Agenda

Council Meeting | Thursday, October 17, 2024 | 9:30 AM | Council Chambers

Page

A. CALL TO ORDER

B. ADOPTION OF AGENDA

C. ADOPTION OF MINUTES

4 - 8 1. **County Council Meeting Minutes**
Council Meeting - 03 Oct 2024 - Minutes

D. SUBDIVISION APPLICATIONS

9 - 16 1. **Subdivision Application #2024-0-127 – MS Maclean Livestock – Lot 2, Block 5, Plan 221 1230 within NW1/4 06-10-20-W4M**
Subdivision Application #2024-0-127 – MS Maclean Livestock – Lot 2, Block5, Plan 221 1230 within NW1/4 06-10-20-W4M

17 - 26 2. **Subdivision Application #2024-0-131 – Horvath - Lot 2, Block 1, Plan 1410472 and Lot 3, Block 2, Plan 2310062 within E1/2 26-9-21-W4M**
Subdivision Application #2024-0-131 – Horvath - Lot 2, Block 1, Plan 1410472 and Lot 3, Block 2, Plan 2310062 within E1/2 26-9-21-W4M

E. DELEGATIONS

27 - 51 1. **11:00 a.m. - County of Lethbridge Community Learning Council - Melanie Patenaude**
Presentation

F. DEPARTMENT REPORTS

F.1. DEVELOPMENT & INFRASTRUCTURE

52 - 78 F.1.1. **Bylaw 24-017 - Re-designate Plan 1711734 Block 2 Lot 3 in the SW 14-9-22-W4 from Direct Control (Bylaw 1456) to Direct Control (Bylaw 24-017)- First Reading**
Bylaw 24-017 - Re-designate Plan 1711734 Block 2 Lot 3 in the SW 14-9-22-W4 from Direct Control (Bylaw 1456) to Direct Control (Bylaw 24-017)- First Reading - Pdf

79 - 275 F.1.2. **Bylaw 24-013 - Amendment to the Edgewood Stables Area Structure Plan (Bylaw 1362)- First Reading**
Bylaw 24-013 - Amendment to the Edgewood Stables Area Structure Plan (Bylaw 1362)- First Reading

276 - 293 F.1.3. **Capital Projects Update**
Capital Projects Update

F.2. CORPORATE SERVICES

294 - 313 F.2.1. **St. Joseph School Sponsorship Request - Esports Program Development 2024**
St. Joseph High School Sponsorship Request - Esports Program Development 2024

F.3. ADMINISTRATION

314 - 319 F.3.1. **Request for Sponsorship - Agri-food Innovation Expo - November 26 - 28, 2024**
Request for Sponsorship - Agri-food Innovation Expo - November 26 - 28, 2024

G. CORRESPONDENCE

320 1. **Alberta Municipal Affairs**
Alberta Municipal Affairs

321 2. **Legion Remembrance Day Parade & Service**
Legion Remembrance Day Parade & Service

H. COUNTY COUNCIL AND COMMITTEE UPDATES

322 - 325 1. **Lethbridge County Council Attendance Update - September 2024**
Lethbridge County Council Attendance Update - September 2024

I. NEW BUSINESS

J. CLOSED SESSION

1. **Chinook Intermunicipal Subdivision and Development Appeal Board - Board Appointment *(FOIP Section 19 - Confidential Evaluations)***
2. **Regional Emergency Management Partnership Agreement *(FOIP Section 21 - Disclosure harmful to intergovernmental relations)***
3. **CAO Report - C. Beck (*FOIP Sections 16, 17, 23 and 24)***

K. ADJOURN

Minutes

Council Meeting | Thursday, October 3, 2024 | 9:00 AM | Council Chambers

The Council Meeting of Lethbridge County was called to order on Thursday, October 3, 2024, 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 Kevin Slomp
Councillor Klaas VanderVeen
Chief Administrative Officer Cole Beck
Director, Development & Infrastructure Devon Thiele
Director, Corporate Services Jennifer Place
Director, Operations Ryan Thomson
Executive Assistant Candice Robison
Manager, Planning & Development Hilary Janzen
Senior Planner Steve Harty

A. CALL TO ORDER

Reeve Tory Campbell called the meeting to order at 9:00 a.m.

Reeve Campbell read the following land acknowledgement:
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.

B. ADOPTION OF AGENDA

603-2024 | Deputy Reeve Kuerbis | MOVED that the October 3, 2024 Lethbridge County Council Meeting Agenda be adopted as presented.

CARRIED

C. ADOPTION OF MINUTES

C.1. *County Council Meeting Minutes*

604-2024 | Councillor Sayers | MOVED that the September 19, 2024 Lethbridge County Council Minutes be adopted as presented.

CARRIED

D. SUBDIVISION APPLICATIONS

D.1. *Subdivision Application #2024-0-116 – Fehr - SW1/4 15-10-19-W4M*

605-2024 | Deputy Reeve Kuerbis | MOVED that the Country Residential subdivision of SW1/4 15-10-19-W4M (Certificate of Title No. 201 233 663), to subdivide a 4.99 acre (2.02 ha) first parcel out farmstead subdivision from a title of 154.04 acres (62.34 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 Survey to illustrate the exact dimensions and parcel size of the proposed parcel as approved.
4. That any easement(s) as required by utility companies, or the municipality shall be established..

CARRIED

D.2. ***Subdivision Application #2024-0-115 – Cage***
- Lot 8, Block 3, Plan 1212032 within SW1/4 1-9-21-W4M

606-2024 Councillor Sayers

MOVED that the Country Residential subdivision of Lot 8, Block 3, Plan 1212032 within SW1/4 1-9-21-W4M (Certificate of Title No. 131 268 045), to create two (2) lots, 2.43 and 3.70 acres (0.985 and 1.499 ha) each respectively in size, from a title comprised of 6.13 acres (2.48 ha), for grouped 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 provide, at their expense a legal shared access easement(s) agreement to the satisfaction of the Subdivision Authority, to be registered to accommodate the sharing of the area for driveway accesses (along pan-handles) that straddle the common shared property line between the proposed lots as a result of subdivision, to be registered concurrently with the final endorsement of the subdivision.
4. The applicant is responsible for satisfying the County in regard to addressing drainage and receiving final approval from Lethbridge County regarding storm water drainage or lot grading with respect to consideration of the Malloy Drain Master Drainage Plan. The applicant may be required to provide additional engineering details or updates to the storm water management plan, as requested by the County.
5. That the applicant provides a final Plan of subdivision prepared by an Alberta Land Surveyor that corresponds to the approval of the Subdivision Authority.
6. That any easement(s) as required by utility agencies shall be established prior to finalization of the application.
7. That any conditions or requirements as required by Alberta Transportation shall be provided prior to finalization.

CARRIED

D.3. ***Subdivision Application #2024-0-122 – Van Diemen Poultry***
- Lot 1, Block 1,Plan 1910907 within SW¼ 4-12-19-W4M

607-2024 Councillor VanderVeen

MOVED that the Country Residential subdivision of Lot 1, Block 1, Plan 1910907 within SW1/4 4-12-19-W4M (Certificate of Title No. 211 004 103 +1), to create a 6.00 acre (2.43 ha) farm yard parcel from a cutoff/fragmented quarter-section title comprised of 78.68 acres (31.84 ha) for country residential use; BE APPROVED subject to the following:

RESERVE: The 10% reserve requirement, pursuant to Sections 666 and 667 of the Municipal Government Act, be provided as money in place of land on the 6.00-acres at the market value of $10,000 per acre with the actual acreage and amount (approx. $6,000) 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.
3. That the applicant provide a final plan of survey by a certified Alberta Land Surveyor to illustrate the exact dimensions and parcel size of the parcel as approved.
4. That any easement(s) as required by utility companies, or the municipality shall be established.

CARRIED

D.4. ***Subdivision Application #2024-0-117 – Mercer - SW1/4 33-09-21-W4M & NW1/4 28-09-21-W4M***

608-2024 Councillor Hickey MOVED that the Agricultural and Country Residential subdivision of SW1/4 33-9-21-W4M & NW1/4 28-9-21-W4M (Certificate of Title No. 231 239 107, 231 239 107 +1), to subdivide and reconfigure two existing adjacent agricultural parcels through subdivision and consolidation, by adjusting titles 46.36 & 95.10 acres (18.7 & 38.48 ha) each respectively in size, and create two new titles at 4.99 & 136.47 acres (2.02 & 55.23 ha), for county residential and agricultural 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 4.99-acres at the market value of $15,000 per acre with the actual acreage and amount (approx. $7,485) 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.
3. That the applicant provides a professional soils analysis and report, to the satisfaction of the Subdivision Authority, to verify soil suitability on the 4.99-acre lot for a private on-site septic system.
4. That the applicant submits a surveyed plan as prepared by an Alberta Land Surveyor that certifies the exact location and dimensions of the parcels being subdivided. The titles and portions of land to be subdivided and consolidated to reconfigure the boundaries (property line) of the adjacent parcels, are 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.
5. That any easement(s) as required by utility companies, or the municipality shall be established.

CARRIED

E. DEPARTMENT REPORTS

E.1. DEVELOPMENT & INFRASTRUCTURE

E.1.1. ***Bylaw 24-016 - Re-designate Plan 9011051 Block 1 Lot 1 in the SE 30-9-22-W4 from Rural Agriculture to Rural General Industrial- First Reading***

609-2024 Deputy Reeve Kuerbis MOVED that Bylaw 24-016 be read a first time.

CARRIED

E.1.2. ***Speed Limit Reduction Request***

610-2024 Councillor VanderVeen MOVED that administration send a letter in response;.
CARRIED

E.1.3. ***Town of Coalhurst ACP Application Letter of Support: Regional Recreational Pathway Study***

611-2024 Deputy Reeve Kuerbis MOVED that County Council supports the Town of Coalhurst's (managing partner) submission of a 2024/25 Alberta Community Partnership grant application in support of the Regional Recreational Pathway Study project. There is no matching contribution required.
CARRIED

Reeve Campbell recessed the meeting at 9:49 a.m.

