	Depth (m)
0		[Hatched Box]	TOPSOIL (100mm)					0
0.5	●	[Hatched Box]	CLAY TILL -medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, light brown, damp, fissured			S1		0.5
1.5	●	[Hatched Box]						1.5
2.0	●	[Hatched Box]	SILTY SAND -fine to coarse grained, trace gravel, oxide inclusions, compact, brown, damp	23		S2		2.0
2.5	●	[Hatched Box]				S3		2.5
3.5	●	[Hatched Box]	CLAY TILL -low to medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, stiff to very stiff, brown, moist	16		S4		3.5
4.0	●	[Hatched Box]				S5	PP=2.5kg/cm2	4.0
5.0	●	[Hatched Box]		10		S6		5.0
5.05			End of Borehole at 5.05m depth					5.05
6.0			Notes: 1. Borehole log to be read in conjunction with Wood report BX30531. For definitions of terms and symbols used on log refer to sheets following logs. 2. Borehole open and dry upon completion. 3. Borehole backfilled with drill cuttings.					6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

Wood Environment & Infrastructure Solutions	LOGGED BY: BM	COMPLETION DEPTH: 5.05 m
	REVIEWED BY: JL	COMPLETION DATE: 4/5/18
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PROJECT NAME: Proposed Residential Subdivision		DRILLER: Chilako Drilling Services Ltd.		BOREHOLE NO: BH18-04	
CLIENT: Martin Geomatic Consultants Ltd.		DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA		PROJECT NO: BX30531	
LOCATION: See Figure 1.				ELEVATION: --	
SAMPLE TYPE		☒ Shelby Tube	☐ No Recovery	☒ SPT Test (N)	☐ Grab Sample
BACKFILL TYPE		☒ Bentonite	☐ Pea Gravel	☐ Slough	☐ Grout
		☐ Drill Cuttings	☐ Sand	☐ Core	

Depth (m)	STANDARD PEN (N) 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	SOIL SYMBOL	SOIL DESCRIPTION	SPT (N)	SAMPLE TYPE	SAMPLE NO	OTHER TESTS COMMENTS	Depth (m)
0			TOPSOIL (150mm)					
			CLAY FILL -low to medium plastic, silty, trace to some sand, organic staining, dark brown, moist					
1			CLAY -medium plastic, silty, sandy, brown, moist			S1	PP=4.5kg/cm2	1
2			CLAY TILL -low to medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, stiff to very stiff, brown, damp	21		S2		2
						S3		
3			...medium plastic, moist below 3.0m depth	16		S4		3
4						S5	PP=2.5kg/cm2	4
5				14		S6		5
			End of Borehole at 5.05m depth					
			Notes: 1. Borehole log to be read in conjunction with Wood report BX30531. For definitions of terms and symbols used on log refer to sheets following logs. 2. Borehole open and dry upon completion. 3. Borehole backfilled with drill cuttings.					
6								6
7								7
8								8
9								9
10								10

Wood Environment & Infrastructure Solutions		LOGGED BY: BM	COMPLETION DEPTH: 5.05 m
		REVIEWED BY: JL	COMPLETION DATE: 4/5/18
		Page 1 of 1	

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PROJECT NAME: Proposed Residential Subdivision		DRILLER: Chilako Drilling Services Ltd.		BOREHOLE NO: BH18-05	
CLIENT: Martin Geomatic Consultants Ltd.		DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA		PROJECT NO: BX30531	
LOCATION: See Figure 1.				ELEVATION: --	
SAMPLE TYPE ☒ Shelby Tube		☐ No Recovery		☒ SPT Test (N)	
☐ Grab Sample		☐ Split-Pen		☐ Core	
BACKFILL TYPE ☒ Bentonite		☐ Pea Gravel		☐ Slough	
☐ Grout		☒ Drill Cuttings		☐ Sand	

Depth (m)	■ STANDARD PEN (N) ■ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	SOIL SYMBOL	SOIL DESCRIPTION	SPT (N)	SAMPLE TYPE	SAMPLE NO	SLOTTED PIEZOMETER	OTHER TESTS COMMENTS	Depth (m)
0			TOPSOIL (150mm)						
			CLAY FILL -medium plastic, silty, sandy, trace red shale, organic staining, brown to dark brown, damp to moist						
1			CLAY TILL -low to medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, light brown to brown, damp, fissured					1	
2			SANDY CLAY TILL -low plastic, silty, trace gravel, coal and oxide inclusions, very stiff to stiff, brown, damp to moist	18	X	S2		2	
			...becoming low to medium plastic clay till below 2.5m depth						
3								3	
4								4	
5				10	X	S6		5	
6			End of Borehole at 5.05m depth					6	
7			Notes: 1. Borehole log to be read in conjunction with Wood report BX30531. For definitions of terms and symbols used on log refer to sheets following logs. 2. Borehole open and dry upon completion. 3. 25mm PVC standpipe installed upon completion of drilling, hand-slotted from 5.0m to 1.0m depth. Annular space backfilled with drill cuttings, bentonite cap at surface.					7	
8								8	
9								9	
10								10	

Wood Environment & Infrastructure Solutions	LOGGED BY: BM	COMPLETION DEPTH: 5.05 m
	REVIEWED BY: JL	COMPLETION DATE: 4/5/18
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PROJECT NAME: Proposed Residential Subdivision		DRILLER: Chilako Drilling Services Ltd.		BOREHOLE NO: BH18-06	
CLIENT: Martin Geomatic Consultants Ltd.		DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA		PROJECT NO: BX30531	
LOCATION: See Figure 1.				ELEVATION: --	
SAMPLE TYPE ☒ Shelby Tube		☐ No Recovery		☒ SPT Test (N)	
☐ Grab Sample		☐ Split-Pen		☐ Core	
BACKFILL TYPE ☒ Bentonite		☐ Pea Gravel		☐ Slough	
☐ Grout		☒ Drill Cuttings		☐ Sand	

Depth (m)	 PLASTIC M.C. LIQUID 20 40 60 80	SOIL SYMBOL	SOIL DESCRIPTION	SPT (N)	SAMPLE TYPE	SAMPLE NO	OTHER TESTS COMMENTS	Depth (m)
0			TOPSOIL (100mm)					
			SILTY SAND -low to medium plastic, fine to medium grained, some clay, silty, brown, damp					
1			CLAY -low to medium plastic, silty, sandy, light brown, damp, fissured			S1		1
2			CLAY TILL -low to medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, very stiff, brown, damp to moist, fissured to 3.0m depth	18		S2		2
						S3		
3						S4		3
						S5		
4						S6		4
5			End of Borehole at 5.05m depth	15				5
6			Notes: 1. Borehole log to be read in conjunction with Wood report BX30531. For definitions of terms and symbols used on log refer to sheets following logs. 2. Borehole open and dry upon completion. 3. Borehole backfilled with drill cuttings.					6
7								7
8								8
9								9
10								10

Wood Environment & Infrastructure Solutions	LOGGED BY: BM	COMPLETION DEPTH: 5.05 m
	REVIEWED BY: JL	COMPLETION DATE: 4/5/18
	Page 1 of 1	

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PROJECT NAME: Proposed Residential Subdivision		DRILLER: Chilako Drilling Services Ltd.		BOREHOLE NO: BH18-07	
CLIENT: Martin Geomatic Consultants Ltd.		DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA		PROJECT NO: BX30531	
LOCATION: See Figure 1.				ELEVATION: --	
SAMPLE TYPE		☒ Shelby Tube ☐ No Recovery ☒ SPT Test (N) ☐ Grab Sample ☐ Split-Pen ☐ Core			
BACKFILL TYPE		☐ Bentonite ☐ Pea Gravel ☐ Slough ☐ Grout ☐ Drill Cuttings ☐ Sand			

Depth (m)	STANDARD PEN (N) 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	SOIL SYMBOL	SOIL DESCRIPTION	SPT (N)	SAMPLE TYPE	SAMPLE NO	SLOTTED PIEZOMETER	OTHER TESTS COMMENTS	Depth (m)	
0			TOPSOIL (100mm) CLAY -low to medium plastic, silty, sandy, organic staining, brown, moist							
1			CLAY TILL -low to medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, very stiff to stiff, light brown, damp ...brown, damp below 1.5m depth ...moist below 3.0m depth					PP=1.5kg/cm2	1	
2				22	X	S2			PP=4.0kg/cm2	2
3						S3				3
4				12	X	S4			PP=2.0kg/cm2	4
5						S5			PP=3.0kg/cm2	5
6			End of Borehole at 5.05m depth							
7			Notes: 1. Borehole log to be read in conjunction with Wood report BX30531. For definitions of terms and symbols used on log refer to sheets following logs. 2. Borehole open and dry upon completion. 3. 25mm PVC standpipe installed upon completion, hand-slotted from 5.0m to 1.0m depth. Annular space backfilled with drill cuttings, bentonite cap at surface.							
8										
9										
10										

Wood Environment & Infrastructure Solutions	LOGGED BY: BM	COMPLETION DEPTH: 5.05 m
	REVIEWED BY: JL	COMPLETION DATE: 4/5/18
	Page 1 of 1	

PROJECT NAME: Proposed Residential Subdivision		DRILLER: Chilako Drilling Services Ltd.		BOREHOLE NO: BH18-08	
CLIENT: Martin Geomatic Consultants Ltd.		DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA		PROJECT NO: BX30531	
LOCATION: See Figure 1.				ELEVATION: --	
SAMPLE TYPE		☒ Shelby Tube ☐ No Recovery ☒ SPT Test (N) ☐ Grab Sample ☐ Split-Pen ☐ Core			
BACKFILL TYPE		☐ Bentonite ☐ Pea Gravel ☐ Slough ☐ Grout ☒ Drill Cuttings ☐ Sand			

Depth (m)	STANDARD PEN (N) 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	SOIL SYMBOL	SOIL DESCRIPTION	SPT (N)	SAMPLE TYPE	SAMPLE NO	OTHER TESTS COMMENTS	Depth (m)
0			TOPSOIL (150mm) CLAY -low to medium plastic, silty, sandy, organic staining, dark brown, moist CLAY TILL -low to medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, stiff, brown, moist					
1			...organic staining at 1.5m depth			S1	PP=2.0kg/cm2	1
2				9		S2		2
3						S3	PP=2.0kg/cm2	3
4				12		S4		4
5						S5	PP=1.75kg/cm2	5
6				13		S6		6
7								7
8								8
9								9
10								10

End of Borehole at 5.05m depth Notes: 1. Borehole log to be read in conjunction with Wood report BX30531. For definitions of terms and symbols used on log refer to sheets following logs. 2. Borehole open and dry upon completion. 3. Borehole backfilled with drill cuttings.		LOGGED BY: BM REVIEWED BY: JL	COMPLETION DEPTH: 5.05 m COMPLETION DATE: 4/5/18
---	--	----------------------------------	---

BX30531.GPJ 18/05/31 11:53 AM (BOREHOLE LOG)

Wood Environment & Infrastructure Solutions

Page 1 of 1

PROJECT NAME: Proposed Residential Subdivision		DRILLER: Chilako Drilling Services Ltd.		BOREHOLE NO: BH18-09	
CLIENT: Martin Geomatic Consultants Ltd.		DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA		PROJECT NO: BX30531	
LOCATION: See Figure 1.				ELEVATION: --	
SAMPLE TYPE ☒ Shelby Tube		☐ No Recovery		☒ SPT Test (N)	
☐ Grab Sample		☐ Split-Pen		☐ Core	
BACKFILL TYPE ☒ Bentonite		☐ Pea Gravel		☐ Slough	
☐ Grout		☒ Drill Cuttings		☐ Sand	

Depth (m)	 PLASTIC M.C. LIQUID 20 40 60 80	SOIL SYMBOL	SOIL DESCRIPTION	SPT (N)	SAMPLE TYPE	SAMPLE NO	OTHER TESTS COMMENTS	Depth (m)
0			TOPSOIL (150mm)					0
			CLAY -low to medium plastic, silty, sandy, organic staining, dark brown, moist					
			CLAY TILL -low to medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, stiff to very stiff, brown, damp, fissured to 1.5m depth					
1						S1		1
2				9		S2		2
						S3	PP=3.0kg/cm2	
3			...moist below 3.0m depth	16		S4		3
4						S5	PP=2.0kg/cm2	4
5				12		S6		5
			End of Borehole at 5.05m depth					
			Notes: 1. Borehole log to be read in conjunction with Wood report BX30531. For definitions of terms and symbols used on log refer to sheets following logs. 2. Borehole open and dry upon completion. 3. Borehole backfilled with drill cuttings.					
6								6
7								7
8								8
9								9
10								10

Wood Environment & Infrastructure Solutions	LOGGED BY: BM	COMPLETION DEPTH: 5.05 m
	REVIEWED BY: JL	COMPLETION DATE: 4/5/18
	Page 1 of 1	

BX30531.GPJ 18/05/31 11:53 AM (BOREHOLE LOG)

PROJECT NAME: Proposed Residential Subdivision		DRILLER: Chilako Drilling Services Ltd.		BOREHOLE NO: BH18-10	
CLIENT: Martin Geomatic Consultants Ltd.		DRILL/METHOD: Truck Mounted C-1150 Drill/ SSA		PROJECT NO: BX30531	
LOCATION: See Figure 1.				ELEVATION: --	
SAMPLE TYPE ☒ Shelby Tube		☐ No Recovery		☒ SPT Test (N)	
☐ Grab Sample		☐ Split-Pen		☐ Core	
BACKFILL TYPE ☒ Bentonite		☐ Pea Gravel		☐ Slough	
☐ Grout		☒ Drill Cuttings		☐ Sand	

Depth (m)	STANDARD PEN (N) 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	SOIL SYMBOL	SOIL DESCRIPTION	SPT (N)	SAMPLE TYPE	SAMPLE NO	SLOTTED PIEZOMETER	OTHER TESTS COMMENTS	Depth (m)
0			TOPSOIL (150mm) CLAY -medium plastic, silty, sandy, light brown, damp, fissured						0
1					S1				1
2			SILTY SAND -fine to coarse grained, trace to some clay, trace gravel, coal and oxide inclusions, brown, moist		S2				2
3			CLAY TILL -low to medium plastic, silty, sandy, trace gravel, coal and oxide inclusions, very stiff to stiff, brown, damp		S3				3
4					S4		PP=4.5kg/cm2		4
5					S5		PP=4.5kg/cm2		5
6			...moist below 4.6m depth		S6		PP=4.5kg/cm2		6
7					S7		PP=2.5kg/cm2		7
8					S8		PP=2.5kg/cm2		8
9			End of Borehole at 6.1m depth						9
10			Notes: 1. Borehole log to be read in conjunction with Wood report BX30531. For definitions of terms and symbols used on log refer to sheets following logs. 2. Borehole open and dry upon completion. 3. 25mm PVC standpipe installed upon completion of drilling, hand-slotted from 6.1m to 1.0m depth. Annular space backfilled with drill cuttings, bentonite cap at surface.						10

Wood Environment & Infrastructure Solutions	LOGGED BY: BM	COMPLETION DEPTH: 6.10 m
	REVIEWED BY: JL	COMPLETION DATE: 4/5/18
	Page 1 of 1	

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 and hydrometer test	w	Natural Moisture Content (ASTM D2216)
N	Standard Penetration Test (CSA A119.1-60)	w _l	Liquid limit (ASTM D 423)
N _d	Dynamic cone penetration test	w _p	Plastic Limit (ASTM D 424)
NP	Non plastic soil	E _r	Unit strain at failure
pp	Pocket penetrometer strength (kg/cm ²)	γ	Unit weight of soil or rock
*q	Triaxial compression test	γ _d	Dry unit weight of soil or rock
q _u	Unconfined compressive strength	ρ	Density of soil or rock
*SB	Shearbox test	ρ _d	Dry Density of soil or rock
SO ₄	Concentration of water-soluble sulphate	C _u	Undrained shear strength
		→	Seepage
		▼	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:

Cohesionless Soils		Consistency	Cohesive Soils	
Relative Density	SPT (N) Value		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.

¹ "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.

² "Canadian Foundation Engineering Manual", 4th Edition, Canadian Geotechnical Society, 2006.

MODIFIED UNIFIED CLASSIFICATION SYSTEM FOR SOILS										
MAJOR DIVISION			GROUP SYMBOL	GRAPH SYMBOL	COLOUR CODE	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA			
COARSE GRAINED SOILS (MORE THAN HALF BY WEIGHT LARGER THAN 75µm)	GRAVELS MORE THAN HALF THE COARSE FRACTION LARGER THAN 4.75mm	CLEAN GRAVELS (LITTLE OR NO FINES)	GW		RED	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	$C_u = \frac{D_{60}}{D_{10}} > 4$; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1 \text{ to } 3$			
			GP		RED	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	NOT MEETING ABOVE REQUIREMENTS			
		DIRTY GRAVELS (WITH SOME FINES)	GM		YELLOW	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12 %	ATTERBERG LIMITS BELOW "A" LINE OR P.I. LESS THAN 4		
			GC		YELLOW	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES		ATTERBERG LIMITS ABOVE "A" LINE P.I. MORE THAN 7		
	SANDS MORE THAN HALF THE COARSE FRACTION SMALLER THAN 4.75mm	CLEAN SANDS (LITTLE OR NO FINES)	SW		RED	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	$C_u = \frac{D_{60}}{D_{10}} > 6$; $C_c = \frac{(D_{60})^2}{D_{10} \times D_{60}} = 1 \text{ to } 3$			
			SP		RED	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	NOT MEETING ABOVE REQUIREMENTS			
		DIRTY SANDS (WITH SOME FINES)	SM		YELLOW	SILTY SANDS, SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12 %	ATTERBERG LIMITS BELOW "A" LINE OR P.I. LESS THAN 4		
			SC		YELLOW	CLAYEY SANDS, SAND-CLAY MIXTURES		ATTERBERG LIMITS ABOVE "A" LINE P.I. MORE THAN 7		
	FINE-GRAINED SOILS (MORE THAN HALF BY WEIGHT SMALLER THAN 75µm)	SILTS BELOW "A" LINE NEGLECTIBLE ORGANIC CONTENT	$W_L < 50\%$	ML		GREEN	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY SANDS OF SLIGHT PLASTICITY	CLASSIFICATION IS BASED UPON PLASTICITY CHART (SEE BELOW)		
			$W_L < 50\%$	MH		BLUE	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDS OR SILTY SOILS			
CLAYS ABOVE "A" LINE NEGLECTIBLE ORGANIC CONTENT		$W_L < 30\%$	CL		GREEN	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY OR SILTY CLAYS, LEAN CLAYS				
		$30\% < W_L < 50\%$	CI		GREEN-BLUE	INORGANIC CLAYS OF MEDIUM PLASTICITY, SILTY CLAYS				
		$W_L > 50\%$	CH		BLUE	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS				
ORGANIC SILTS & CLAYS BELOW "A" LINE		$W_L < 50\%$	OL		GREEN	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	WHENEVER THE NATURE OF THE FINES CONTENT HAS NOT BEEN DETERMINED, IT IS DESIGNATED BY THE LETTER "F", E.G. SF IS A MIXTURE OF SAND WITH SILT OR CLAY			
		$W_L > 50\%$	OH		BLUE	ORGANIC CLAYS OF HIGH PLASTICITY				
HIGHLY ORGANIC SOILS			Pt		ORANGE	PEAT AND OTHER HIGHLY ORGANIC SOILS	STRONG COLOUR OR ODOUR, AND OFTEN FIBEROUS TEXTURE			
SPECIAL SYMBOLS										
LIMESTONE			OILSAND							
SANDSTONE			SHALE							
SILTSTONE			FILL (UNDIFFERENTIATED)							
SOIL COMPONENTS										
FRACTION		U.S. STANDARD SIEVE SIZE		DEFINING RANGES OF PERCENTAGE BY WEIGHT OF MINOR COMPONENTS						
GRAVEL		PASSING	RETAINED	PERCENT		DESCRIPTOR				
COARSE		76mm	19mm							
FINE		19mm	4.75mm	35-50		AND				
SAND										
COARSE		4.75mm	2.00mm	20-35		Y/EY				
MEDIUM		2.00mm	425µm	10-20		SOME				
FINE		425µm	75µm	1-10		TRACE				
FINES (SILT OR CLAY BASED ON PLASTICITY)		75µm								
OVERSIZED MATERIAL										
ROUNDED OR SUBROUNDED: COBBLES 76mm TO 200mm BOULDERS > 200mm				NOT ROUNDED: ROCK FRAGMENTS > 76mm ROCKS > 0.76 CUBIC METRE IN VOLUME						

PLASTICITY CHART FOR SOILS PASSING 425 µm SIEVE

NOTES:

1. ALL SIEVE SIZES MENTIONED ON THIS CHART ARE U.S. STANDARD A.S.T.M. E 11

2. COARSE GRAIN SOILS WITH 5 TO 12% FINES GIVEN COMBINED GROUP SYMBOLS, E.G. GW-GC IS A WELL GRADED GRAVEL SAND MIXTURE WITH CLAY BINDER BETWEEN 5 AND 12% FINES.

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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,**

Scott Roughead, C.E.T.
Senior Environmental Technologist
ASET Member #: 098653

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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

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

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>.

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) <i>Environmental Protection and Enhancement Act</i>
ESA	Environmental Site Assessment
ESAR	Environmental Site Assessment Repository
FIP	Fire Insurance Plans
FOIP	Freedom of Information and Protection of Privacy
HCFC	Hydrochlorofluorocarbon
HPA	<i>Hazardous Products Act</i>
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	<i>Transportation of Dangerous Goods Act</i>
UFFI	Urea Formaldehyde Foam Insulation
UST	Underground Storage Tank
WHMIS	Workplace Hazardous Materials Information System
WL	Working Level

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;
3. completing a viewing of the Site and perimeter-viewing of surrounding properties;
4. 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.

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 transverses 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.

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 public-agency 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.

Table 1: Land Titles

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)
4;20;8;5;SW	1954 - 1982	Her majesty the Queen in Right of The Province of Alberta As Represented by The Manager of The St. Mary and Milk Rivers Development
4;20;8;5;SW	1948 - 1954	His majesty the King in the right of Alberta
4;20;8;5;SW	1932 - 1948	Alberta Railway and Irrigation Company

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 1:40,000	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.
	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 1:40,000	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.
	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 1:31,680	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.
	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 1:31,680	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.
	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.
	Surrounding Properties	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 1:20,000	Site	The site appears like 1999 aerial photo and present day. The outline of the former irrigation canal is still visible.
	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).

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) – <i>Inventory of pollutant releases (to air, water and land), disposals and transfers for recycling:</i> 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 – <i>Canadian Federal Contaminated Sites:</i> 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) – <i>Licensing of Nuclear Facilities:</i> 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) – <i>Registered Landfills or Dumps:</i> 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 ¼ 05-008-20-W4M).
AEP – <i>Authorization and Approvals for the Site and Surrounding Properties:</i> 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.

¹ 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.

AEP Water Well Drilling Reports – <i>Groundwater wells within the Site quarter section:</i> 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) – <i>ESAR reports on the Site and neighboring properties:</i> 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 – <i>Potential environmental issues at the Site:</i> 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) – <i>Stop orders, control orders, tickets, violations of various Environmental Acts and wellsite reclamation certificates:</i> The responses received from the ELC stated there had been no enforcement actions issued against the Site owner.
Alberta Energy Regulator (AER) – <i>Information on oil and gas wells, facilities, batteries, incident reports and pipeline township maps:</i> 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 – <i>Oil/gas wells, groundwater wells, pipelines, facilities and batteries, AER waste control location or landfill, or environmental spills:</i> 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) – <i>Above-ground and Underground Bulk Storage Tanks reported since 1992 or surveyed in 1992:</i> The response received from the PTMAA did not identify any USTs or ASTs for the Site.
County of Lethbridge – <i>Records of known contamination or compliance concerns, landfills, bylaw complaints or infractions or surface drainage issues:</i> 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.

² 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

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.

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 Bq/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),

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

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.

Site

No chemical storage or handling 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*

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 or 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 from 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.

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 *Stachybotrys atra* 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

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

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

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.

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.

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.

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.

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.

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
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8.0 REFERENCES

- Abacus Datagraphics Ltd. 2016. AbaData database. Accessed on 08 November 2016.
- Alberta Employment & Immigration. 2009. *Occupational Health and Safety Act Revised Statutes of Alberta 2000, Chapter O-2*. Edmonton, Alberta. Alberta Environment and Environment Canada. 1982. *Identification and Verification of Active and Inactive Land Disposal Sites in Alberta*. Edmonton, Alberta.
- Alberta Environment and Environment Canada. 1982. *Identification and Verification of Active and Inactive Land Disposal Sites in Alberta*. Edmonton, Alberta. Alberta Queen's Printer, Edmonton, Alberta.
- Alberta Environment and Parks. 2015a. Alberta Water Wells database. Accessed on 08 November 2016.
- Alberta Environment and Parks. 2015b. ESAR database. Accessed on 08 November 2016.
- Alberta Environment and Parks (AEP). 2016. *Alberta Environmental Site Assessment Standard*.
- Alberta Environmental Protection. 1980. *The Pesticides Applicator Licensing Regulation 214/80*. Edmonton, Alberta.
- Alberta Environmental Protection. 1997a. *The Pesticide Regulation 43/97*. Edmonton, Alberta.
- Alberta Environmental Protection. 1997b. *The Pesticides Control Products Regulation 174/97*. Edmonton, Alberta.
- Alberta Environmental Protection. 1997c. *The Pesticide Sales Handling, Use and Application Regulation 24/97*. Edmonton, Alberta.
- Alberta Environmental Protection. 2000. *Code of Practice for Landfills*. Edmonton, Alberta. Alberta Queen's Printer, Edmonton, Alberta.
- Alberta Environmental Protection. 2003. *The Activities Designation Regulation 276/2003*. Amended up to Alta. Reg. 118/2013. Alberta Queen's Printer, Edmonton, Alberta.
- Alberta Environmental Protection. 2008. *Waste Control Regulation, Alta Reg. 192/1996*. With amendments up to and including Alberta Regulation 62/2013. Alberta Queen's Printer, Edmonton, Alberta.
- Alberta Human Resources & Employment Health and Safety. 2012. *Alberta Asbestos Abatement Manual*. Alberta Queen's Printer, Edmonton, Alberta.
- Alberta Jobs, Skills, Training and Labour. 2015. *Occupational Health and Safety Code (OHS), Part 29, Section 397*. The Queen's Printer, Edmonton, Alberta.
- Canadian Council of Ministers of the Environment. 2003. *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum Products and Allied Petroleum Products*. Updated 2013. Winnipeg, Manitoba.
- Canadian Environmental Protection Act. 1993. *Code of Practice for Underground Storage Tank Systems Containing Petroleum Products and Allied Petroleum Products*. Ottawa, Ontario.

- Canadian Environmental Protection Act. 1994a. Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products.* Ottawa, Ontario.
- Canadian Environmental Protection Act. 1994b. Guidelines for Secondary Containment for Aboveground Storage Tanks.* Ottawa, Ontario.
- Canadian Mortgage and Housing Corporation (CMHC) and Health Canada. 2007 (revised 2010). *Radon – a Guide for Canadian Homeowners.* Ottawa, Ontario.
- Canadian Standards Association (CSA). 2001. *Phase I Environmental Site Assessment (CSA Z768-01).* Reaffirmed 2012. Ottawa, Ontario.
- Dubreuil, Lorraine and Cheryl A. Woods. 2002. *Catalogue of Canadian Fire Insurance Plans 1875 – 1975, Occasional Papers of the Association of Canadian Map Libraries and Archives Number 6.* Ottawa, Ontario.
- Fenton, M.M., E.J. Waters, S.M. Pawley, N. Atkinson, D.J. Utting, and K. McKay. 2013. *Surficial Geology of Alberta;* Alberta Energy Regulator / Alberta Geological Survey (AER/AGS), Map 601, scale 1:1 000 000.
- Government of Alberta, Human Resources and Employment. 2003. *Occupational Health and Safety Regulations, Alberta Regulations 62/2003.* With amendments up to and including Alberta Regulation 182/2013. Alberta Queen's Printer, Edmonton Alberta.
- Government of Alberta, Human Resources and Employment. 2009. *Occupational Health and Safety Code, Part 4.* Queen's Printer, Edmonton, Alberta.
- Government of Canada. 2005. *Surface Coating Materials Regulations SOR/2005-109.* Canada Consumer Product Safety Act. Ottawa, Ontario.
- Government of Canada. 2010. *Hazardous Products Act, Surface Coating Materials Regulations (SOR/2005-109) as amended by SOR/2010-224.* Ottawa, Ontario. Health Canada. 2012. *Cross-Canada Survey of Radon Concentrations in Homes Final Report.* Ottawa, Ontario.
- National Research Council Canada. 2015. *Alberta Fire Code 2014.* Ottawa, Ontario.
- Prior, G.J., B. Hathway, P.M. Glombick, D.I. Pană, C.J. Banks, D.C. Hay, C.L. Schneider, M. Grobe, R. Elgr, and J.A. Weiss. 2013. *Bedrock Geology of Alberta;* Alberta Energy Regulator / Alberta Geological Survey (AER/AGS), Map 600, scale 1:1 000 000.
- Province of Alberta. 1996. *Alberta Waste Control Regulation (192/1996)* - with amendments up to and including *Alberta Regulation 62/2013.* Alberta Queen's Printer, Edmonton, Alberta.
- Province of Alberta. 1997. *Dangerous Goods Transportation and Handling Act - Dangerous Goods Transportation and Handling Regulation. Alta Reg. 157/1997 with amendments up to and including Alta Reg. 211/2011.* Alberta Queen's Printer, Edmonton, Alberta.
- Province of Alberta. 2000. *Pipeline Act RSA 2000* (revised 2014). Alberta Queen's Printer, Edmonton, Alberta.

Province of Alberta 2002. *Municipal Government Act - Subdivision and Development Regulation (43/2002)* - with amendments up to and including *Alberta Regulation 119/2014*. Alberta Queen's Printer, Edmonton, Alberta.

Province of Alberta. 2003. *Environmental Protection and Enhancement Act - Activities Designation Regulation, Alberta Regulation 276/2003*, with amendments up to and including *Alberta Regulation 61/2015*. Alberta Queen's Printer, Edmonton, Alberta.

Province of Alberta. 2003. *Environmental Protection and Enhancement Act - Wastewater and Storm Drainage (Ministerial) (Alberta Regulation 120/193)*, with amendments up to and including *Alberta Regulation 278/2003*. Alberta Queen's Printer, Edmonton, Alberta.

Province of Alberta. 2003. *Occupational Health and Safety Regulation, Alta Reg. 62/2003* (with amendments up to and including *Alta. Reg. 182/2013*). Alberta Queen's Printer, Edmonton, Alberta.

Province of Alberta. 2005. *Pipeline Regulation 91/2005*. Alberta Queen's Printer, Edmonton, Alberta.

Province of Alberta. *Water Act. 2009. Water (Ministerial) Regulation. Alta Reg. 205/1998*. Consolidated up to 185/2015. Alberta Queen's Printer, Edmonton, Alberta.

Province of Alberta. 2010. *Municipal Government Act, RSA 2000. Subdivision and Development Regulation, Alta Reg 43/2002*. Consolidated up to 51/2011. Edmonton, Alberta

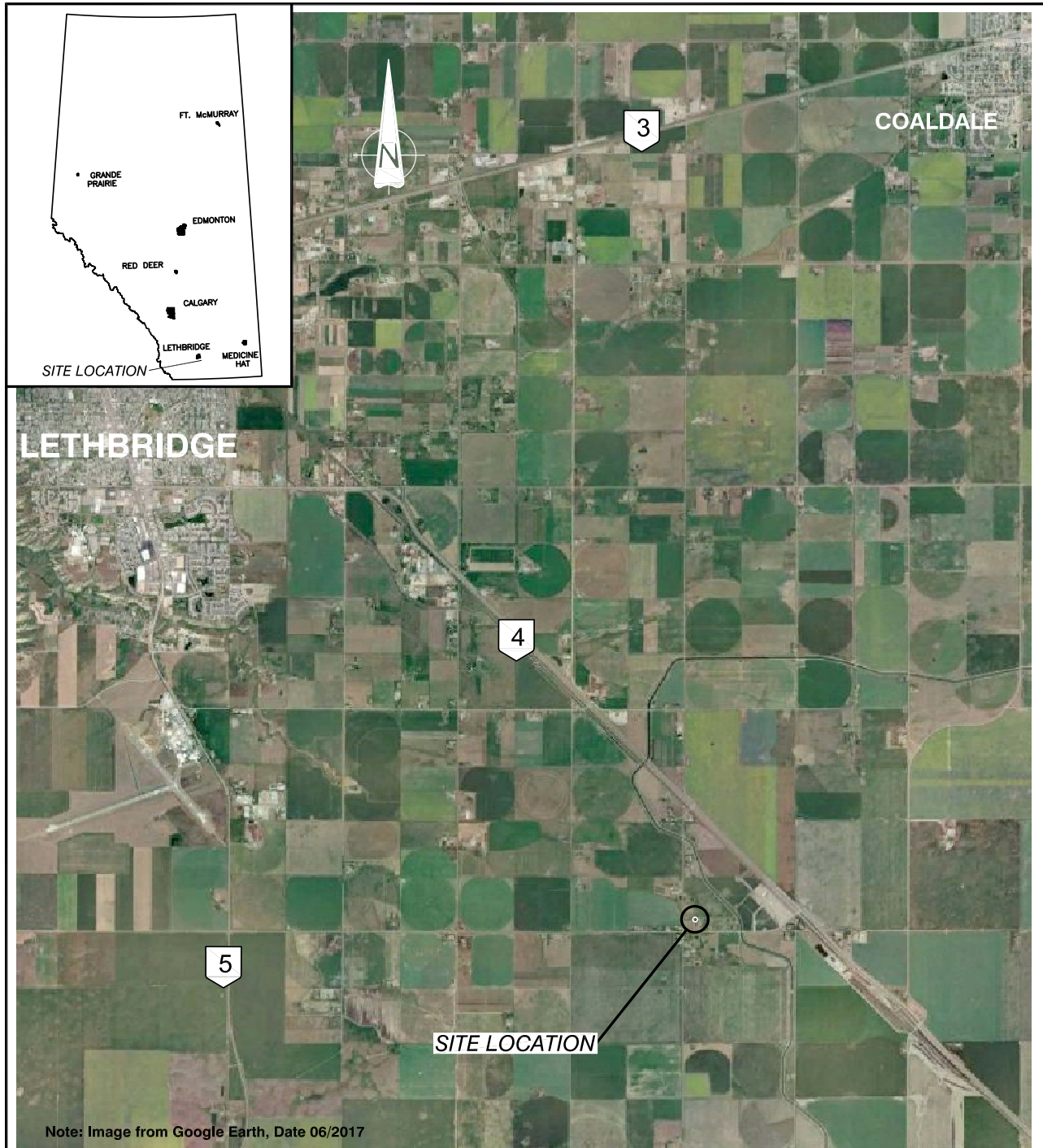
Radon Environmental Management Corporation. 2011. *Mapping the Geologic Radon Potential In Canada*. Vancouver, British Columbia.

Transportation of Dangerous Goods Regulations (SOR 2001 – 286) under the *Transportation of Dangerous Goods Act, 1992, S.C. 1992, c. 34*. Consolidated by the Minister of Justice current to 11 October 2016. Minister of Justice, Ottawa, Ontario.



Figures

Figure 1: Location Plan
Figure 2: Site Plan



Amec Foster Wheeler Environment & Infrastructure 469 - 40th Street South Lethbridge, Alberta CANADA T1J 4M1 Tel. (403) 327-7474 Fax (403) 327-7682				Martin Geomatic Consultants Ltd.	
TITLE LOCATION PLAN		DWN BY: BJ	DATUM: NA	DATE: APRIL 2018	
PROJECT Phase I Environmental Site Assessment Nakamura Residential Subdivision - SW5-8-20-W4M near Lethbridge, Alberta		CHK'D BY: SR	PROJECT NO: BX20137	FIGURE 1	
		SCALE: NTS			



Amec Foster Wheeler Environment & Infrastructure 469 - 40th Street South Lethbridge, Alberta CANADA T1J 4M1 Tel. (403) 327-7474 Fax (403) 327-7682				Martin Geomatic Consultants Ltd.	
TITLE SITE PLAN		DWN BY: BJ	DATUM: NA	DATE: APRIL 2018	
PROJECT Phase I Environmental Site Assessment Nakamura Residential Subdivision - SW5-8-20-W4M near Lethbridge, Alberta		CHK'D BY: SR	PROJECT NO: BX20137	FIGURE 2	
		SCALE: NTS			



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
051 470 968

REGISTRATION

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.