Reeve Campbell reconvened the meeting at 10:01 a.m.

F. PUBLIC HEARINGS - 10:00AM

Reeve Campbell called a recess to the Council Meeting, for the Public Hearing for Bylaw 24-015 at 10:02 a.m.

F.1. ***Bylaw 24-015 - Re-designate a portion of the SW 1-10-22-W4 from Rural Agriculture to Rural Recreation - Public Hearing***

612-2024 Deputy Reeve Kuerbis MOVED that the Public Hearing for Bylaw 24-015 commence at 10:02 a.m.
CARRIED

The Manager, Planning and Development reviewed Bylaw 24-015.

Reeve Campbell asked if anyone wished to speak in favour or opposition of Bylaw 24-015.

No comments were made.

613-2024 Councillor VanderVeen MOVED that the Public Hearing for Bylaw 24-015 adjourn at 10:10 a.m.
CARRIED

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

614-2024 Deputy Reeve Kuerbis MOVED that Bylaw 24-015 be read a second time.
CARRIED

615-2024 Councillor VanderVeen MOVED that Bylaw 24-015 be read a third time.
CARRIED

F.1. CORPORATE SERVICES

F.1.1. ***Tax Penalty Waiver Request - Albion Ridge Farms Ltd.***

616-2024 Councillor VanderVeen MOVED that Council not waive tax penalties in the amount of $400.31 as requested for the 2024 tax rolls titled to Albion Ridge Farms Ltd.
CARRIED

G. CORRESPONDENCE

G.1. ***Covenant Foundation - Harvest Moon Ball Sponsorship***

Council reviewed information from the Covenant Foundation regarding their annual Harvest Moon Ball being held on October 19, 2024.

G.2. ***MD of Willow Creek - 31st Legacy of Our Land Banquet***

Council reviewed an invitation from the MD of Willow Creek regarding their 31st Legacy of Our Land Banquet being held on November 1, 2024.

Reeve Campbell recessed the meeting at 10:25 a.m.

Reeve Campbell reconvened the meeting at 10:33 a.m.

H. NEW BUSINESS

I. CLOSED SESSION

I.1. CAO Report - C. Beck (FOIP Sections 16, 17, 23 and 24)

617-2024 Councillor VanderVeen MOVED that the Lethbridge County Council Meeting move into Closed Session, pursuant to Section 197 of the Municipal Government Act, the time being 10:34 a.m. for the discussion on the following:

I.1. CAO Report - C. Beck (FOIP Sections 16, 17, 23 and 24)

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

CARRIED

618-2024 Councillor Hickey MOVED that the Lethbridge County Council Meeting move out of the closed session at 12:07 p.m.

CARRIED

J. ADJOURN

619-2024 Councillor Sayers MOVED that the Lethbridge County Council Meeting adjourn at 12:07 p.m.

CARRIED

_____
Reeve

_____
CAO

AGENDA ITEM REPORT

Title:	Subdivision Application #2024-0-127 – MS Maclean Livestock – Lot 2, Block 5, Plan 221 1230 within NW1/4 06-10-20-W4M
Meeting:	Council Meeting - 17 Oct 2024
Department:	ORRSC
Report Author:	Steve Harty

APPROVAL(S):

Hilary Janzen, Manager, Planning & Development	Approved - 04 Oct 2024
Devon Thiele, Director, Development & Infrastructure	Approved - 07 Oct 2024
Cole Beck, Chief Administrative Officer	Approved - 08 Oct 2024

STRATEGIC ALIGNMENT:

Governance	Relationships	Region	Prosperity
☐	☐	☐	☒

EXECUTIVE SUMMARY:

This application is to subdivide a vacant 3.00-acre parcel from a ¼-section title of 154.12-acres for country residential use. The proposal does meet the subdivision criteria of the Land Use Bylaw.

RECOMMENDATION:

That S.D. Application #2024-0-127 be approved subject to the conditions as outlined in the draft resolution.

REASON(S) FOR RECOMMENDATION(S):

It is the first subdivision from the ¼-section and meets the provincial Subdivision and Development Regulations and the municipal bareland (vacant) subdivision policies as stated in the Land Use Bylaw.

PREVIOUS COUNCIL DIRECTION / POLICY:

- The proposal is eligible for subdivision consideration as a bareland (vacant) first subdivision as per the policies of Land Use Bylaw No. 24-007.
- The County reintroduced subdivision criteria in the 2013 Land Use Bylaw (Bylaw No. 1404) to allow bareland (vacant) parcel subdivisions in order to support landowners to obtain financing for land or residences, as mortgages are registered against a title of land. These policies remain in current LUB No. 24-007.
- The application complies with the subdivision criteria of LUB No. 24-007, and the proposed 3.0 acre parcel size conforms to the bylaw's minimum 2.0 to maximum 3.0 acre vacant parcel size.

BACKGROUND INFORMATION:

Located 3-miles northeast of the City of Lethbridge, ½-mile northwest of Eight Mile Lake. The application is to subdivide the northwest dry corner to establish a future yard.

The proposed vacant parcel is located adjacent to the west municipal road allowance with an existing approach already in place. The parcel boundary will be angled on the southeast side to account for the irrigation pivot on the land. Water is to be provided by a water well and sewage is proposed to be treated by an individual on-site private septic system. A professionally soil analysis will need to be submitted to verify the suitability of the land for an onsite septic system. There are no abandoned gas wells located in proximity to this proposal and there are no identified environmental or historical features present that require consideration. There is a poultry operation (CFO) located to the west with a permit for 97,000 broilers. An MDS of 160 m is needed for an expanding operation, and over 490 m exists to the northwest corner of the proposal.

Overall, the proposal conforms to the LUB No. 24-007 subdivision policies as the first subdivision for a vacant (bareland) parcel not to exceed 3.0-acres in size. The application was circulated to required external agencies and no comments were received, or easements requested (at time of agenda report).

ALTERNATIVES / PROS / CONS:

The Subdivision Authority could decide to not approve if it is not satisfied the subdivision is suitable.

Pros:

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

Cons:

- a refusal would likely be appealed by the applicants as the County's subdivision criteria have been met.

FINANCIAL IMPACT:

None, but the County will benefit from future taxes for a dwelling and country residential yard.

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

5A Lethbridge County 2024-0-127 Approval
Diagrams 2024-0-127

RESOLUTION

2024-0-127

Lethbridge County **Country Residential** subdivision of Lot 2, Block 5, Plan 2211230 within NW1/4 6-10-20-W4M

THAT the Country Residential subdivision of Lot 2, Block 5, Plan 2211230 within NW1/4 6-10-20-W4M (Certificate of Title No. 221 175 323), to subdivide a 3.00-acre (1.21 ha) vacant parcel subdivision from a ¼-section title of 154.12-acres (62.37 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 final plan of survey as prepared by an Alberta Land Surveyor that corresponds to the approved parcel configuration and size being subdivided.
4. That the applicant has a professional soils analysis and report completed for the new 3.00 acre parcel to demonstrate suitability of a private on-site septic treatment system on the land, with results to be as determined satisfactory to the Subdivision Authority.
5. That any easement(s) as required by utility companies or the municipality, as deemed necessary, shall be established 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 vacant parcel 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. As the first subdivision from the ¼-section, the proposed 3.00-acre parcel size conforms to the land use bylaw's minimum 2.0-acre and maximum 3.00-acre vacant parcel size criteria and overall, the application conforms to the County's subdivision policies.
4. No objection or concerns have been received regarding the application and the proposed parcel meets the applicable minimum distance separation to the closest confined feeding operation in proximity.

INFORMATIVE:

(a) Since the proposed subdivision complies with Section 663(a) 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.

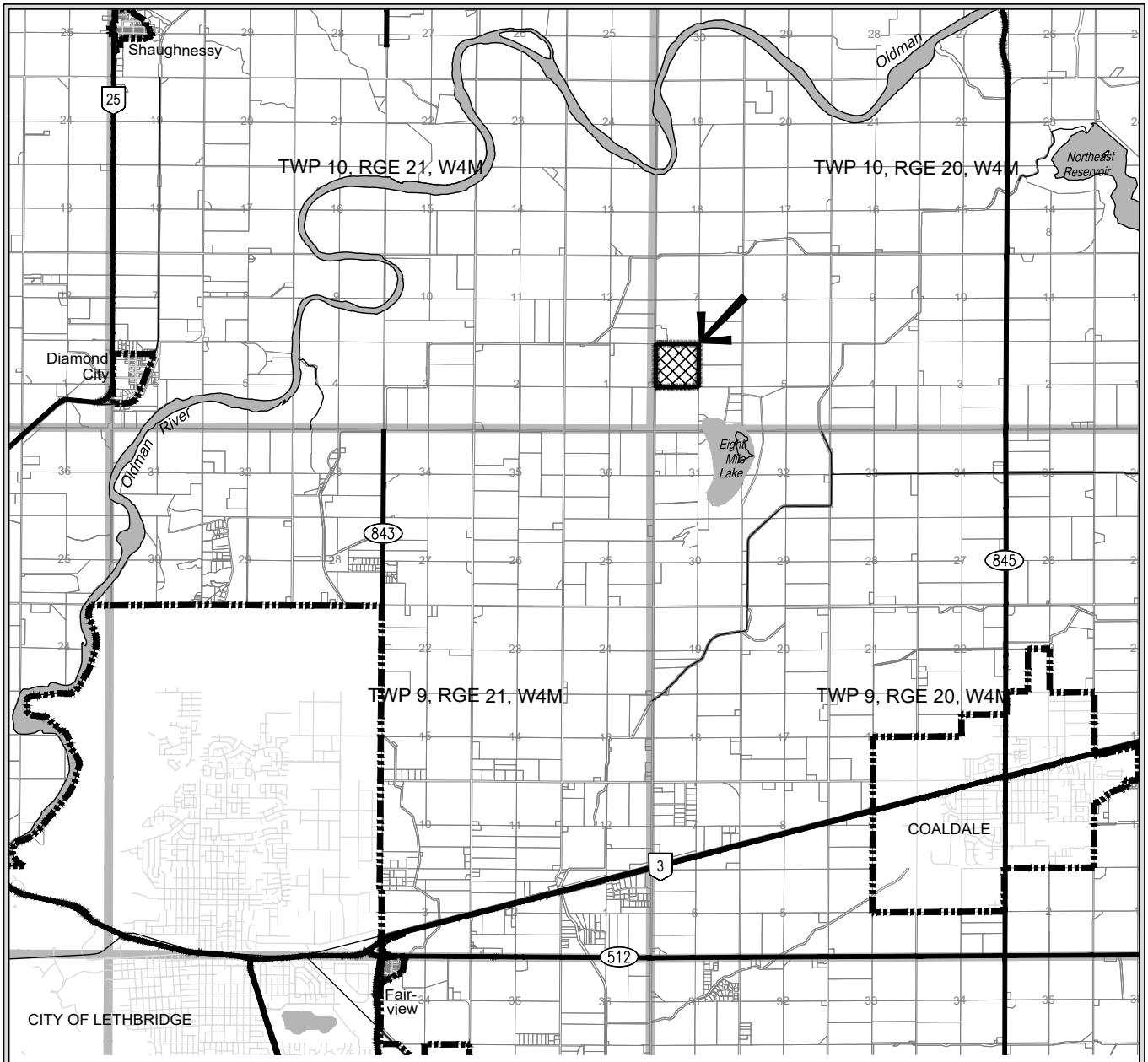
(c) The applicant/owner is advised that other municipal, provincial or federal government or agency approvals may be required as they relate to the subdivision and the applicant/owner is responsible for verifying and obtaining any other approval, permit, authorization, consent or license that may be 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.)

_____ _____

MOVER REEVE

_____

DATE

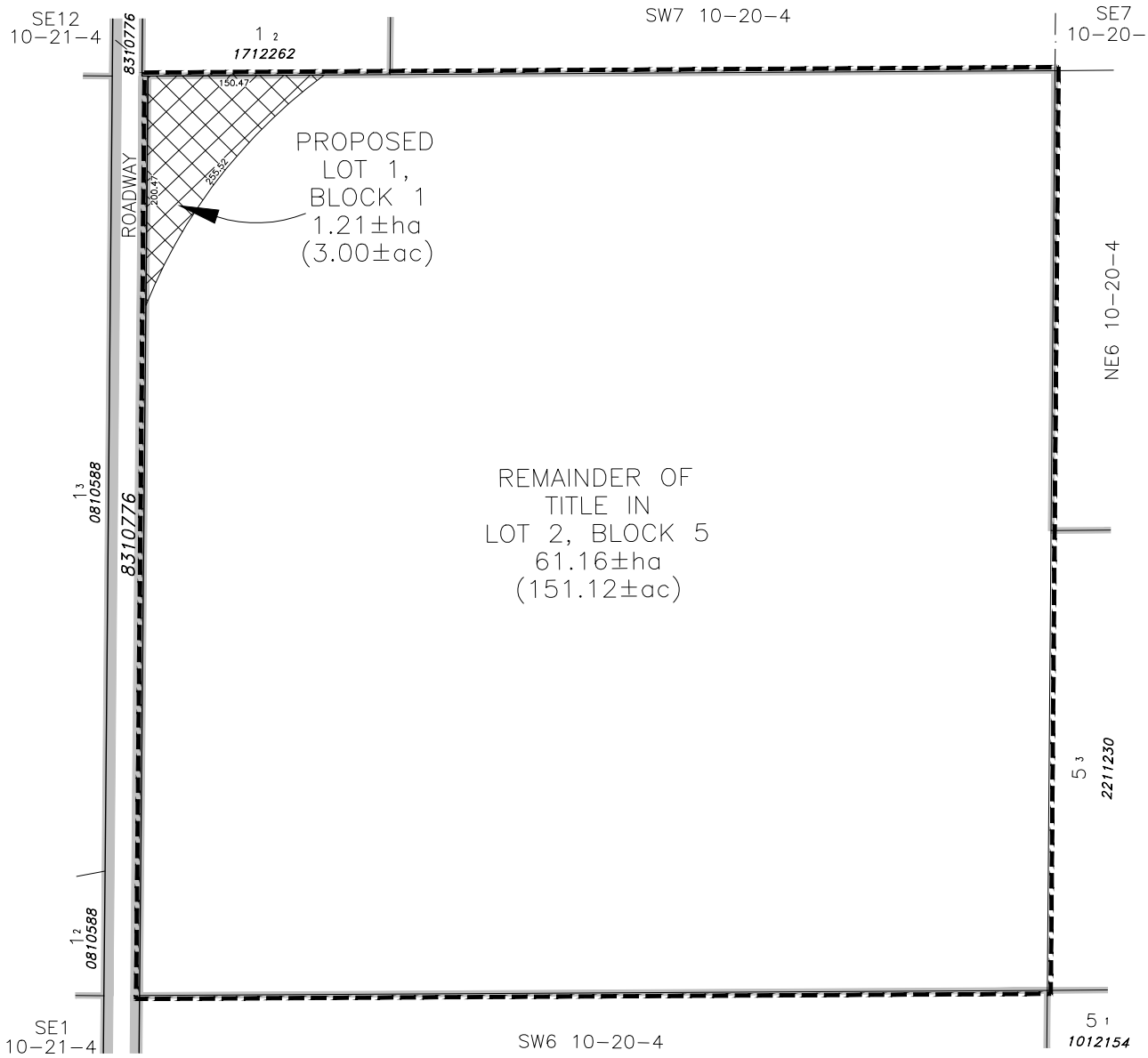


SUBDIVISION LOCATION SKETCH
LOT 2, BLOCK 5, PLAN 2211230 WITHIN
NW 1/4 SEC 6, TWP 10, RGE 20, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: SEPTEMBER 9, 2024
FILE No: 2024-0-127

MAP PREPARED BY:
OLDMAN RIVER REGIONAL SERVICES COMMISSION
3105 16th AVENUE NORTH, LETHBRIDGE, AB T1H 5E8
"NOT RESPONSIBLE FOR ERRORS OR OMISSIONS"

OLDMAN RIVER REGIONAL SERVICES COMMISSION

September 09, 2024 N:\Subdivision\2024\2024-0-127.dwg



SUBDIVISION SKETCH

See tentative plan of subdivision by Brown Okamura & Associates Ltd. file no. 24-16387T

LOT 2, BLOCK 5, PLAN 2211230 WITHIN
NW 1/4 SEC 6, TWP 10, RGE 20, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: SEPTEMBER 9, 2024
FILE No: 2024-0-127

OLDMAN RIVER REGIONAL SERVICES COMMISSION

0 Metres 100 200 300 400

September 09, 2024 N:\Subdivision\2024\2024-0-127.dwg

SUBDIVISION SKETCH

See tentative plan of subdivision by Brown Okamura & Associates Ltd. file no. 24-16387T

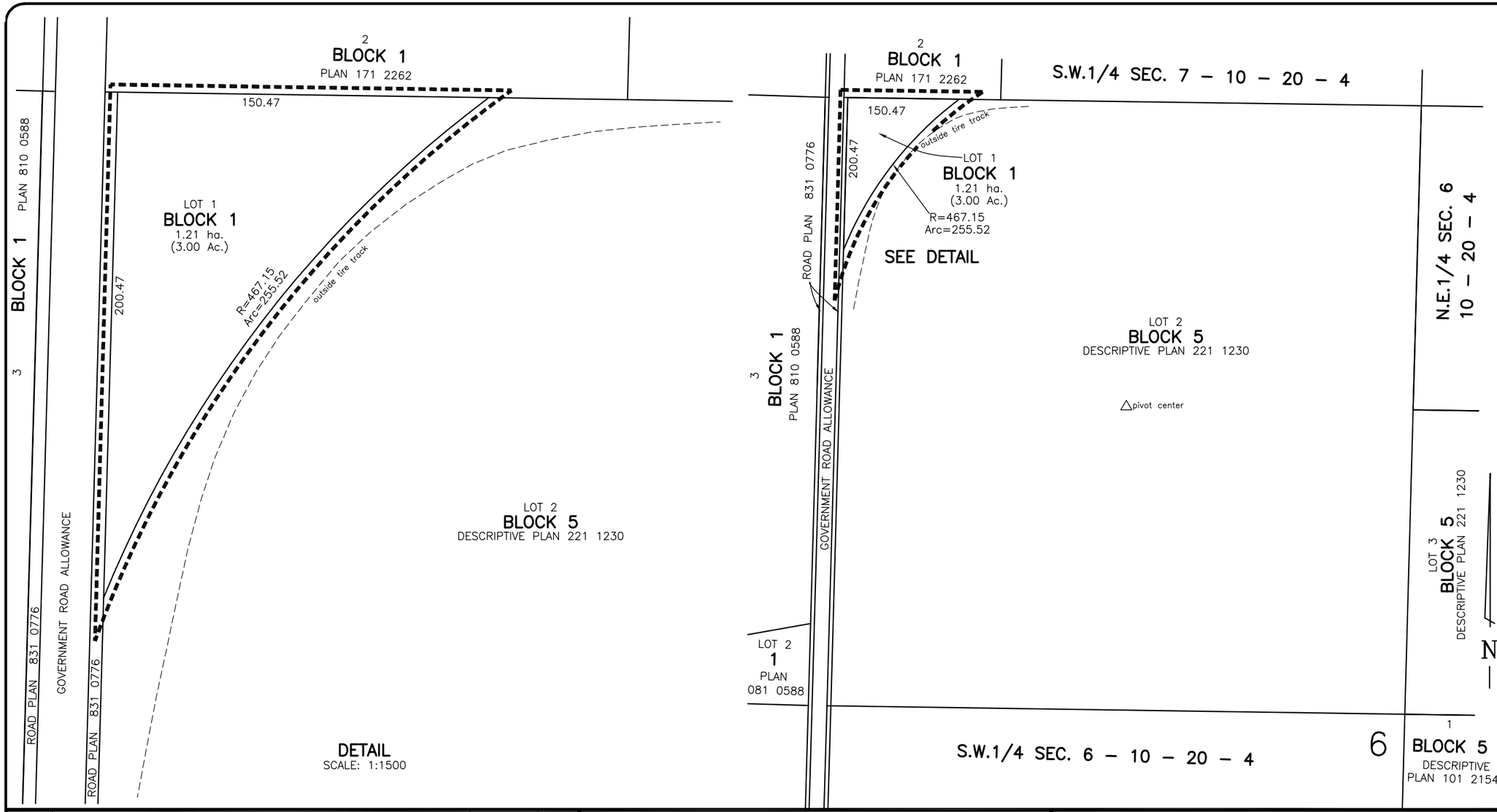
LOT 2, BLOCK 5, PLAN 2211230 WITHIN
NW 1/4 SEC 6, TWP 10, RGE 20, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: SEPTEMBER 9, 2024
FILE No: 2024-0-127