(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

8211 3681 7.B

(CONTINUED)

ENCUMBRANCES, LIENS & INTERESTSPAGE 2
051 470 968

REGISTRATION

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.

(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).

Certificate of Title

Canada



NO	8	2	1	1	3	6	8	1	7	B
REF	8	1	1	2	3	9	4	4	0	A
	8	1	1	1	2	3	9	4	4	B
VALUE \$	1	1	2	2	6	1	8	5	0	0

ARG	TWP	R	Q	PT
1	4	10	18	33W

PLAN	BLK	LOT	PT
2			

South Alberta Land 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 estate in the unsplit

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, 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 NORTH OF THE 30 METRE CANAL RIGHT OF WAY ON PLAN 8210212 - CORRECTED 08/08/84, CONTAINING 27 HECTARES (66.8 ACRES) MORE OR LESS EXCEPTING THE NORTH 15 METRES CONTAINING 0.37 HECTARES MORE OR LESS

EXCEPTING THEREOUT ALL MINES AND MINERALS

CONVERTED AND CANCELLED

OCT 16 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 hereunto subscribed my name and affixed my official seal

On 6 day of AUGUST A.D. 19 82
 Post Office Address 1615 - 21 STREET SOUTH
 LETHBRIDGE, ALBERTA
 T1K 2H6



South Alberta Land Registration District

A G 1819 V 1232
 Rev 2 73

Certificate of Title

Canada



NO	8	1	1	2	3	9	4	4	0	B
PER	8	1	1	0	7	1	3	1	9	A
VALUE \$	1	9	4	5	0	0	0	0	0	

VL	1	1	20	18	15	4	1
----	---	---	----	----	----	---	---

PLAN	BLK	LOT	PT
2			

South Alberta Land 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 estate in fee simple

of and in

OF SECTION FIVE (5)

THAT PORTION OF THE SOUTH WEST QUARTER LYING TO THE WEST OF THE WESTERLY LIMIT OF THE 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 FOUR (4) OF THE SAID SECTION FIVE (5) CONTAINING 28.3 HECTARES (70) ACRES) MORE OR LESS

/CORRECTED 15/1/82

CORRECTED 15/1/82

IN TOWNSHIP EIGHT (8), RANGE TWENTY (20), WEST OF THE FOURTH MERIDIAN WHICH LIES

EXCEPTING THEREOUT ALL MINES AND MINERALS

THIS CERTIFICATE	IN FULL - ON RENEWAL
ABOVE OWNER AND ISSUED 15 JANUARY 1982	

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 hereunto subscribed my name and affixed my official seal

this 29 day of DECEMBER

A.D. 1981

Post Office Address 1615 - 21 STREET SOUTH
LETHBRIDGE, ALBERTA



South Alberta Land Registration District

A.C. 1818 - 1232
Rev. 5-73

VIOLATIONS

ABBREVIATIONS

E	Exhaust	URW	Unity flight of War
C	Crest	BL	Builder's Lien
T ₁	Transmission	TN	Tax Notification
T ₂	Transfer	WL	Writ of Execution
Mtge	Mortgage	CC	Consent and Condition
		ENCUM	Encumbrance

Show Other Abbreviations Here

NAMEROBERT D. KILSON.....

LAKO ... 4 - 20 - B - S - SHPTA

CHARGES, LIENS AND INTERESTS.

FILE 37111
NO 8111123191410B

[illegible]

ENTERED 20/1/82
RENEWAL 15/1/82

Certificate of Title

REF. 811239439A
Canada 811239439B

THIS CERT. IS CANCELLED AS TO PORTION OF
THE NORTHELY 15 METRES
IN ACCORDANCE WITH THE TRANSFER TO
THE BOARD OF DIRECTORS OF THE ST. MARY
IRRIGATION DISTRICT
AND A NEW CERT. OF TITLE NO. 821099172
ISSUED THIS 4 DAY OF JUNE 1982
AD REG



NO 8 1 1 2 3 3 4 4 0 B
REF 8 1 1 0 7 1 3 1 9 A
VALUE 1 9 4 5 0 0 0 0 0

VL 1 4 2 0 0 1 3 9 4

PLAN 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 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1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 25

Show Other Abbreviations Here

NAME ROBERT D. WILSON

LAND 4 - 20 - 8 - 5 - 5K PTH

CHARGES, LIENS AND INTERESTS.

Nature of Instrument	Registration Number	Date of registration DY MO YR	Amount	PARTICULARS	Signature of Registrar	Discharges and Transfers	
						Registration Number	Date of registration DY MO YR
CC	1485 KX			THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSFER	/		
C	3432 U			SW2	/		
C	3903 EM	14 10 74		THE ALBERTA RAILWAY AND IRRIGATION COMPANY	/		
C	3373 KX	5 9 72		PTN DESCRIBED IN INSTRUMENT	/		
URW	741045238	14 5 74		THE REGISTRAR OF DEEDS (16.5 FT. STRIP) TO ALBERTA GOVERNMENT TELEPHONE IRRIGABLE UNIT UNDER SECTION 58 OF THE IRRIGABLE ACT (ST. MARY RIVER IRRIGATION DISTRICT)	/	821099171	4 6 82
IRRIGABLE	811183564	29 9 81			/		

CANCELLED

Certificate of Title

RENEWAL: 4/6/82

Canada

REFERENCES:

811239439A
811239439B



NO	8	1	1	2	3	9	4	4	0	B
RET	8	1	1	0	7	1	3	1	9	A
VALUE	1	9	1	4	5	1	0	0	0	

MD	1	9	2	0	1	8	1	4	9	1
----	---	---	---	---	---	---	---	---	---	---

PLAN	8	2	1	0	2	1	2
BLK	1	0	2	1	2	1	2
LOT	1	0	2	1	2	1	2
PT	1	0	2	1	2	1	2

South Alberta Land 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 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)

WEST OF THE FOURTH MERIDIAN WHICH LIES TO THE NORTH OF THE

SOUTH HALVES OF LEGAL SUBDIVISION THREE (3) AND FOUR (4)

AND WHICH LIES TO THE WEST OF THE 65 METRE CANAL RIGHT OF WAY

ON PLAN 8210212

CONTAINING 28.1 HECTARES (69.5 ACRES) MORE OR LESS

EXCEPTING: FIRSTLY THE 30 METRE CANAL RIGHT OF WAY ON

PLAN 8210212 CONTAINING 0.718 HECTARES

(1.77 ACRES) MORE OR LESS

SECONDLY THAT PORTION OF THE NORTH 15 METRES OF THE

SAID QUARTER SECTION WHICH LIES WEST OF THE

65 METRE CANAL RIGHT OF WAY ON PLAN 8210212

CONTAINING 0.37 HECTARES (0.91 ACRES) MORE OR

LESS

THIS CERT IS CANCELLED IN FULL
ON SEPARATION
IN ACCORDANCE WITH THE TRANSFER TO
ROBERT D. WILSON
AND A NEW CERTIFICATE OF TITLE IN 8 2 1 1 3 6 8 1 7
ISSUED THIS 6 DAY - AUGUST 19 82
AD:REG.

EXCEPTING THEREOUT ALL MINES AND MINERALS

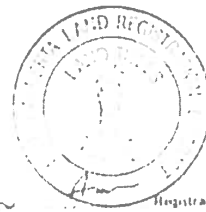
SUBJECT TO THE ENCUMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER

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

this 29 day of DECEMBER, A.D. 19 81

Post Office Address 1615 - 71 STREET SOUTH
LETHBRIDGE, ALBERTA

M. V. V. V.



South Alberta Land Registration District

A.C. 1818 V 1232
Rev. 9 73

Show Other Abbreviations Here

ABBREVIATIONS

E	.. Eminent	UHW	.. Unity Right of Way
C	.. Casual	BL	.. Builders Lien
Tr	.. Termination	TN	.. Tax Notification
Trs	.. Transfer	WE	.. Writ of Execution
Adp	.. Mortgage	CC	.. Covenants and Conditions
		ENCL	.. Encumbrance

NAME ROBERT D. WILSON
LAND 4 - 20 - 8 - 5 - PTN SW 1/4

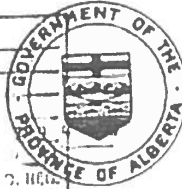
CHARGES, LIENS AND INTERESTS.

Nature of Instrument	Registration Number	Date of Registration DY MO YR	Amount	PARTICULARS	Signature of Registrar	Registration Number	Date of Registration DY MO YR	Signature of Registrar
	1485 BX			THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT				
CC	3452 U			SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSFER				
C	5903 EM	24 10 34		SW ¹ / ₄ TO ALBERTA RAILWAY AND IRRIGATION COMPANY				
IRRIGABLE UNIT	81118564	29 9 81		IRRIGABLE UNIT UNDER SECTION 58 OF THE IRR ACT (ST. MARY RIVER IRRIGATION DISTRICT)	GABLER <i>H. H. H.</i>			

ENTERED 20/1/82
AND CONSOLIDATION WITH 811239439

Certificate of Title

THIS CERT IS CANCELLED ON SEPARATION	IN FULL
IN ACCORDANCE WITH ABOVE OWNER	
AND A NEW CERT OF 1 8 1 1 2	
ISSUED THIS 29 DAY DECEMBER	



NO	8	1	1	0	7	1	1	3	1	1	9		
REF	8	1	1	0	1	1	2	1	6	3	1	6	A
VALUE \$	1	18	15	14	17	10	0	10					

ARG	TWP	REQ	O	PT
1	20	1	1	1

PLAN	BLK	LOT	PT
2			

South Alberta Land 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 estate in fee simple
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 TWENTY (20) WEST OF THE FOURTH
MERIDIAN, CONTAINING 6.07 HECTARES (15 ACRES) MORE OR LESS

EXCEPTING THEREOUT 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
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

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

this 23 day of APRIL
1614 - 21 STREET S.
Post Office Address
LETHBRIDGE, ALBERTA

AD 19 81

Registrar
South Alberta Land Registration District

ABBREVIATIONS

C - Current	ULW - Utility Right of Way
C - Canal	BL - Barber's Lane
T - Transmission	TH - Tax Modification
Tr - Transfer	WE - Wet of Easement
Mtr - Mortgage	CC - Community and Consolidation
	ENCL - Encumbrance

Show Other Abbreviations Here

CHARGES, LIENS AND INTERESTS.

Nature of Interest	Register No.	Date of Registration (YY MM DD)	Amount	Particulars	Signature of Register	Discharge and Withdrawal		
						Registration Number	Date of Discharge (YY MM DD)	Signature of Registrar
	1435 A.A.			THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT				
C	3903 E.M.	24 10 34		THE ALBERTA RAILWAY AND IRRIGATION COMPANY				
C	1494 L.B.	29 6 1		7 KUIPERS HOLDINGS LTD.		811071320	23 4 81	
C	3573 A.A.	5 9 72		AS TO PTH OF SEC. CONT. 3.72 AC THE BOARD OF DIRECTORS OF THE ST. MARY RIVER IRRIGATION DISTRICT				
IRRIGABLE LAND	1118364	9 9 81		IRRIGABLE UNIT UNDER SECTION 58 OF THE IRRIGATION ACT (ST. MARY RIVER IRRIGATION DISTRICT)				

Certificate of Title

THIS CERTIFICATE IS CANCELLED IN FULL
ON SEPARATION

IN ACCORDANCE WITH THE
ABOVE OWNER

AND A NEW CERTIFICATE
ISSUED THIS 24 DAY OF DECEMBER 1981



NO	8	1	1	0	7	1	3	1	9
RET	8	1	1	0	1	2	14	13	14
VALUE \$	1	8	15	14	17	10	0	10	

LM

ARG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAN	2																			

South Alberta Land 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 estate in fee simple 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 TWENTY (20) WEST OF THE FOURTH MERIDIAN, CONTAINING 6.07 HECTARES (15 ACRES) MORE OR LESS

EXCEPTING THEREOUT 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

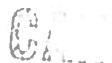
EXCEPTING OUT OF THE SECONDLY DESCRIBED ALL MINES AND MINERALS.

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

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

23 APRIL 1981

Post Office Address 1615 - 21 STREET S.
LETHBRIDGE, ALBERTA



AD 1981

[Signature] Registrar
South Alberta Land Registration District

A 0 1918 V 1232
REV. 9 73

Show Other Abbreviations Here

CHARGES, LIENS AND INTERESTS.

Certificate of Title

Canada



NO	8	1	1	2	3	9	4	3	9	A
REF	9	6		R		1	0	9		A
VALUE \$					1	5	8	1	1	

ARG	1	W	2	0	0	1	P	T
VL	1	4	2	0	1	5	5	4

PLAN	2									
BLK										
LOT										
PT										

South Alberta Land Registration District

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

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)
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

ENTERED 20/1/32

CANCELLED BY 29 DECEMBER 1932

BY CCA 811071319

AND 811071319A

81123740A C.B.

INSTR. 621112217 AD. N.W.

REGISTERED

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

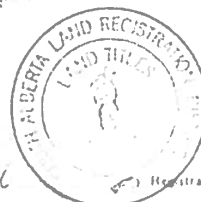
IN WITNESS WHEREOF I have hereunto subscribed my name and affixed my official seal

this 29 day of DECEMBER

A.D. 1932

Post Office Address 1615 - 21 STREET SOUTH

LETHBRIDGE, ALBERTA



South Alberta Land Registration District

Show Other Abbreviations Here

NAME _____

4 - 20 - 8 - 5 - 54 PTH

CHARGES, LIENS AND INTERESTS.

UWVN - Utility of VNV

701 - Builders Loan

Wohnung
TN - Tote Hotelkette

Wf - Will of Emulation

Mediator - α

WORKING TOGETHER TO IMPROVE THE QUALITY OF LIFE

NO. 37115 9111239439

[illegible]

RENEWAL
6441 G.X.

Certificate of Title

Canada



NO	9	6	k	1	0	9	A
HE	6	5	Z	2	0	9	
VALUES	N	O	T	E	S	T	A

AND TWENTY	FOOT	PT
1	4	20

PLAN	REK	LOT	PT
2			

South Alberta Land Registration District

THIS IS TO CERTIFY that HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF ALBERTA AS REPRESENTED BY THE MANAGER OF THE ST. MARY AND MILK RIVERS DEVELOPMENT
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) 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 MINES AND MINERALS AND THE RIGHT TO WORK THE SAME

THE	IN FULL
ROBERT D. WILSON	
AND A	
ISSUED THIS	22 DECEMBER 81

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 hereunto subscribed my name and affixed my official seal

this 9 day of MARCH A.D. 1954
Post Office Address LETHBRIDGE, ALBERTA.

ALBERTA 1232
Rev. 7-53

South Alberta Land Registration District

Show Other Abbreviations Here

NAME.....MILK RIVERS DEVELOPMENT

LAND 4 20 8 5 SW PTN.

- U — Economy
- C — Cost
- T — Transmission
- It — Inter
- M — Message

C - Case; HL - Breast Lm; G - Family History of W/O

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2

2. *Definition* — MOD^2
 Definition of MOD^2 is given by the following conditions:

1961 1092

[illegible]

CHARGES, LIENS AND INTERESTS.

[illegible]

LAND TITLES ACT, Sec. 81.—The land mentioned in any schedule of title granted under this Act shall be impounded and without any special provision thereon, where the contrary is expressly declared, be subject to—
 (a) Any subsiding operations or excavations contained in the original grant of the land from the Crown;
 (b) All unpaid taxes, including hydroelectric and drainage district rates;
 (c) Any public highway or right-of-way or other public easement, however created, upon, over or in respect of the land;
 (d) Any subsiding lease or agreement for a lease for a period not exceeding three years, where there is actual occupation of the land under the lease;
 (e) Any survey, survey or excavation system or affecting the interest of the owner of the land which has been registered and mentioned in force against the owner;
 (f) Any right of compensation which may by statute be vested in any person, body corporate, or his heirs;
 (g) Any right-of-way or other easement granted or acquired under the provisions of any Act in force in the Province.



209
 Found on instrument registered at 347, dated
 3-4-1946
 Under 5477 (Stat. Ex. Feb. 1944)
 Registrar, Dist. 295

Certificate of Title

Assess. Fund Value _____
 Unimproved Inc. Value _____

Refer Govt. No. 45N. 232

South Alberta Land Registration District

This is to Certify that His Majesty The King
 on the right of the Province of Alberta

is now the owner of an estate in fee simple

of and in that portion of the South West quarter of Section 46
 in Township 19 Range 20 West of the 10th Meridian in the Province of
 Alberta which lies to the North of the Northern limit of the Local Right-of-way
 shown on a plan filed in the Land Titles Office for the South Alberta
 Land Registration District as div 46. and South of a line drawn
 parallel with and thirty-two (32) feet perpendicular to said Northern
 limit of said Right-of-way containing one
 and ninety-two hundredths (1.92) acres more or less and
 secondly, that portion of the South West quarter of Section
 Five (5) in said Township consisting of a strip of land
 thirty-two (32) feet in perpendicular width adjacent to the
 Northern, Western and Southern limits of said Local
 Right-of-way shown on said plan and is containing one
 and eighty-eight hundredths (1.88) acres more or less
 Excepting thereout all mineral and submerged and the
 right to work the same and

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

In Witness Whereof I have hereunto subscribed my name and affixed my
 official seal this 11th day of May A.D. 1946

Registrar

South Alberta Land Registration District

P.O. Address _____

OVER

This Certificate is cancelled.....
and a new Certificate 96 R 109 issued to.....
St Mary and Milk River Development
under Transfer to (by V.C.) from the
above named registered owner. Dated 21 July 1953
and Registered at 10⁴¹ o'clock A.M., this..... day of
March A.D., 1954 as No. 644/G.X.

..... W. W. W. W. W. RD
Registered

LAND TITLES ACT, 1906. 31.—The land mentioned in any certificate of this office shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(1) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(2) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(3) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(4) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(5) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(6) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(7) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(8) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(9) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.

(10) Any mortgage or other interest in land shall be subject to the provisions of this Act and to the provisions of any Act or Ordinance relating to the same.



Land in instrument registered at 10:47
 As on the 26 day of APRIL
 1932
 No. 8137
 By *Edwin J. [Signature]*
 Registrar, L.A.S. 99

Certificate of Title.

Assessed Value \$100.00
 Unassessed Value \$100.00

CANCELLED

South Alberta Land Registration District.

Refer Certificate No. 14, 12:24

This is to Certify that ALBERTA RAILWAY AND IRRIGATION COMPANY

is now the owner of an estate in fee simple

of and in FIRSTLY .. THAT PORTION OF THE SOUTH EAST QUARTER OF SECTION SIX (6) IN TOWNSHIP EIGHT (8) RANGE TWENTY (20) WEST OF THE FOURTH MERIDIAN IN THE PROVINCE OF ALBERTA WHICH LIES NORTH OF THE NORTHERN LIMIT OF THE IRRIGATION RIGHT OF WAY AS THE SAID RIGHT OF WAY IS SHOWN ON A PLAN FILED IN THE LAND TITLES OFFICE FOR THE SOUTH ALBERTA LAND REGISTRATION DISTRICT AS IRR. 46 AND SOUTH OF A LINE RUNNING PARALLEL WITH THE SAID NORTHERN LIMIT AND DISTANT THIRTY TWO (32) FEET PERPENDICULARLY NORTHERLY THEREFROM, CONTAINING ONE AND NINETY TWO ONE HUNDREDTHS (1.92) ACRES MORE OR LESS, AND

SECONDLY .. THAT PORTION OF THE SOUTH WEST QUARTER OF SECTION FIVE (5) IN THE SAID TOWNSHIP CONSISTING OF A STRIP OF LAND THIRTY TWO (32) FEET IN PERPENDICULAR WIDTH ADJACENT TO THE NORTHERN, WESTERN AND SOUTH WESTERN LIMITS OF SAID IRRIGATION RIGHT OF WAY AS SHOWN ON SAID PLAN IRR. 46, CONTAINING ONE AND EIGHTY EIGHT ONE HUNDREDTHS (1.88) ACRES MORE OR LESS,

RESERVING OUT OF ALL THE ABOVE LAND UNTO HIS MAJESTY ALL COAL AND UNTO THE ALBERTA RAILWAY AND IRRIGATION COMPANY ALL OTHER MINERALS, AND

NO ENDORSEMENTS
ON BACK OF TITLE

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

In Witness Whereof I have hereunto subscribed my name and affixed my official seal this TWENTY SIX

day of APRIL A.D. 1932.

P.O. Address

Edwin J. [Signature]
 Registrar
CANCELLED
 South Alberta Land Registration District.

This Certificate is cancelled
 and a new Certificate 15220 issued to
Edwin J. [Signature]
 under Transfer to _____ from the
 above named registered owner _____
 and Registered at 3:07 P.M. 3 day of
 May A.D. 1932 5477 EX.
[Signature]
 Registrar



Accr. Fund Value \$10,000⁰⁰
Unearned Inc. Value \$67.00⁰⁰

Land Registration District

Refer. Cont. No. 149.34

CANCELLED

This is to Certify that Walter Porter

of the City of Lethbridge, in the Province of Alberta

Lamer

is now the owner of an estate in See sample

[illegible]

of and in four portions of land situated in Township Eight (8) Range Sixty-two (62) West of the South Western
of the Province of Alberta, and being Partly: Three portions of the South West quarter of Section Four (4)
and of the South East quarter of Section Five (5) which lie to the West of a line above parallel
with said Twp. (50) but perpendicularly distant West from the centre line of the Railway right-of-way
of the Alberta Railway and Irrigation Company as shown on a plan of said right-of-way, filed in the
Land Titles Office, for the South Alberta Land Reclamation District No. 23, containing in the said South
West quarter Four and three tenths (4.3) acres more or less and in the said South East quarter One
hundred and twelve (112) acres, more or less Saidly. The North half and the east half of the south
East quarter of Legal Subdivision Four (4) of said Section Five (5) which lie to the East of the
Canal right-of-way of the Alberta Railway and Irrigation Company, as shown on a plan of said right-of-way,
filed in said Land Titles Office, as set out, containing together thirty seven, and five tenths (37.5) acres more or less, southly
Three portions of said Legal Subdivision Four (4) and Five (5) which lie to the West of said Canal right-of-way, containing
together, Twelve (12) acres more or less, and Saidly: Three portions of Legal Subdivisions One (1), Two (2) and
Three (3) of said Section Five (5) which lie to the North of said Canal right-of-way, the whole of Legal Subdivisions Eight (8) and
Nine (9) of said Section Five (5) which lie to the West of said Canal right-of-way containing together one hundred and forty one (141) acres
more or less, all as shown on said plan "Set 46". The lands herein comprised containing together three
hundred and eighty five, and eight tenths (385.8) acres, more or less. Subject to the right-to-be exercised
within ten (10) years, from 21st August 1907 of expropriation of certain portions thereof; and to such
other rights and conditions, as are reserved and contained in transfer registered as 3432 II and
Reserving unto His Majesty all coal and unto the Alberta Railway and Irrigation Company

all other minerals, 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 Witness Whereof I have hereunto subscribed my name and affixed my

official sent this Gift
day of February A.D. 1917

B. N. Registrar,
Land Registration District.

P.O. Address Pittbridge Alberta

Exhibit of S. 20 note of S. 24 Sec. 1. Mekinsin Lin Press (see over)

The title of Madame owner is subject
to a mortgage made by him
to Harvey S. Fish
to secure 2000 dollars at 5% per annum,
payable as herein provided, dated 1 June 1917
and registered at 2:29 p.m. 10 Apr 1917
as 2079 R.S. W. Gamham
Registrar

Mortgage No. 2379 R.S. discharged
by Harvey S. Fish
dated 7 day of January 1918
at 10:22 a.m. 2379 R.S.
of January 1918 as 537 C.M.
W. Gamham
Registrar

14 km S of the S. John Henry down the L. River of April 1918 - 10:22 a.m. 5 June 1918
1067 C.M.

£ 24 note of S. 20 and of S. 24 Sec 5. Mechanics Lien #1250 - The Stacey Lumber Co. Ltd. 23 Dec 1919. 11:59 AM.

Withdrawal of S. Lien 1067 C.M. 15 Oct. 1920. 2:30 p.m. 22 Oct 1920 - 5:20 C. 20

5 S. 24 E. 1/4 of S. 20, sec 5 (3 ac) Wilson Sch Dist 3736, 25/159. 24 Nov 1920
2:37 p.m. 3 Dec 1921 - 6:37 C.M.

Mortgage. Owner to Credit Foncier Franco-Canadien. 3000 \$ 20 p. 70. 20 Oct 1920. 10:52 a.m. 24 Oct 1920. 3:21 p.m.

6 S. 24 E. 1/4 - 1.92 ac. } as described } Discharge of mortgage 3213 C.M. 12 April 1932 - 10:25 a.m. 26 April 1932 - 8:15 p.m.
5 S. 24 E. 1/4 - 1.88 ac. } in Instrument }

6 S. 24 E. 1/4 - 1.92 ac. } as described } Alberta Railway & L. Co. 45 N 23 2 - 10:47 a.m. 26 April 1932 - 8:15 p.m.
5 S. 24 E. 1/4 - 1.88 ac. } in Instrument }

5 S. 24 E. 1/4 Cread: The Alberta Railway & Irrigation Co. 5 Oct 1934 - 10:33 a.m. - 24 Oct 1934
6 S. 24 E. 1/4 - 3903 C.M.

NOTIFICATION (Tax Recovery Act 1920)
by Deft. Mun. Affs.
Dated 30/3/35 Reg'd 10
1 Apr 1935 as No. 8361 R.P.

THE ACT OF 1920 NOTIFICATION No. 8361 R.P. Dated
Registered at 10:54 a.m. 22 June 1935 as No. 8465 R.P.

Sw 1/4 - 4.8 acres as } Discharge of mortgage 3213 C.M. 2 Oct 1936 - 3:00 p.m. - 22 Jan 1937 - 7:00 p.m.
described in Inst }

Sw 1/4 - 4.8 acres as } John S Henderson 51 S 20 5 - 19 Sept 1936 - 3:00 p.m. - 22 Jan 1937 - 7:00 p.m.
described in Inst }

6 S. 24 E. 1/4 } Eva Mabel Porter 52 T 18 6, 27 April 1938. 10:25 a.m. - 29 April 1938 - 5:28 p.m. - 8:15 p.m.
as described }

57565
and a new certificate 57565 issued to
Eva M. Porter
with transfer to her from the
old certificate numbered 57565 dated 28 Aug 1925
and registered at 2:17 o'clock P. this 14 day of
May A.D. 194 5287 F.B.
W. Gamham
Registrar

Certificate of Title

THIS CERT. IS CONTAINED IN FULL
 Canada of SEPARATION
 ABOVE OWNER
 ISSUED THE 29 DECEMBER 1981



NO	8	1	1	0	7	1	3	1	9
REF	8	1	1	0	1	2	4	3	4
VALUES	3	0	1	5	3	0	0	0	0

LM	1	4	2	0	8	5	5	2
----	---	---	---	---	---	---	---	---

PLAN	2
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South Alberta Land 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 estate in fee simple

of and in 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 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) MORE OR LESS, EXCEPTING THEREOUT "A" 1.21 HECTARES (3 ACRES) MORE OR LESS, BEING THE SOUTHERLY TWENTY (20) RODS OF THE EASTERLY TWENTY FOUR (24) RODS OF SAID QUARTER SECTION....

"B" PLAN.....	NO.....	HECTARES	ACRES
CANAL RIGHT OF WAY	IRR. 1442	.918	MORE OR LESS 2.27

EXCEPTING THEREOUT ALL MINES AND MINERALS.

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 26.3 HECTARES (65 ACRES) MORE OR LESS, EXCEPTING THEREOUT.....

PLAN...	NO.....	HECTARES	ACRES
CANAL RIGHT OF WAY	IRR 1442	1.319	MORE OR LESS 3.27

THIRDLY... THOSE PORTIONS OF SAID 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 15.02 HECTARES (37.5 ACRES) MORE OR LESS, EXCEPTING THEREOUT....

PLAN...	NO...	HECTARES	ACRES
CANAL RIGHT OF WAY	IRR 1442	3.487	MORE OR LESS 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 CANAL RIGHT OF WAY CONTAINING 7.69 HECTARES (19 ACRES) MORE OR LESS EXCEPTING THEREOUT... 1.761 HECTARES (1.98 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 PLAN IRR 46

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

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

this 23 day of APRIL A.D. 1981

Post Office Address 1615 - 21 STREET S.
 LETHBRIDGE, ALBERTA

A.G. 1818 - 1212
 Rev. 5-73

South Alberta Land Registration District

Certificate of Title

Canada



NO.	8	1	1	0	1	2	4	3	4
1	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
VALUE	1	9	2	0	0	0	0	0	0

PLAN	1	4	2	0	1	3	5	5	1
------	---	---	---	---	---	---	---	---	---

PLAN	2	1	1	1	1	1	1	1	1
------	---	---	---	---	---	---	---	---	---

THIS CERT IS CANCELLED
IN FULL
IN ACCORDANCE WITH THE TRANSFER TO
ROBERT D. WILSON
AND A NEW CERT OF TITLE No. 8110/1319
ISSUED THIS 23rd APRIL 1981.

South Alberta Land Registration District

THIS IS TO CERTIFY THAT RALPH P. KUIPERS OF THE CITY OF LETHBRIDGE IN THE PROVINCE
OF ALBERTA (FARMER) AND SUSAN DEE KUIPERS OF THE SAME PLACE (HIS WIFE)

ARE now the owners of an estate in fee simple AS JOINT TENANTS

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 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 43.2 HECTARES (119 ACRES) MORE OR LESS,
EXCEPTING THEREOUT "A": 1.21 HECTARES (3 ACRES) MORE OR LESS, BEING THE
SOUTHERLY TWENTY (20) RODS OF THE EASTERLY TWENTY FOUR (24) RODS OF SAID
QUARTER SECTION:

PLAN	NO.	HECTARES MORE OR LESS	ACRES MORE OR LESS
CANAL RIGHT OF WAY	IRR. 1442	1.918	2.27

EXCEPTING THEREOUT ALL MINES AND MINERALS

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 26.3 HECTARES (65 ACRES) MORE OR LESS,
EXCEPTING THEREOUT:

PLAN	NO.	HECTARES MORE OR LESS	ACRES MORE OR LESS
CANAL RIGHT OF WAY	IRR 1442	1.319	3.27

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 3 CONTAINING 15.02 HECTARES (37.5 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

PLAN	NO.	HECTARES MORE OR LESS	ACRES MORE OR LESS
CANAL RIGHT OF WAY	IRR 1442	3.467	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 CANAL RIGHT OF WAY CONTAINING 7.69 HECTARES
(19 ACRES) MORE OR LESS

EXCEPTING THEREOUT: .761 OF A HECTARE (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 PLAN IRR 46

EXCEPTING THEREOUT ALL MINES AND MINERALS

CANCELLED

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

IN WITNESS WHEREOF I HAVE HEREON SET MY HAND AND SEAL OF OFFICE

WITNESSED AND CORRECTED 27th APRIL 1981

PROVIDED BY S.S. 1-5-11

LETHBRIDGE, ALBERTA

Registrar

South Alberta Land Registration District

Show Other Abbreviations Here

LAND 6-20-8-S-S; PT::

LAND 6-20-8-S-S; PT::

CHARGES, LIENS AND INTERESTS.

ABUSE VIOLATIONS	
1. Harassment	UNW: Unity Flight of War
2. Coercion	BL: Building Love
3. Intimidation	TH: The Motivation
4. Theft	WE: Will of Creation
5. Abuse of Power	C.C.: Community and Civilization
	TRCUM: Trust-Create-Us

RENEWAL
53 L.F.

Certificate of Title

Canada



NO	1	6	6	N	1	8	4		
REF	1	6	4	P	1	7	5		
VALUES				2	8	4	5	0	0

THIS CERT IS CANCELLED IN FULL
IN ACCORDANCE WITH THE WARRANT TO
RALPH P. KUIPERS ET UX
AND A NEW CERT OF TITLE NO. 2.1.1.0.1.2.4.3
ISSUED THIS 22 DAY OF JAN 1981
AD. REQ.

AMC (TWEEG) (PI)
KD 1 4 2 3 1 8 5 1 1

PLAN 101101 (PI)
2

South Alberta Land Registration District

THIS IS TO CERTIFY MARIAN PORTER (WIDOW) OF LAFAYETTE IN THE STATE OF OREGON
AND DONALD O. PORTER OF LONGVIEW IN THE STATE OF WASHINGTON BOTH OF THE UNITED
STATES OF AMERICA THE SAID MARIAN PORTER AS TO AN UNDIVIDED FOURTEENTHS (4/10) INTEREST, AND
ARE THE OWNERS OF AN ESTATE IN THE LANDS THE SAID DONALD O. PORTER AS TO AN UNDIVIDED ONE TENTH
(1/10) INTEREST

OF AND IN 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 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 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:

(A) OUT OF THE FIRSTLY DESCRIBED PORTION THE SOUTHERLY THREE HUNDRED AND THIRTY
(330) FEET OF THE EASTERLY THREE HUNDRED AND NINETY 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 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

ACRES MORE OR LESS

SE 1/4

2.27

SW 1/4

11.88

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

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

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

this 14 day of JULY A.D. 1971
MAY. 99W. LAFAYETTE, OREGON U.S.A.
Post Office Address 1704 SUSAN AVENUE
LONGVIEW, WASHINGTON U.S.A.
(RESPECTIVELY)

A.G. 1818 v. 1232
May 22

Registrar
South Alberta Land Registration District

LAND TITLES ACT, Sec. 64 — The land mentioned in any certificate of title granted under this Act shall by implication and without any special condition therein, be subject to—

- Any existing reservations or exceptions (including royalties contained in the original grant of the land from the Crown);
- All unpaid taxes, including irrigation and drainage district rates;
- Any public highway or right-of-way or other public easement, heretofore created upon, over or in respect of the land;
- Any subsisting lease or agreement for a lease for a period not exceeding three years, where there is actual occupation of the land under the same;
- Any decrees, orders or executions against or affecting the interest of the owner of the land which have been registered and maintained in force against the owner;
- Any right of expropriation which may by statute be valid in any person, body corporate, or Her Majesty;
- Any right-of-way or other easement granted or acquired under the provisions of any Act or law in force in the Province.



Issued on instrument registered at 2.1 o'clock
P. m. on the 2 day of MARCH
A.D. 19 71
Number 8161 Book K.T. 237
H. E. MC COMBS,
Registrar, S.A.L.R.D.

Certificate of Title

Assoc. Fund Value \$2,845.00

Refer Cert. No. 80 Q 138

South Alberta Land Registration District

This is to Certify that FREDERICK WILTON 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 AN UNDIVIDED 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 NINETEEN (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 NINETY 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 CANAL RIGHT-OF-WAY ON PLAN IRR. 46 CONTAINING ONE AND EIGHTY EIGHT HUNDRETHS (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

QUARTER SECTION	ACRES MORE OR LESS
SE	2.27
SW	11.88

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

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

In Witness Whereof I have hereunto subscribed my name and affixed my official seal this SECOND day of MARCH A.D. 19 71

202 PROFESSIONAL BUILDING,
740-4TH AVENUE SOUTH,
LETHBRIDGE, ALBERTA.

H. E. MC COMBS, Registrar
South Alberta Land Registration District

SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSFER....3432 U.
H. E. MC COMBS AD REG.

OVER

NO	3	0	Q	1	1	3	8
MI	7	2	U	1	1	5	1
MS			S	3	4	8	5

Coulton

THIS CERT. IS CONTAINED IN FULL
IN 2 COPIES, WITH THE FOLLOWING TO
RALPH P. KUIPERS ET UX
AND A NEW CERT. DATED 8.1.19.12
ISSUED THIS 22. DAY. JAN. 19-84
AD. REG.



	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
CS	1	1	2	1	1	5	5	1	1

NUMBER	PLATE
0	1
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1

South Alberta Land Registration District

THE DISTRICT COURT OF THE UNITED STATES OF AMERICA, IN THE DISTRICT OF COLUMBIA, DO hereby certify that the following is a true and correct copy of the original as the same appears in the records of the court.

15 with the intent of exercising control IN AN UNDIVIDED ONE HALF (1/2) SHARE

of and is 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 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. 25 CONTAINING ONE HUNDRED AND NINETEEN (119) ACRES MORE OR LESS EXCEPTING THEREOUT "A": THREE (3) ACRES MORE OR LESS BEING THE SOUTHERLY TWENTY (20) RODS OF THE EASTERLY TWENTY FOUR (24) RODS OF SAID QUARTER SECTION
"B":

PLAN	NO.	ACRES MORE OR LESS
CANAL RIGHT OF WAY	18R 1442	2.27
EXCEPTING THEREOUT ALL TILES AND MINERALS		

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.	ACRES MORE OR LESS
CANAL RIGHT OF WAY	IRR 1442	3.27
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:

PLAN	NO.	ACRES MORE OR LESS
CAPITAL RIGHT OF WAY	1 RR 1462	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 CANAL RIGHT OF WAY CONTAINING NINETEEN (19) ACRES MORE OR LESS

EXCEPTING THEREOUT: ONE 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 PLAN IRR 46 EXCEPTING THEREOUT ALL MINES AND MINERALS.

EXCEPTING THEREFROM ALL PILES 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

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

214 AUGUST 1949

For Office Address

人、(2018、12)2
94、2、3

IN, Mississippi
A.D. 1949

Hopkins

Mississippi Land Registration District

Certificate of Title

ABBREVIATIONS

E - Easement
 C - Covenants
 Tr - Transfer
 Mfg - Mortgage
 UHW - Utility Right of Way
 BL - Burden Lien
 Tr - Tax Notification
 WE - Writ of Execution
 C.C. - Court Order and Conditions
 F.R.U. - Encumbrance

NAME DAVID WALTER PORTER (PART. JNT.)

LAND 4-20-8-5-51-PTN

Show Other Abbreviations Here

CHARGES, LIENS AND INTERESTS.

TITLE NO. 18 10 1 Q 1 13 18

Charge of Instrument	Registration Number	List of Registrations	Amount	PARTICULARS	Signature of Registrar	Registration Number	Time of Registration	Signature of Registrar
	1485 K.X.			THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT				
C	3903 E.M.	24 110 34		(S.M.) THE ALBERTA RAILWAY AND IRRIGATION COMPANY				
C	5995 K.V.	8 4 71		RALPH PETER KUIPERS & SUSAN DEE KUIPERS		81101243322	1 81	
C	1494 L.B.	29 6 71		7 KUIPERS HOLDING LTD.				
C	3373 K.X.	5 9 72		(AS TO THE S.M. CONT. 3.72 ACS) THE BOARD OF DIRECTORS OF THE ST. MARY RIVER IRRIGATION DISTRICT				
CC	3432 U.			SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSFER				

LAND TITLES ACT, Sec. 81.—The land mentioned in any certificate of title granted under this Act shall by implication and without any special mention therein, unless the contrary is expressly declared, be subject to—
 (a) Any subsisting reservations or exceptions contained in the original grant of the land from the Crown;
 (b) All unpaid taxes, including telephone and drainage district rates;
 (c) Any public highway or right-of-way or other public easement, however created, upon, over or in respect of the land;
 (d) Any subsisting lease or agreement for a term for a period not exceeding three years, where there is actual occupation of the land under the lease;
 (e) Any decrees, orders or attachments against or affecting the interest of the owner of the land which have been registered and maintained in force against the owner;
 (f) Any right of expropriation which may by statute be vested in any person, body corporate, or His Majesty;
 (g) Any right-of-way or other easement granted or acquired under the provisions of any Act or law in force in the Province.

79 U 151



151

Based on instrument registered at 2.17
 P. on the 13 day of JULY
 A.D. 1949
 Number 597 of G.C. File 17
 H. FORBES
 Registrar P.A. 52950

Certificate of Title

Asses. Fund Value \$7900.00
 Unearned Inc. Value \$1150.00

Refer Cert. No. 57.I.65

South Alberta Land Registration District

This is to Certify that DAVID WALTER PORTER OF SALEM IN THE STATE

OF OREGON ONE OF THE UNITED STATES OF AMERICA (CLENK) 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 ~~xxx~~ know the owners of an estate in fee simple AS SUCH EXECUTORS

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

FIRSTLY, 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 A PLAN FILED IN THE LAND TITLES OFFICE FOR THE SOUTH ALBERTA LAND REGISTRATION DISTRICT AS R.V. 23 CONTAINING ONE HUNDRED AND NINETEEN (119) ACRES MORE OR LESS, EXCEPTING THEREOUT THREE (3) ACRES MORE OR LESS BEING THE SOUTHERLY TWENTY (20) RODS OF THE EASTERLY TWENTY FOUR (24) RODS OF SAID QUARTER SECTION, 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, 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 A PLAN FILED IN THE SAID LAND TITLES OFFICE AS IRR. 46 CONTAINING THIRTY SEVEN AND FIVE TENTHS (37.5) ACRES MORE OR LESS, AND FOURTHLY, THOSE PORTIONS OF SAID LEGAL SUBDIVISIONS FOUR (4) AND FIVE (5) WHICH LIE TO THE WEST OF SAID CANAL RIGHT OF WAY CONTAINING NINETEEN (19) ACRES MORE OR LESS, EXCEPTING THEREOUT ONE AND EIGHTY EIGHT HUNDREDTHS (1.88) ACRES MORE OR LESS AS DESCRIBED IN TRANSFER REGISTERED AS 8127 S.J., SUBJECT TO (AS TO ALL THE ABOVE LAND) THE RIGHT OF EXPROPRIATION OF CERTAIN PORTIONS THEREOF AND TO SUCH OTHER RIGHTS AND CONDITIONS AS ARE SET FORTH IN TRANSFER REGISTERED AS 3432 U, AND RESERVING UNTO HIS MAJESTY ALL COAL AND UNTO THE ALBERTA RAILWAY AND IRRIGATION COMPANY ALL OTHER MINERALS, AND

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

In Witness Whereof I have hereunto subscribed my name and affixed my

official seal this THIRTEENTH day of JULY A.D. 1949

[Signature] Registrar

P.O. Address SW 1/4 CAYEAT, THE ALBERTA RAILWAY AND IRRIGATION COMPANY

South Alberta Land Registration District
 5 OCT. 1934, 10.33 AM.
 24 OCT. 1934..... 3903 R.V. 4

This Certificate is cancelled 138 \$
and a new one is issued 80 \$
David Walter Fortis Wal
10 Aug 1949
under Transfer
above number 10 24
and Registered at 10 1481-98
Aug 10 1949
1481-98
1481-98

[illegible]

Licensed instrument registered on 2.17 miles
 Pa. on the 14 day of MAY
 S.S. of 41
 Number 5217 Book F.B. Folio 149
W. FORBES
 Register, P.S. D.P.D.

Certificate of Title.

Assoc Fund Value \$6200.00
Unearned Inc Value \$4150.00

Refer Court No: 14-J-234

South Alberta Land Administration District.

This is to (n

MA MABEL PORTER OF THE CITY OF

LETHBRIDGE

VAN

is now the owner of

of machine

ALL THE
WEST OF
FIRSTLY

OF THE SOUTH
IRRIGATION CO.

OFFICE FOR THE SOUTH ALBERTA LAND REGISTRATION DISTRICT AS R.T.2) CONTAINING ONE
HUNDRED AND NINETEEN (119) ACRES MORE OR LESS.

EXCEPTING THEREOUT THREE (3) ACRES MORE OR LESS BEING THE SOUTHERLY TWENTY (20) RODS OF THE EASTERLY TWENTY FOUR (24) RODS OF SAID QUARTER SECTION.

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,

THIRDLY, THOSE PORTIONS OF LEGAL SUBDIVISION FIVE (5) AND OF THE NORTH 1/4 OF SECTION 36, TOWNSHIP 36 NORTH, RANGE 14 EAST, CONTAINING THIRTY SEVEN AND FIVE

FILED IN THE SAID LAND TITLES OFFICE AS TRR.46 CONTAINING THIRTY SEVEN AND FIVE
TENTHS (37 5/10) ACRES MORE OR LESS, AND

FOURTHLY, THOSE PORTIONS OF SAID LEGAL SUBDIVISIONS FOUR (4) AND FIVE (5) WHICH ARE

TO THE WEST OF SAID CANAL RIGHT OF WAY CONTAINING
EXCEPTING THEREOUT ONE AND EIGHTY EIGHT HUNDRETHS (1.88) ACRES MORE OR LESS AS

DESCRIBED IN TRANSFER REGISTERED AS 07/1/19.
SUBJECT AS TO ALL THE ABOVE LANDS TO THE RIGHT OF EXPROPRIATION OF CERTAIN PORTIONS
AND RESERVATIONS AS ARE SET FORTH IN TRANSFER

THEREOF AND TO SUCH OTHER RIGHTS AND CONDITIONS AS ARE SET FORTH IN THE
REGISTERED AS 31432 11 AND

REGISTERED AS 7422 AND
RESERVING UNTO HIS MAJESTY ALL COAL AND UNTO THE ALBERTA RAILWAY COMPANY
ALL OTHER MINERALS AND

COMPANY ALL OTHER MINERALS, 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 Witness Whereof I have hereunto subscribed my name and affixed my

official seal, this: — FOURTEENTH

day of MAY A.D. 1941

P.O. Address. LETHBRIDGE, ALBERTA

MORTGAGE, WALTER PORTER TO CREDIT FONCIER FRANCO CANADIEN \$1000.00 1st 24 OCT. 1930.. 3213 E.B.

SW 1/4, CAVEAT. THE ALBERTA RAILWAY AND IRRIGATION COMPANY, 5 OCT. 1954, 10.35 AM, 24 OCT. 1954

Discharge of mortgage

This Certificate is cancelled _____
and a new certificate 2945 issued to David W. Porter et al. (as executors)
David W. Porter et al. from the
under Transfer to By Transmission dated 13 July 1949
above named registered owner PM, this 13 day of
and registered at 217 o'clock PM, this 13 day of
July A.D., 1949 as No. 5979.C.
David W. Porter et al. By: mar

RECEIVED: 4/6/82

Cayuga

REFERENCES:

811239439
811239439A
811239439B



Handwritten notes on a lined notebook page. The page contains two grids of numbers.

The first grid is a 4x4 matrix with the following values:

8	1	1	2	3	9	4	0
4	1	1	0	7	1	3	9
8	1	1	0	7	1	3	9
1	9	6	7	5	2	0	

Below the first grid, the text "MID" is written.

The second grid is a 2x2 matrix with the following values:

1	5	0	1
8	1	5	4

Below the second grid, the text "PLAN" is written.

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

51 now the cost of an extra in the work

THAT PORTION OF THE SOUTH HALF OF LEGAL SUBDIVISION THREE (3)
AND THE SOUTH HALF OF LEGAL SUBDIVISION FOUR (4) IN THE
SOUTH HALF OF SECTION FIVE (5)
IN TOWNSHIP EIGHT (8)
RANGE TWENTY (20)
WEST OF THE FOURTH MERIDIAN
WHICH LIES TO THE WEST OF THE 6.5 METRE CANAL RIGHT OF WAY
ON PLAN 8210212

THIS CERT IS CANCELLED IN FULL
ON SEPARATION _____
IN ACCORDANCE WITH THE TRANSFER TO _____
ABOVE OWNER _____
AND A NEW CERT OF TITLE # 871136517
ISSUED THIS 6 DAY AUGUST 19 87
[Signature]
AD-REG.

CONTAINING 15.3 HECTARES (37.7 ACRES) MORE OR LESS
EXCEPTING OUT OF LEGAL SUBDIVISION FOUR OF THE 30 METRE
CANAL RIGHT OF WAY ON PLAN 8210212
CONTAINING 0.723 HECTARES (1.79 ACRES) MORE OR LESS
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

THE SIGNATURE VALUE OF THE SIGNATURE IS NOT VALID ANY MORE AND IT IS NOT OFFICIAL ANY MORE.

79 DECEMBER

Post Office Address 1615 - 21 STREET SOUTH
LETHBRIDGE, ALBERTA

人 民 日 报 1957. 12. 27
第 1000 页

South Africa Land Registration Data:

Show Other Abbreviations Here

NAME ROBERT D. WILSON

LAND 4-20-5-5-III 54

CHARGES, LIENS AND INTERESTS.

[illegible]

Nature of Interest	Registration Number	Date of Registration Dy. Mth. Yr.	Amount	PARTICULARS	Signature of Register	Discharge and Disbursement	
						Registration Number	Date of Discharge Dy. Mth. Yr.
	1400			TOLE DOPE RIVER DISTRICT RIVER IRRIGATION DISTRICT.			
	3432 U			SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSFER			
	3903 EM	24 10 34		SW ¹ / ₄ TO ALBERTA RAILWAY AND IRRIGATION COMPANY			
IRRIGABLE UNIT	3115564	29 9 81		IRRIGABLE UNIT UNDER SECTION 58 OF THE IRRIGABLE ACT (ST. MARY RIVER IRRIGATION DISTRICT)			

15/1/82
ENTERED 20/1/82
REF. 811239439
Canada 81.739439A
811239439B

2

South Alberta Land Registration District

E - Eminent
 C - Credit
 T - Transmutation
 Tr - Transfer
 M - Mortgage
 URW - Unity Right of Way
 BL - Builders Lien
 TN - Tax Lien
 WE - Writ of Execution
 CC - Co-ownership and Co-tenancy
 EDCUM - Eminent Domain

Show Other Abbreviations Here

CHARGES, LIENS AND INTERESTS.

Nature of Investment	Registration No. & Date	Date of Registration DY MO YH	Amount	PARTICULARS	Signature of Registrar	Registration Number	Date of Registration DY MO YH	Signature of Registrar
	1425 KK			THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT				
	3432 U			SUBJECT TO THE RIGHTS AND RESERVATIONS CONTAINED IN TRANSFER				
C	3903 EM	24 10 34		SW ¹ THE ALBERTA RAILWAY AND IRRIGATION COMPANY				
C	3373 KK	5 9 72		PTN DESCRIBED IN INSTRUMENT THE BOARD OF DIRECTORS OF THE ST. MARY RIVER IRRIGATION DISTRICT		821099171	4 6 82	H. H. H.
URW	741045238	14 5 74	1.00 - 0.16 2.00 - 0.16 3.00 - 0.16 4.00 - 0.16 5.00 - 0.16 6.00 - 0.16 7.00 - 0.16 8.00 - 0.16 9.00 - 0.16 10.00 - 0.16 11.00 - 0.16 12.00 - 0.16 13.00 - 0.16 14.00 - 0.16 15.00 - 0.16 16.00 - 0.16 17.00 - 0.16 18.00 - 0.16 19.00 - 0.16 20.00 - 0.16 21.00 - 0.16 22.00 - 0.16 23.00 - 0.16 24.00 - 0.16 25.00 - 0.16 26.00 - 0.16 27.00 - 0.16 28.00 - 0.16 29.00 - 0.16 30.00 - 0.16 31.00 - 0.16 32.00 - 0.16 33.00 - 0.16 34.00 - 0.16 35.00 - 0.16 36.00 - 0.16 37.00 - 0.16 38.00 - 0.16 39.00 - 0.16 40.00 - 0.16 41.00 - 0.16 42.00 - 0.16 43.00 - 0.16 44.00 - 0.16 45.00 - 0.16 46.00 - 0.16 47.00 - 0.16 48.00 - 0.16 49.00 - 0.16 50.00 - 0.16 51.00 - 0.16 52.00 - 0.16 53.00 - 0.16 54.00 - 0.16 55.00 - 0.16 56.00 - 0.16 57.00 - 0.16 58.00 - 0.16 59.00 - 0.16 60.00 - 0.16 61.00 - 0.16 62.00 - 0.16 63.00 - 0.16 64.00 - 0.16 65.00 - 0.16 66.00 - 0.16 67.00 - 0.16 68.00 - 0.16 69.00 - 0.16 70.00 - 0.16 71.00 - 0.16 72.00 - 0.16 73.00 - 0.16 74.00 - 0.16 75.00 - 0.16 76.00 - 0.16 77.00 - 0.16 78.00 - 0.16 79.00 - 0.16 80.00 - 0.16 81.00 - 0.16 82.00 - 0.16 83.00 - 0.16 84.00 - 0.16 85.00 - 0.16 86.00 - 0.16 87.00 - 0.16 88.00 - 0.16 89.00 - 0.16 90.00 - 0.16 91.00 - 0.16 92.00 - 0.16 93.00 - 0.16 94.00 - 0.16 95.00 - 0.16 96.00 - 0.16 97.00 - 0.16 98.00 - 0.16 99.00 - 0.16 100.00 - 0.16	TO ALBERTA GOVERNMENT TELEPHONES				
IRRIGABLE UNIT	811183564	29 9 81		IRRIGABLE UNIT UNDER SECTION 58 OF THE IRRIGABLE ACT (ST. MARY RIVER IRRIGATION DISTRICT)				

CANCELLED

Candy



8	1	1	2	5	9	4	0	0
8	1	1	0	7	1	1	0	9
5	1	1	0	7	1	1	1	9

VALUE 1 1 9 6 7 5 10 0 0 0

AMPL INP 29 0 PT

VL

PLATE BLK LGE PT

2								
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THIS IS TO CERTIFY THAT ROBERT D. WILSON OF THE CITY OF LETHBRIDGE IN THE PROVINCE
OF ALBERTA (FARMER)

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

THAT PORTION OF THE SOUTH HALF OF LEGAL SUBDIVISION THREE (3)
AND THE SOUTH HALF OF LEGAL SUBDIVISION FOUR (4)²¹ LYING TO THE
WEST OF THE WESTERLY LIMIT OF THE CANAL RIGHT OF WAY AS SHOWN
ON PLAN 1R-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 (20) WEST OF THE FOURTH MERIDIAN WHICH LIES
 EXCEPTING THEREOUT ALL MINES AND MINERALS

THIS CERT IS CANCELLED IN FULL
ON RENEWAL
ABOVE OWNER
8 1 1 2 3 9
15 JANUARY

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 hereunto set my hand and affixed my official seal

100 20 200 30 300 40 400 50 500 60 600 70 700 80 800 90 900 100 1000 110 1100 120 1200 130 1300 140 1400 150 1500 160 1600 170 1700 180 1800 190 1900 200 2000 210 2100 220 2200 230 2300 240 2400 250 2500 260 2600 270 2700 280 2800 290 2900 300 3000 310 3100 320 3200 330 3300 340 3400 350 3500 360 3600 370 3700 380 3800 390 3900 400 4000 410 4100 420 4200 430 4300 440 4400 450 4500 460 4600 470 4700 480 4800 490 4900 500 5000 510 5100 520 5200 530 5300 540 5400 550 5500 560 5600 570 5700 580 5800 590 5900 600 6000 610 6100 620 6200 630 6300 640 6400 650 6500 660 6600 670 6700 680 6800 690 6900 700 7000 710 7100 720 7200 730 7300 740 7400 750 7500 760 7600 770 7700 780 7800 790 7900 800 8000 810 8100 820 8200 830 8300 840 8400 850 8500 860 8600 870 8700 880 8800 890 8900 900 9000 910 9100 920 9200 930 9300 940 9400 950 9500 960 9600 970 9700 980 9800 990 9900 1000 10000 1010 10100 1020 10200 1030 10300 1040 10400 1050 10500 1060 10600 1070 10700 1080 10800 1090 10900 1100 11000 1110 11100 1120 11200 1130 11300 1140 11400 1150 11500 1160 11600 1170 11700 1180 11800 1190 11900 1200 12000 1210 12100 1220 12200 1230 12300 1240 12400 1250 12500 1260 12600 1270 12700 1280 12800 1290 12900 1300 13000 1310 13100 1320 13200 1330 13300 1340 13400 1350 13500 1360 13600 1370 13700 1380 13800 1390 13900 1400 14000 1410 14100 1420 14200 1430 14300 1440 14400 1450 14500 1460 14600 1470 14700 1480 14800 1490 14900 1500 15000 1510 15100 1520 15200 1530 15300 1540 15400 1550 15500 1560 15600 1570 15700 1580 15800 1590 15900 1600 16000 1610 16100 1620 16200 1630 16300 1640 16400 1650 16500 1660 16600 1670 16700 1680 16800 1690 16900 1700 17000 1710 17100 1720 17200 1730 17300 1740 17400 1750 17500 1760 17600 1770 17700 1780 17800 1790 17900 1800 18000 1810 18100 1820 18200 1830 18300 1840 18400 1850 18500 1860 18600 1870 18700 1880 18800 1890 18900 1900 19000 1910 19100 1920 19200 1930 19300 1940 19400 1950 19500 1960 19600 1970 19700 1980 19800 1990 19900 2000 20000 2010 20100 2020 20200 2030 20300 2040 20400 2050 20500 2060 20600 2070 20700 2080 20800 2090 20900 2100 21000 2110 21100 2120 21200 2130 21300 2140 21400 2150 21500 2160 21600 2170 21700 2180 21800 2190 21900 2200 22000 2210 22100 2220 22200 2230 22300 2240 22400 2250 22500 2260 22600 2270 22700 2280 22800 2290 22900 2300 23000 2310 23100 2320 23200 2330 23300 2340 23400 2350 23500 2360 23600 2370 23700 2380 23800 2390 23900 2400 24000 2410 24100 2420 24200 2430 24300 2440 24400 2450 24500 2460 24600 2470 24700 2480 24800 2490 24900 2500 25000 2510 25100 2520 25200 2530 25300 2540 25400 2550 25500 2560 25600 2570 25700 2580 25800 2590 25900 2600 26000 2610 26100 2620 26200 2630 26300 2640 26400 2650 26500 2660 26600 2670 26700 2680 26800 2690 26900 2700 27000 2710 27100 2720 27200 2730 27300 2740 27400 2750 27500 2760 27600 2770 27700 2780 27800 2790 27900 2800 28000 2810 28100 2820 28200 2830 28300 2840 28400 2850 28500 2860 28600 2870 28700 2880 28800 2890 28900 2900 29000 2910 29100 2920 29200 2930 29300 2940 29400 2950 29500 2960 29600 2970 29700 2980 29800 2990 29900 3000 30000 3010 30100 3020 30200 3030 30300 3040 30400 3050 30500 3060 30600 3070 30700 3080 30800 3090 30900 3100 31000 3110 31100 3120 31200 3130 31300 3140 31400 3150 31500 3160 31600 3170 31700 3180 31800 3190 31900 3200 32000 3210 32100 3220 32200 3230 32300 3240 32400 3250 32500 3260 32600 3270 32700 3280 32800 3290 32900 3300 33000 3310 33100 3320 33200 3330 33300 3340 33400 3350 33500 3360 33600 3370 33700 3380 33800 3390 33900 3400 34000 3410 34100 3420 34200 3430 34300 3440 34400 3450 34500 3460 34600 3470 34700 3480 34800 3490 34900 3500 35000 3510 35100 3520 35200 3530 35300 3540 35400 3550 35500 3560 35600 3570 35700 3580 35800 3590 35900 3600 36000 3610 36100 3620 36200 3630 36300 3640 36400 3650 36500 3660 36600 3670 36700 3680 36800 3690 36900 3700 37000 3710 37100 3720 37200 3730 37300 3740 37400 3750 37500 3760 37600 3770 37700 3780 37800 3790 37900 3800 38000 3810 38100 3820 38200 3830 38300 3840 38400 3850 38500 3860 38600 3870 38700 3880 38800 3890 38900 3900 39000 3910 39100 3920 39200 3

Post Office Address: 1615 - 21 STREET SOUTH

LEITCH-BRIDGE, ALBERTA

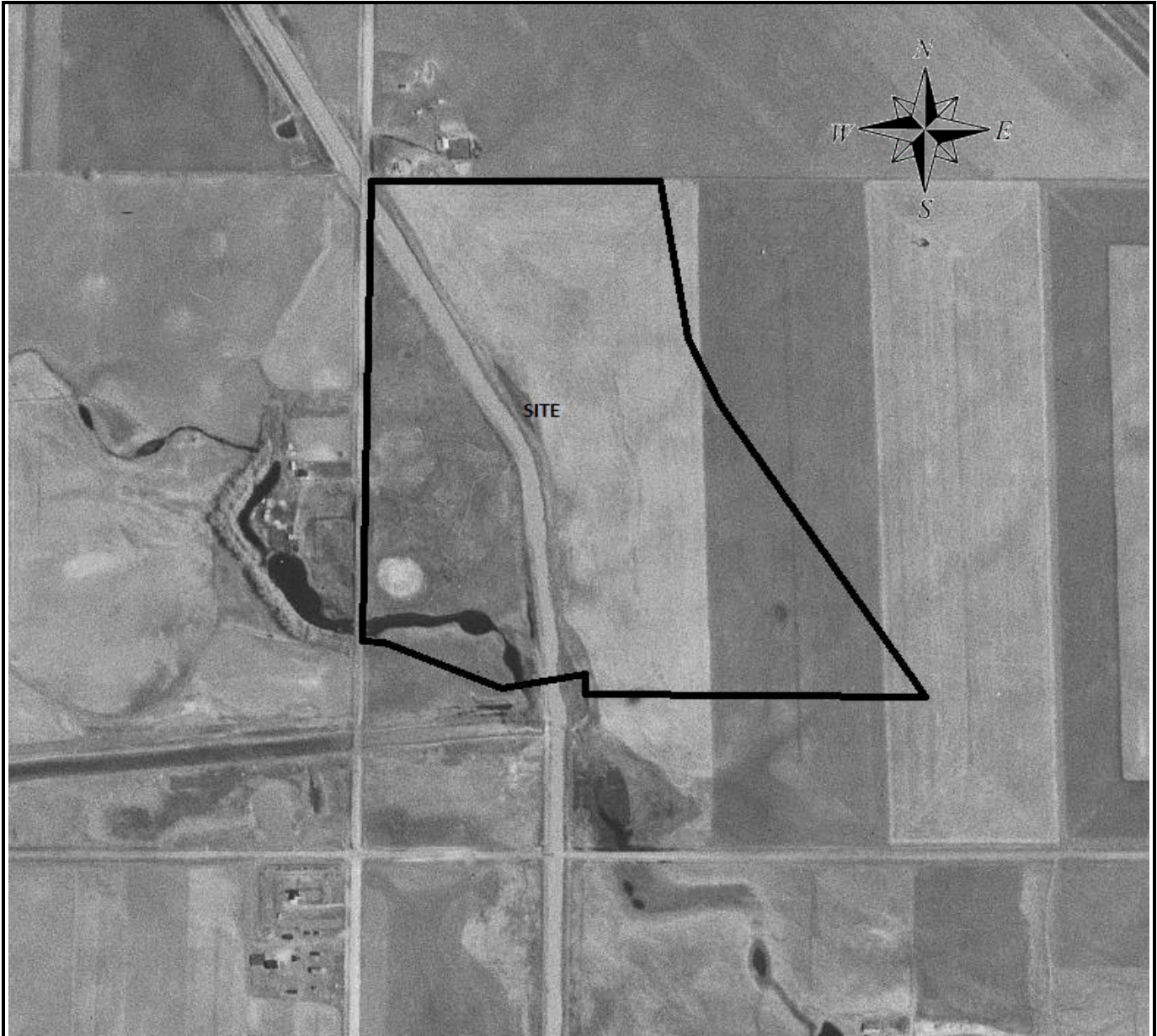
$\Delta \chi^2_{\text{min}} = 1.212$
 $\text{max}(\chi^2) = 1.1$

Subscribed and sworn to before me this 1st day of August 1901.



Appendix B

Aerial Photographs



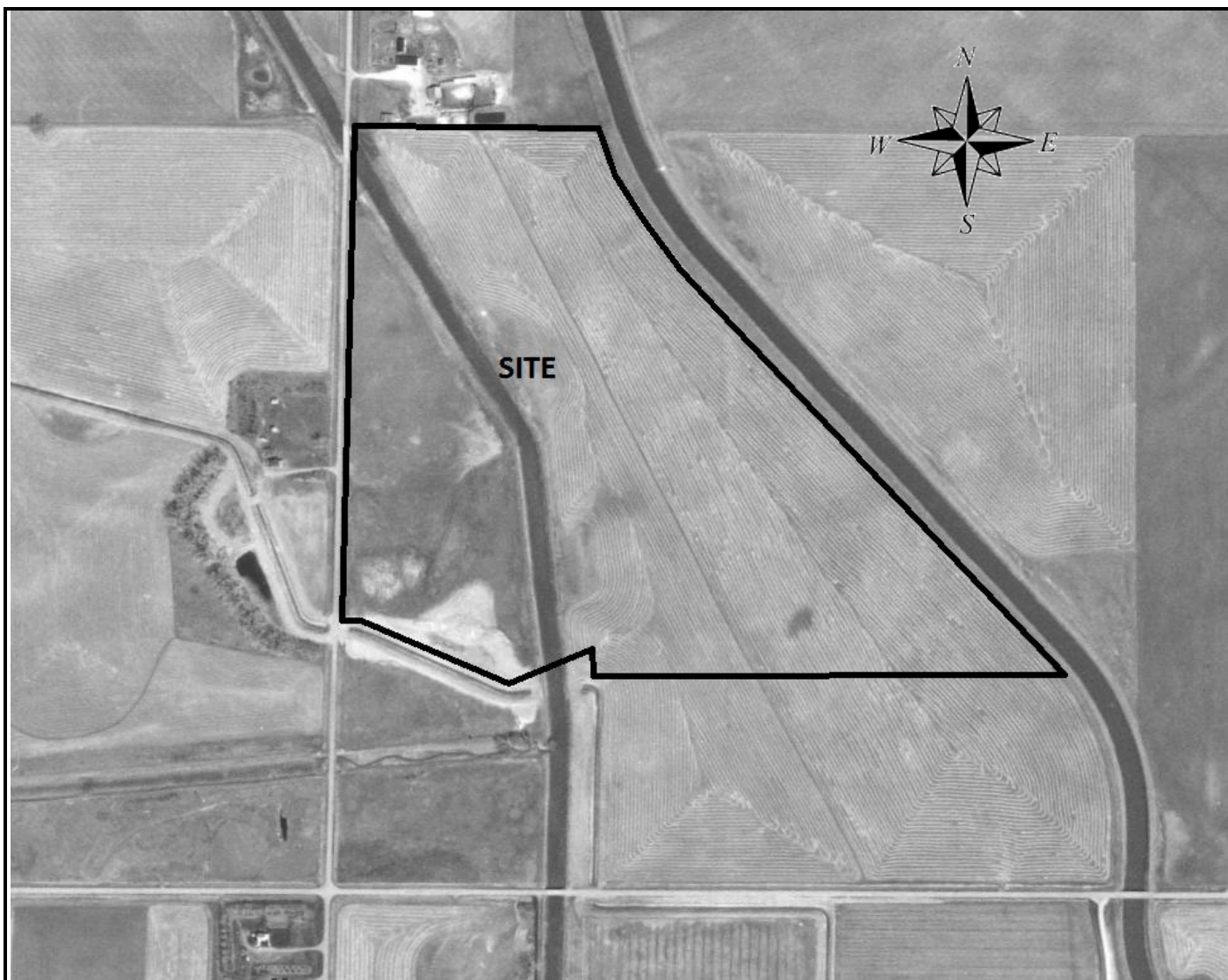
CLIENT:
Martin Geomatic Consultants Ltd.

Project:				
Phase I ESA Nakamura Residential Subdivision SW 05-008-20 W4M, near Lethbridge, Alberta				
Air Photo 1950				
DATE:	JOB No.:	SCALE:	APPENDIX	REV.
April 2018	BX20137	N.T.S	B-1	1



CLIENT:
Martin Geomatic Consultants Ltd.

Project:				
Phase I ESA Nakamura Residential Subdivision SW 05-008-20 W4M, near Lethbridge, Alberta Air Photo 1961				
DATE:	JOB No.:	SCALE:	APPENDIX	REV.
April 2018	BX20137	N.T.S	B-2	1



CLIENT:
Martin Geomatic Consultants Ltd.

Project:				
Phase I ESA Nakamura Residential Subdivision SW 05-008-20 W4M, near Lethbridge, Alberta				
Air Photo 1970				
DATE:	JOB No.:	SCALE:	APPENDIX	REV.
April 2018	BX20137	N.T.S	B-3	1



Project:

**Phase I ESA
Nakamura Residential Subdivision
SW 05-008-20 W4M, near Lethbridge, Alberta**

Air Photo 1983

CLIENT:

Martin Geomatic Consultants Ltd.

DATE:

April 2018

JOB No.:

BX20137

SCALE:

N.T.S

APPENDIX

B-4

REV.

1



CLIENT:
Martin Geomatic Consultants Ltd.

Project:				
Phase I ESA Nakamura Residential Subdivision SW 05-008-20 W4M, near Lethbridge, Alberta				
Air Photo 1999				
DATE:	JOB No.:	SCALE:	APPENDIX	REV.
April 2018	BX20137	N.T.S	B-5	1



CLIENT:
Martin Geomatic Consultants Ltd.

Project:				
Phase I ESA Nakamura Residential Subdivision SW 05-008-20 W4M, near Lethbridge, Alberta Air Photo 2009				
DATE:	JOB No.:	SCALE:	APPENDIX	REV.
April 2018	BX20137	N.T.S	B-6	1



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,

Tonnie Jacobsen
PTMAA



#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

**COUNTY OF LETHBRIDGE NO. 26
DEVELOPMENT PERMIT**

SCHEDULE 4

LAND USE BY-LAW NO. 806

FORM B

DEVELOPMENT APPLICATION NO. 94-89

DEVELOPMENT PERMIT NO. 94-89

This development permit is hereby issued to:

NAME: Harriet Douwes & Bourke Reaney

ADDRESS: Box 3000 Main, Lethbridge, Alberta T1J 4B1

In respect of works consisting of: new residence.

On land located at: S.W. 5-8-20-W4 (65 acres)

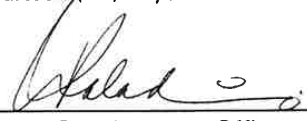
and as described on plans submitted by the applicant.

This permit refers only to works outlined in Development Application No. 94-89

and is subject to the conditions contained herein:

- 1) The residence is to be located a minimum distance of 125' from the centerline of the County road.
- 2) All construction is to comply with the Alberta Building Code. The applicant is to contact Alberta Labour, Client Services Division @ 381-5423.

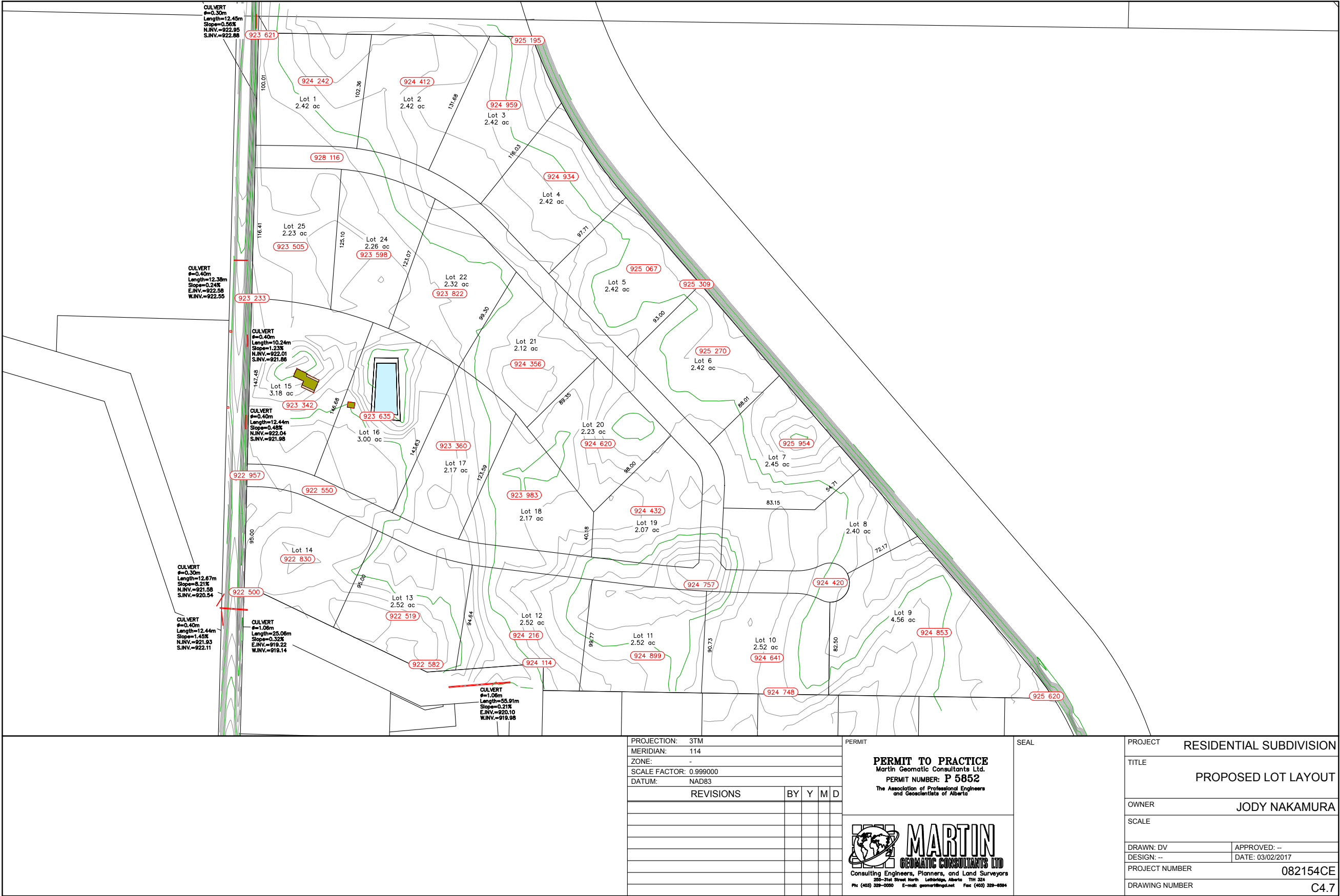
This permit becomes effective the 6th day of September, 1994 unless an appeal pursuant to Section 83 of The Planning Act is lodged within fourteen (14) days of the following date.