OLDMAN RIVER REGIONAL SERVICES COMMISSION

0 Metres 100 200 300 400

September 09, 2024 N:\Subdivision\2024\2024-0-127.dwg

AERIAL PHOTO DATE: 2018



NO.	REVISION	DATE	BY
2	RREVISED LOT SIZE	AUG. 26/24	CJB
1	RREVISED LOT SIZE	JUNE 6/24	CJB

Improvements shown were surveyed on June 5th, 2024

NOTE : Portion to be approved is outlined thus ▬▬▬▬▬▬▬▬
and contains approximately 1.21 ha.
Distances are in metres and decimal parts thereof.

Distances and areas are approximate and are subject to change upon final survey.

M S MACLEAN LIVESTOCK CO. LTD.

TENTATIVE PLAN SHOWING SUBDIVISION
of part of
LOT 2; BLOCK 5; DESCRIPTIVE PLAN 221 1230
all within
N.W.1/4 SEC. 6; TWP. 10; RGE. 20; W.4 M.
LETHBRIDGE COUNTY

brown okamura & associates ltd.
Professional Surveyors
2830 – 12th Avenue North, Lethbridge, Alberta

APPROVED	DRAWN CJB	DATE MAY 2/24
	CHECKED TCP	JOB 24–16387
T. C. Penner, A.L.S.	SCALE 1:5000	DRAWING 24–16387T

AGENDA ITEM REPORT

Title:	Subdivision Application #2024-0-131 – Horvath - Lot 2, Block 1, Plan 1410472 and Lot 3, Block 2, Plan 2310062 within E1/2 26-9-21-W4M
Meeting:	Council Meeting - 17 Oct 2024
Department:	ORRSC
Report Author:	Steve Harty

APPROVAL(S):

Hilary Janzen, Manager, Planning & Development	Approved - 04 Oct 2024
Devon Thiele, Director, Development & Infrastructure	Approved - 07 Oct 2024
Cole Beck, Chief Administrative Officer	Approved - 08 Oct 2024

STRATEGIC ALIGNMENT:

Governance	Relationships	Region	Prosperity
☐	☐	☐	☒

EXECUTIVE SUMMARY:

The application is to reconfigure two adjacent parcels by reducing in size a 47.54-acre title down to 12.71-acres for country residential use through subdividing and consolidating 34.84-acres to an adjacent agricultural parcel, thereby creating a 203.11-acre agricultural title. The proposal meets the subdivision criteria of the Land Use Bylaw.

RECOMMENDATION:

That S.D. Application #2024-0-131 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 realignment/reconfiguration of title subdivision policies as stated in the Land Use Bylaw.

PREVIOUS COUNCIL DIRECTION / POLICY:

- LUB No. 24-007 contains subdivision policies to allow a realignment/reconfiguration of titles and property lines without an increase in titles. For this proposal, the applicant(s) start with two titles and will end up with two but in a different layout/size.
- The LUB No. 24-007 realignment/reconfiguration of titles policy enables property boundaries to be realigned based on land use and the location of improvements.
- The 47.54-acre parcel was approved on an appeal to the Land and Property Rights Tribunal in 2022 after initially being refused by Council (Subdivision Authority). The reduction in parcel

size to the 12.71 acres would be more in alignment with meeting the Subdivision Authority's original intent and the County's agricultural subdivision policies.

BACKGROUND INFORMATION:

Located 3½-miles north of Highway 3 and 1½ -miles east of the City of Lethbridge boundary. The application is to reduce in size the title associated with the residential yard.

The developed portion of the yard comprises the 12.71-acres of land excluding the dugout. The yard area is situated on the east side and presently contains a dwelling and other improvements. The dugout is to remain on the west 34.84 acre agricultural portion which is to be consolidated to the adjacent agricultural title to the south (SE 26-9-21-W4M). The two adjacent landowners have made an agreement to undertake the land reconfiguration. The existing dwelling's potable water source is the COLRWA co-op and sewage is treated on-site with an individual septic field situated west of the house. The septic system will remain within the confines of the smaller property once the boundary is realigned. Access will remain from an existing approach to the east municipal road allowance. There are no abandoned gas wells located within this parcel of land.

Overall, the proposal meets the criteria of the County's LUB No. 24-007 for a realignment/reconfiguration of titles. With the consolidation of land, the residential acreage is reduced in size and the agricultural title is enlarged, with no additional titles being created above what presently exist. The reduction in parcel size to the 12.71 acres better aligns with the country residential and agricultural subdivision policies.

The application was circulated to the required external agencies with no concerns expressed and no utility easements are requested (at time of agenda report). The adjacent land to the north is identified as potentially containing Historical Resources of a category HRV 5a and 4a. Alberta Culture stated the applicant is not required to apply for Historical Resources Act approval.

ALTERNATIVES / PROS / CONS:

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

Pros:

- there are no advantages to the County in denying the subdivision as the County's bylaws and criteria are met.

Cons:

- a refusal would mean the 47.54-acre parcel remains which is an inefficient sized parcel (i.e., too large residential or too small agriculture) and the decision could be appealed by the applicants.

FINANCIAL IMPACT:

None.

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

5A Lethbridge County 2024-0-131 Approval
Diagrams 2024-0-131 v2

RESOLUTION

2024-0-131

Lethbridge County **Agricultural & Country Residential** subdivision of Lot 2, Block 1, Plan 1410472 and Lot 3, Block 2, Plan 2310062 all within E1/2 26-9-21-W4M

THAT the Agricultural & Country Residential subdivision of Lot 2, Block 1, Plan 1410472 and Lot 3, Block 2, Plan 2310062 all within E1/2 26-9-21-W4M (Certificate of Title No. 231 009 671, 231 197 768), to subdivide and reconfigure two adjacent parcels, by subdividing a 12.71 acre (5.14 ha) country residential parcel from a title of 47.54-acres (19.24 ha) in size and consolidating the remnant 34.84 acres (14.1 ha) to an adjacent agricultural parcel creating a title 203.11 acres (82.19 ha) 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 applicant submits a surveyed plan as prepared by an Alberta Land Surveyor that certifies the exact location and dimensions of the parcels being subdivided, as approved. The titles and portions of land to be subdivided and consolidated to reconfigure the boundaries (property line) of the adjacent parcels, are 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 agencies shall be established prior to finalization of the application.

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 and 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 is satisfied the reduced country residential parcel size at 12.71 acres is more in alignment with meeting the intent of the Subdivision Authority's previous decision, when the LPRT subsequently created the 47.54-acre title in 2022.
4. The subdivision proposal may be considered in accordance with the County's subdivision criteria as a reconfiguration of titles. With the consolidation of land, the residential acreage is reduced in size and the agricultural title is enlarged, with no additional titles being created above what presently exist.

INFORMATIVE:

(a) Since the proposed subdivision complies with Section 663(d) 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) 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.

(e) ATCO Gas has no objection.

(f) ATCO Transmission high pressure pipelines has no objections. Questions or concerns related to ATCO high pressure pipelines can be forwarded to hp.circulations@atco.com.

(g) Alberta Health Services – Wade Goin, Executive Officer/Public Health Inspector:

"In response to the request for comment on the above noted subdivision, we have reviewed the information and wish to provide the following comments:

- Alberta Health Services understands the purpose of the application is to reduce the size of an existing rural residential yard and expand the adjacent agricultural parcel.
- We do not object to the application at this time.

We do not foresee any new public health problems being created as a result of the above noted subdivision provided that the applicant complies with all pertinent regulations, by-laws, and standards.

If you require any further information, please don't hesitate to contact me."

(h) SMRID – Phyllis Monks, Land Administrator:

"The St. Mary River Irrigation District (SMRID) has reviewed this application, if the subdivision is approved, the District requires that the following conditions be met:

- If the proposed subdivided homestead lot wishes to use water from the District for the yardsite, an Household Purposes Agreement must be signed with the District prior to any water use.
- All works, easements, etc., involved to provide water to the proposed subdivision will be at the landowner's expense.
- Both parcels form part of an irrigable unit.

A fee of $250.00 plus G.S.T. is due upon receipt of the attached invoice for consideration of the subdivision application by the District.

If you have any further questions or concerns, please contact me in the Taber office at 403-223-2148."

(i) Alberta Environment Rangeland Depart has no concerns.

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

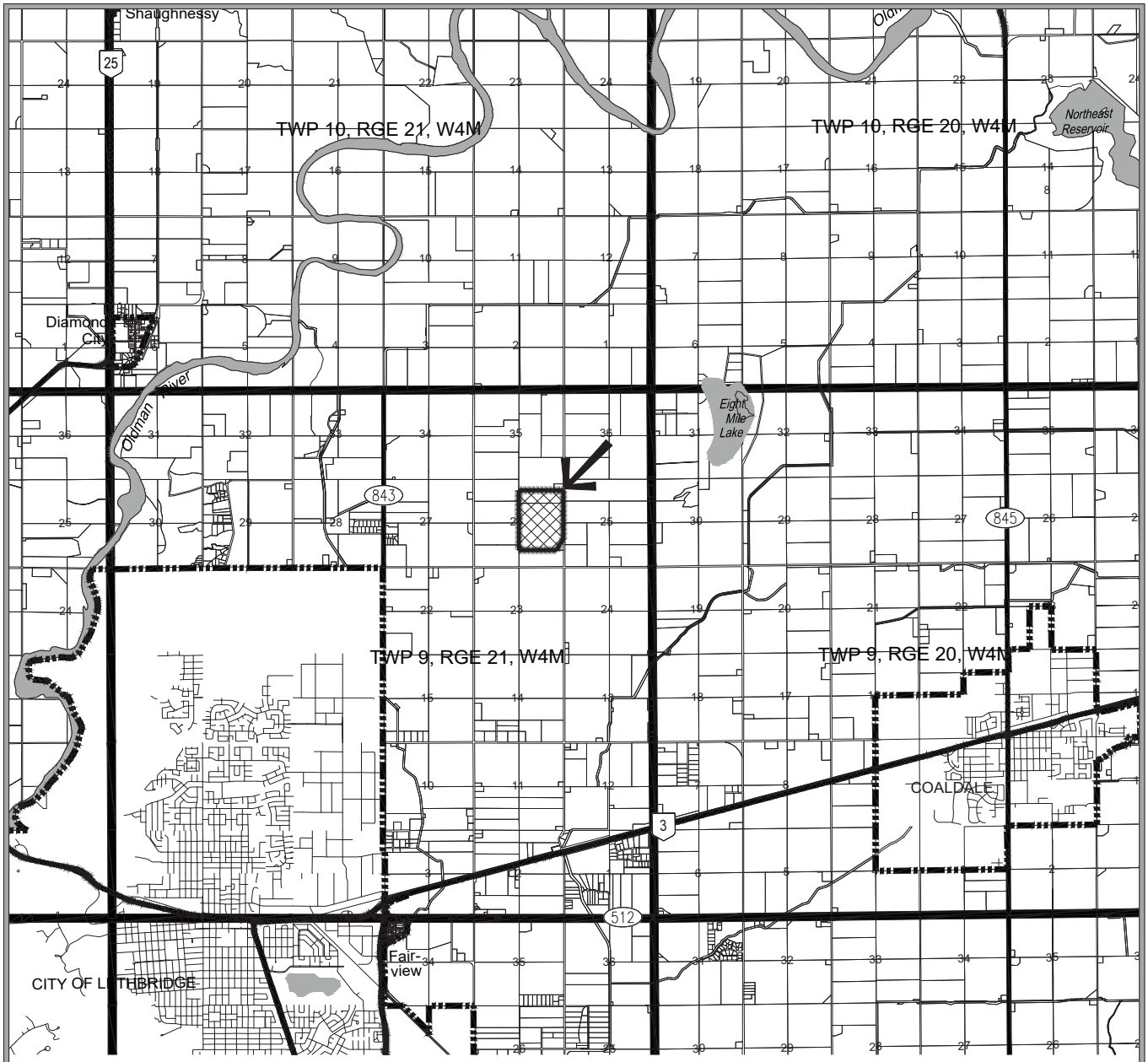
"We have reviewed the captioned subdivision application and determined that in this instance formal *Historical Resources Act* approval is not necessary, and submission of a Historic Resources application is not required."

_____ _____

MOVER REEVE

_____

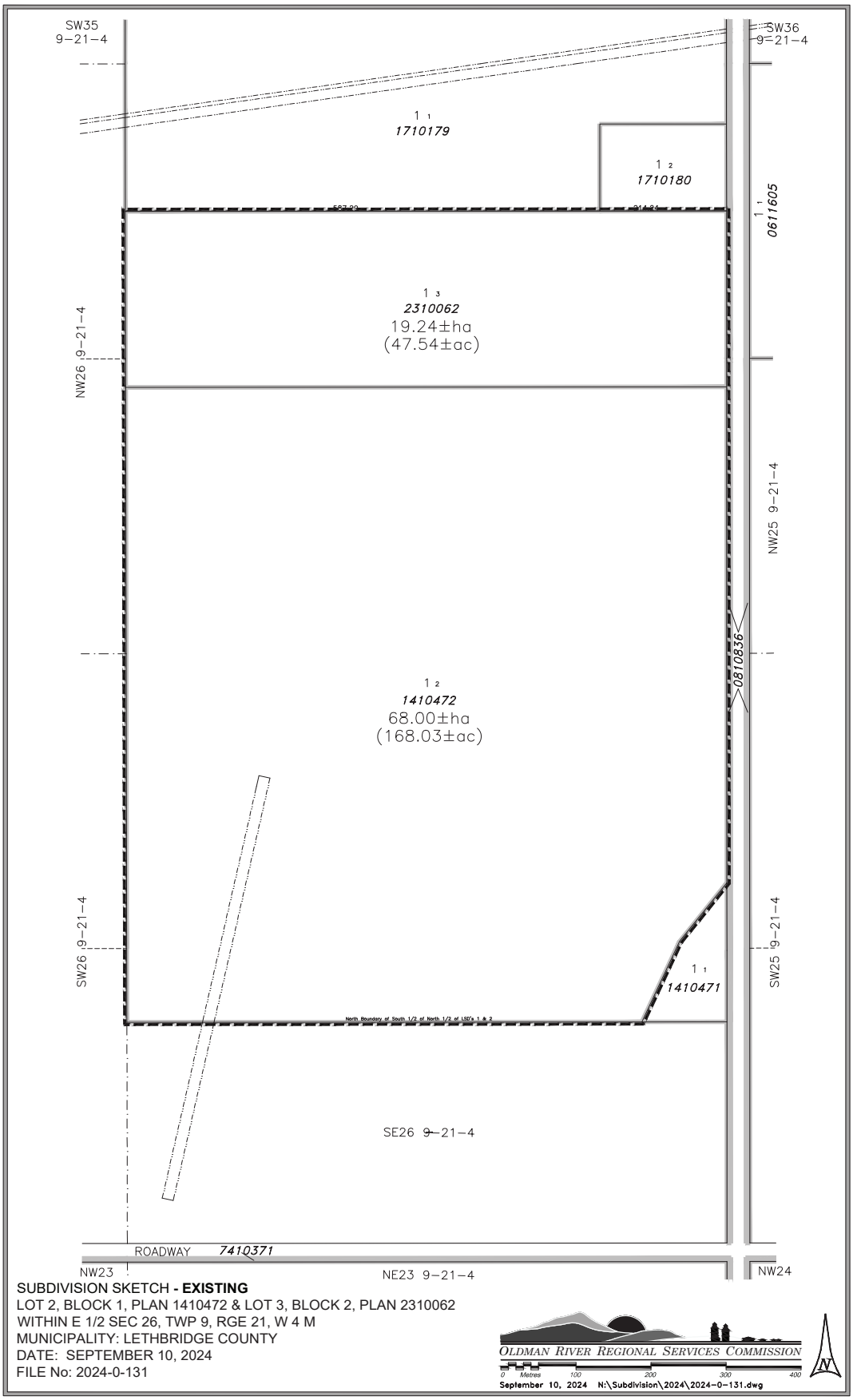
DATE



SUBDIVISION LOCATION SKETCH
LOT 2, BLOCK 1, PLAN 1410472 & LOT 3, BLOCK 2, PLAN 2310062
WITHIN E 1/2 SEC 26, TWP 9, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: SEPTEMBER 10, 2024
FILE No: 2024-0-131

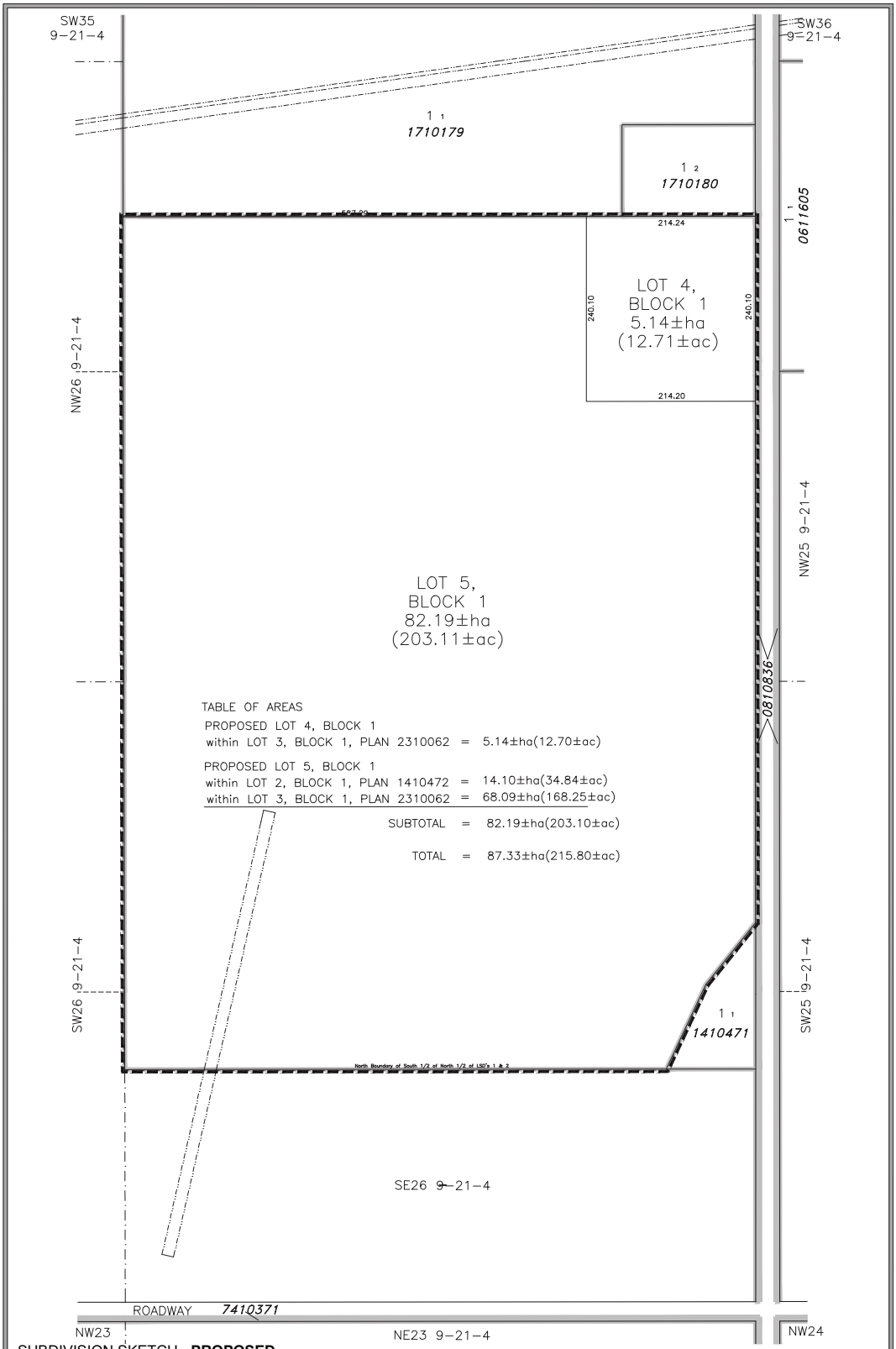
OLDMAN RIVER REGIONAL SERVICES COMMISSION