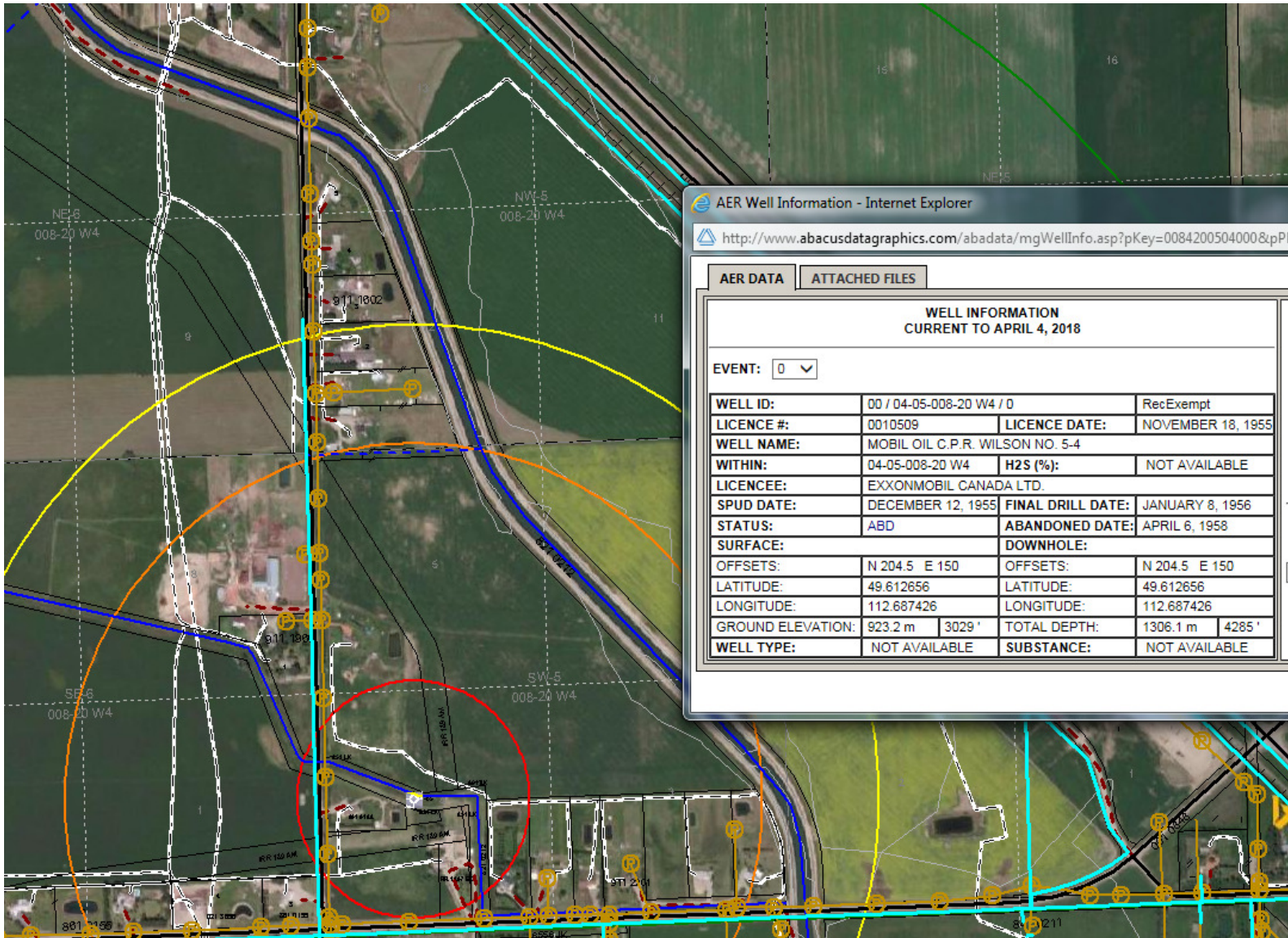
DATE: August 23, 1994 **SIGNED:** 

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
~~W.P. ROLLICK, 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,

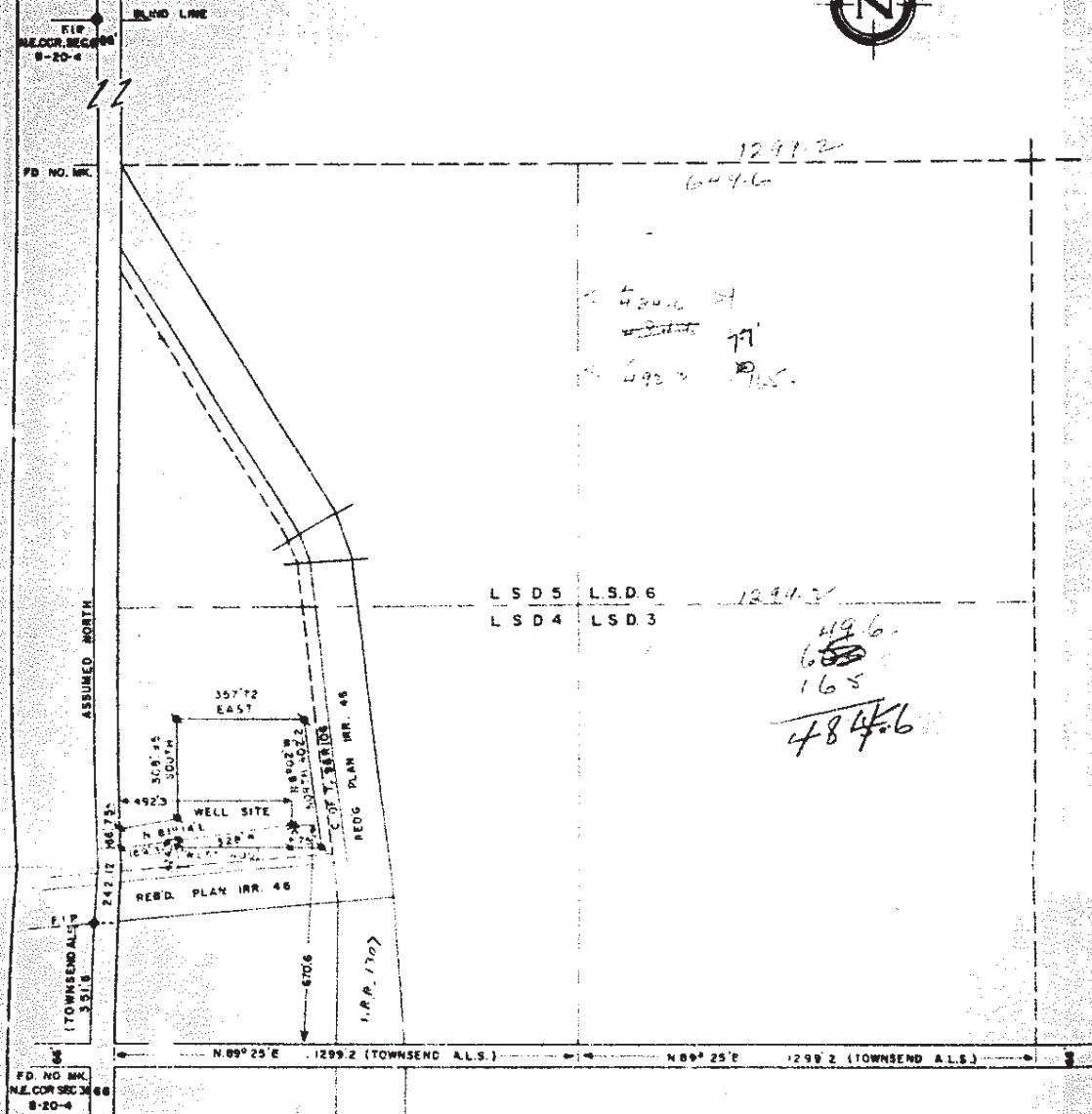
B. E. Taylor

AEEhnis:bam

**PLAN OF
MOBIL OIL C.P.R. WILSON 5-4
MOBIL OIL OF CANADA, LTD**

L.S.D. 4, SEC. 5, TP. 8 R. 20, W. 4 M.

SCALE - 1 INCH = 400 FEET NOV. 10, 1954



ELEVATION AT WELL SITE 3029.3 TAKEN FROM TOP OF CAPS
AT N.W. COR. OF BRIDGES 3 AND 4 OF S.M.R.D. ASSUMING
3034.38 AND 3032.46 RESPECTIVELY (GEODETIC DATUM)

MINERAL RIGHTS		SURFACE RIGHTS	
CO-ORDINATES	ELEVATION	AREA	
N. 87° 0' 6" E. 492.3	GROUND	K.S.	TRACT ROAD
	3029.3	3.48	0.26
TOTAL ACREAGE		3.74	
FLOWLINE ACREAGE			

• 2" x 2" WOODEN STAKE
• 1/2" DIAM. ROUND PIPE @ 3' LATHS
• STANDARD HIGH POST POINER

MOBIL OIL OF CANADA, LTD

I HEREBY CERTIFY THIS TO BE
A TRUE AND CORRECT SURVEY

McBarrell

R.P.E.

John D. Jones

SURVEYOR

McLester

WITNESS

John D. Jones

WITNESS



Water Well Drilling Report

[View in Metric](#) [Export to Excel](#)

GIC Well ID 118269
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

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.

Well Identification and Location										Measurement in Imperial	
Owner Name	Address				Town		Province		Country	Postal Code	
Location	1/4 or LSD 4	SEC 5	TWP 8	RGE 20	W of MER 4	Lot	Block	Plan	Additional Description		
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)						
ft from					Latitude 49.612674 Longitude -112.686998					Elevation 3039.00 ft	
ft from					How Location Obtained					How Elevation Obtained	
					Field					Estimated	

Additional Information										Measurement in Imperial
Distance From Top of Casing to Ground Level in										
Is Artesian Flow										
Rate igpm										
Describe										
Recommended Pump Rate igpm										
Pump Installed										
Depth ft										
Recommended Pump Intake Depth (From TOC) ft										
Type										
Make										
H.P.										
Model (Output Rating)										
Did you Encounter Saline Water (>4000 ppm TDS)										
Depth ft										
Well Disinfected Upon Completion										
Gas										
Depth ft										
Geophysical Log Taken Electric										
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	ft
Method of Water Removal			
Type			
Removal Rate igpm			
Depth Withdrawn From ft			
If water removal period was < 2 hours, explain why			

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	ig	

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well	Certification No
UNKNOWN NA DRILLER	1
Company Name	Copy of Well report provided to owner
UNKNOWN DRILLER	Date approval holder signed



Water Well Drilling Report

[View in Metric](#) [Export to Excel](#)

GIC Well ID 118268
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1983/12/15

GOWN ID

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.

Well Identification and Location										Measurement in Imperial	
Owner Name STOKELL, LIONEL		Address WILSON		Town		Province		Country		Postal Code	
Location	1/4 or LSD 4	SEC 5	TWP 8	RGE 20	W of MER 4	Lot	Block	Plan	Additional Description		
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					Elevation	
ft from					Latitude 49.612674 Longitude -112.686998					ft	
ft from					How Location Obtained					How Elevation Obtained	
					Map					Not Obtained	

Drilling Information	
Method of Drilling Rotary	Type of Work New Well
Proposed Well Use Domestic	

Formation Log			Measurement in Imperial	
Depth from ground level (ft)	Water Bearing	Lithology Description		
24.00		Glacial Till		
28.00		Sand & Gravel		
48.00		Glacial Till		
58.00		Clay & Coal		
75.00		Gray Clay		
100.00		Gray Sticky Clay		
120.00		Coal		
180.00		Sandy Clay		
240.00		Clay & Gravel		
260.00		Sand		
265.00		Hard Clay		

Yield Test Summary			Measurement in Imperial	
Recommended Pump Rate 0.00 igpm				
Test Date	Water Removal Rate (igpm)	Static Water Level (ft)		
1983/03/11	7.50	140.00		

Well Completion			Measurement in Imperial	
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
265.00 ft		1983/03/07	1983/03/11	
Borehole				
Diameter (in)	From (ft)	To (ft)		
0.00	0.00	265.00		
Surface Casing (if applicable)		Well Casing/Liner		
Steel		Steel		
Size OD :	6.00 in	Size OD :	4.50 in	
Wall Thickness :	0.225 in	Wall Thickness :	0.000 in	
Bottom at :	200.00 ft	Top at :	0.00 ft	
		Bottom at :	265.00 ft	
Perforations				
From (ft)	To (ft)	Diameter or Slot Width (in)	Slot Length (in)	Hole or Slot Interval (in)
200.00	265.00	2.000		0.13
Perforated by Machine				
Annular Seal Cement/Grout				
Placed from 0.00 ft to 100.00 ft				
Amount				
Other Seals				
Type		At (ft)		
Screen Type				
Size OD : 0.00 in				
From (ft)	To (ft)	Slot Size (in)		
Attachment				
Top Fittings		Bottom Fittings		
Pack				
Type Unknown		Grain Size .375		
Amount 1.00 Yards				

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



Water Well Drilling Report

[View in Metric](#) [Export to Excel](#)

GIC Well ID 118268
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1983/12/15

GOWN ID

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.

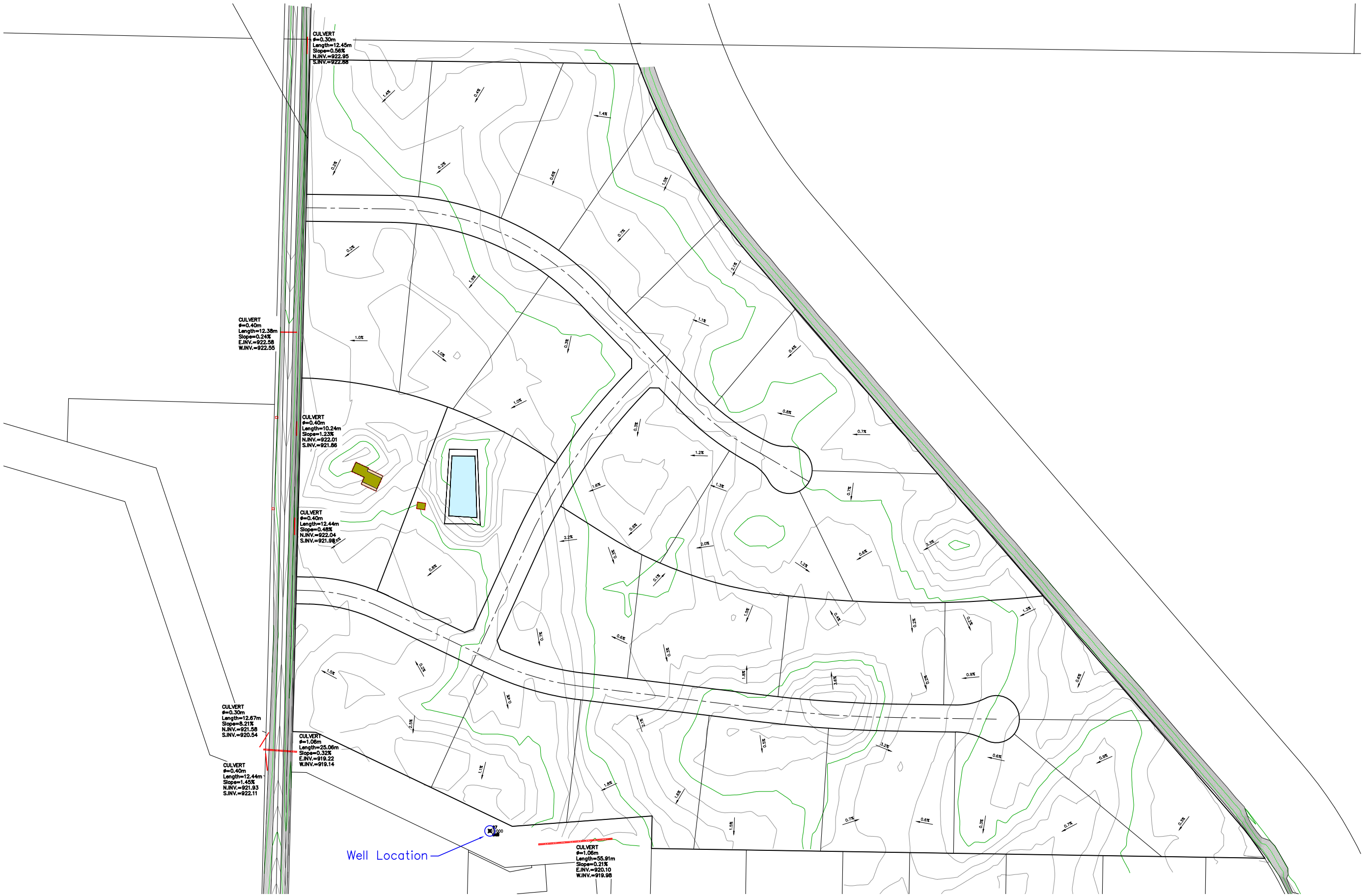
Well Identification and Location										Measurement in Imperial
Owner Name STOKELL, LIONEL		Address WILSON		Town		Province		Country	Postal Code	
Location	1/4 or LSD 4	SEC 5	TWP 8	RGE 20	W of MER 4	Lot	Block	Plan	Additional Description	
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					
ft from					Latitude 49.612674 Longitude -112.686998					Elevation ft
ft from					How Location Obtained					How Elevation Obtained
					Map					Not Obtained

Additional Information				Measurement in Imperial
Distance From Top of Casing to Ground Level in				
Is Artesian Flow				Is Flow Control Installed
Rate igpm				Describe
Recommended Pump Rate		0.00 igpm		Pump Installed
Recommended Pump Intake Depth (From TOC)		0.00 ft		Depth ft
		Type		Make H.P.
				Model (Output Rating)
Did you Encounter Saline Water (>4000 ppm TDS)		Depth ft		Well Disinfected Upon Completion
Gas		Depth ft		Geophysical Log Taken
				Submitted to ESRD
Additional Comments on Well		Sample Collected for Potability		Submitted to ESRD Yes
DRILLER REPORTS SOFT WATER				

Yield Test			Taken From Ground Level	Measurement in Imperial
			Depth to water level	
Test Date 1983/03/11	Start Time 12:00 AM	Static Water Level 140.00 ft	Drawdown (ft)	Elapsed Time Minutes:Sec
				Recovery (ft)
Method of Water Removal				
Type Pump				
Removal Rate 7.50 igpm				
Depth Withdrawn From 200.00 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	Certification No 1
Company Name SOUTH COUNTRY DRILLING LTD.	Copy of Well report provided to owner Date approval holder signed





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.

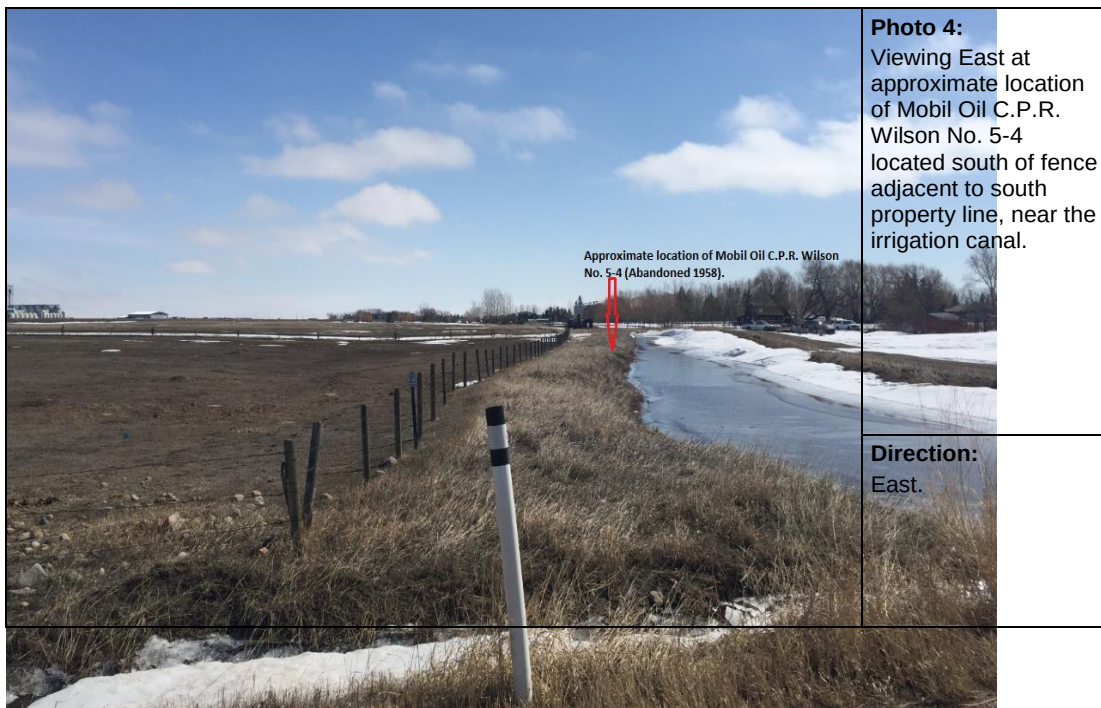




Photo 5:

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.



Photo 8:
Farm located north of
the Site.

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

Professional summary

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



Appendix F

Limitations

LIMITATIONS

1. The work performed in the preparation of this report and the conclusions presented are subject to the following:
 - a. 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.
2. 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.
3. 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.
5. 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.

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
jnakamura@hotmail.com

Z:\DATA\Active Projects\082154 Nakamura\CEV.003 MLR_ASP Notice to neighbors_20211214.doc



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 10th, 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:

I, _____(print names), of _____(address), have received the letter and concept drawings from MGCL, dated December 13th, 2021 outlining the planned 25 lot rural residential development (Jody Nakamura) in SW-5-8-20 W4M, Lethbridge County. I have reviewed the letter and concept plans and have no concerns with the proposed development at this time, based on the information received. 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).
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 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.
Box 15 Lethbridge, Alberta T1J 3Y3

INVOICE # 0686

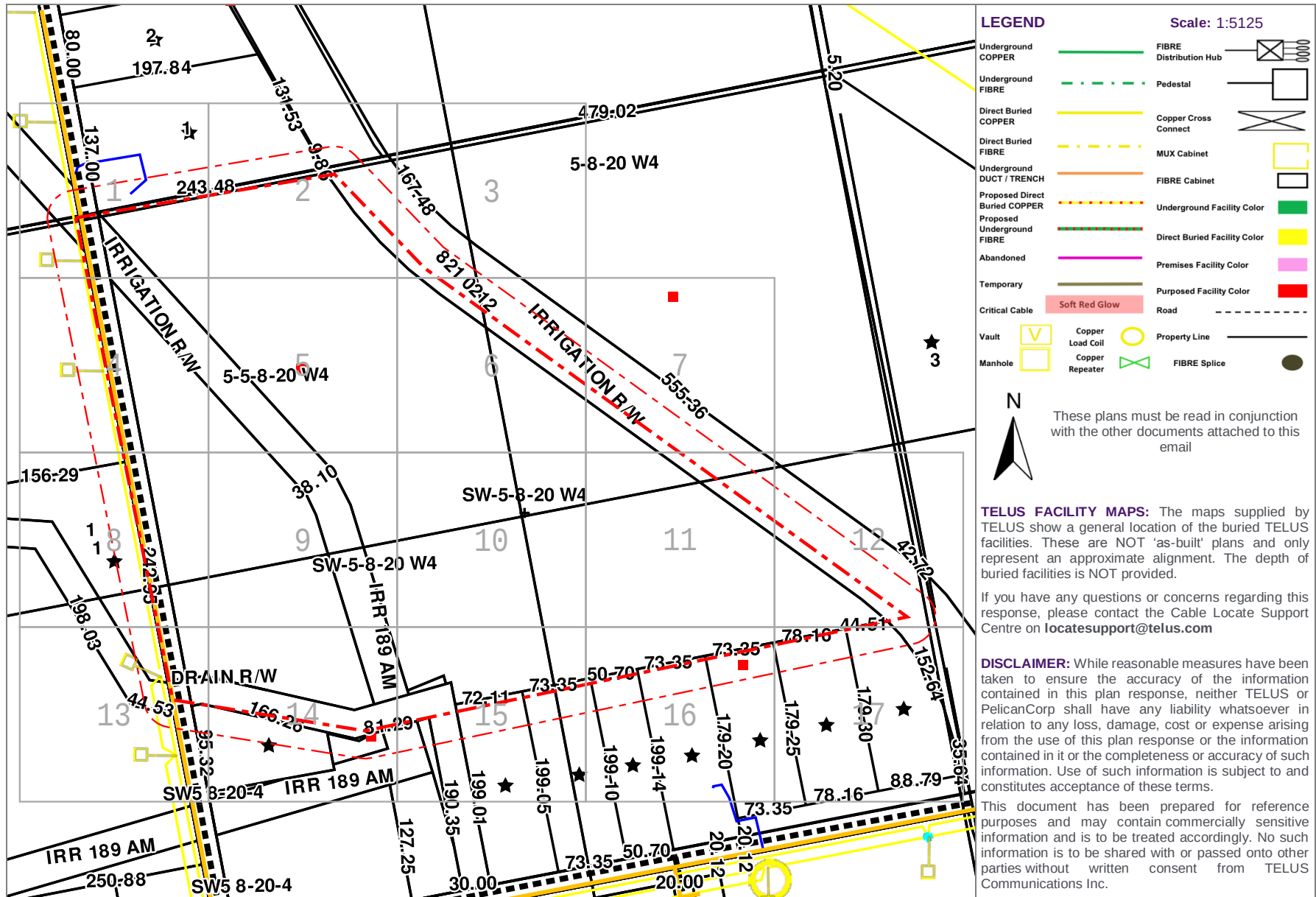
DATE: MAR. 5/10

Received from:

SODY CHAKAMUKHA

Payment for:	Price	Amount
Bank Payment For (27)		
HERE WITH @ 250.00 X 27 =	6,750.00	
AND BY MONEY ORDER #52657082		
GST # 866702798	GST	
	Total	6,750.00

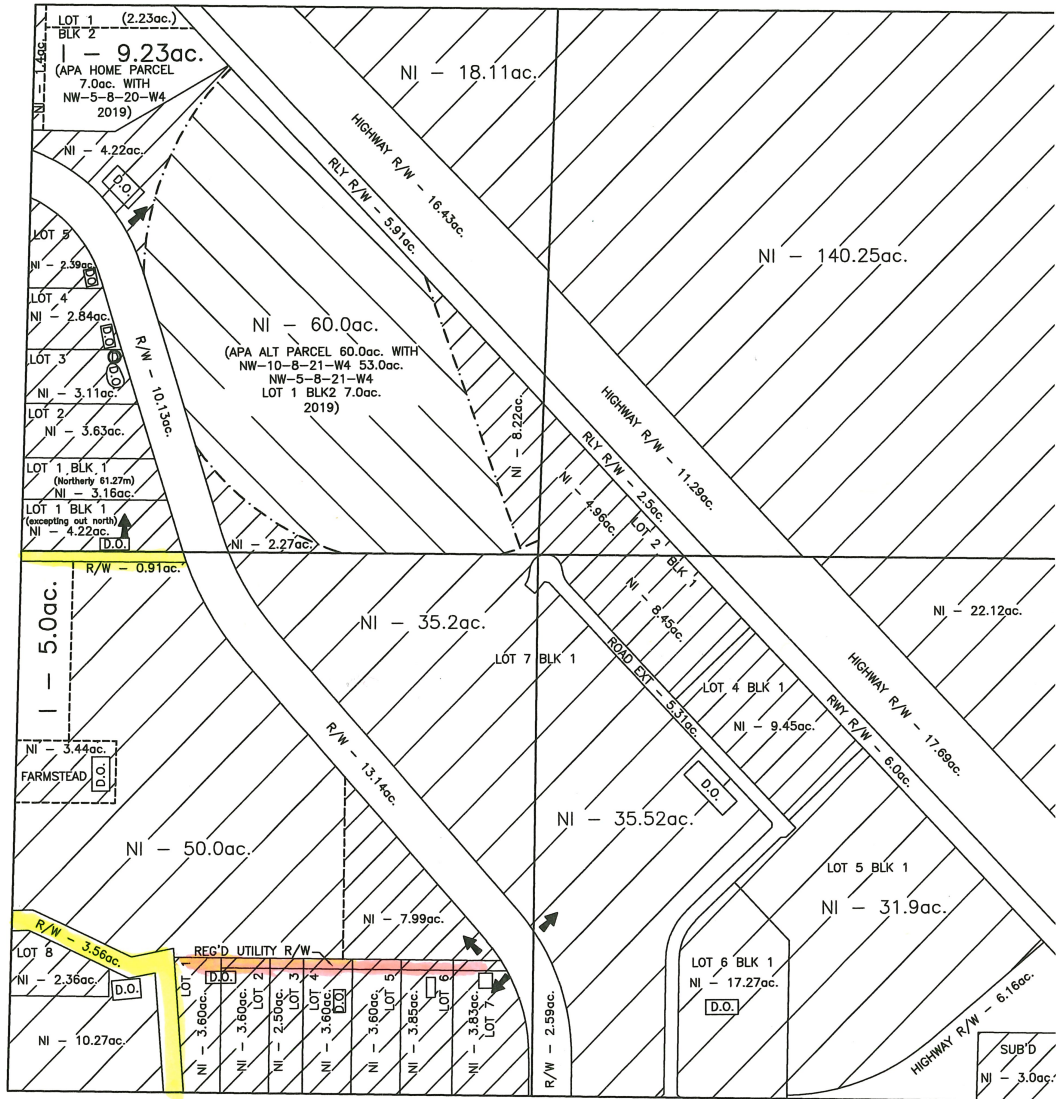
Telus Map



SMRID Maps



ST. MARY RIVER
IRRIGATION DISTRICT
WSU # 10



IRRIGATED ACRES MAP OF SEC. 5 TP. 8 RG. 20 W.4

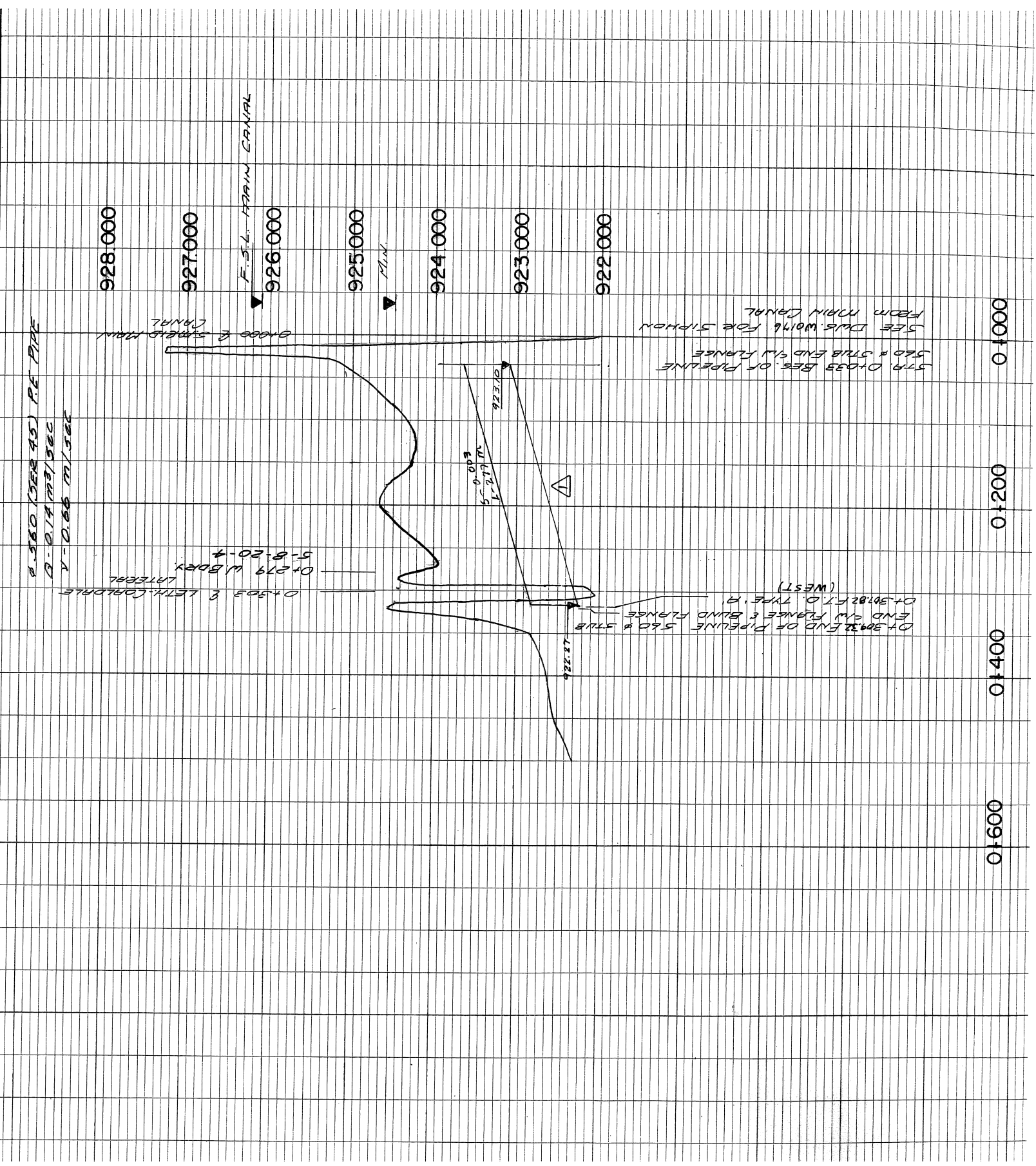
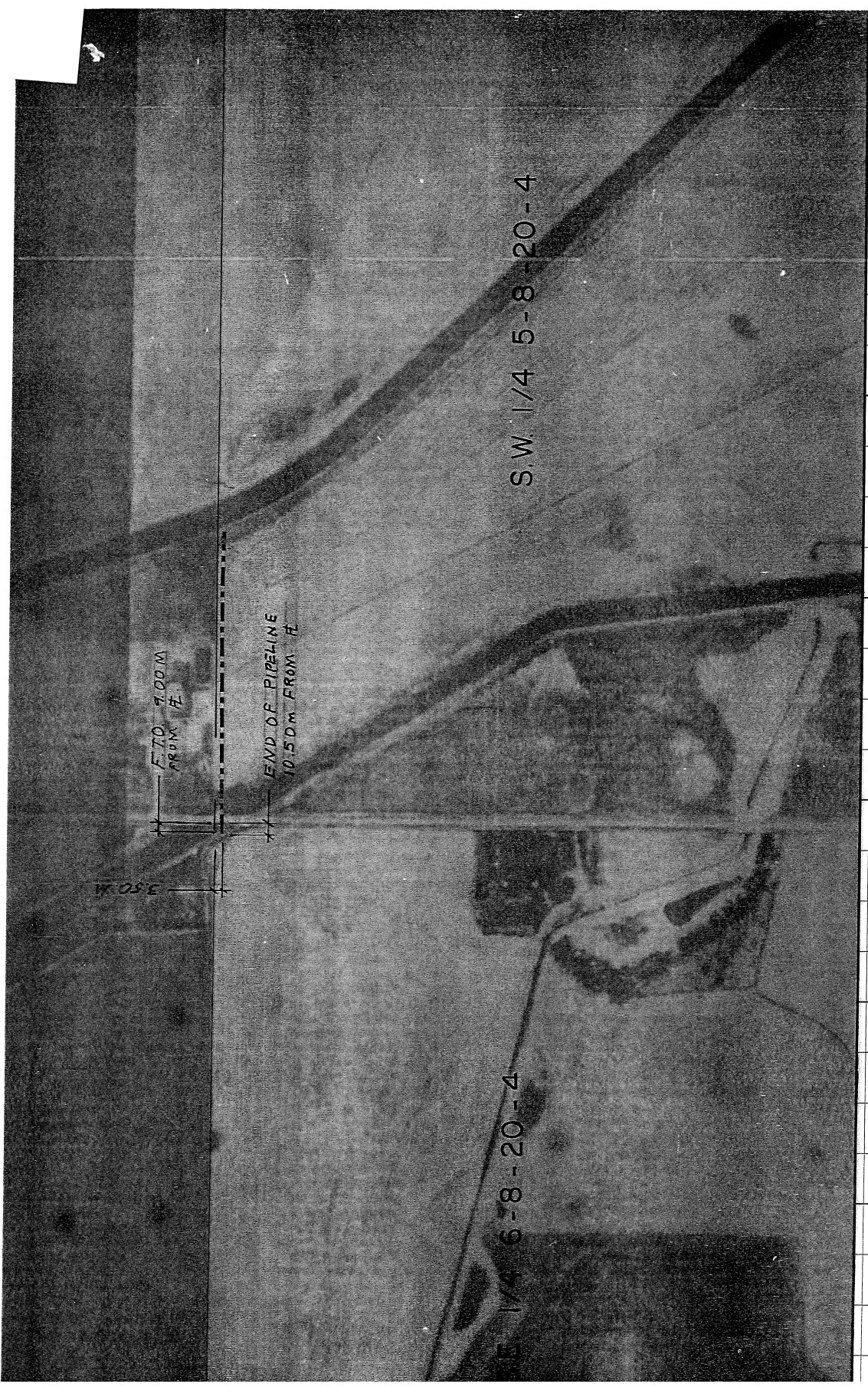
LEGEND			
0.0ac	IRRIG. AREAS (CLEAR)	DOMESTIC TURNOUT	DRAINAGE CHANNEL
0.0ac	NOT IRRIGATED	PUMP SITE	FIELD BOUNDARY
APA	ALTERNATE PARCEL AGREEMENT	FARM IRRIGATION DITCH	BURIED PIPE
F.S.	FARMSTEAD	BURIED PIPELINE EAS	BOUNDARY OF SPRINKLED AREA
POINT OF DELIVERY	DUGOUT		

	S.E. SOUTH OF RLY	S.W.	N. 1/2 SOUTH OF RAILWAY
IRR.	105.44	5.0	9.23
N.I.	2.59	133.92	94.06
R/W	6.16	17.61	10.13
HWY			
TOTAL	114.19	156.53	113.42

REPLACING IRRIGATED ACRES MAP DATED MAR, 2019.

APRIL 1, 2019.
DATE





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**

Distributor: TRIPLE W NATURAL GAS CO-OP LTD.

Date: July 2/19

Customer Name: Martin Geomatic

Address or Legal Description: SE 6-8-20 + SW 5-8-20

Customer's Request: planning + design subdivision

Time Office received call: 2:25

Call Taken by: e-mail

Time Operations received call: _____

Time Responded: _____

Time Operations reached site: _____

AB One Call #: 20192703220

TYPE OF REQUEST:

Leak on Meter Set ☐
Leak in Premises ☐
Leak on Reg Station ☐
Underground Leak ☐
Hit Gas Line ☐

Appliance Problem ☐
Pilot Light Out ☐
Venting Problem ☐
House Reg Problem ☐
Reg Station Problem ☐

Line Location ☒
CO Problem ☐
Furnace Check ☐
Meter Read ☐
Other ☐

Leak Detection Equipment Reading: Inside: _____

Outside: _____

Operation's Remarks & Recommendations: _____

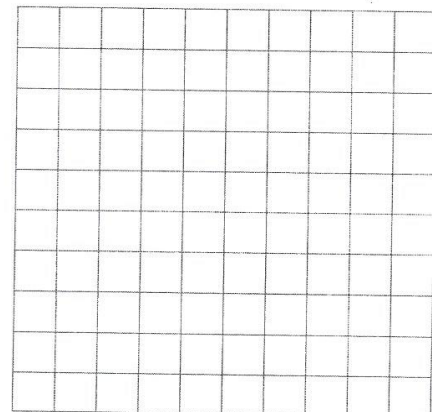
Sent map of area for planning + design

Completion Time: 5:15

Date: 07/04/19

Serviceman: JH

MAP



I have read and acknowledge receipt of the Foregoing:

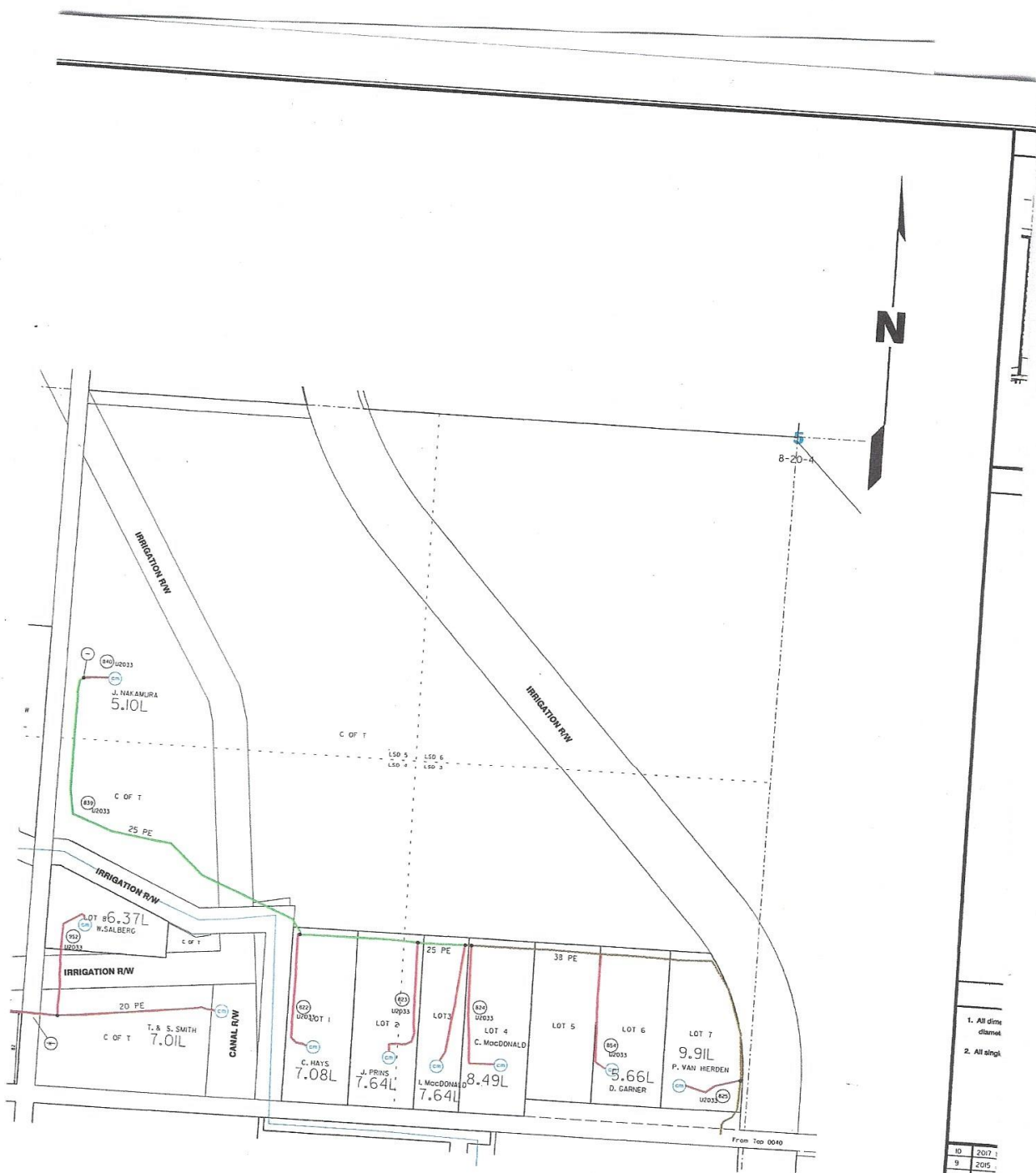
Tenant ☐ Owner ☐ Acting Manager ☐

Customer's Signature: _____

Top Copy - Customer

Second Copy - Operations and Maintenance

Third Copy - Office



1. All dims diamet
2. All singl

NO.	DATE
10	2017
9	2015
8	2007
7	2003
6	2000
5	1995
4	ADDED
3	1994
2	1993
1	NEW S.

B-20, W4M

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 sub-catchment 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^a 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.

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 Plan^d. 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.

Table 1 – Pre Development Sub-Catchment Parameters								
Name	Area (ha)	Flow Length (m)	Slope (%)	Texture	Imperv. (%)	Suction Head (mm)	Conductivity (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)	Conductivity (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.

^g 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.

ⁱ 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 (m ³ /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 m ³)
ponding	922.20	924.20	0.57	922.77	10.82	1.96

Table 5 – Pre-Development Discharge		
Name	Max. Flow (m ³ /s)	Total Flow (ML)
S.M.R.I.D._Channel	1.38	17.93

B. Post-Development

The post-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 (m ³ /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 m ³)
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 (m ²)	Increment Volume (m ³)	Total Volume (m ³)
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
TOB	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			
Type	Stormwater Wet Pond	Catchment	26.83 ha
Land Use	Rural Residential	% Impervious	10 %
Permanent Pool Volume	14,100 m ³	Permanent Pool Depth	2.0 m
Active Storage Volume	15,700 m ³	Active Storage Depth	1.5 m
Volume at Spill Elevation	37,600 m ³	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.

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:



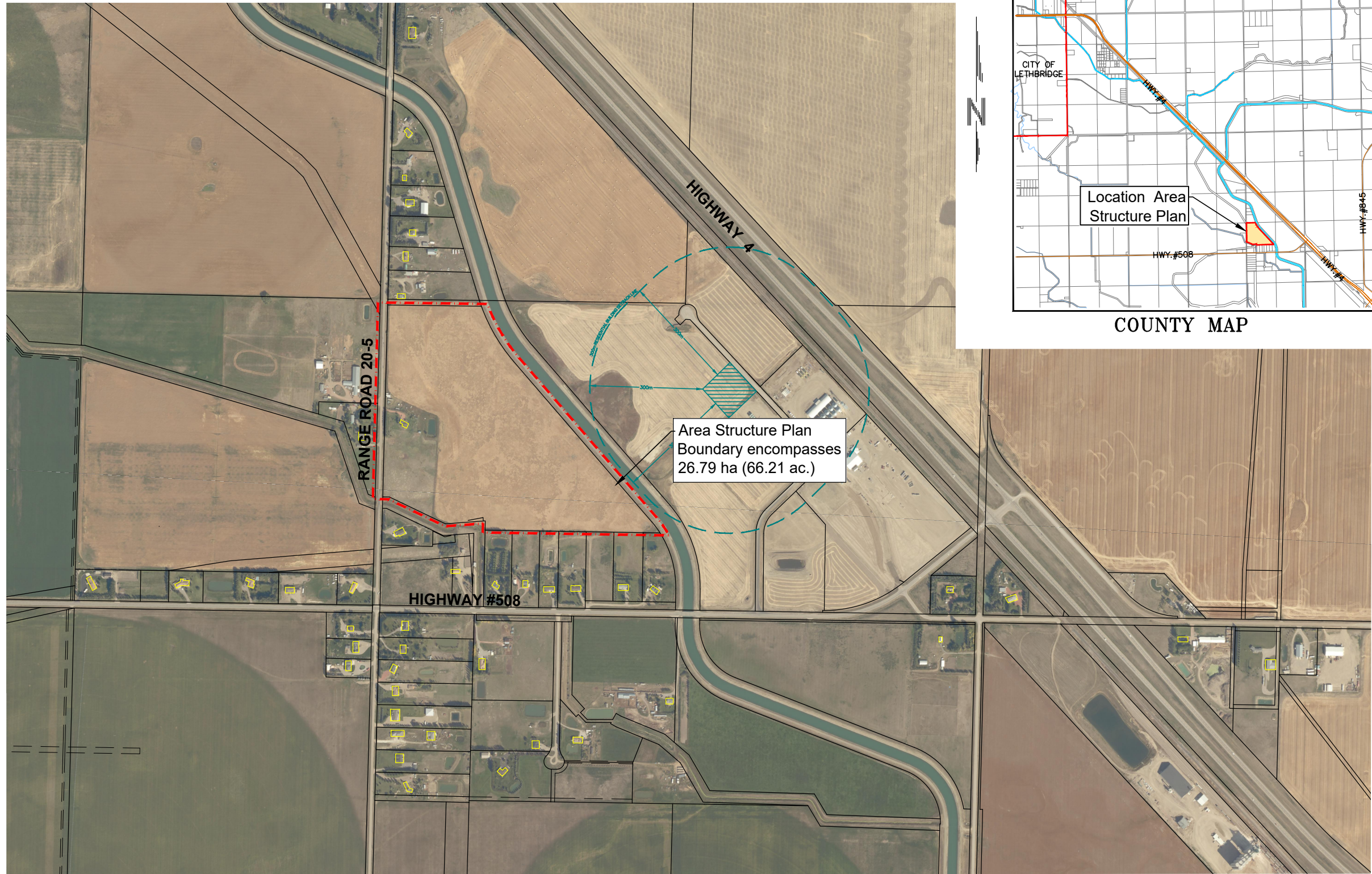
Raymond Martin, P.Eng.
Civil Engineer, Project Manager

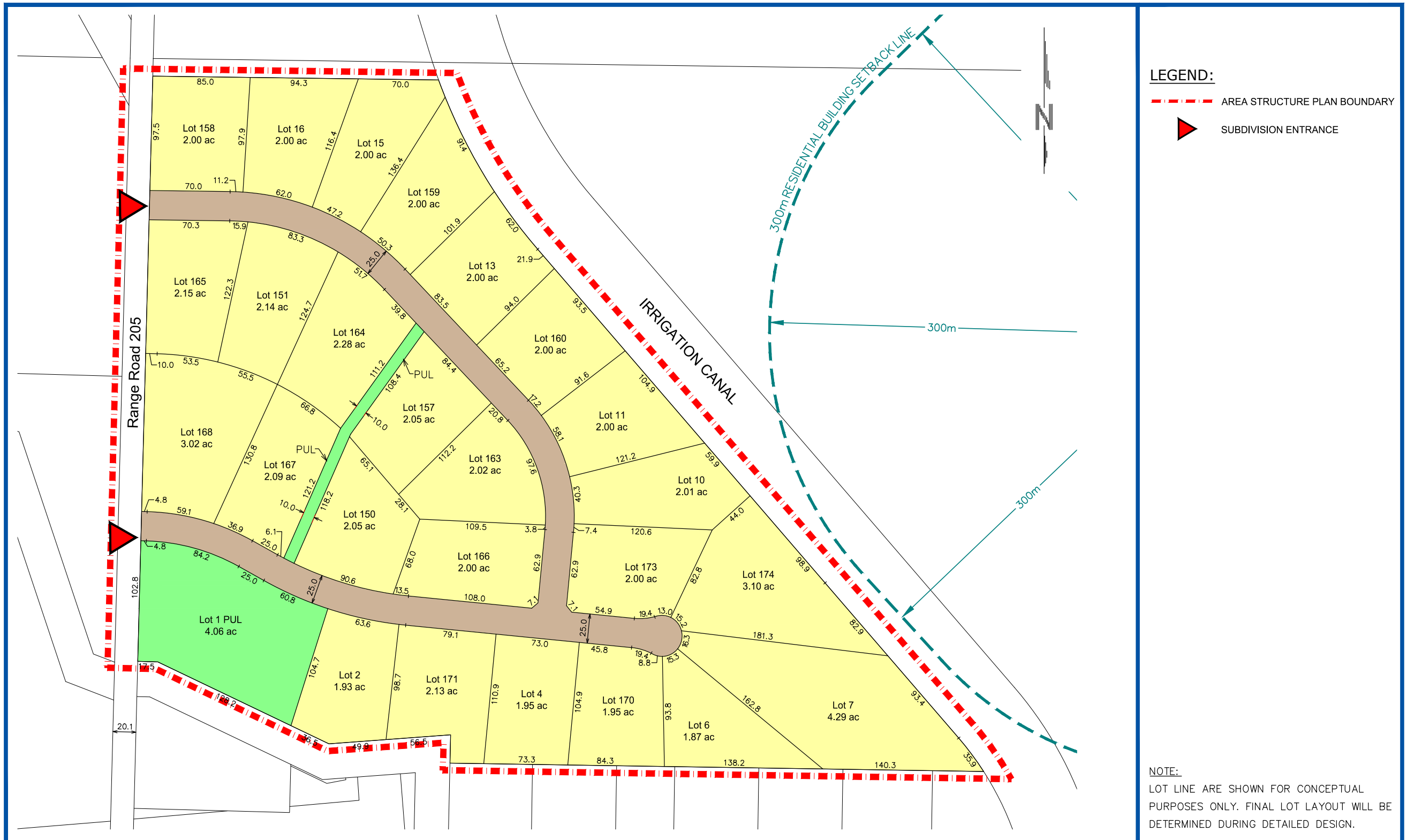


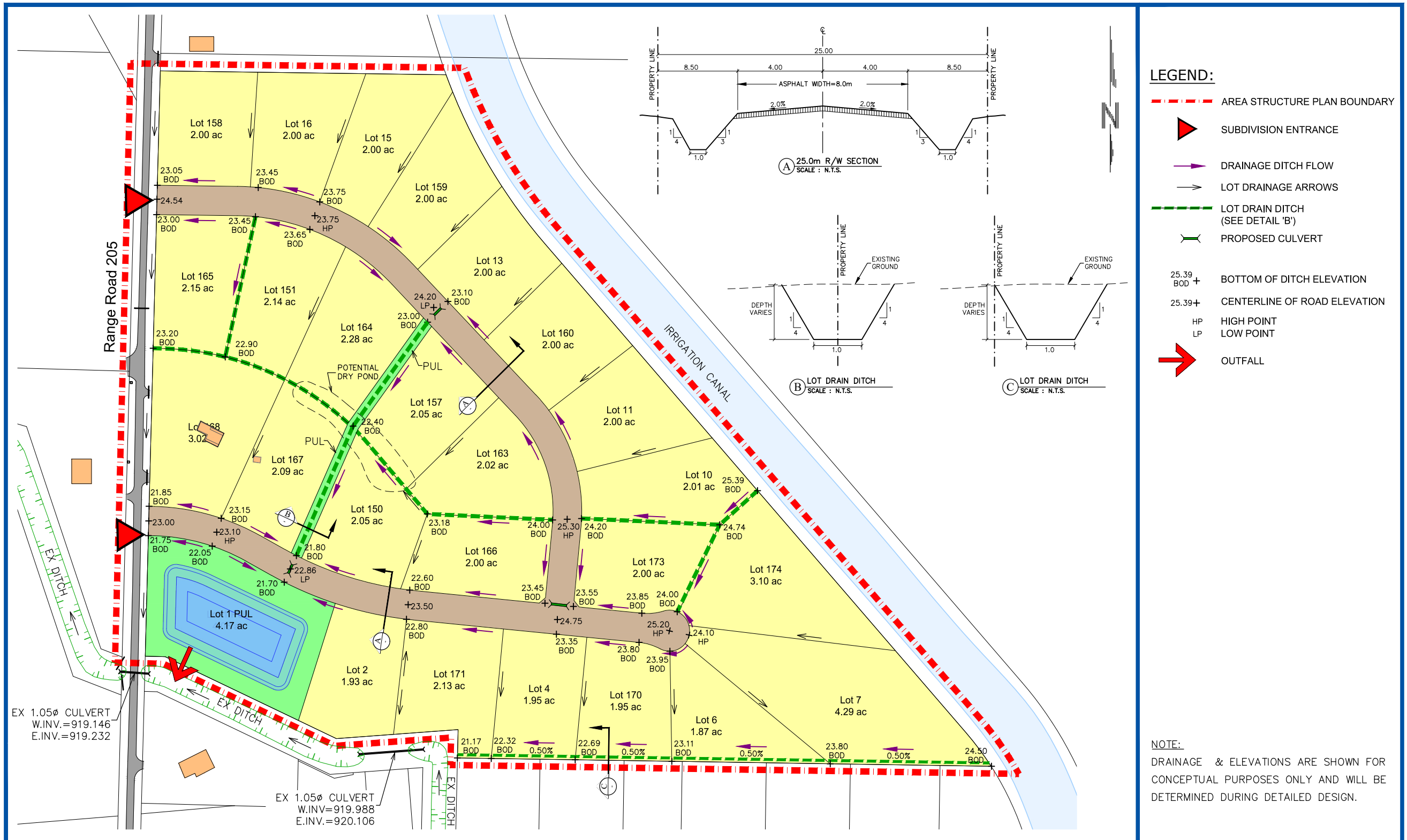
PERMIT TO PRACTICE
Martin Geomatic Consultants Ltd.
Signature: _____
Date: 2023-02-07
PERMIT NUMBER: P 5852
The Association of Professional
Engineers and Geoscientists of Alberta

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).

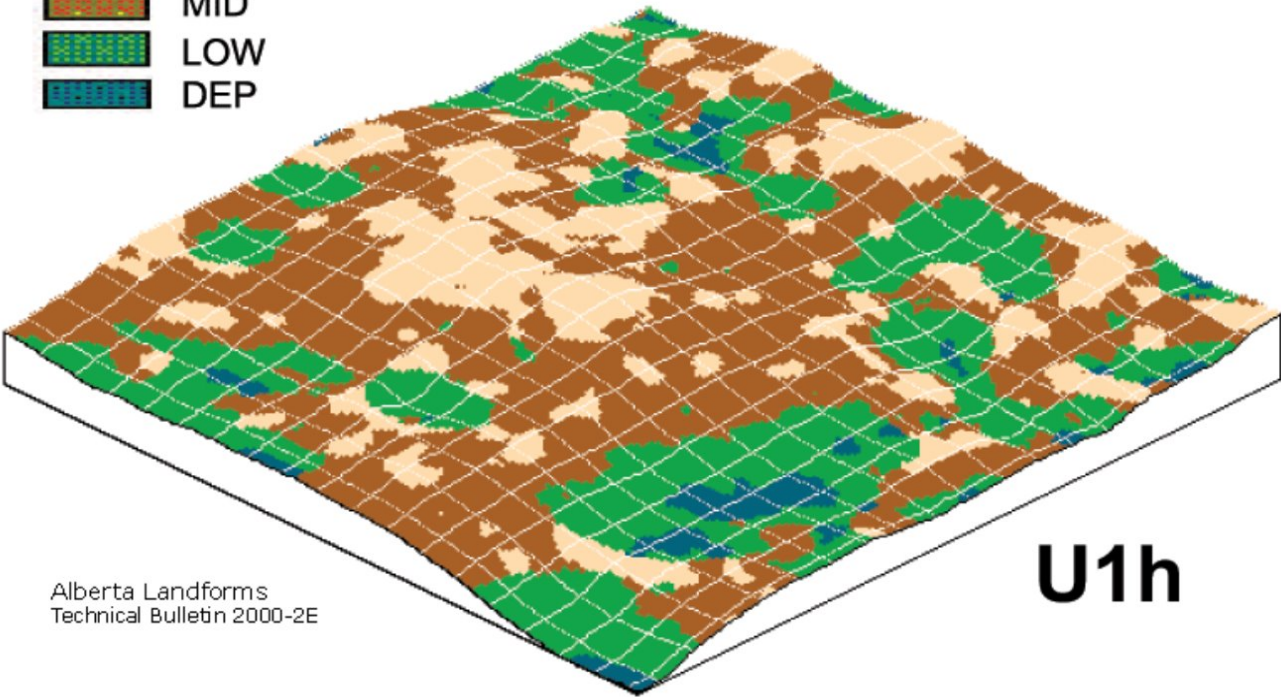
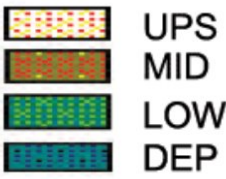
Orthic Dark Brown Chernozem on medium textured (L, SiCL, CL) materials over medium (L, CL) or fine (C) textured till (WNY).

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:



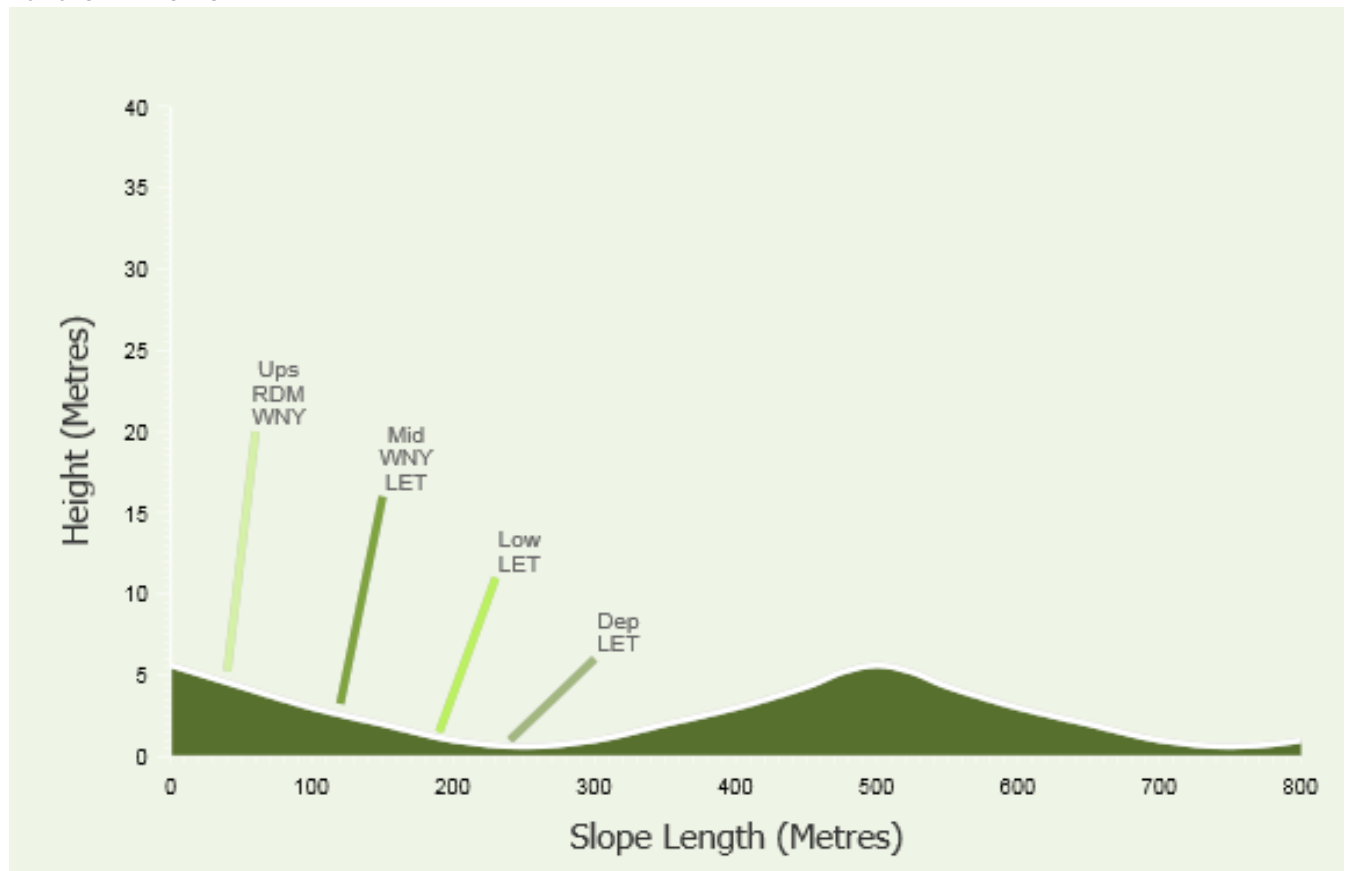
Landform Model:



Alberta Landforms
Technical Bulletin 2000-2E

U1h

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).

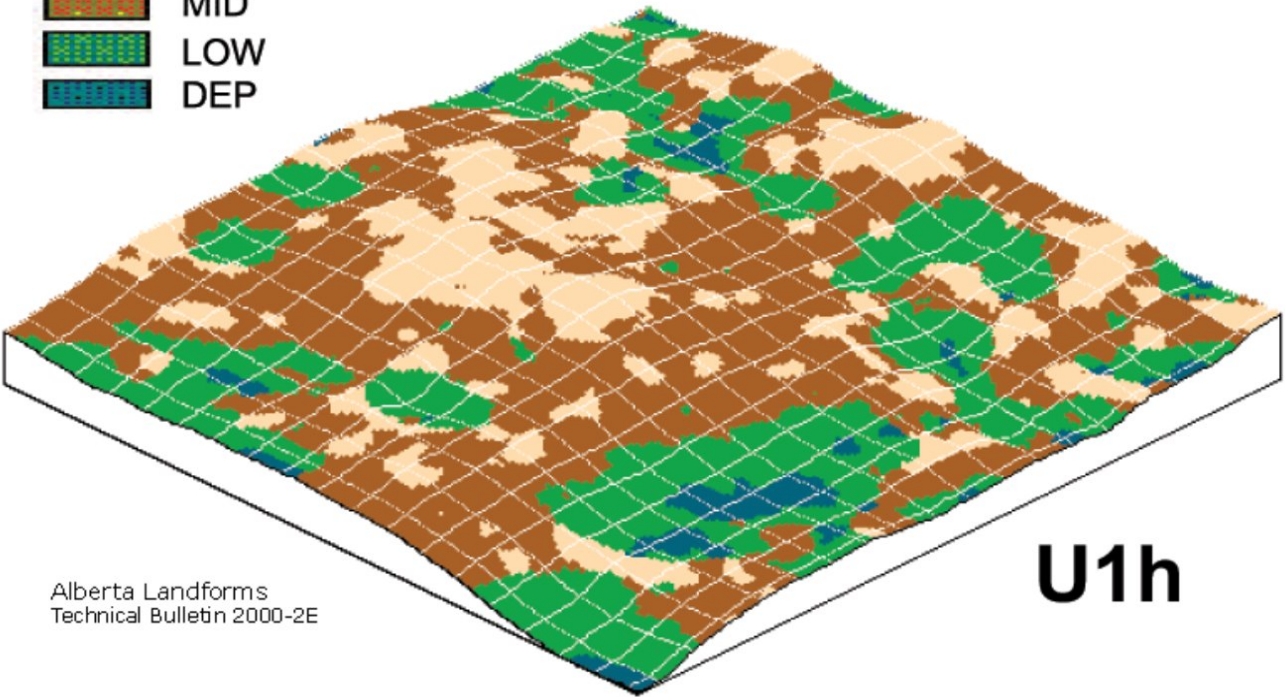
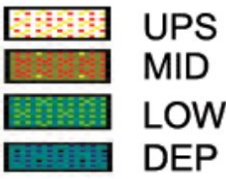
Orthic Dark Brown Chernozem on medium textured (L, SiCL, CL) materials over medium (L, CL) or fine (C) textured till (WNY).