September 10, 2024 N:\Subdivision\2024\2024-0-131.dwg



SUBDIVISION SKETCH - **EXISTING**
LOT 2, BLOCK 1, PLAN 1410472 & LOT 3, BLOCK 2, PLAN 2310062
WITHIN E 1/2 SEC 26, TWP 9, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: SEPTEMBER 10, 2024
FILE No: 2024-0-131

OLDMAN RIVER REGIONAL SERVICES COMMISSION
0 Metres 100 200 300 400
September 10, 2024 N:\Subdivision\2024\2024-0-131.dwg



SUBDIVISION SKETCH - **PROPOSED**

See tentative plan of subdivision by Brown Okamura & Associates Ltd. file no. 24-16473T

LOT 2, BLOCK 1, PLAN 1410472 & LOT 3, BLOCK 2, PLAN 2310062
WITHIN E 1/2 SEC 26, TWP 9, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: SEPTEMBER 10, 2024
FILE No: 2024-0-131

OLDMAN RIVER REGIONAL SERVICES COMMISSION
0 Metres 100 200 300 400
September 10, 2024 N:\Subdivision\2024\2024-0-131.dwg

SUBDIVISION SKETCH - **PROPOSED**

See tentative plan of subdivision by Brown Okamura & Associates Ltd. file no. 24-16473T

LOT 2, BLOCK 1, PLAN 1410472 & LOT 3, BLOCK 2, PLAN 2310062
WITHIN E 1/2 SEC 26, TWP 9, RGE 21, W 4 M
MUNICIPALITY: LETHBRIDGE COUNTY
DATE: SEPTEMBER 10, 2024
FILE No: 2024-0-131

AERIAL PHOTO DATE: 2018

OLDMAN RIVER REGIONAL SERVICES COMMISSION

0 Metres 100 200 300 400

September 10, 2024 N:\Subdivision\2024\2024-0-131.dwg

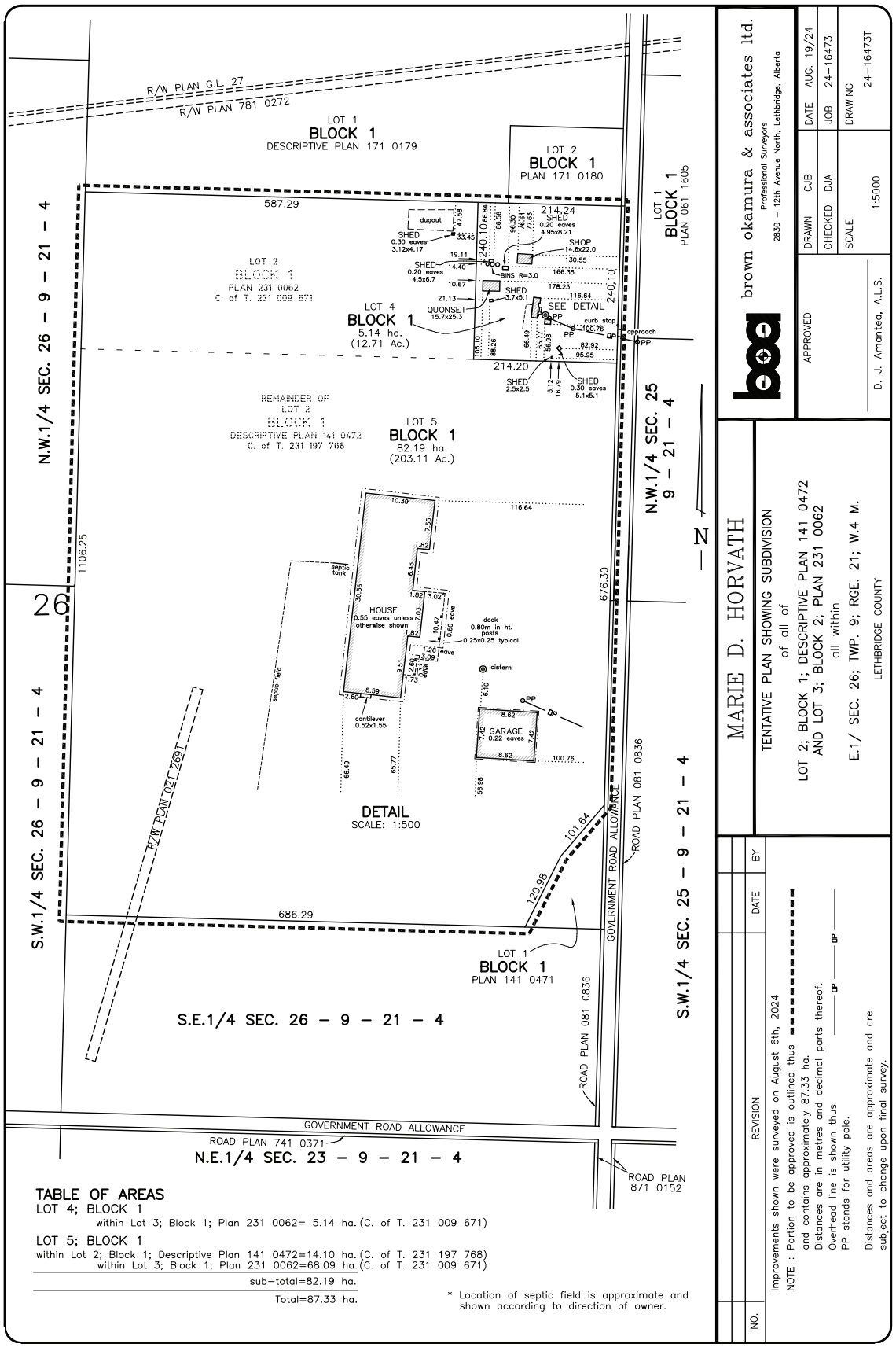


TABLE OF AREAS

LOT 4; BLOCK 1
within Lot 3; Block 1; Plan 231 0062= 5.14 ha. (C. of T. 231 009 671)

LOT 5; BLOCK 1
within Lot 2; Block 1; Descriptive Plan 141 0472=14.10 ha. (C. of T. 231 197 768)
within Lot 3; Block 1; Plan 231 0062=68.09 ha. (C. of T. 231 009 671)

sub-total=82.19 ha.

Total=87.33 ha.

* Location of septic field is approximate and shown according to direction of owner.

NO.	REVISION	DATE	BY

Improvements shown were surveyed on August 6th, 2024
NOTE : Portion to be approved is outlined thus ▬▬▬▬
and contains approximately 87.33 ha.
Distances are in metres and decimal parts thereof.
Overhead line is shown thus ——— DP ———
PP stands for utility pole.

Distances and areas are approximate and are subject to change upon final survey.

MARIE D. HORVATH

TENTATIVE PLAN SHOWING SUBDIVISION
of all of
LOT 2; BLOCK 1; DESCRIPTIVE PLAN 141 0472
AND LOT 3; BLOCK 2; PLAN 231 0062
all within
E.1/ SEC. 26; TWP. 9; RGE. 21; W.4 M.
LETHBRIDGE COUNTY

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

APPROVED

D. J. Amantea, A.L.S.

DRAWN	CJB	DATE	AUG. 19/24
CHECKED	DJA	JOB	24-16473
SCALE	1:5000	DRAWING	24-16473T


County of
Lethbridge
Community
Learning
Council

County of Lethbridge Community Learning Council

We are a Community Adult Learning Program (CALP)

County of Lethbridge Community Learning Council

What is a Community Adult Learning Program? (CALP)

We are community-based organizations that provide Adult Literacy and Foundational Learning in over **80** regions across Alberta.

County of Lethbridge Community Learning Council

What is Literacy?

Literacy is the ability to identify, interpret, create, communicate, compute and use printed and written materials.

County of Lethbridge Community Learning Council

What is Adult Foundational Learning?

Foundational learners come to CALPs to develop basic skills in one of these Literacy and Foundational Learning categories:

- Adult Literacy
- Numeracy
- Skills for Learning
- Basic Digital Skills
- English Language Learning
- Community Capacity Building

County of Lethbridge Community Learning Council

Foundational skills are those on which all other skills are built, such as reading, writing, numeracy, digital and problem solving.

Foundational learners often experience economic, social, and/or other challenges that may interfere with their learning.

County of Lethbridge Community Learning Council

At least one in five adult Albertans face daily literacy and numeracy challenges.*

Numeracy is the ability to use, apply, interpret and communicate mathematical information and ideas.

*Based on the 2012 International Literacy survey Programme for the International Assessment of Adult Competencies (PIAAC)

County of Lethbridge Community Learning Council

The CALP Vision

Changing lives through adult foundational learning in connected communities.