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:



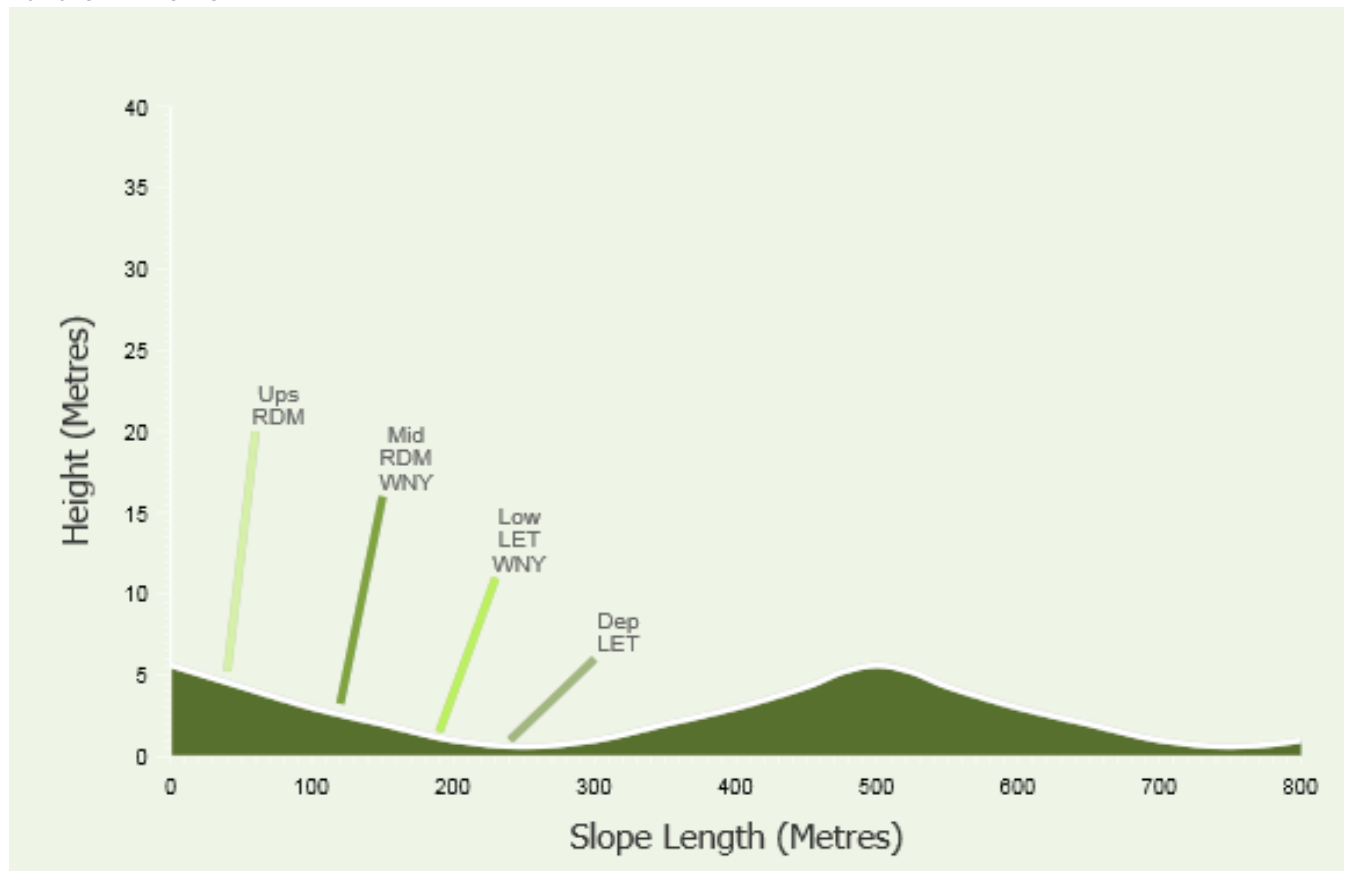
Landform Model:



Alberta Landforms
Technical Bulletin 2000-2E

U1h

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)

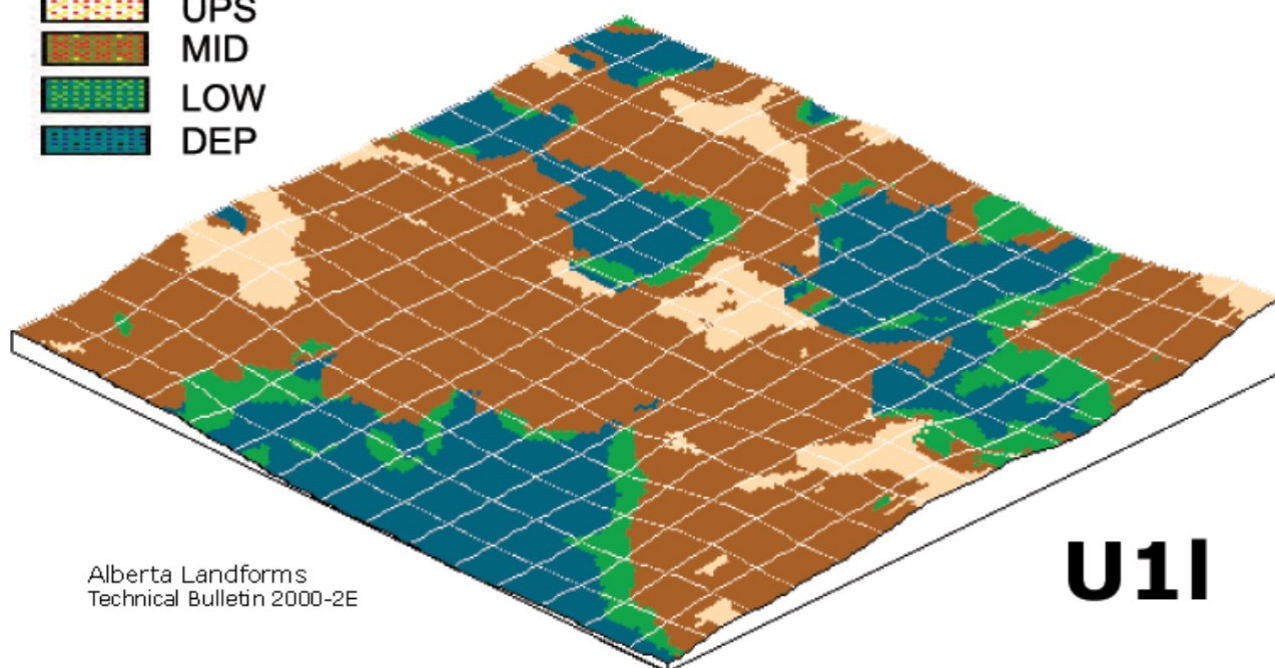
Landscape Model Descriptions:

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:



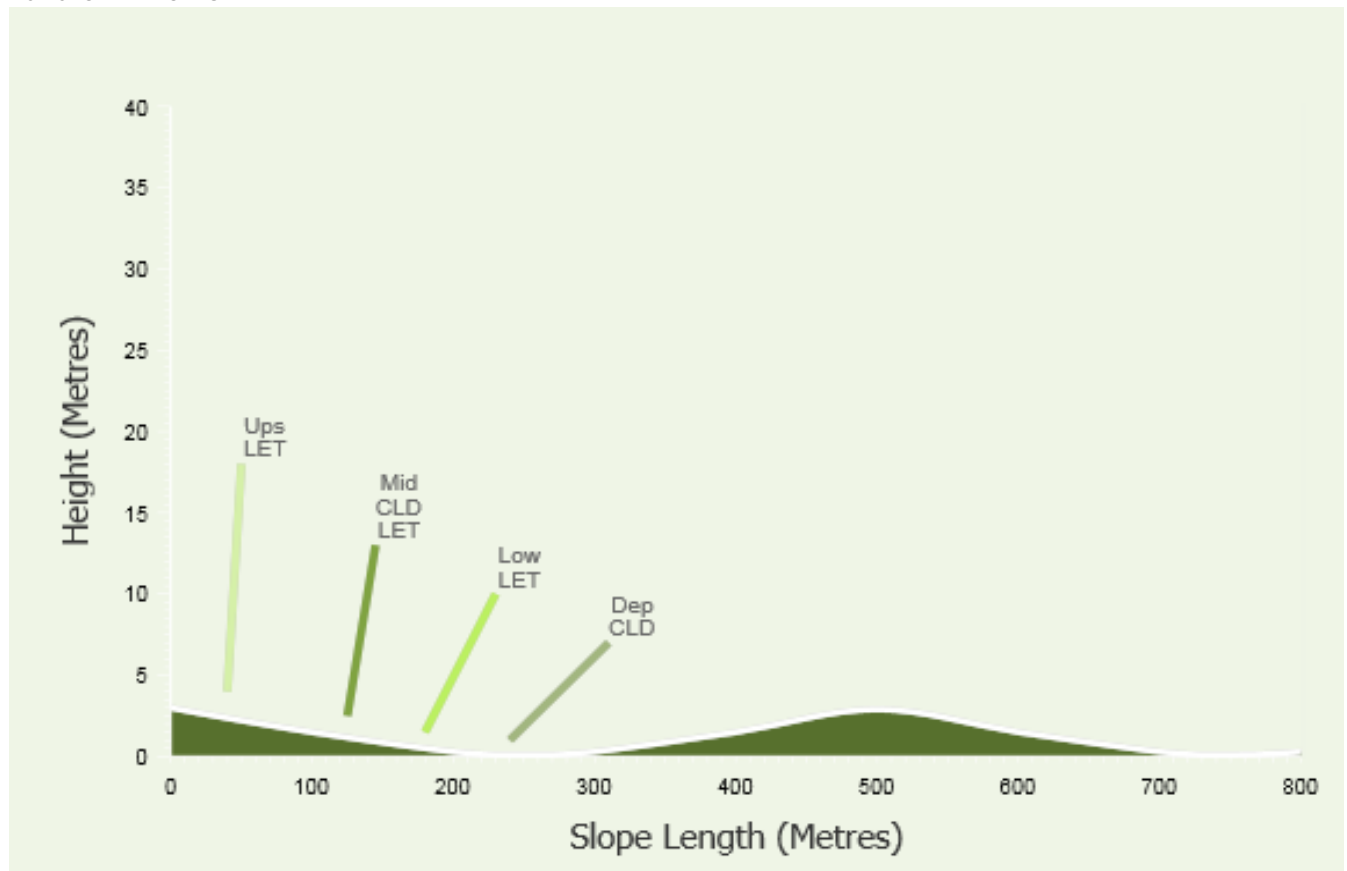
Landform Model:



Alberta Landforms
Technical Bulletin 2000-2E

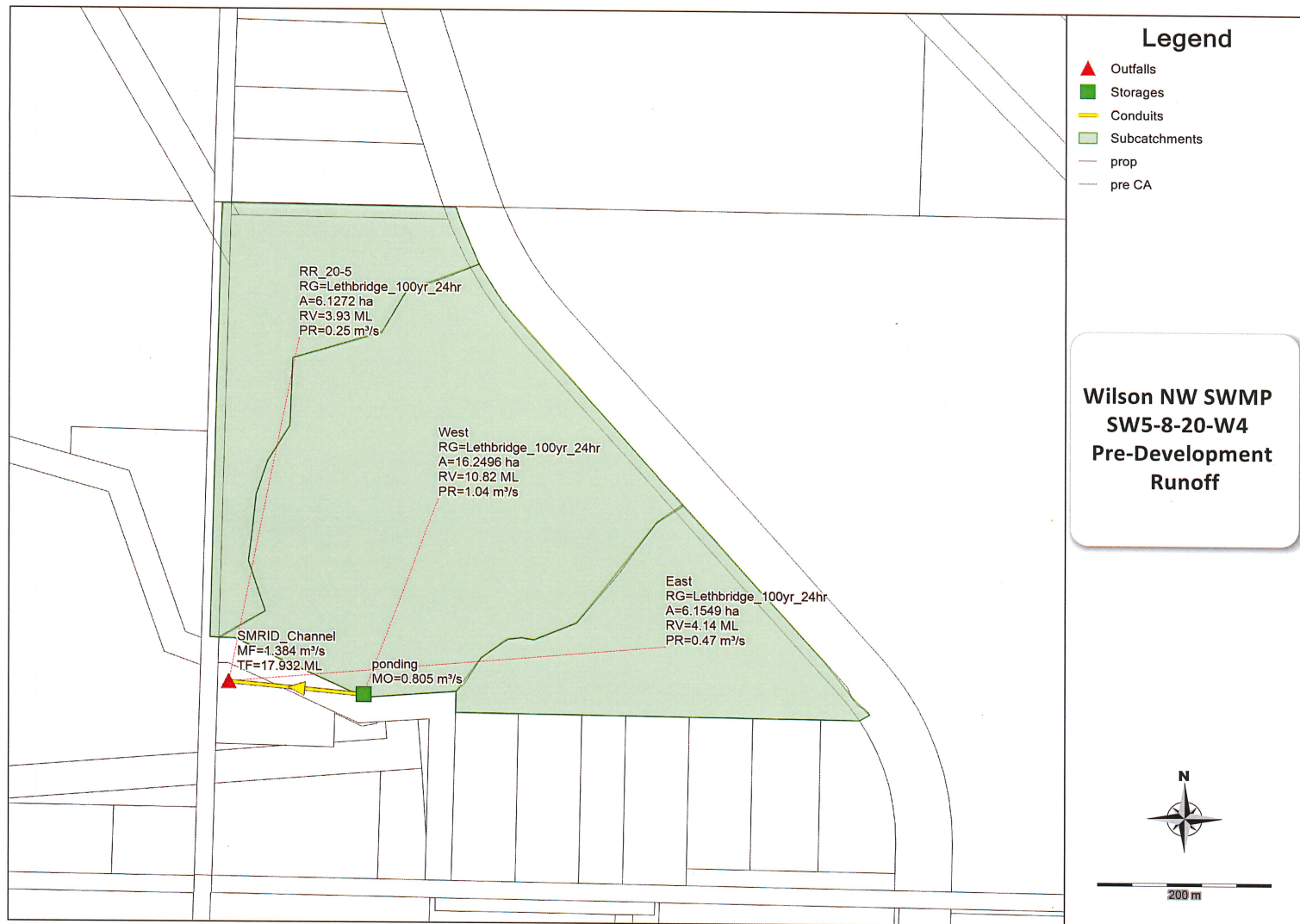
U1I

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 CMS
 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 0
 REPORT_STEP 0:01:00
 WET_STEP 0:05:00
 DRY_STEP 0:05:00
 ROUTING_STEP 5
 ALLOW_PONDING NO
 INERTIAL_DAMPING PARTIAL
 VARIABLE_STEP 0.75
 LENGTHENING_STEP 0
 MIN_SURFAREA 0
 NORMAL_FLOW_LIMITED BOTH
 SKIP_STEADY_STATE NO
 FORCE_MAIN_EQUATION H-W
 LINK_OFFSETS DEPTH
 MIN_SLOPE 0

[EVAPORATION]
 ;;Type Parameters
 ;;-----
 CONSTANT 0.0
 DRY_ONLY NO

[RAINGAGES]
 ;; Rain Time Snow Data
 ;;Name 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 0

RR_20-5	Lethbridge_100yr_24hr	SMRID_Channel	6.1272	0	117.605	0.45	0
West	Lethbridge_100yr_24hr	ponding	16.2496	0	350.963	1.11	0

[SUBAREAS]							
;;Subcatchment	N-Imperv	N-Perv	S-Imperv	S-Perv	PctZero	RouteTo	PctRouted
;;-----	-----	-----	-----	-----	-----	-----	-----
East	0.015	0.15	1	5	0	PERVIOUS	100
RR_20-5	0.015	0.15	1	5	0	PERVIOUS	100
West	0.015	0.15	1	5	0	PERVIOUS	100

[INFILTRATION]			
;;Subcatchment	Suction	HydCon	IMDmax
;;-----	-----	-----	-----
East	292.2	0.5	0.25
RR_20-5	292.2	0.5	0.25
West	292.2	0.5	0.25

[OUTFALLS]				
;;	Invert	Outfall	Stage/Table	Tide
;;Name	Elev.	Type	Time Series	Gate
;;-----	-----	-----	-----	-----
SMRID_Channel	919.4	FREE		NO

[STORAGE]										
;;	Invert	Max.	Init.	Storage	Curve		Ponded	Evap.	Infiltration parameters	
;;Name	Elev.	Depth	Depth	Curve	Params		Area	Frac.		
;;-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
ponding	922.2	2	0	TABULAR	Curve1		0	0	292	0.5 0.26

[CONDUITS]									
;;	Inlet		Outlet		Manning	Inlet	Outlet	Init.	Max.
;;Name	Node		Node	Length	N	Offset	Offset	Flow	Flow
;;-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
C1	ponding		SMRID_Channel	10	0.15	0.4	2	0	0

[XSECTIONS]						
;;Link	Shape	Geom1	Geom2	Geom3	Geom4	Barrels
;;-----	-----	-----	-----	-----	-----	-----
C1	TRAPEZOIDAL	1	10	5	5	1

[LOSSES]				
;;Link	Inlet	Outlet	Average	Flap Gate
;;-----	-----	-----	-----	-----

[CURVES]			
;;Name	Type	X-Value	Y-Value
;;-----	-----	-----	-----
Curve1	Storage	0	600
Curve1		0.2	1500
Curve1		.4	5242
Curve1		.6	8000

[TIMESERIES]

```

;;Name      Date      Time      Value
;;-----
;Chicago design storm, a = 1019.2, b = 0, c = 0.731, Duration = 1440 minutes, r = 0.35, rain units = mm/hr.
Chicago_24hr      0:00      1.352
Chicago_24hr      0:05      1.361
Chicago_24hr      0:10      1.372
Chicago_24hr      0:15      1.382
Chicago_24hr      0:20      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
Chicago_24hr      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
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
Chicago_24hr	8:05	16.477
Chicago_24hr	8:10	21.566
Chicago_24hr	8:15	33.491
Chicago_24hr	8:20	286.165
Chicago_24hr	8:25	92.134
Chicago_24hr	8:30	42.664

Chicago_24hr	8:35	30.072
Chicago_24hr	8:40	23.803
Chicago_24hr	8:45	19.955
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
Chicago_24hr	9:45	7.881
Chicago_24hr	9:50	7.553
Chicago_24hr	9:55	7.255
Chicago_24hr	10:00	6.984
Chicago_24hr	10:05	6.736
Chicago_24hr	10:10	6.507
Chicago_24hr	10:15	6.296
Chicago_24hr	10:20	6.101
Chicago_24hr	10:25	5.919
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	10:50	5.173
Chicago_24hr	10:55	5.049
Chicago_24hr	11:00	4.932
Chicago_24hr	11:05	4.822
Chicago_24hr	11:10	4.717
Chicago_24hr	11:15	4.617
Chicago_24hr	11:20	4.522
Chicago_24hr	11:25	4.431
Chicago_24hr	11:30	4.345
Chicago_24hr	11:35	4.263
Chicago_24hr	11:40	4.184
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
Chicago_24hr	12:30	3.55
Chicago_24hr	12:35	3.499
Chicago_24hr	12:40	3.449
Chicago_24hr	12:45	3.401
Chicago_24hr	12:50	3.355
Chicago_24hr	12:55	3.31

Chicago_24hr	13:00	3.267
Chicago_24hr	13:05	3.224
Chicago_24hr	13:10	3.183
Chicago_24hr	13:15	3.144
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
Chicago_24hr	13:45	2.928
Chicago_24hr	13:50	2.895
Chicago_24hr	13:55	2.863
Chicago_24hr	14:00	2.832
Chicago_24hr	14:05	2.802
Chicago_24hr	14:10	2.773
Chicago_24hr	14:15	2.744
Chicago_24hr	14:20	2.716
Chicago_24hr	14:25	2.689
Chicago_24hr	14:30	2.662
Chicago_24hr	14:35	2.636
Chicago_24hr	14:40	2.61
Chicago_24hr	14:45	2.585
Chicago_24hr	14:50	2.561
Chicago_24hr	14:55	2.537
Chicago_24hr	15:00	2.514
Chicago_24hr	15:05	2.491
Chicago_24hr	15:10	2.469
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
Chicago_24hr	17:10	2.045
Chicago_24hr	17:15	2.031
Chicago_24hr	17:20	2.017

Chicago_24hr	17:25	2.004
Chicago_24hr	17:30	1.99
Chicago_24hr	17:35	1.977
Chicago_24hr	17:40	1.964
Chicago_24hr	17:45	1.951
Chicago_24hr	17:50	1.939
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
Chicago_24hr	18:20	1.867
Chicago_24hr	18:25	1.856
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	1.791
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
Chicago_24hr	19:25	1.732
Chicago_24hr	19:30	1.722
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

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	22:20	1.459
Chicago_24hr	22:25	1.453
Chicago_24hr	22:30	1.447
Chicago_24hr	22:35	1.441
Chicago_24hr	22:40	1.434
Chicago_24hr	22:45	1.428
Chicago_24hr	22:50	1.422
Chicago_24hr	22:55	1.416
Chicago_24hr	23:00	1.411
Chicago_24hr	23:05	1.405
Chicago_24hr	23:10	1.399
Chicago_24hr	23:15	1.393
Chicago_24hr	23:20	1.387
Chicago_24hr	23:25	1.382
Chicago_24hr	23:30	1.376
Chicago_24hr	23:35	1.371
Chicago_24hr	23:40	1.365
Chicago_24hr	23:45	1.36
Chicago_24hr	23:50	1.355
Chicago_24hr	23:55	1.349
Chicago_24hr	24:00	0

[REPORT]
INPUT YES
CONTROLS NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]

[MAP]
DIMENSIONS 377904.216833746 5496889.70168789 378739.664103158 5497557.43227258
UNITS Meters

[COORDINATES]
;;Node X-Coord Y-Coord
;;-----
SMRID_Channel 377963.916 5496961.816
ponding 378118.806 5496947.119

[VERTICES]
;;Link X-Coord Y-Coord
;;-----

[POLYGONS]
;;Subcatchment X-Coord Y-Coord

;;-----	-----	-----
East	378647.629	5496990.979
East	378680.915	5496947.538
East	378701.689	5496926.631
East	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	5497013.336
West	378300.364	5497015.349
West	378283.862	5497013.739
West	378253.272	5496991.199
West	378225.097	5496951.351
West	378118.773	5496944.001
West	377970.111	5497013.256
West	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 MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)

Wilson NW
Pre Development
24hr_100yr

NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.

Analysis Options

Flow Units CMS

Process Models:

Rainfall/Runoff YES

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed NO

Water Quality NO

Infiltration Method GREEN_AMPT

Flow Routing Method DYNWAVE

Starting Date MAY-27-2015 00:00:00

Ending Date JUN-10-2015 00:00:00

Antecedent Dry Days 0.0

Report Time Step 00:01:00

Wet Time Step 00:05:00

Dry Time Step 00:05:00

Routing Time Step 5.00 sec

Element Count

Number of rain gages 1

Number of subcatchments ... 3

Number of nodes 2

Number of links 1

Number of pollutants 0

Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
------	-------------	-----------	--------------------

Lethbridge_100yr_24hrChicago_24hr INTENSITY 5 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
East	6.15	175.85	0.00	1.0500	Lethbridge_100yr_24hr	SMRID_Channel
RR_20-5	6.13	117.61	0.00	0.4500	Lethbridge_100yr_24hr	SMRID_Channel
West	16.25	350.96	0.00	1.1100	Lethbridge_100yr_24hr	ponding

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
SMRID_Channel	OUTFALL	919.40	3.00	0.0	
ponding	STORAGE	922.20	2.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	ponding	SMRID_Channel	CONDUIT	10.0	12.0873	0.1500

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	TRAPEZOIDAL	1.00	15.00	0.74	20.00	1	28.52

	Volume hectare-m	Depth mm
Runoff Quantity Continuity		
Total Precipitation	3.428	120.145
Evaporation Loss	0.000	0.000
Infiltration Loss	1.541	54.016
Surface Runoff	1.889	66.224
Final Surface Storage	0.000	0.000
Continuity Error (%)	-0.079	

***** Volume Volume

Flow Routing Continuity	hectare-m	10^6 ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	1.889	18.895
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	1.793	17.932
Internal Outflow	0.000	0.000
Storage Losses	0.066	0.656
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.031	0.307
Continuity Error (%)	0.001	

Time-Step Critical Elements

None

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

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 Runoff Summary

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

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence 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

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 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

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	E&I Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CMS
ponding	0.590	2	6	1.961	7	0 09:20	0.805

Outfall Loading Summary

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CMS	Max. Flow CMS	Total Volume 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

Link	Type	Maximum Flow CMS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.805	0 09:20	0.60	0.03	0.13

Flow Classification Summary

Conduit	Adjusted /Actual Length	--- Dry	Fraction of Up Dry	Time in Down Dry	Flow Sub Crit	Class Sup Crit	Up Crit	Down Crit	Avg. Froude Number	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



```

[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 NO

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        0
REPORT_STEP     00:01:00
WET_STEP        00:05:00
DRY_STEP        00:05:00
ROUTING_STEP    5

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

[RAINGAGES]

```
;;
;;Name          Rain      Time      Snow      Data
              Type      Intrvl    Catch      Source
;;-----
Lethbridge_100yr_24hr INTENSITY 0:05      1.0      TIMESERIES Chicago_24hr
```

[SUBCATCHMENTS]

```
;;
;;Name          Raingage      Outlet      Total      Pcnt.
              Area      Imperv      Width      Pcnt.      Curb      Snow
              -----      -----      -----      -----      -----      -----
S1             Lethbridge_100yr_24hr wet_pond 26.8323 10      528.29 1      0
```

[SUBAREAS]

```
;;Subcatchment N-Imperv N-Perv S-Imperv S-Perv PctZero RouteTo PctRouted
;;-----
S1             0.015      0.15      1      5      0      PERVIOUS 100
```

[INFILTRATION]

```
;;Subcatchment Suction      HydCon      IMDmax
;;-----
S1             292.2      0.5      0.25
```

[OUTFALLS]

```
;;
;;Name          Invert      Outfall      Stage/Table      Tide
              Elev.      Type      Time Series      Gate
;;-----
Tiffin_Drain    919.4      FREE      NO
```

[STORAGE]

```
;;
;;Name          Invert      Max.      Init.      Storage      Curve      Evap.
              Elev.      Depth      Depth      Curve      Params      Frac.
Infiltration parameters
;;-----
wet_pond        918.9      4.1      2      TABULAR      wet_pond      0      0
```

[ORIFICES]

```
;;
;;Name          Inlet      Outlet      Orifice      Crest      Disch.      Flap Open/Close
              Node      Node      Type      Height      Coeff.      Gate Time
;;-----
```

C1 wet_pond Tiffin_Drain SIDE 2 0.65 NO 0

[XSECTIONS]

```
;;Link                    Shape                    Geom1                    Geom2                    Geom3                    Geom4                    Barrels
;;-----
C1                    CIRCULAR                    0.14                    0                    0                    0                    -----
```

[CURVES]

```
;;Name                    Type                    X-Value                    Y-Value
;;-----
Curve1                    Storage                    0                    600
Curve1                                       0.2                    1500
Curve1                                       0.4                    5242
Curve1                                       0.6                    8000

wet_pond                    Storage                    0                    5700
wet_pond                                       1                    6900
wet_pond                                       2                    8800
wet_pond                                       3                    10900
wet_pond                                       3.5                    12400
wet_pond                                       4.1                    13900
```

[TIMESERIES]

```
;;Name                    Date                    Time                    Value
;;-----
;Chicago design storm, a = 1019.2, b = 0, c = 0.731, Duration = 1440 minutes, r = 0.35, rain units = mm/hr.
Chicago_24hr                                       0:00                    1.352
Chicago_24hr                                       0:05                    1.361
Chicago_24hr                                       0:10                    1.372
Chicago_24hr                                       0:15                    1.382
Chicago_24hr                                       0:20                    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
Chicago_24hr                                       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
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

Chicago_24hr	8:05	16.477
Chicago_24hr	8:10	21.566
Chicago_24hr	8:15	33.491
Chicago_24hr	8:20	286.165
Chicago_24hr	8:25	92.134
Chicago_24hr	8:30	42.664
Chicago_24hr	8:35	30.072
Chicago_24hr	8:40	23.803
Chicago_24hr	8:45	19.955
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
Chicago_24hr	9:45	7.881
Chicago_24hr	9:50	7.553
Chicago_24hr	9:55	7.255
Chicago_24hr	10:00	6.984
Chicago_24hr	10:05	6.736
Chicago_24hr	10:10	6.507
Chicago_24hr	10:15	6.296
Chicago_24hr	10:20	6.101
Chicago_24hr	10:25	5.919
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	10:50	5.173
Chicago_24hr	10:55	5.049
Chicago_24hr	11:00	4.932
Chicago_24hr	11:05	4.822
Chicago_24hr	11:10	4.717
Chicago_24hr	11:15	4.617
Chicago_24hr	11:20	4.522
Chicago_24hr	11:25	4.431

Chicago_24hr	11:30	4.345
Chicago_24hr	11:35	4.263
Chicago_24hr	11:40	4.184
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
Chicago_24hr	12:30	3.55
Chicago_24hr	12:35	3.499
Chicago_24hr	12:40	3.449
Chicago_24hr	12:45	3.401
Chicago_24hr	12:50	3.355
Chicago_24hr	12:55	3.31
Chicago_24hr	13:00	3.267
Chicago_24hr	13:05	3.224
Chicago_24hr	13:10	3.183
Chicago_24hr	13:15	3.144
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
Chicago_24hr	13:45	2.928
Chicago_24hr	13:50	2.895
Chicago_24hr	13:55	2.863
Chicago_24hr	14:00	2.832
Chicago_24hr	14:05	2.802
Chicago_24hr	14:10	2.773
Chicago_24hr	14:15	2.744
Chicago_24hr	14:20	2.716
Chicago_24hr	14:25	2.689
Chicago_24hr	14:30	2.662
Chicago_24hr	14:35	2.636
Chicago_24hr	14:40	2.61
Chicago_24hr	14:45	2.585
Chicago_24hr	14:50	2.561

Chicago_24hr	14:55	2.537
Chicago_24hr	15:00	2.514
Chicago_24hr	15:05	2.491
Chicago_24hr	15:10	2.469
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
Chicago_24hr	17:10	2.045
Chicago_24hr	17:15	2.031
Chicago_24hr	17:20	2.017
Chicago_24hr	17:25	2.004
Chicago_24hr	17:30	1.99
Chicago_24hr	17:35	1.977
Chicago_24hr	17:40	1.964
Chicago_24hr	17:45	1.951
Chicago_24hr	17:50	1.939
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

Chicago_24hr	18:20	1.867
Chicago_24hr	18:25	1.856
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	1.791
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
Chicago_24hr	19:25	1.732
Chicago_24hr	19:30	1.722
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
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	22:20	1.459
Chicago_24hr	22:25	1.453
Chicago_24hr	22:30	1.447
Chicago_24hr	22:35	1.441
Chicago_24hr	22:40	1.434
Chicago_24hr	22:45	1.428
Chicago_24hr	22:50	1.422
Chicago_24hr	22:55	1.416
Chicago_24hr	23:00	1.411
Chicago_24hr	23:05	1.405
Chicago_24hr	23:10	1.399
Chicago_24hr	23:15	1.393
Chicago_24hr	23:20	1.387
Chicago_24hr	23:25	1.382
Chicago_24hr	23:30	1.376
Chicago_24hr	23:35	1.371
Chicago_24hr	23:40	1.365
Chicago_24hr	23:45	1.36
Chicago_24hr	23:50	1.355
Chicago_24hr	23:55	1.349
Chicago_24hr	24:00	0

[REPORT]

;;Reporting Options

INPUT YES

CONTROLS NO

SUBCATCHMENTS ALL

NODES ALL

LINKS ALL

[TAGS]

[MAP]

DIMENSIONS	94653.76445	5497995.49985	95477.67655	5498635.57115
------------	-------------	---------------	-------------	---------------

```

UNITS          Meters

[COORDINATES]
;;Node         X-Coord      Y-Coord
;;-----
Tiffin_Drain   94747.273     5498082.681
wet_pond       94768.7      5498097.743

[VERTICES]
;;Link         X-Coord      Y-Coord
;;-----

[POLYGONS]
;;Subcatchment X-Coord      Y-Coord
;;-----
S1             94716.833     5498100.957
S1             94698.022     5498100.957
S1             94691.215     5498599.823
S1             94940.465     5498606.477
S1             94947.42      5498590.709
S1             94974.97      5498540.016
S1             95001.229     5498501.997
S1             95007.726     5498495.258
S1             95060.195     5498438.194
S1             95193.199     5498296.564
S1             95294.91      5498191.079
S1             95420.202     5498059.493
S1             95440.226     5498036.037
S1             94972.811     5498024.594
S1             94973.384     5498048.623
S1             94868.115     5498037.753
S1             94716.833     5498100.957

[SYMBOLS]
;;Gage         X-Coord      Y-Coord
;;-----

```

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)

Wilson NW
Post Development
24hr_100yr

NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.

Analysis Options

Flow Units LPS

Process Models:

Rainfall/Runoff YES

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed NO

Water Quality NO

Infiltration Method GREEN_AMPT

Flow Routing Method DYNWAVE

Starting Date JUN-01-2020 00:00:00

Ending Date JUN-12-2020 06:00:00

Antecedent Dry Days 0.0

Report Time Step 00:01:00

Wet Time Step 00:05:00

Dry Time Step 00:05:00

Routing Time Step 5.00 sec

Element Count

Number of rain gages 1

Number of subcatchments ... 1

Number of nodes 2
 Number of links 1
 Number of pollutants 0
 Number of land uses 0

 Raingage Summary

Name	Data Source	Data Type	Recording Interval
Lethbridge_100yr_24hr	Chicago_24hr	INTENSITY	5 min.

 Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	26.83	528.29	10.00	1.0000	Lethbridge_100yr_24hr	wet_pond

 Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
Tiffin_Drain	OUTFALL	919.40	2.14	0.0	
wet_pond	STORAGE	918.90	4.10	0.0	

 Link Summary

Name	From Node	To Node	Type	Length	%Slope Roughness
C1	wet_pond	Tiffin_Drain	ORIFICE		

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
---------	-------	---------------	--------------	--------------	---------------	-------------------	--------------

Runoff Quantity Continuity

	Volume hectare-m	Depth mm
Total Precipitation	3.224	120.145
Evaporation Loss	0.000	0.000
Infiltration Loss	1.325	49.373
Surface Runoff	1.902	70.870
Final Surface Storage	0.003	0.100
Continuity Error (%)	-0.165	

Flow Routing Continuity

	Volume hectare-m	Volume 10^6 ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	1.902	19.016
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	1.889	18.887
Internal Outflow	0.000	0.000
Storage Losses	0.000	0.000
Initial Stored Volume	1.415	14.149
Final Stored Volume	1.428	14.278
Continuity Error (%)	0.000	

Time-Step Critical Elements

None

```

*****
Highest Flow Instability Indexes
*****
All links are stable.

```

```

*****
Routing Time Step Summary
*****
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 Runoff Summary
*****

```

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff LPS	Runoff Coeff
S1	120.15	0.00	0.00	49.37	70.87	19.02	1841.08	0.590

```

*****
Node Depth Summary
*****

```

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence 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 Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr
Tiffin_Drain	OUTFALL	0.00	53.81	0 21:25	0.000	18.887
wet_pond	STORAGE	1841.06	1841.06	0 08:40	19.016	33.165

Node Surge Summary

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
wet_pond	STORAGE	138.33	1.404	0.556

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Average	Avg	E&I	Maximum	Max	Time of Max	Maximum
---------	-----	-----	---------	-----	-------------	---------

Storage Unit	Volume 1000 m3	Pcnt Full	Pcnt Loss	Volume 1000 m3	Pcnt Full	Occurrence days hr:min	Outflow LPS
wet_pond	18.409	49	0	30.367	81	0 21:25	53.81

 Outfall Loading Summary

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	96.96	20.04	53.81	18.887

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	ORIFICE	53.81	0 21:25			1.00

 Flow Classification Summary

Conduit	Adjusted /Actual Length	--- Up Dry	Fraction of Time in Flow Class Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
---------	-------------------------------	------------------	---	-------------	-------------	------------	--------------	--------------------------	------------------------

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

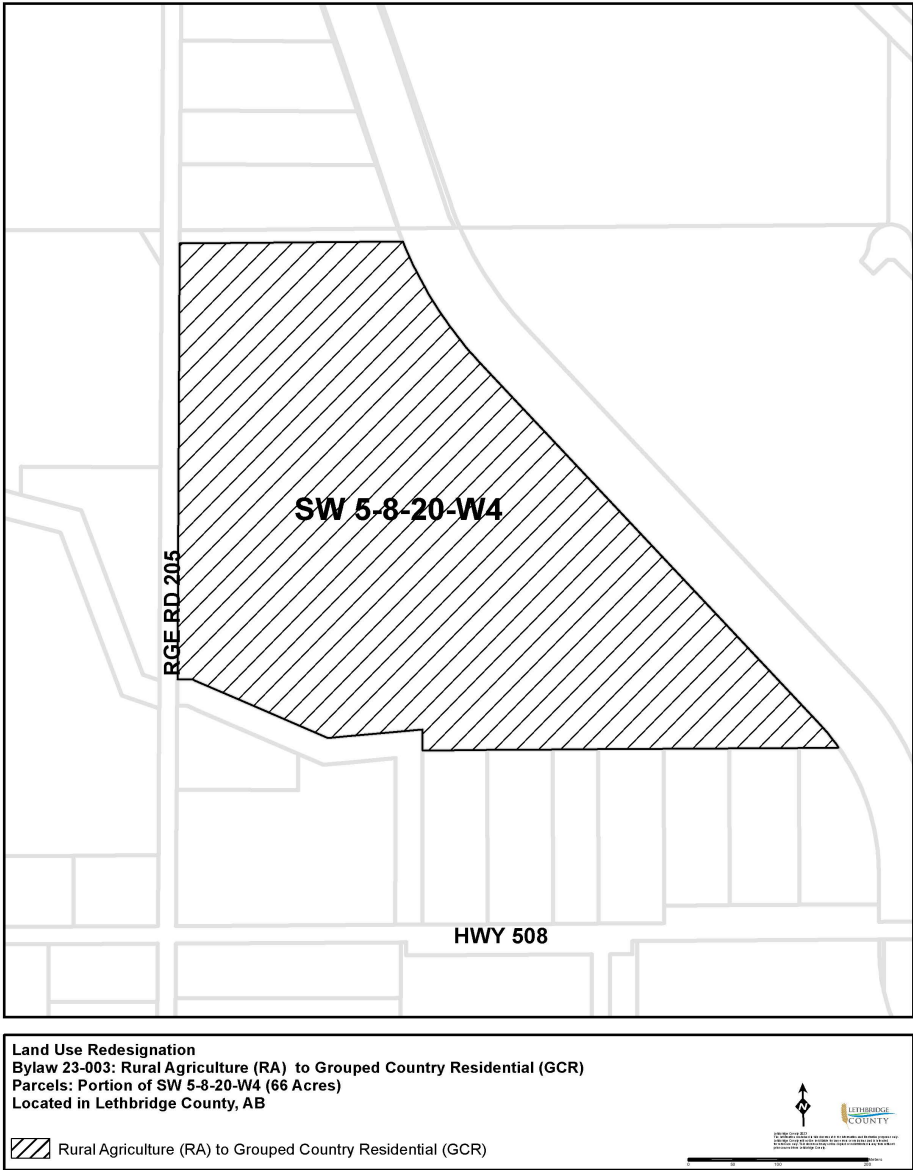
**LETHBRIDGE COUNTY
IN THE PROVINCE OF ALBERTA
BYLAW NO. 23-003**

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;



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	



Land Use Redesignation
Bylaw 23-003: Rural Agriculture (RA) to Grouped Country Residential (GCR)
Parcels: Portion of SW 5-8-20-W4 (66 Acres)
Located in Lethbridge County, AB

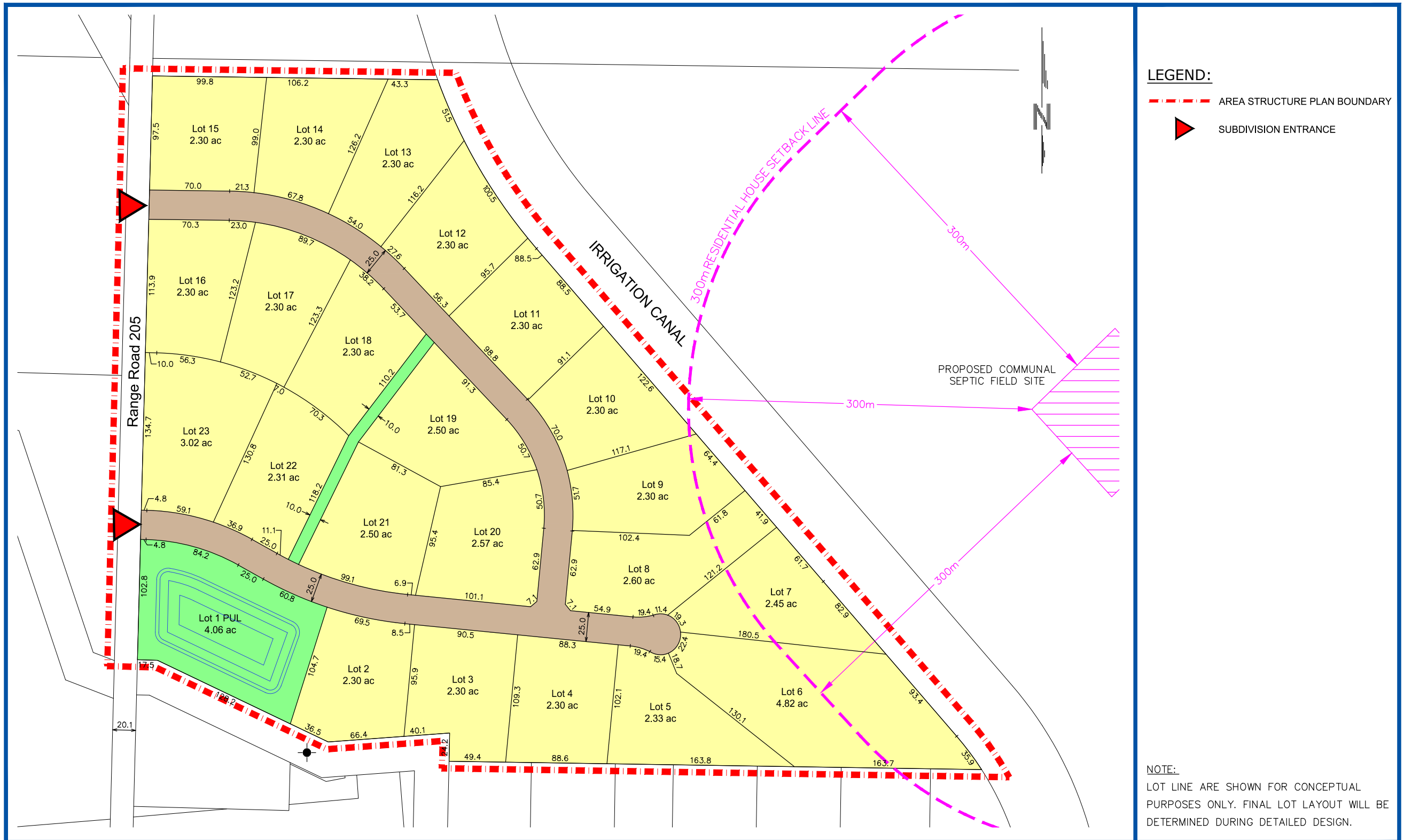
 Rural Agriculture (RA) to Grouped Country Residential (GCR)



LETHBRIDGE
COUNTY

Lethbridge County, 2013
 This map is a general representation of the information and should not be used for any other purpose.
 The information is provided for informational purposes only and should not be used for any other purpose.
 The information is provided for informational purposes only and should not be used for any other purpose.





Hilary Janzen

From: Ed Martin <edm@mgcl.ca>
Sent: May 16, 2023 9:47 AM
To: Hilary Janzen
Cc: 'Ray Martin'; 'Jody Nakamuara'
Subject: RE: Country Crossroads Estate

Hi Hilary

Based on the last communication we had with the water co-op, there is no water available for Country Crossroad Estate. The plan is to try and purchase water units if they are available at the time of subdivision. Otherwise, the source for potable water will be irrigation water stored in individual dugouts and treated inhouse by each lot owner.

Regards

Ed

Ed Martin P.Eng. | President | Martin Geomatic Consultants Ltd. | 255 -31st. Street No., Lethbridge, Alberta, T1H 3Z4 | Office: (403) 329-0050 | Fax: (403) 329-6594 | Cell: (403) 330-5303

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From: Hilary Janzen <hjanzen@lethcounty.ca>
Sent: Monday, May 15, 2023 9:22 AM
To: Ed Martin <edm@mgcl.ca>
Subject: RE: Country Crossroads Estate

Ed can you also provide details with regards to the availability of potable water. That was one of the items county council requested further information on.

Hilary Janzen, RPP, MCIP
Interim Director of Community Services
Lethbridge County
905 4th Ave S
Lethbridge, AB T1J 4E4

From: Ed Martin <edm@mgcl.ca>
Sent: Friday, May 12, 2023 2:30 PM

To: Hilary Janzen <hjanzen@lethcounty.ca>
Cc: 'Ray Martin' <raym@mgcl.ca>; 'Jody Nakamuara' <jnakamura@hotmail.ca>
Subject: Country Crossroads Estate

Hi Hilary

The following is the information requested by Council Resolution regarding the Postponement of Bylaws 23-002 and 23-003.

We have redesigned the lot layout to increase the minimum lot size from 2.0 acres to 2.3 acres. To accomplish this we have reduced the number of lots being created from 25 to 22 lots. **See Figure 5.0 – Proposed Lot layout - revised and Figure 7.0 Building Setbacks – revised.**

This allows for sufficient area for the dugouts that will be used to supply potable water. We have assumed the average dugout size to be about 500 sq. feet.

This increase in size also ensures sufficient land for sewage septic fields.

Regards

Ed

Ed Martin, P.Eng. | President | Martin Geomatic Consultants Ltd. | 255 -31st. Street No., Lethbridge, Alberta, T1H 3Z4 | Office: (403) 329-0050 | Fax: (403) 329-6594 | Cell: (403) 330-5303

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AGENDA ITEM REPORT



Title: Land Acknowledgement Statement
Meeting: Council Meeting - 01 Jun 2023
Department: Council
Report Author: Klaas VanderVeen, Lorne Hickey, Mark Sayers

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 19 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

At the March 2, 2023 Council meeting a resolution was passed to have three members of Council prepare a land acknowledgement for all of council's consideration. On May 18, 2023 the committee met and drafted an acknowledgement as indicated in the proposed resolution.

In addition to the statement, the committee has provided some options for council's consideration of when and how the land acknowledgement is made, be it one, some or all of the suggested options.

RECOMMENDATION:

Move that County Council adopt the following Land Acknowledgment Statement:

"In the true spirit of reconciliation, we acknowledge all those who call this land home now and for thousands of years in the past. May we respect each other and find understanding together and recognize the benefits that this land provides to all of us."

And that the land acknowledgement be:

1. Read at the onset of the Annual Organizational Meeting each year.
2. Read at the onset of every council meeting.
3. Read at the onset of public events hosted by Lethbridge County.
4. and is also included on County correspondence such as letterhead, email signature lines and the County website.

REASON(S) FOR RECOMMENDATION(S):

Through the development of the proposed land acknowledgement statement, the committee considered statements from various organizations and drafted an acknowledgement they felt spoke to

truth and reconciliation, the past, present and future of the area and was representative of the County's overall philosophies.

BACKGROUND INFORMATION:

In 2015, the Truth and Reconciliation Commission of Canada (established in 2008) released a report which included its recommendations of 94 Calls to Action in order to redress the legacy of residential schools and advance the Truth and Reconciliation process across the Country.

By implementing a land acknowledgement statement such as the one proposed, Lethbridge County shares in reconciliation by recognizing the history of the land the County sits on while also highlighting it's appreciation of what the land has and continues to offer to all.

ALTERNATIVES / PROS / CONS:

To not approve a land acknowledgement :

PRO - County would remain status quo.

CON - A land acknowledgement, while important, is only one piece of Truth and Reconciliation. However, by not implementing one, it may appear as though the County does not support its Indigenous neighbors or the community as a whole.

Council could revise the Land Acknowledgement:

PRO - Would still offer recognition and acknowledgement of the traditional lands of which Lethbridge County resides on.

CON - There would be no con to revising the proposed acknowledgement.

FINANCIAL IMPACT:

There is no financial impact associated with the proposed resolution.

LEVEL OF PUBLIC PARTICIPATION:

☒ **Inform** ☐ **Consult** ☐ **Involve** ☐ **Collaborate** ☐ **Empower**

AGENDA ITEM REPORT



Title: RAVE Industrial Park Infrastructure Upgrades - Tender Results
Meeting: Council Meeting - 01 Jun 2023
Department: Infrastructure
Report Author: Devon Thiele

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 23 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

The RAVE Industrial Park Infrastructure upgrades project tender has recently closed, with a total of two contractors submitting a bid. The bids received were significantly higher than the original engineering estimate, in which the budget was based upon. The following are the prices received:

McNally Contractors (2011) Ltd. - \$5,550,234.81
Tollestrup Construction Inc. - \$7,933,597.30

The 2023 budgeted amount for this project is \$3,600,000, which was based on the engineer's estimate that was provided in the fall of 2022. Through discussions with the engineer (WSP) and the low bidder (McNally), we were able to find cost savings in the amount of \$540,091.76, which modified McNally's total bid to \$5,010,143.05. This modified price, plus engineering and third-party costs, total \$5,225,143.05 which leaves a funding deficit of \$1,625,143.05.

In April 2023, the County was notified that the Park Lake Road project received \$1,370,745.75 in Strategic Transportation Infrastructure Program (STIP) funding which will help offset the project costs. This project was proposed to be solely funded through the Market Access Network Reserve, but with the approval of the STIP grant, we can apply these funds saved to other projects and allocate MSI funds to this project. The below table outlines the approved and proposed funding sources:

Funding Source	2023 Budget Amount	Proposed Amount	Difference
Federal Gas Tax Fund	\$2,000,000	\$2,000,000	\$0
Municipal Sustainability Initiative	\$540,000	\$1,825,000	\$1,285,000
Public Works Project Reserve	\$1,060,000	\$1,400,143.05	\$340,143.05
TOTAL	\$3,600,000	\$5,225,143.05	\$1,625,143.05

RECOMMENDATION:

That Council approves an additional \$1,285,000 from Municipal Sustainability Initiative and an additional \$340,143.05 from the Public Works Project Reserve, for a total budget of \$5,225,143.05.

REASON(S) FOR RECOMMENDATION(S):

To ensure this project is completed this year as there are sufficient funds to cover the additional expenditures.

PREVIOUS COUNCIL DIRECTION / POLICY:

RAVE Industrial Park Infrastructure Upgrades - Phase 2 (Final) was approved in the 2023 budget.

BACKGROUND INFORMATION:

Several discussions with WSP have taken place to determine the most cost-effective way to move this project forward, including deferral. It was WSP's opinion that we will not secure better pricing by delaying this project to 2024. The largest financial component of this project (approx. 73%) is the underground work including waterlines, storm sewer, and sanitary sewer pipe installations. We've seen drastic price escalations on pipeline material in the past few years, and these price increases are affecting this project.

ALTERNATIVES / PROS / CONS:

Alternative 1: Delay the project to a future year, or cancel the project

PRO: Short-term expenditures on the project would be minimized

CON: The project needs to eventually be completed, and delaying would likely increase costs in future years

CON: Several communications and meetings have taken place with landowners and agreements entered into, which would need to be completed again.

FINANCIAL IMPACT:

An additional \$1,285,000 from Municipal Sustainability Initiative and \$340,143.05 from the Public Works Project Reserve

LEVEL OF PUBLIC PARTICIPATION:

☒ **Inform** ☐ **Consult** ☐ **Involve** ☐ **Collaborate** ☐ **Empower**

ATTACHMENTS:

[231-01203-00 - Award Recommendation 20230518](#)



May 18, 2023

File: 231-01203-00

Lethbridge County
#100, 905-4th Ave. South
Lethbridge, Alberta T1J 4E4

ATTENTION: Devon Thiele, C.E.T., Director of Infrastructure

**RE: Rave Industrial Park Upgrade
Underground, Surface Works & Other Works
Contract No. 231-01203-00**

Tenders were received on May 1, 2023, from a total of two (2) bidders. A review of all bids submitted is now complete and we have found all bidders have met all contractual requirements at the bid stage. Based on McNally Contractors (2011) Ltd.'s submitting the lowest price, if awarded to them the anticipated funding required for this project would be as follows:

	Totals
Contract Amount (Less Site Occ)	\$ 5,387,932.76
Landowner Approaches Recovery	\$ 127,152.48
Parking Areas Recovery	\$ 65,045.47
Contingency	\$ 345,000.00
Potential Site Occ. Bonus (5 day)	\$ 7,500.00
Potential ACP (EPS) Bonus	\$ 2,000.00
TOTALS	\$ 5,550,234.81

WSP worked with the low bidder to negotiate savings based on several discussions. WSP outlined their priorities and shared data to support their cost reduction objectives. In turn, McNally shared their concerns and perspectives to find areas where they could make changes without compromising the quality of work. The results are as follows:

	Totals
Sanitary Pipe Changes	\$ 46,955.98
Storm Pipe Size Change	\$ 295,809.98
Move Lift Station	\$ 47,452.80
Revised Mechanical & Electrical	\$ 149,873.00
TOTALS	\$ 540,091.76

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Lethbridge, AB
Canada T1H 5C1

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F: +1 403 380-2825
wsp.com



Based on the potential savings the anticipated new contract amount is **\$5,010,143.05**

The following is a breakdown of the Total Project Budget:

	Totals
New Contract Amount (Less Site Occ)	\$ 5,010,143.05
WSP Engineering Fees	\$ 185,000.00
Fortis Costs	\$ 30,000.00
TOTALS	\$ 5,225,143.05

We are requesting your Councils' decision regarding the awarding of this project to **McNally Contractors (2011) Ltd.** The complete listing of Tender Summary has been attached for your information. As you will see in the Tender Summary, Schedule "B" Item 1B and the Schedule "D" Total had minor addition errors that have been accounted for and corrected. Should you require any additional information or clarification, please contact this office.

Sincerely,

Randal McCarthy

Randal McCarthy, P.L. (Eng.)
Project Engineer
WSP

Attachments

cc: Trent Purvis, P.Eng., Manager Southern Region, WSP
Dave Armstrong, Contracts Group Manager, WSP

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wsp.com

AGENDA ITEM REPORT



Title: Local Improvement Tax - Counter Petitions
Meeting: Council Meeting - 01 Jun 2023
Department: Infrastructure
Report Author: Devon Thiele

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 18 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

At the April 6th, 2023 Council meeting, administration presented two Local Improvement Plans based on two petitions received for the following:

Petition 1: Paving of Township Road 8-2

Petition 2: Paving of Range Road 21-5, and Valley View Place.

After this meeting, administration distributed the Local Improvement Plans to the benefiting landowners. Since then, multiple counter-petitions have been received in which administration reviewed and determined to be sufficient.

RECOMMENDATION:

No decision or action by council is required as this report is for information purposes only.

REASON(S) FOR RECOMMENDATION(S):

As required by the Municipal Government Act, if a valid counter-petition is submitted to the County, the County must not proceed with the Local Improvement.

PREVIOUS COUNCIL DIRECTION / POLICY:

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

Councillor Vanderveen MOVED that the distribution of the Local Improvement Plan for the benefiting landowners for the paving of Township Road 8-2, be approved as amended.

Deputy Reeve Kuerbis MOVED that the distribution of the Local Improvement Plan for the benefiting landowners for the paving of Range Road 21-5 and Valley View Place, be approved based on the funding split of 72/25 with 75% being borne by the landowners and 25% being borne by the County.

BACKGROUND INFORMATION:

Administration is presenting this to Council for information and formally declaring the counter-petition sufficient as required by the Municipal Government Act.

ALTERNATIVES / PROS / CONS:

N/A

FINANCIAL IMPACT:

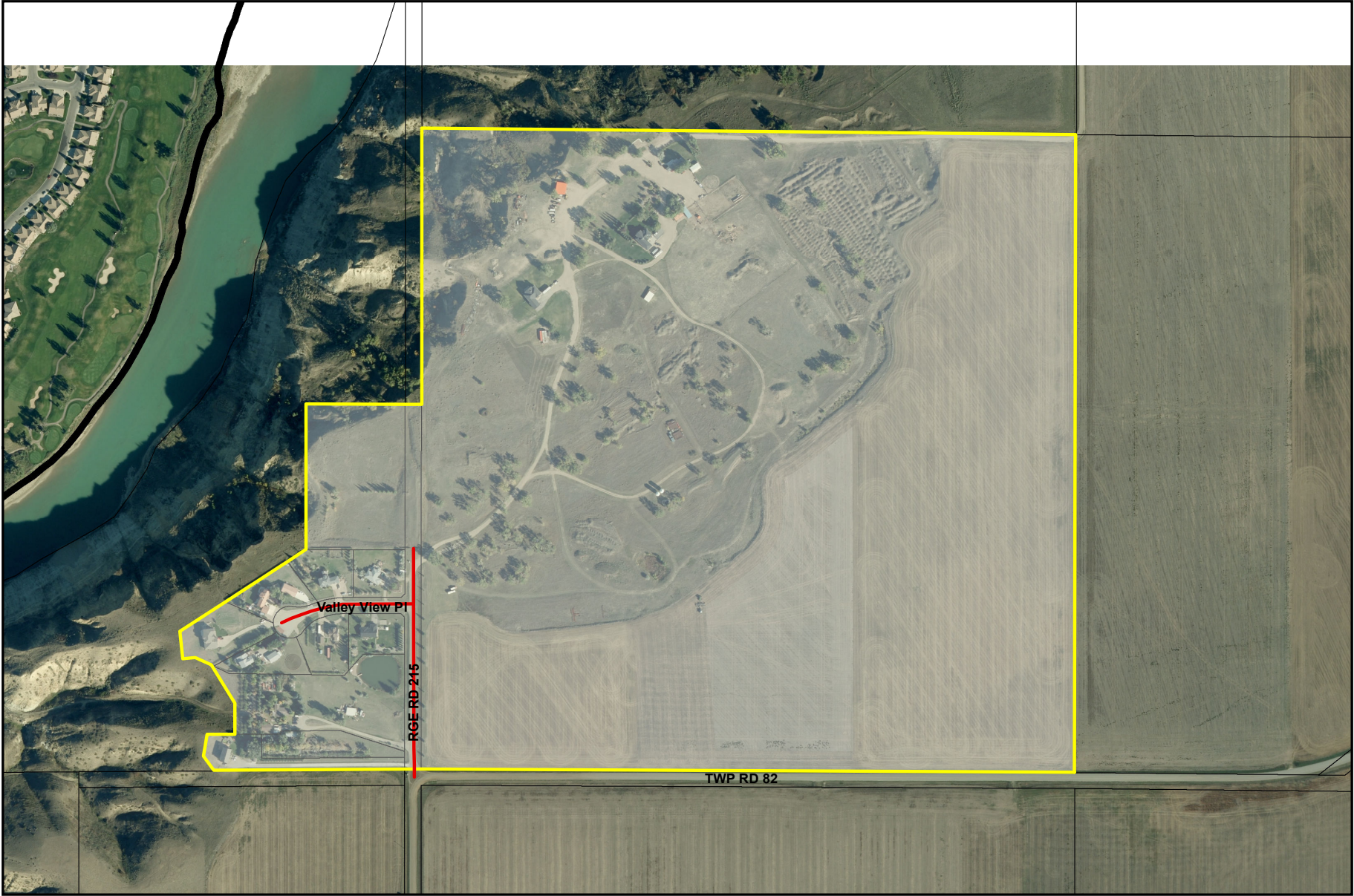
None

LEVEL OF PUBLIC PARTICIPATION:

☒ **Inform** ☐ **Consult** ☐ **Involve** ☐ **Collaborate** ☐ **Empower**

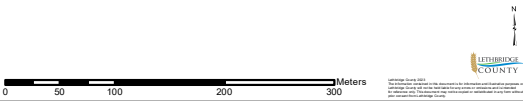
ATTACHMENTS:

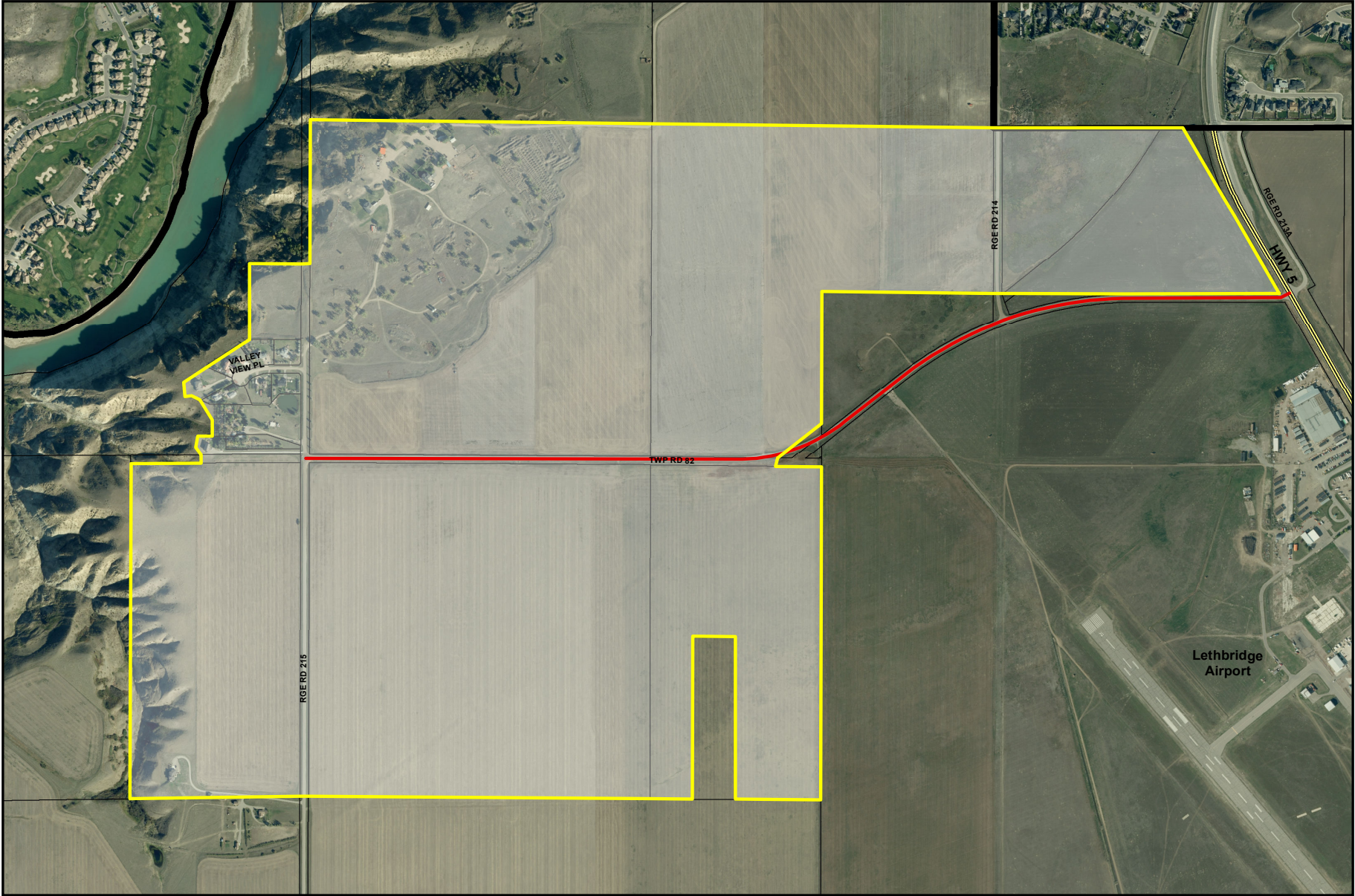
[RgeRd_215_ValleyViewPlace](#)
[TWPRD_82_LIP](#)



Local Improvement Plan: Rge Rd 21-5 and Valley View Place Local Improvement Paving Project

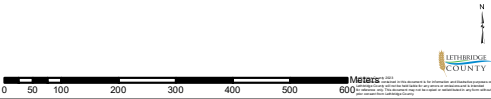
-  Local Improvement Tax Area
-  Proposed Roadway Upgrades





Local Improvement Plan: Twp Rd 8-2 Local Improvement Paving Project

-  Local Improvement Tax Area
-  Proposed Roadway Upgrades



AGENDA ITEM REPORT



Title: 2023 Calgary Stampede BMO Farm Family Awards
Meeting: Council Meeting - 01 Jun 2023
Department: Agriculture Service Board
Report Author: Gary Secrist

APPROVAL(S):

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

Approved - 23 May 2023
Approved - 23 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

The Calgary Stamped BMO Farm Family Awards presentation will take place on Monday, July 10, 2023 as part of the Stampede festivities. An invitation has come from the organizers for County representation to attend the event.

RECOMMENDATION:

That County Council select one member of Council and guest of their choice to represent Lethbridge County at the 2023 BMO Farm Family awards presentations scheduled for July 10, 2023.

REASON(S) FOR RECOMMENDATION(S):

To support agriculture and farm families in our municipality by participating in this event that celebrates the values of western heritage and generational farms.

PREVIOUS COUNCIL DIRECTION / POLICY:

Historically, the councilor of the division in which the nominee resides is selected with a guest of their choice to join the nominee in the days' activities. Two spots are available and no extra tickets will be granted through this invitation. This years award winner representing Lethbridge County is the Nicol family who operate a dairy farm in electoral Division 4.

BACKGROUND INFORMATION:

Annually Lethbridge County's Agriculture Service Board nominates an outstanding farm family to be awarded the Bank of Montreal Farm Family Award during the Calgary Stampede. The nominees will be hosted at a recognition program during the 2023 Calgary Stampede. As special guests, they will enjoy a daylong itinerary of Stampede events, including brunch and tickets to the rodeo. A request is also sent out for Lethbridge County to send representation.

ALTERNATIVES / PROS / CONS:

That we do not send representation to this event. This would not be the recommendation as most Southern Alberta municipalities support this initiative.

FINANCIAL IMPACT:

A Council representative would be approved for attendance and related expenses.

LEVEL OF PUBLIC PARTICIPATION:**Inform****Consult****Involve****Collaborate****Empower**

AGENDA ITEM REPORT



Title: 2024 Capital Equipment Purchasing
Meeting: Council Meeting - 01 Jun 2023
Department: Public Operations
Report Author: Jeremy Wickson

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 25 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

Annually council approves 5-year capital plans as per the Municipal Government Act which requires an approved 5-year capital plan and a 3-year operating budget.

All purchases for the replacement of existing equipment would be for the 2024 calendar year and therefore will fall under the 2024 capital equipment expenditures.

As delays in the delivery of equipment have been a challenge in 2022 and 2023, similar challenges exist in the delivery timeline for 2024 due to ongoing pandemics and global supply chains. In ordering equipment earlier in 2023 for delivery in 2024 the intention is to have more equipment delivered for early spring work when more intensive levels of service are required.

RECOMMENDATION:

That Council approve the 2024 Capital Equipment list for purchasing requirements.

REASON(S) FOR RECOMMENDATION(S):

The global pandemic has caused delays in the delivery and supply of equipment necessary for County operations and service level provision. Due to extensive delays in delivery of ordered machinery and equipment, if approved later in the calendar year there will be delays in equipment delivery for spring 2024.

By starting the purchasing process and issuing RFPs and RFQs, equipment can be ordered by mid-July and delivered by April 2024.

PREVIOUS COUNCIL DIRECTION / POLICY:

Council approved the 5-year 2023-27 Capital Equipment list in the fall of 2022 during budget deliberations for 2023.

BACKGROUND INFORMATION:

In 2022-23 the capital equipment that was purchased faced several lengthy delays in delivery due to limited supplies, factory shutdowns, and staffing constraints, all with residual effects from the global pandemic.

The equipment purchased for operations is required in meeting ongoing levels of service requirements. The capital equipment proposed is for core services such as road maintenance, construction, weed spraying, and snow plowing.

Equipment life cycles are considered as part of equipment purchasing. Optimal purchasing has equipment landed in the spring for operations and disposals can be cycled to auction or sold accordingly when the demand is the highest.

From past typical purchasing years prior to the pandemic, the turnaround on equipment has been 3-6 months. In 2022-23 that timeline increased to 8-12 months and equipment manufacturers still have uncertainty around conditions for 2024.

ALTERNATIVES / PROS / CONS:

1. If purchases are delayed for approval until later in the 2023 calendar year, delivery of equipment will be delayed and may impact the operating budget.

FINANCIAL IMPACT:

The machinery and equipment (M&E) planned for purchase as part of the 5-year plan presented and approved by council in fall 2022 budget deliberations has minimal changes.

Machinery and equipment are charged to each department on an annual basis to establish a M&E reserve that adequately funds future purchases.

LEVEL OF PUBLIC PARTICIPATION:

☒ **Inform** ☐ **Consult** ☐ **Involve** ☐ **Collaborate** ☐ **Empower**

ATTACHMENTS:

[2024-28 FLEET CAPITAL Forecast and Detail - Council Report](#)

 LETHBRIDGE COUNTY FLEET BUDGET 2024 CAPITAL EQUIPMENT PURCHASES				
			SOURCE	
ID #	Project Name	Budget Request	Fleet Equipment Replacement Reserve	Public Works Reserve
	SCHEDULED REPLACEMENTS			
24-FLT-	Replacement Divisional Grader	675,000	525,000	-
24-FLT-	Replacement Divisional Grader	675,000	525,000	-
24-FLT-	Replacement of 2 X PW/ASB Trucks 3/4 & 1 Tons	200,000	170,000	-
24-FLT-	Replacement of Truck & Plow Equipment	500,000	470,000	-
24-FLT-	Replacement of Tandem Cross Gate Belly Dumps Lead	55,000	45,000	-
24-FLT-	Replacement of Tandem Cross Gate Belly Dumps	50,000	42,000	-
24-FLT-	Crack Sealant Trailer	120,000	110,000	-
24-FLT-	Replacement of ASB Tractor 175hp	300,000	250,000	-
24-FLT-	Replacement of ASB Roadside Mower	50,000	45,000	-
	VEHICLE REPLACEMENT PROGRAM			
24-FLT-	Enterprise Fleet Program - 12 X Crewcab 1/2 ton Truck	720,000	60,000	-
24-FLT-	Enterprise Fleet Program - 1 X SUV	60,000	5,000	-
24-FLT-	Upgrade Wheel to Track Skid Steer (Trade in EVCON)	95,000	10,000	-
24-FLT-	Replacement of Track Skid Steer (Trade in EVCON)	95,000	10,000	-
TOTAL CAPITAL EQUIPMENT REQUEST		\$ 3,595,000	\$ 2,267,000	\$ -

SOURCES OF FUNDING					
E.S. Contingency Reserve	Debentures	Proceeds on Sale of Equipment			Total
-	-	150,000	\$		675,000
-	-	150,000	\$		675,000
-	-	30,000	\$		200,000
-	-	30,000	\$		500,000
-	-	10,000	\$		55,000
-	-	8,000	\$		50,000
-	-	10,000	\$		120,000
-	-	50,000	\$		300,000
-	-	5,000	\$		50,000
-	-	660,000	\$		720,000
-	-	55,000	\$		60,000
-	-	85,000	\$		95,000
-	-	85,000	\$		95,000
\$ -	\$ -	\$ 1,328,000	\$		3,595,000
			\$		3,595,000

 LETHBRIDGE COUNTY FLEET BUDGET 2025 CAPITAL EQUIPMENT PU			
ID #	Project Name	Budget Request	Fleet Equipment Replacement Reserve
	<u>SCHEDULED REPLACEMENTS</u>		
25-FLT-	Replacement of PW Track Excavator	550,000	500,000
25-FLT-	Replacement Divisional Grader	675,000	525,000
25-FLT-	Replacement of Gravel Truck	250,000	220,000
25-FLT-	Replacement of Scraper Engines (Zero Hour Maint.)	550,000	550,000
25-FLT-	Replacement of Tandem Cross Gate Belly Dumps Lead	55,000	45,000
25-FLT-	Replacement of Tandem Cross Gate Belly Dumps	50,000	42,000
25-FLT-	Replacement of Emergency Services Vehicle	90,000	75,000
25-FLT-	Replacement of 3 X PW/ASB Trucks 3/4 & 1 Tons	260,000	215,000
25-FLT-	Replacement of ASB Roadside Mower	50,000	45,000
25-FLT-	Replacement of Quad w/ Parks UTV	40,000	35,000
	<u>VEHICLE REPLACEMENT PROGRAM</u>		
25-FLT-	Enterprise Fleet Program - 12 X Crewcab 1/2 ton Truck	780,000	60,000
25-FLT-	Enterprise Fleet Program - 1 X SUV	65,000	5,000
25-FLT-	Replacement of 2 X Track Skid Steer (Trade in EVCON)	190,000	20,000
TOTAL CAPITAL EQUIPMENT REQUEST		\$ 3,605,000	\$ 2,337,000

Y				
PURCHASES				
SOURCES OF FUNDING				
Public Works Reserve	E.S. Contingency Reserve	Debentures	Proceeds on Sale of Equipment	Total
-	-	-	50,000	\$ 550,000
-	-	-	150,000	\$ 675,000
-	-	-	30,000	\$ 250,000
-	-	-	-	\$ 550,000
-	-	-	10,000	\$ 55,000
-	-	-	8,000	\$ 50,000
-	40,000	-	15,000	\$ 130,000
-	-	-	45,000	\$ 260,000
-	-	-	5,000	\$ 50,000
-	-	-	5,000	\$ 40,000
-	-	-	720,000	\$ 780,000
-	-	-	60,000	\$ 65,000
-	-	-	170,000	\$ 190,000
\$ -	\$ 40,000	\$ -	\$ 1,268,000	\$ 3,645,000
				\$ 3,645,000

 LETHBRIDGE COUNTY FLEET BUDGET 2026 CAPITAL EQUIPMENT PURCHASES				
			SOURCE	
ID #	Project Name	Budget Request	Fleet Equipment Replacement Reserve	Public Works Reserve
	SCHEDULED REPLACEMENTS			
26-FLT-	Replacement Divisional Grader	700,000	550,000	-
26-FLT-	Replacement Divisional Grader	700,000	550,000	-
26-FLT-	Replacement of Dozer Engine (Zero Hour Maint.)	450,000	450,000	-
26-FLT-	Replacement of PW Padfoot Trailer	60,000	60,000	-
26-FLT-	Replacement of 4 X PW/ASB Trucks 3/4 & 1 Tons	310,000	250,000	-
26-FLT-	Replacement of Tandem Cross Gate Trailer	60,000	55,000	-
26-FLT-	Replacement of Tri Axle Cross Gate Trailer	75,000	65,000	-
26-FLT-	Replacement of ASB Roadside Mower	50,000	45,000	-
26-FLT-	Replacement of ASB Side Arm Mower	40,000	35,000	-
	VEHICLE REPLACEMENT PROGRAM			
26-FLT-	Enterprise Fleet Program - 12 X Crewcab 1/2 ton Truck	780,000	60,000	-
26-FLT-	Enterprise Fleet Program - 1 X SUV	65,000	5,000	-
26-FLT-	Replacement of 2 X Track Skid Steer (Trade in EVCON)	190,000	20,000	-
TOTAL CAPITAL EQUIPMENT REQUEST		\$ 3,480,000	\$ 2,145,000	\$ -

SOURCES OF FUNDING					
E.S. Contingency Reserve	Debentures	Proceeds on Sale of Equipment			Total
-	-	150,000	\$		700,000
-	-	150,000	\$		700,000
-	-	-	\$		450,000
-	-	-	\$		60,000
-	-	60,000	\$		310,000
-	-	5,000	\$		60,000
-	-	10,000	\$		75,000
-	-	5,000	\$		50,000
-	-	5,000	\$		40,000
-	-	720,000	\$		780,000
-	-	60,000	\$		65,000
-	-	170,000	\$		190,000
\$ -	\$ -	\$ 1,335,000	\$		3,480,000
			\$		3,480,000

 LETHBRIDGE COUNTY FLEET BUDGET 2027 CAPITAL EQUIPMENT PURCHASES				
			SOURCE	
ID #	Project Name	Budget Request	Fleet Equipment Replacement Reserve	Public Works Reserve
	<u>SCHEDULED REPLACEMENTS</u>			
27-FLT-	Replacement Construction Grader	1,000,000	850,000	-
27-FLT-	Replacement Backhoe	350,000	330,000	-
27-FLT-	Replacement of Construction Tractor	550,000	470,000	-
27-FLT-	Replacement of Highway Tractor	250,000	230,000	-
27-FLT-	Replacement of 4 X PW/ASB Trucks 3/4 & 1 Tons	310,000	250,000	-
27-FLT-	Replacement of PW Disc Trailer	75,000	73,000	-
27-FLT-	Replacement of Survey Equipment	75,000	70,000	-
27-FLT-	Replacement of ASB 175hp Tractor	300,000	290,000	-
27-FLT-	Replacement of ASB Side Arm Mower	40,000	35,000	-
27-FLT-	Replacement of ASB Roadside Mower	50,000	45,000	-
27-FLT-	Replacement of ASB Grass Drills	50,000	45,000	-
27-FLT-	Replacement of Spray Patching Truck	450,000	400,000	-
	<u>VEHICLE REPLACEMENT PROGRAM</u>			
27-FLT-	Enterprise Fleet Program - 12 X Crewcab 1/2 ton Truck	780,000	60,000	-
27-FLT-	Enterprise Fleet Program - 1 X SUV	65,000	5,000	-
27-FLT-	Replacement of 2 X Track Skid Steer (Trade in EVCON)	190,000	20,000	-
TOTAL CAPITAL EQUIPMENT REQUEST		\$ 4,535,000	\$ 3,173,000	\$ -

SOURCES OF FUNDING					
E.S. Contingency Reserve	Debentures	Proceeds on Sale of Equipment		Total	
-	-	150,000	\$	1,000,000	
-	-	20,000	\$	350,000	
-	-	30,000	\$	500,000	
-	-	20,000	\$	250,000	
-	-	60,000	\$	310,000	
-	-	2,000	\$	75,000	
-	-	5,000	\$	75,000	
-	-	10,000	\$	300,000	
-	-	5,000	\$	40,000	
-	-	5,000	\$	50,000	
-	-	5,000	\$	50,000	
-	-	50,000	\$	450,000	
-	-	720,000	\$	780,000	
-	-	60,000	\$	65,000	
-	-	170,000	\$	190,000	
\$ -	\$ -	\$ 1,312,000	\$	4,485,000	
				4,485,000	

 LETHBRIDGE COUNTY FLEET BUDGET 2027 CAPITAL EQUIPMENT PURCHASES				
			SOURCE	
ID #	Project Name	Budget Request	Fleet Equipment Replacement Reserve	Public Works Reserve
	<u>SCHEDULED REPLACEMENTS</u>			
28-FLT-	Replacement Divisional Grader	725,000	565,000	-
28-FLT-	Replacement Divisional Grader	725,000	565,000	-
28-FLT-	Replacement of Truck & Plow Equipment	550,000	510,000	-
28-FLT-	Replacement of Scraper Engines (Zero Hour Maint.)	650,000	550,000	-
28-FLT-	Replacement of 1 X PW Construction 3 Ton	110,000	95,000	-
28-FLT-	Replacement of 2 X PW/ASB Trucks 3/4 & 1 Tons	160,000	130,000	-
28-FLT-	Replacement of ASB 150hp Tractor	200,000	190,000	-
28-FLT-	Replacement of ASB Side Arm Mower	80,000	75,000	-
28-FLT-	Replacement of ASB Roadside Mower	60,000	55,000	-
28-FLT-	Replacement of ASB Park Mower	40,000	35,000	-
28-FLT-	Replacement of ASB Wood Chipper	50,000	45,000	-
28-FLT-	Replacement of Equipment Trailer	30,000	29,000	-
	<u>VEHICLE REPLACEMENT PROGRAM</u>			
28-FLT-	Enterprise Fleet Program - 12 X Crewcab 1/2 ton Truck	780,000	60,000	-
28-FLT-	Enterprise Fleet Program - 1 X SUV	65,000	5,000	-
28-FLT-	Replacement of 2 X Track Skid Steer (Trade in EVCON)	200,000	30,000	-
TOTAL CAPITAL EQUIPMENT REQUEST		\$ 4,425,000	\$ 2,939,000	\$ -

SOURCES OF FUNDING					Total
E.S. Contingency Reserve	Debtentures	Proceeds on Sale of Equipment			Total
-	-	160,000			\$ 725,000
-	-	160,000			\$ 725,000
-	-	40,000			\$ 550,000
-	-	-			\$ 550,000
-	-	15,000			\$ 110,000
-	-	30,000			\$ 160,000
-	-	10,000			\$ 200,000
-	-	5,000			\$ 80,000
-	-	5,000			\$ 60,000
-	-	5,000			\$ 40,000
-	-	5,000			\$ 50,000
-	-	1,000			\$ 30,000
-	-	720,000			\$ 780,000
-	-	60,000			\$ 65,000
-	-	170,000			\$ 200,000
\$ -	\$ -	\$ 1,386,000			\$ 4,325,000
					\$ 4,325,000



Capital Equip

Replacement	2022	2023	2024	2025	2026	2027
PUBLIC WORKS						
Grader 870G/160M	625	625	675	675	700	
Grader 872G/160M AWD	625	625	675		700	
Grader 14M						1000
Scraper				550		
Dozer D7					450	
Spray Patching Truck						450
Tractor Construction - 350+hp	500					550
Packer - Steel drum/padfoot						
Packer - pneumatic tire						
Skid steer (Track)	70	75	95	95	95	95
Skid steer (Track)	80	85	95	95	95	95
Track excavator 290				550		
Track excavator 210						
Backhoe						350
Loader		500				
Highway Tractor				250		250
Bellydump gravel trailer			105	105	135	
Tandem		200	325			
Plow/sander		125	175			
Hwy Tractor Winch						
Hwy Tractor Water						
Crew Cab 3/4 ton		140		80	150	150
Crew Cab 1 ton	180		120	80	80	160
Crew Cab Construction 3 ton	90	100				
Service truck						
Water truck						
Triaxle pup						
Trailer (24 wheel)						
Pipe trailer						
Utility trailer (construction)						
Dump trailer (PW/ASB)						
Crack sealant trailer			120			
Equipment trailer		25				
Padfoot - trailer					60	
Disc - trailer						75
Rubber tire - trailer						
Shop Exterior Forklift	100					
Snow Blades and Bucket - Loader						
Rock box Salt Dawg		25				
Portable welder						
Snowblower						
Fuel Pumps	40	40				
Tow Behind Scissor Lift		45				
Trimble GNSS - Surveyor						75
	\$ 2,310	\$ 2,610	\$ 2,385	\$ 2,480	\$ 2,465	\$ 3,250
ASB & Parks						
Mower Tractor 175 HP			300			300
Mower Tractor 150 HP	190					
Mower Tractor 60 HP						
15' Roadside Mowers		50	50	50	50	50
Park Mowers - 72"						
15 ft. Side Arm					40	40
Crew Cab 1 ton					80	
Crew cab 1/2 ton						
Crew cab 3/4 ton			80			
Regular Cab 1 Ton Diesel				100		
3 Ton Spray Truck w/ Deck		90				
SA Spray Truck w/ Deck	230					
UTV - Parks				40		
Wood Chipper						
ASB Disc		65				
Hydroseeder						
Grass Drills						50

Trailers						
	\$ 420	\$ 205	\$ 430	\$ 190	\$ 170	\$ 440
<u>CPO & Fire Services</u>						
CPO - Truck				90		
Fire Services Truck	60					
	\$ -	\$ -	\$ -	\$ 90	\$ -	\$ -
<u>Enterprise Fleet Program</u>						
CAO/Planning - SUV/Truck (1/1)	55	55	60	65	65	65
Assessment/Technical Services- Truck (2)	90	100	120	130	130	130
Public Works/ASB/Utilities - Truck (10)	405	500	600	650	650	650
	\$ 550	\$ 655	\$ 780	\$ 845	\$ 845	\$ 845
TOTAL	\$ 3,280	\$ 3,470	\$ 3,595	\$ 3,605	\$ 3,480	\$ 4,535

oment Forecasting

2028	2029	2030	2031	2032	2033
725	725	725	725	750	750
725	725	725		750	750
650		800			
			700		
				600	
					650
	200	200			
100	100	100	105	105	105
100	100	100	105	105	105
	600				
	210		220		
350			325	325	325
200			175	175	175
				150	150
160	160	160	160	160	160
110	120				
	50				
	30				
	30				
\$ 3,120	\$ 3,050	\$ 2,810	\$ 2,515	\$ 3,120	\$ 3,170
		320	320	320	320
200					
	75				
60	60	60	60	60	60