The Community Adult Learning Program is funded and supported by the Government of Alberta.

We are a non-profit society, and we operate on an annual grant from Advanced Education.

County of Lethbridge Community Learning Council

History of CALP

Since the 1970's, the Government of Alberta has supported community-based adult learning across the province.

With CALPs, AE invests approximately $18 million each year to support the delivery of adult literacy and foundational learning, professional development for staff and volunteers to foster the advancement of community adult learning. Our annual grant is $122,842.

County of Lethbridge Community Learning Council

Purpose of CALPs

The community adult learning programs are the first point of access for adult foundational learners. We provide a non-threatening, flexible learning environment as well as raising awareness and creating a culture of learning in communities.

County of Lethbridge Community Learning Council

We help foundational learners see themselves as learners, often for the first time, and build the confidence they need to acquire new skills and continue their learning journey.

As learners use their new skills in their daily lives, the skills are acquired more permanently which allows individuals to pursue further learning, have meaningful employment and fully participate in their community.

County of Lethbridge Community Learning Council

Alberta's adult learners have a wide variety of cultures and traditions which shape their attitudes towards learning.

English language skills are essential for newcomers to settle in their community, thrive in the workforce and to become full participants in society.

County of Lethbridge Community Learning Council

CALPs are well positioned to respond to diverse learning needs through adaptable programs and supports made possible through strong partnerships and the coordination of services.

County of Lethbridge Community Learning Council

Literacy and foundational skills *"have a significant influence on life outcomes- the ability to learn, health status, civic participation and social engagement, economic performance, and involvement with the justice system"* *

*Living Literacy: A Literacy Framework for Alberta's Next Generation, 2010 p.4

County of Lethbridge Community Learning Council

Community Adult Learning Programs support Alberta's rural and economic development by coordinating with local businesses to identify learning gaps, and by tailoring programs and services.

This allows communities to take control of their learning potential and attract more settlement, investment, and development.

County of Lethbridge Community Learning Council

A little about our CALP

- Our CALP was established in 1974
- We have dedicated volunteers that sit on our board
- We currently operate with two part-time staff
- We serve the following communities:

County of Lethbridge Community Learning Council

Our CALP area:

County of Lethbridge Community Learning Council

Partnerships

We welcome any opportunity to partner with local agencies, schools, businesses, and other service providers to ensure that our learners receive the support, resources and education that they deserve.

County of Lethbridge Community Learning Council

How we serve our communities and learners:

We use our grant funds to run classes and to reduce barriers.

- We can subsidize or cover course costs for our programs. We try to keep our course costs as low as possible
- We offer free childcare for some of our courses
- Mileage- we can help cover some mileage costs when a learner needs to travel to another community

County of Lethbridge Community Learning Council

Learner Support Services

We also assist individuals to transition to programs and services that will help them to meet their learning goals. Learner Support Services may include:

- Providing information about post-secondary and other learning opportunities
- Coaching and mentoring on how to access and use information and resources
- Creating a safe and welcoming environment for learners to be connected to community supports and services
- Assistance with forms
- Providing access to and assistance with basic technology
- Providing referrals
- Resumé support

County of Lethbridge Community Learning Council

Volunteer Tutors

We also run a Volunteer Tutor program where we match a volunteer with a learner in need. This is a free service that we can provide because of the generosity of our tutors who donate their time and talents to our program.

We offer tutor training opportunities throughout the year to support our tutors as they help our learners reach their goals.

County of Lethbridge Community Learning Council

Family Literacy

We can offer Family Literacy programs with activities that build adults' skills and promote the values and benefits of literacy for the entire family.

We aim to increase their own literacy and foundational skills which also strengthens daily literacy activities for all family members.

County of Lethbridge Community Learning Council

Books for Babies

We are part of the Chinook Books for Babies Program. This is a free program where we receive books that we deliver to our local health units to be given to all babies at their four-month immunization.

We have a dedicated volunteer that puts these kits together for us. She has put together hundreds of bags for us.

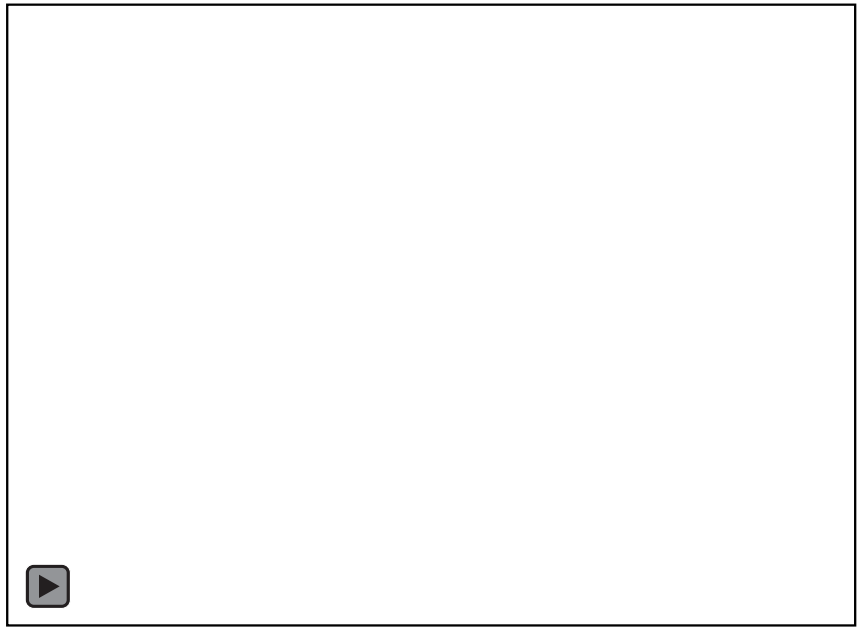
Council of the Federation Literacy Award 2024

County of Lethbridge Community Learning Council

Last month we were announced as the recipient of this award which recognizes outstanding achievement, innovative practice and excellence in literacy. The awards are presented annually, in each province and territory, to recognize the excellence of educators, volunteers, learners, community organizations and businesses in many areas, including family, Indigenous, health, workplace and community literacy.

County of Lethbridge Community Learning Council

An example of our impact:



AGENDA ITEM REPORT

Title:	Bylaw 24-017 - Re-designate Plan 1711734 Block 2 Lot 3 in the SW 14-9-22-W4 from Direct Control (Bylaw 1456) to Direct Control (Bylaw 24-017)- First Reading
Meeting:	Council Meeting - 17 Oct 2024
Department:	Development & Infrastructure
Report Author:	Hilary Janzen

APPROVAL(S):

Devon Thiele, Director, Development & Infrastructure	Approved - 07 Oct 2024
Cole Beck, Chief Administrative Officer	Approved - 08 Oct 2024

STRATEGIC ALIGNMENT:

Governance	Relationships	Region	Prosperity
☐	☒	☒	☐

EXECUTIVE SUMMARY:

An application has been made to re-designate Plan 1711734 Block 2 Lot 3 in the SW 14-9-22-W4 from Direct Control (Bylaw 1456) to Direct Control (Bylaw 24-017). The applicant wishes to locate a place of worship on the parcel.

RECOMMENDATION:

That Bylaw 24-017 be read a first time.

REASON(S) FOR RECOMMENDATION(S):

First reading of Bylaw 24-017 will allow County Administration to set the date for the Public Hearing and send out the notices for the proposed bylaw.

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

BACKGROUND INFORMATION:

An application has been made to re-designate Plan 1711734 Block 2 Lot 3 in the SW 14-9-22-W4 from Direct Control (Bylaw 1456) to Direct Control (Bylaw 24-017). The applicant wishes to locate a place of worship with associated uses on the parcel.

The application has been circulated to all County Departments, the City of Lethbridge, the Town of Coalhurst, and external agencies for review and their comments as well as any planning/strategic

planning considerations will be presented at the public hearing. It is anticipated that the public hearing will be held in November 2024.

ALTERNATIVES / PROS / CONS:

County Council may refuse first reading of the Bylaw. Refusing the bylaw would be contrary to legal advice which as 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 commercial/industrial tax rate.

LEVEL OF PUBLIC PARTICIPATION:

☐ Inform ☐ Consult ☒ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

Bylaw 24-017 - Compiled Application Package
Bylaw 24-017 - Free Grace Fellowship- Amendment to LUB

Lethbridge County
#100, 905 - 4th Ave S
Lethbridge, AB T1J 4E4
403-328-5525

FORM C: APPLICATION FOR A LAND USE BYLAW AMENDMENT

Pursuant to Land Use Bylaw No. 24-007

OFFICE USE		
Date of Application:	Assigned Bylaw	No. 24-017
Date Deemed Complete: September 11, 2024	Application & Processing Fee:	$ 2000.00
☒ Redesignation ☐ Text Amendment	Certificate of Title Submitted:	☐ Yes ☒ No

A refusal is **not** appealable and a subsequent application for amendment involving the same lot and/or the same or similar use may not be made for at least 18 months after the date of refusal. [Refer to Part 1, Sections 54 to 56 of bylaw.]

IMPORTANT NOTE: Although the Development Officer is in a position to advise on the principle or details of any proposals, such advice must not be taken in any way as official consent.

APPLICANT INFORMATION

Name of Applicant: Alvin Reinhard Fritz Architecture Inc.

Mailing Address: 10-90001 Range Road 212
Lethbridge County, AB

Postal Code: T1J 5N9

Phone: (403) 320-8100
Phone (alternate):
Fax: (403) 327-3373

Is the applicant the owner of the property? ☐ Yes ☒ No

IF "NO" please complete box below

Name of Owner: Free Grace Fellowship
Mailing Address: 1807 - 2 Avenue A North
Lethbridge, AB

Postal Code: T1H 0G4

Phone: (403) 382-0044

Applicant's interest in the property:
- ☐ Agent
- ☐ Contractor
- ☐ Tenant
- ☒ Other Architect

PROPERTY INFORMATION

Municipal Address: Hwy 25 TWN RD 92

Legal Description: Lot(s) 3 Block 2 Plan 1711734
OR Quarter _____ Section _____ Township _____ Range _____

Lethbridge County
#100, 905 - 4th Ave S
Lethbridge, AB T1J 4E4
403-328-5525

FORM C: APPLICATION FOR A LAND USE BYLAW AMENDMENT

Pursuant to Land Use Bylaw No. 24-007

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): Direct Control - Light Industrial (Bylaw 1456)

Proposed Land Use Designation (zoning) (if applicable): Direct Control - Public Institutional

SITE DESCRIPTION:

Describe the **lot/parcel dimensions** _____ and **lot area/parcel acreage** 12.6 Acres
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 55 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.