40					
80	45				
		130			
	260				
50					
				200	200

30					
\$ 460	\$ 440	\$ 510	\$ 380	\$ 580	\$ 580
			90		
80					
\$ -	\$ -	\$ -	\$ 90	\$ -	\$ -
65	70	70	70	70	70
130	130	130	130	130	130
650	700	700	700	700	700
\$ 845	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900
\$ 4,425	\$ 4,390	\$ 4,220	\$ 3,885	\$ 4,600	\$ 4,650

AGENDA ITEM REPORT



Title: Water Pipeline Purchase Borrowing Bylaw 23-016
Meeting: Council Meeting - 01 Jun 2023
Department: Finance and Administration
Report Author: Jennifer Place

APPROVAL(S):

Larry Randle, Interim Chief Administrative Officer

Approved - 31 May 2023

STRATEGIC ALIGNMENT:



Governance



Relationships



Region



Prosperity

EXECUTIVE SUMMARY:

County Council gave first reading of Borrowing Bylaw No. 23-016 at the May 4, 2023 meeting. Since first reading the borrowing bylaw has been advertised for two consecutive weeks and the 15 day petition period has passed per the Municipal Government Act (MGA). Therefore, Council can now move forward with second and third reading of the bylaw.

RECOMMENDATION:

That Water Pipeline Purchase Borrowing Bylaw No. 23-016 be read a second time.

That Water Pipeline Purchase Borrowing Bylaw No. 23-016 be read a third time.

REASON(S) FOR RECOMMENDATION(S):

The following recommendations align with council passing first reading of Bylaw No. 23-016 and is required under the Municipal Government Act in order for a municipality to borrow funds.

BACKGROUND INFORMATION:

On March 13, 2023 McCain Foods announced that they would be implementing a \$600 million expansion to their facility located within Lethbridge County to be operational by January 1, 2025, which will double the size of their existing plant and create 260 jobs. While this news is exciting and generates economic growth within the County, this expansion will also require a significant investment from the County of an 18,300 meter water pipeline installation from Coaldale to the McCain Foods plant.

Pursuant to Section 251(1) of the Municipal Government Act (MGA), "A municipality may only make a borrowing if the borrowing is authorized by a borrowing bylaw".

251(2) A borrowing bylaw must set out:

(a) the amount of money to be borrowed and, in general terms, the purpose for which the money is borrowed;

(b) the maximum rate of interest, expressed as a percentage, the term and the terms of repayment of the borrowing

(c) the source or sources of money to be used to pay the principal and interest owing under the borrowing.

Below are the county's debt limits as per the approved 2022 Year End Financial Statements.

TOTAL DEBT LIMIT	\$46,597,014
TOTAL DEBT	\$14,330,744
UNUSED DEBT LIMIT	\$32,266,270
DEBT SERVCING LIMIT	\$7,766,169
DEBT SERVICING	\$1,373,035
AMOUNT OF DEBT SERVICING LIMIT UNUSED	\$6,393,134

ALTERNATIVES / PROS / CONS:

County Council could decide to not pass second and third reading.

PRO

- There would be no impact to county debt limits or requirement to pay on debt and may indicate to the Province that the project cannot proceed without grant funding support.

CON

- Funds could not be borrowed and the County would have to find another source of funding in order to proceed with the waterline project, which could impact McCain's timelines.
- The County would not be fulfilling its obligation per the agreement with McCain.

FINANCIAL IMPACT:

Borrowing for this project will have an impact on the county's available debt capacity and could limit future borrowing needs or requirements. Additionally, borrowing payments must be funded, therefore the county will need to ensure that there is sufficient tax revenue levied to fund the annual principal and interest payments without creating future cash flow issues and while also not negatively affecting current levels of service.

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform ☒ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

[Bylaw 23-016 - Water Pipeline Purchase Borrowing Bylaw](#)

BYLAW NO. 23-016
OF LETHBRIDGE COUNTY
IN THE PROVINCE OF ALBERTA

A Bylaw of Lethbridge County, in the Province of Alberta authorizing the Council to incur indebtedness by the issuance of debenture(s) up to the amount of \$6,000,000 for the purpose of a Water Pipeline Purchase for within Lethbridge County.

WHEREAS:

The Council of Lethbridge County has decided to issue a bylaw pursuant to Section 258 of the *Municipal Government Act* to authorize the financing to implement the Water Pipeline Purchase project located in Lethbridge County.

Plans and specifications have been prepared and the total cost of the purchase is estimated to be \$6,000,000.00.

Debenture	<u>6,000,000.00</u>
Total Cost	\$6,000,000.00

In order to complete the purchase, it will be necessary for Lethbridge County to borrow up to the sum of \$6,000,000.00 for a period not to exceed 25 years, from the Province of Alberta or an authorized financial institution, by the issuance of debentures and on the terms and conditions referred to in this bylaw.

The estimated lifetime of the product financed under this bylaw is equal to, or in excess of 25 years.

The principal amount of the outstanding debt of Lethbridge County at December 31, 2022 is \$14,330,744 and no part of the principal or interest is in arrears.

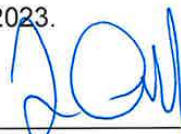
All required approvals for the purchase have been obtained and is in compliance with all *Acts* and *Regulations* of the Province of Alberta.

NOW, THEREFORE, THE COUNCIL OF LETHBRIDGE COUNTY, DULY ASSEMBLED, ENACTS AS FOLLOWS:

1. That for the purpose of purchasing the Water Pipeline to be located in Lethbridge County the sum of up to SIX MILLION DOLLARS (\$6,000,000.00) be borrowed from the Province of Alberta or an authorized financial institution by way of debenture on the credit and security of Lethbridge County at large, of which amount the full sum of \$6,000,000.00 is to be paid by Lethbridge County at large.
2. The proper officers of Lethbridge County are hereby authorized to issue debenture(s) on behalf of Lethbridge County for the amount and purpose as authorized by this bylaw, namely, to implement the Water Pipeline Purchase for use within Lethbridge County.

3. Lethbridge County shall repay the indebtedness according to the repayment structure in effect, namely semi-annual or annual equal payments of combined principal and interest instalments not to exceed TWENTY FIVE (25) years calculated at a rate not exceeding the interest rate fixed by the Province of Alberta, or an authorized financial institution on the date of the borrowing, and not to exceed EIGHT (8) percent.
4. Lethbridge County shall levy and raise in each year municipal taxes sufficient to pay the indebtedness.
5. The indebtedness shall be contracted on the credit and security of Lethbridge County.
6. The net amount borrowed under the bylaw shall be applied only to the project specified by this bylaw.
7. This bylaw comes into force on the date it is passed.

GIVEN first reading this 20th day of April, 2023.



Reeve


Chief Administrative Officer

GIVEN second reading this ____ day of ____, 2023.

Reeve

Chief Administrative Officer

GIVEN third reading this ____ day of ____, 2023.

Reeve

Chief Administrative Officer

Dear Reeve Tory Campbell and Lethbridge County Council,

The Town of Coaldale is hosting our Coaldale Summer Fest and Candy Parade on Saturday, August 12, 2023 with the theme of "Salute to Agriculture 2023". It is always an honor to be able to include our neighbouring communities in our celebrations and to welcome you to our Town.

We would like to cordially invite you to participate in the 2023 Candy Parade in two ways:

1. Mayor or Council Representative:
 - As a VIP, we would like to welcome you to Coaldale by having you ride in style. If you are able to attend our parade, please reply back to parade@coaldale.ca and we will arrange with you VIP transportation if required.
2. Enter a Float to promote your community
 - No entry fee
 - You are welcome to bring wrapped candy to hand out along Candy Parade route
 - Bring volunteers to hand out candy

We hope you can attend our parade and celebrate with us on August 12. Please find attached a registration form which we would invite you to submit by August 2, 2023.

If you have any questions, please contact Erica Romeo at 403-345-1323 or parade@coaldale.ca

We look forward to seeing you on August 12.

Sincerely,

Erica Romeo
Town of Coaldale Summer Fest Parade Committee



**Coaldale Summer Fest
Candy Parade
"Salute to Agriculture 2023"
Registration Form**

SATURDAY, August 12TH, 2023

Parade Lineup and Judging: 9:00AM

Parade Start: 11:00AM

No Entry Fee

Registration Deadline: August 2, 2023

Return to: parade@coaldale.ca

403-345-1323

Feel free to provide individually wrapped candy to hand out along parade route

Parade Lineup is at R.I. Baker School

Organization/Entry Name: _____

Contact Name: _____

Contact Address: _____

City: _____ Province: _____ Postal Code: _____

Phone: _____ Cell: _____ Email: _____

Length of Entry: _____ Height of Entry: _____

Your name, home phone number, home address and postal code are collected under the authority of section 33(c) of the Freedom of Information and Protection of Privacy Act. This information will be used in the administration of Town of Coaldale programs. If you have any questions about this collection, contact the FOIP Coordinator, Town of Coaldale, 1920-17th Street, T1M 1M1 or [403-345-1300](tel:403-345-1300).

Categories (please specify):

- ☐ Children & Youth (children and youth organizations)
- ☐ Comic & Novelty (smaller individual entries that are just for fun)
- ☐ Community & Not-for-Profit Organizations
- ☐ Musical
- ☐ Agricultural
- ☐ Commercial
- ☐ Animals
- ☐ Antique Farm Equipment
- ☐ Antique and Classic Cars

The Coaldale Summer Fest Parade is a Candy Parade – a community event designed to entertain families and visitors in our community. We encourage you to bring candy to hand out to the children along the parade route. If you do decide to bring candy as part of your entry, please provide at least 2 people to hand out the candy along the curbs for the safety of our young parade goers. Please no throwing of candy from your parade entry – safety is our top priority.

**2023 Theme
"Salute to Agriculture 2023"**

Rules and Regulations

REGISTRATION DEADLINE:

August 2, 2023

INSURANCE:

All vehicle entries and animal entries must provide a Certificate of Insurance as evidence that insurance is maintained for your entry and your entry's participants.

All vehicle operators MUST have a valid operator's license.

PROVINCE OF ALBERTA TRAFFIC SAFETY ACT:

The Act applies to all roadways at all times with the exception of the official parade route on the designated date and at the designated time. Quads and golf carts are not permitted on any roadway other than: travelling directly to and from the marshalling area at R.I. Baker; on the designated parade route. Other unregistered vehicles will only be permitted on the parade route. These vehicles must be dropped off and picked up at R.I. Baker School by trailer.

All trailers being used as a float must satisfy The Act while travelling to and from the official parade route start and end site (R.I. Baker).

Field tractors are permitted to travel to and from the official parade route start and end site (R.I. Baker), however, passengers other than permitted by a jump seat are not allowed on the vehicle during transport to and from R.I. Baker.

PARKING:

Please car pool to the marshalling area to avoid congestion and delays in leaving the area after the parade. More details will follow as to where parking will be available.

MARSHALLING AREA:

The marshalling area will be at the R.I. Baker School grounds. We request that all entrants be in the marshalling area and checked in at the Registration Booth no later than 9:30am if you wish your entry to be judged. Judging starts at 9:30am. Ribbons will be handed out at 10:45am.

Please note that safety rules will be reviewed with each entry prior to the parade start and that all instructions made by parade Officials must be obeyed.

***An information email will be sent to you one week prior to parade day with all the information you will need to make the day a success.**

MAXIMUM ENTRY DIMENSIONS:

If your entry exceeds 40 feet in length or 16 feet in height (from ground level), the parade committee will contact you with further information.

JUDGING:

Judging will commence at 9:30am and equine judging will commence at 10:00am.

COMMERICAL ENTRIES:

Commercial and Agricultural entries are welcomed.

For safety reasons, please note that fuel trucks or any road trailers carrying dangerous goods are not permitted to enter the parade.

ALCOHOLIC BEVERAGES AND DRUGS:

Alcohol, cannabis and prohibited drugs are forbidden. Participants whom parade Officials believe have consumed alcohol, cannabis or prohibited drugs prior to or during the parade will be removed and not be accepted in future parades.

SMOKING:

Will not be permitted on any float or horse entry on our parade route.

PARADE POSITION:

Will be chosen by parade Officials at the time of marshalling.

EQUESTRIAN ENTRIES:

Equine entries can be dropped off in the parking lot at R.I. Baker. Please provide your own clean-up crew for any messes at the drop off area, marshalling area and along the parade route.

DECORATING:

Our hope is that all entries be at least 75% decorated. Antique vehicles are exempt.

Parade Safety

1. Due to safety concerns for our young parade goers, it is prohibited to throw candy or other items from a float or vehicle or to use squirting water guns or water balloons. Please distribute candy by having someone walk along side of the float and toss the candy into the crowd.
2. Seat belt Traffic Safety Rules and helmet rules will be relaxed while on the parade route **ONLY**. Skateboarders, rollerbladers, and bikers are **NOT** allowed to be towed by any float or vehicle.
3. Floats utilizing a combustible fuel powered generator or other possible fire hazards must include a minimum 10 lb ABC Chemical Fire Extinguisher.
4. No entry may be more than 16 feet in height (from ground level) and no longer than 40' to be able to navigate the corner at 20th Ave and 15th St.
5. All parade entries must stay on the parade route from start to finish to ensure the safety of the public and to ensure no traffic infractions are incurred as per the Province of Alberta Traffic Safety Act.
6. All trailers being used as a float must satisfy the Province of Alberta Traffic Safety Act while travelling to and from the official parade start and end site (R.I. Baker). Specifically, trailers must adhere to the following: street legal; working lights; license plate; no passengers; no items blowing off the trailer.
7. All riders on floats must be securely seated on the float with all parts of their bodies confined within the float (no feet dangling from float). A safety support or railing on the float would be preferred. Once on the parade route, no one will be allowed to jump onto the float.
8. The ultimate responsibility for safety lies with each individual entry. Entries must comply with all rules and regulations and safety codes. The Town of Coaldale, Parade Committee and staff assume no responsibility in connection with and makes no representation as to the safety of any parade entry, in whole or in part, solely by compliance with the parade rules and regulations.

Checklist

- ☐ Entry at least 75% decorated.
- ☐ If you wish, provide candy to cover entire parade route.
- ☐ Provide walkers to hand out candy along the sides of the road.
- ☐ Insurance policy included
- ☐ Agree to and understand all Rules and Regulations and Parade Safety as stated above.

Name (signature)

Date

Return completed application to:

parade@coaldale.ca

403-345-1323

Photo/Video Authorization and Release

I, _____, of _____, _____,
(print name) (Street Address) (Name of Town) (Province)

authorize The Town of Coaldale, to use: 1. film photographs
2. digital photographs
3. motion picture footage
4. audio recordings of myself, my child/ward in accordance with the
following terms:

THEME OF MATERIALS

The Materials will be recorded and used with the understanding that the content or theme thereof will be the following: To promote the Town of Coaldale, AB as a *preferred community to live, work and play*.

LOCATION

The Materials will be recorded at or around the following location(s): In Coaldale, Alberta, or

(Specific Venue if applicable)

REPRODUCTION AND USE

The Town of Coaldale has the unrestricted right and permission to copyright and use, re-use, publish, and republish the Materials in all forms of media (including printed materials) for art, promotional purposes (including, but not limited to, advertising, publicity, commercial, or display use), illustration, exhibition, editorial, trade, or any other purpose whatsoever. This right extends to both domestic and foreign markets.

RELEASE OF CLAIMS

I hereby relinquish any right that I may have to examine or approve the completed Materials or their use(s).

Further, I hereby release and discharge The Town of Coaldale and all persons functioning under the Towns permission or authority (including, but not limited to, associates, affiliates, officers, agents, advertising agencies, designated directors, employees, and customers) from any claims. This includes claims related to blurring, alteration, distortion, or use in composite form that may occur or be produced in the process of recording, processing, or publishing the Materials, including any claims for libel or invasion of privacy.

I hereby affirm that I am over the age of majority and have the right to contract in my child's name. I have read the above document and I fully understand its contents. This agreement shall be binding upon me and my heirs, legal representatives and assigns.

Dated: _____,
(day) (month) (year)

Signed: _____ Phone: _____

Print Name: _____

Of: _____, Alberta, _____

Your name, home phone number, home address and postal code are collected under the authority of section 33(c) of the Freedom of Information and Protection of Privacy Act. This information will be used in the administration of Town of Coaldale programs. If you have any questions about this collection, contact the FOIP Coordinator, Town of Coaldale, 1920-17th Street, T1M 1M1 or 403-345-1300.



May 11, 2023

Dear Reeve Campbell:

I am once again calling for nominations for my Community Builders Awards, and given your role as the Reeve of Lethbridge County, I am writing to ask if you might be willing to help spread the word and/or nominate someone you know?

Residents of the Lethbridge constituency are invited to nominate anyone who goes above and beyond to make a positive difference in our community.

In the past, this has included community volunteers, farmers, foster parents, educators, artists, athletes, social workers, coaches, entrepreneurs, emergency responders, and many others who go the extra mile to invest in the lives of others and make our community great.

The awards will be presented in four categories: youth leader, community leader, not-for-profit leader, and business leader.

Recipients of the 2023 Community Builders Awards will be chosen by a panel of community members and will be honoured at a special ceremony in the fall.

If your life has been positively impacted by the investment of someone in our community, please nominate them today!

Should you be willing to help spread the word, a poster has been enclosed for display in your organization. For more information, please visit RachaelThomas.ca or contact Dallas at 403.320.0070. **The deadline to submit nominations is Friday, June 16th.**

Please feel free to share this invitation widely.

Sincerely,

Rachael Thomas
Member of Parliament for Lethbridge



RACHAEL THOMAS
MEMBER OF PARLIAMENT

COMMUNITY BUILDER AWARDS

DO YOU KNOW SOMEONE WHO GOES ABOVE
AND BEYOND TO SERVE OUR COMMUNITY?

Join me in celebrating volunteerism in Lethbridge and
nominate a youth, adult, not-for-profit organization, or
business that positively impacts our community!

NOMINATE SOMEONE TODAY!



SCAN HERE
to nominate!

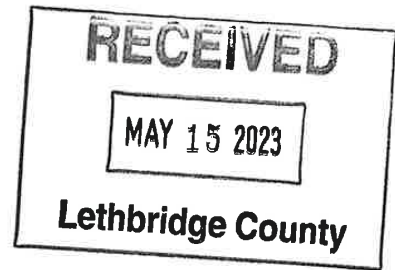


The deadline to submit nominations is 11:59pm MDT on Friday, June 16th.
Apply online: www.RachaelThomas.ca or pick up a nomination form from my office!



May 5, 2023

Reeve & Council
Lethbridge County
100-905 4 Ave S
Lethbridge, AB T1J 4E4



Dear Reeve & Council,

I want to express my sincere gratitude for your donation to STARS. Because of your support, STARS saved my life.

Like many people across Western Canada, my family and I spend summer weekends at a cabin on a lake. The weekend my life would change started like any other with some chores around the lake. As I went about my sunny summer day, I began to feel dizzy, nauseous and had intense chest pain. I collapsed on the dock and as I laid there, all I could think about was my wife and two children. I refused to believe this was the end. I would later learn that I was having a massive heart attack.

With the help of neighbours and my wife Thea, a ground ambulance arrived. Luckily for me an emergency room doctor happened to be at the lake that day and knew that my best chance at survival included STARS, so he advised paramedics to call and request the service. After going into cardiac arrest twice and floating in and out of consciousness, I felt a jolt of electricity and heard STARS flight nurse, Crystal Lybeck, say "welcome back, Wade." I was transported to hospital, underwent emergency surgery and survived thanks to the quick actions of bystanders, local EMS and STARS.

With your \$20,240.00 donation, STARS is able to provide life-saving critical care, anywhere: on the ground, in the air and virtually. Today, I've recovered and I'm enjoying life with my family. We are all so grateful STARS was there for me that day, because of allies like you. Thank you!

Sincerely,
Wade Cassidy
STARS Very Important Patient



403-295-1811 | 1-855-516-4848



1441 Aviation Park NE, Box 570
Calgary, AB T2E 8M7



donations@stars.ca | stars.ca



PLEASE CUT HERE



Shock Trauma Air Rescue Service Foundation

1441 Aviation Park NE, Box 570
Calgary, AB T2E 8M7
stars.ca

Lethbridge County
100-905 4 Ave S
Lethbridge, AB T1J 4E4

Receipt Number: 59526
Date Issued: May 5, 2023
Gift Date\Type: 2023-04-27\Cash
Receipt Amount: \$20,240.00

Business Receipt

Gift Amount: \$20,240.00
Advantage Amount: \$0.00

Per: *Kinda A. J. Cassidy*

Please retain for your records. Charitable registration #81845 9521 RR0001 Canada Revenue Agency Canada.ca/charities-giving. STARS and the STARS logo are trademarks of the Shock Trauma Air Rescue Service. The Shock Trauma Air Rescue Service Foundation is a licensed user.

Dear Mayor and Esteemed Council Members,

I hope this email finds you in good health and high spirits. I am writing to extend a warm invitation to you and the entire council to join us for the annual Ukrainian Day celebration, organized by the Ukrainian Canadian Congress - Alberta Provincial Council (UCC-APC). This highly anticipated event will take place on Sunday, August 20, 2023, at the picturesque Ukrainian Cultural Heritage Village.

Ukrainian Day holds great significance in our community and has been a cherished tradition for over 70 years. It is a joyous occasion where we come together to celebrate Ukrainian culture, heritage, and the vibrant contributions that Ukrainian Canadians have made to our society.

To provide you with more detailed information about the event and the various sponsorship opportunities available, we have attached our Sponsorship Package to this email. Should you have any questions or require further information, please do not hesitate to reach out to our office via phone or email at info@uccab.ca.

On behalf of the UCC-APC Ukrainian Day Committee, I extend our heartfelt thanks for considering our invitation. We truly hope that you and your esteemed council members will be able to join us in celebrating Ukrainian culture, heritage, and community spirit.

Thank you for your attention, and we look forward to the honor of your presence at Ukrainian Day.

UCC-APC Ukrainian Day Committee

Orysia Boychuk, President

Ukrainian Canadian Congress – Alberta Provincial Council

[Click here to subscribe to our e-newsletter!](#)

Follow us on [Facebook](#) and [Instagram](#)

Contact us:

#8, 8103 127 Avenue
T5C 1R9, Edmonton, AB
(780)414-1624



Ukrainian Day *Opening our Hearts*

August 20, 2023

SPONSORSHIP & ADVERTISING OPPORTUNITIES!

On Sunday, August 20th 2023, the UCC-APC will be celebrating our annual Ukrainian Day at the Ukrainian Cultural Heritage Village. This annual festival has been a signature community event for over 70 years!

The festival includes several activities, talent showcases, and commemorative events promoting and celebrating Ukrainian-Albertan heritage and culture. The event will feature a Music Jam, Cheremosh & Tryzub dancers, choirs, food vendors, presentations, children's activities, displays and much more!

We encourage you to show your support of the Ukrainian-Canadian community, the largest population of Ukrainians outside of Ukraine itself, especially during this time of Russia's invasion of Ukraine. Ukrainian Day is a unique opportunity to showcase your organization, business or services to a large, diverse audience. A chance to show your community spirit and caring, while at the same time fostering brand recognition throughout the Ukrainian community. All sponsors will be profiled to maximum capacity by UCC-APC.

You can show your support of Alberta's vibrant Ukrainian community at one of several different levels of sponsorship. All Ukrainian Day sponsors will be acknowledged. In addition, each level of sponsorship has a wide variety of profile and marketing opportunities.

All sponsors will be provided with:

- Logo and recognition on UCC-APC website, e-Bulletins, program booklet and media releases
- Prominent signage at Ukrainian Day (sponsor to provide banner)
- Announcements and recognition of sponsorship by the Emcee at the Showcase Concert
- Opportunity to distribute corporate marketing item/brochure (must be approved by the UCC-APC)
- Acknowledgement in the UCC-APC newsletter article about Ukrainian Day.

A. 2022 Ukrainian Day Presenting Sponsor \$5,000

The Presenting Sponsorship is a unique opportunity for a company/organization to attach its name and reputation to an important annual event and be associated with the broader community in Alberta. This is a co-branding opportunity with the potential for lasting recognition and offers the chance for your corporate/organization name and logo to be prominently melded into all 2022 Ukrainian Day advertising and promotion. In addition to the promotional and advertising opportunities previously mentioned, you will also receive:

- **Naming opportunity of the event, i.e. UCC-APC and 'your company' present Ukrainian Day 2023**
- **Opportunity to use 'Ukrainian Day Sponsor' on your promotional and advertising materials**
- **Opportunity to develop a special marketing item/component at the Ukrainian Day event**
- **Link from the UCC-APC website to your organization's website**
- **First right of refusal for next year's presenting sponsorship**
- **Corporate Logo on an email announcement acknowledging and promoting the sponsorship (5000+)**
- **Your corporate logo on all our emails promoting the event, broadcast directly to over 5000 contacts (targeted to community leaders, local business, individuals and media)**
- **Logo on the cover of the Ukrainian Day program book, 3000+ distributed at the event and mailed around Alberta**
- **Full page ad in the Ukrainian Day program book (3000+ copies)**
- **Corporate Logo on an e-Bulletin announcement acknowledging and promoting the sponsorship (5000+)**
- **Half page ad in the UCC-APC newsletter, distributed to 1500+ contacts**
- **Special VIP luncheon with unique entertainment**

B. 2022 Ukrainian Day Concert Showcase Sponsor \$3,000



This Sponsor receives many benefits from sponsoring the headline event of the afternoon at Ukrainian Day, the Ukrainian Showcase performance. In addition to the promotional and advertising opportunities previously mentioned, you will also receive:

- **Opportunity to use 'Ukrainian Day Sponsor' on your promotional and advertising materials**
- **Link from the UCC-APC website to your organization's website**
- **First right of refusal for next year's concert sponsorship**
- **Opportunity for corporate/organization name and logo to be displayed on the main stage (banner to be provided by the sponsor)**
- **Your corporate logo on all our emails promoting the event, broadcast directly to over 5000 contacts (targeted to community leaders, local business, individuals and media)**
- **Logo on the acknowledgement page in the Ukrainian Day program book (3000+)**
- **Half page ad in the Ukrainian Day program book (3000+ copies)**
- **Corporate Logo on an e-Bulletin announcement acknowledging and promoting the sponsorship (5000+)**
- **Quarter page ad in the UCC-APC newsletter, distributed to 1500+ contacts, and on-line**
- **Special VIP luncheon with unique entertainment**

C. 2022 Ukrainian Day

Silver Sponsor

\$2,000

This sponsor will receive many benefits and prominent positioning of your organization's name and logo on all Ukrainian Day promotion and advertising materials. In addition to the opportunities mentioned above, you will also receive:

- Opportunity to use 'Ukrainian Day Sponsor' on your promotional and advertising materials
- Link from the UCC-APC website to your organization's website
- Your corporate logo on all our emails promoting the event, broadcast directly to over 5000 contacts (targeted to community leaders, local business, individuals and media)
- Logo on the acknowledgement page in the Ukrainian Day program book 3000+
- Half page ad in the Ukrainian Day program book (3000+ copies)
- Acknowledgement in the UCC-APC newsletter, distributed to 1500+ contacts, and online

D. 2022 Ukrainian Day

Bronze Sponsor

\$750

For your sponsorship of this special event, you will receive positioning of your organization as follows:

- Your corporate logo on all our emails promoting the event, broadcast directly to over 5000 contacts (targeted to community leaders, local business, individuals and media)
- Logo on the acknowledgement page in the Ukrainian Day program book (3000+)
- Quarter page ad in the Ukrainian Day program book (3000+ copies)
- Logo and recognition on the UCC-APC website
- Announcements and recognition of sponsorship by the Emcee at the Showcase Concert
- Prominent on site signage
- Acknowledgement in the UCC-APC newsletter article about Ukrainian Day, and on-line

E. 2022 Ukrainian Day

Activity Sponsor

\$500

Businesses and organizations also have an opportunity to sponsor a specific component of Ukrainian Day 2022. Activity areas include:

- Stage Sponsor
- Arts and Crafts Sponsor
- Market Sponsor
- Children's activities and games

For your sponsorship of this special component, you will receive positioning of your organization as follows:

- Quarter page ad in the Ukrainian Day program book (3000+ copies)
- Logo and recognition on the UCC-APC website
- Prominent Signage at the sponsorship area (banner to be provided by the sponsor)
- Recognition on the acknowledgement page of the Ukrainian Day program book
- Acknowledgement in UCC-APC newsletter article about Ukrainian Day, and on-line.

F. In-Kind Sponsor

To mount any event there are many needs and opportunities for businesses to provide in-kind support for items such as:

- Decorations
- Tents
- Design of Promotional Materials
- Printing of Promotional Materials
- Technical equipment and support

If you are interested in an in-kind sponsorship, recognition will be provided at the level of support provided - in Program booklet, website, e-Bulletin. Please contact our office for more details.

UCC-AB Provincial Council
#8, 8103-127 Ave, Edmonton, T5C 1R9
community@uccab.ca
(780) 414-1624

**The Ukrainian Day Souvenir
Program Booklet
Advertising Opportunities!
Printed in full colour!**

The Ukrainian Day Booklet is distributed free of cost to all attendees during annual Ukrainian Day festivities.

Advertising rates:

Taxes do not apply to prices!

Full page

$7\frac{1}{4}'' \times 9\frac{1}{4}'' = \800

Half page

$3\frac{1}{2}'' \times 9\frac{1}{4}''$ or $7\frac{1}{4}'' \times 4\frac{1}{2}'' = \535

Quarter page

$3\frac{1}{2}'' \times 4\frac{1}{2}'' = \325

Business card

$3\frac{1}{2}'' \times 2'' = \190

DEADLINES:

Ad space reservation - **July 5, 2023**

Ad material submission – **July 15, 2023**

** Orders received after the deadline will only be accepted based on space availability*