Lethbridge County
#100, 905 - 4th Ave S
Lethbridge, AB T1J 4E4
403-328-5525

FORM C: APPLICATION FOR A LAND USE BYLAW AMENDMENT

Pursuant to Land Use Bylaw No. 24-007

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 Part 1, section 55(2) or as deemed necessary to make an informed evaluation of the suitability of the site in relation to the proposed use;

if deemed necessary.

SITE PLAN

Plans and drawings, in sufficient detail to enable adequate consideration of the application, must be submitted in **duplicate** with this application, together with a plan sufficient to identify the land. It is desirable that the plans and drawings should be on a scale appropriate to the development. However, unless otherwise stipulated, it is not necessary for plans and drawings to be professionally prepared. Council may request additional information.

DECLARATION OF APPLICANT/AGENT

The information given on this form is full and complete and is, to the best of my knowledge, a true statement of the facts in relation to the application. I also consent to an authorized person designated by the municipality to enter upon the subject land and buildings for the purpose of an inspection during the processing of this application. *I/We have read and understand the terms noted below and hereby* ***certify that the registered owner of the land is aware of, and in agreement with this application.***

APPLICANT

REGISTERED OWNER (if not the same as applicant)

July 17, 2024

DATE

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. 24-007 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.

Free Grace Fellowship
Owner(s):

BERT VAN HIERDEN
Contact Name:

1807 - 2 Avenue A North, Lethbridge, AB T1H 0G4
Contact Address:

403 382 0044
Contact Phone:

bert@kippgarlic.com
Contact Email:

Lethbridge County
Planning Department
100, 905 – 4 Avenue South
Lethbridge, AB T1J 4E4

To Whom It May Concern:

With regards to HWY 25 TWN 92 Lot 3 Block 2 Plan 1711734 (Property address) _____ (Property name (if applicable))

Please be advised that I, BERT VAN HIERDEN (full name) am:

(select one)

O The owner of the above-mentioned property, and that I authorize

⊗ An officer or director of the owner(s) of the above-mentioned property, and that I am authorized by that owner to authorize

Alvin Reinhard Fritz Architecture Inc. (Agent or company name) and/or its _____ (Applicant, consultant, contractor (if applicable))

To apply for any and all Land Use Amendment, Development Permit, and Building Permits (Permit type)

I further agree to immediately notify Lethbridge County, in writing, of any changed regarding the above information.

July 18 2024
Date signed

Signature of owner

BERT VAN HIERDEN
Name of owner (printed)

ALVIN REINHARD FRITZ
ARCHITECTURE INC.

Norland Coach House
#10 90001 Range Road 212
Lethbridge County, Alberta, T1J 5N9

Tel: 403.320.8100
Fax: 403.327.3373
Email: general@alvinfritzarchitect.com

Principal
Alvin Reinhard Fritz, Architect
AAA, MRAIC, AIBC, MAA, SAA, OAA

The immediate need for the Church is to build a sanctuary which will accommodate the services of the Free Grace Church, as well as the ancillary and support such as Youth Group and Christian Education. It is anticipated since the site is 12.6 acres that there will be some residual land mass available for other functions and the following should be considered in this Direct Control Zoning.

1. The client envisions supporting a daycare as a proposed future Land Use. Daycares are part and parcel of many church organizations and, as such, would not like to preclude the ability to have a daycare that is affiliated with the Church within the environment. It would also be valuable to consider a Christian Bookstore/Library, which would have minimal public engagement, however, would be available for the parishioners of the church.

2. The proposed Re-designation is consistent with applicable statuary practice. It is apparent that there are numerous church organizations accommodated on land with Direct Control Zoning throughout the region. As such, a Direct Control Zoning and the Re-designation of this site would also follow logically.

3. Compatibility of the proposal with surrounding uses and zonings. The proposed redesignation is compatible with the surrounding uses and there is an increase in Agro/industrial/commercial style development in this area of the County. We observed that there were organizations nearby that sell vegetables and agricultural products. We also note that there are examples of home occupation and the site on a main traffic corridor makes it quite palatable for the proposed use. It would not be considered an uncommon location for a church such as this to occur.

4. Analyzing the development potential site including identification of constraints and or hazards consists of a site that is more than 12.6 acres and, as such, there is adequate land mass to demonstrate potential for this project to fit well within the easements and setbacks that are anticipated. The site is ideally suitable for the development since it at the top of the escarpment and has good topography and drainage. The site is on the top of the escarpment, the land levels off to the west such that it is ideal for this construction. Soil conditions are anticipated to be very acceptable since there is very little negative impact by way of environmental considerations and will be managed through the addition of the church. There should be no detrimental impact in these regards.

5. The site has been serviced for a residential homestead and, as such, sewage management, domestic water, gas, electricity, are available to the project. Solid waste management can readily be handled since the site is so close to West Lethbridge.

6. Access and egress from the parcel are going to be managed in accordance with traffic recommendations from Alberta Transportation. The impact on public roads is anticipated to be minimal given that the Church operates primarily on Sunday, at which time, there is dramatically less activity on the roads from other sources.

DIRECT CONTROL

1. PURPOSE

To provide a means whereby Council may regulate and control the use, development, or subdivision on a site-specific basis to the following lands:

Consisting of Plan 1711734 Block 2 Lot 3.

For the specific purposes of allowing a Place of Worship and other limited uses deemed to be appropriate for the site.

2. PERMITTED USES

Accessory Buildings/Structures to an approved use
Daycare
Library
Parks, Playgrounds, and Sports fields
Place of Worship
Signs - Type d 2 (in accordance with Part 6 of the Land Use Bylaw)

DISCRETIONARY USE

Cemetery
Long Term Care Facility
Retail Sales and Uses
Schools/Education Facilities
Seniors Housing

3. DEFINITIONS

Long Term Care Facility – means a health care facility with multiple accommodation or dwelling units that provides 24-hour professional supervision and care for people with complex care needs.

All other words or terms have the same meaning as what is specified in the Land Use Bylaw.

4. MINIMUM LOT SIZE

The minimum lot size shall be 12.6 acres.

5. MINIMUM YARD SETBACK REQUIRMENTS

Front yard – 30 feet/9.1metres
Side yard – 20 feet/6.1 metres
Rear yard – 20 feet/6.1 metres

For setbacks on parcels adjacent to or fronting statutory road allowances, additional setbacks will be applied as per section 6 below.

6. MINIMUM SETBACK FROM ROADWAY
   No part of a building, structure or development shall be located within 38.1 meters (125 feet) of the centre line of the county road or 70 metres (230 feet) from the centreline of a secondary highway or greater as required by Alberta Transportation.

7. MAXIMUM SITE COVERAGE
   The maximum site coverage for all principal and accessory buildings combined is 50%.

8. ACCESSORY BUILDINGS AND STRUCTURES
   a. Any accessory buildings or structures shall not be located in the required setback from a public road or an easement
   b. An accessory building or structure shall only be constructed after or in conjunction with an approved principle use or building on the parcel.

9. GENERAL STANDARDS OF DEVELOPMENT
   At the discretion of the Council or the Development Officer acting as the Development Authority having regard for Part 4 of the Land Use Bylaw.

10. SIGN REGULATIONS
    As per the Lethbridge County Land Use Bylaw

11. OTHER STANDARDS
    a. All storm water shall be retained on site to predevelopment levels. A storm water management plan shall be required prior to the development or subdivision of the lands
    b. All finished lot grading shall be constructed and maintained to the satisfaction of the Lethbridge County.
    c. Approaches and driveway access shall be in accordance and acceptable to the Lethbridge County Engineering Guidelines and Minimum Servicing Standards or as otherwise stipulated by Council.
    d. Any additional standards as required by Council or the Development Officer.

12. OTHER REQUIREMENTS
    a. Site, Layout, and Grading Plan – that shows the property dimensions, building locations, outdoor storage areas, employee parking areas and utility easements and servicing areas, including the septic field location and any dugouts or storm ponds.
    b. Landscaping Plan - that shows the front yard landscaping and fencing (height and type) on the property.

c. Refuse or Garbage shall be kept in a suitably sized container or enclosure, effectively screened, and the refuse containers shall be located in a rear yard only.
d. Servicing - the developer shall be responsible for ensuring all required servicing is provided to the development, including potable water and private septic. If an on-site private septic treatment system is used to handle sewage disposal, then the system and field must be installed by a certified installer licensed with the provincial department of Municipal Affairs.
    i. Parking and storage areas are prohibited from being located over any of the septic system including the disposal field area.
e. Roads
    i. A TIA will be required upon submission of a development permit application
    ii. Access to the parcels will be limited to a single access point to Township Road 9-2
    iii. Developer is to pay for all costs associated with the TIA and all upgrades required for the intersection of TWP RD 9-2 and HWY 25 as recommended by Alberta Transportation
    iv. The developer will be required to upgrade Township Road 9-2 to the county's standards at their own expense
f. Development Agreement – the developer shall enter into a development agreement to satisfy any requirements or standards as stipulated by the County.

13. SUBDIVISION
a. . No further subdivision is contemplated.
b. Council, acting in the capacity of the Subdivision Authority, shall make decisions on subdivision applications

14. DELEGATION OF AUTHORITY
a. Council shall be the Development Authority to decide on development permit applications for discretionary uses or applications for waivers of development standards. Council may also decide on development permit applications for permitted uses.
b. The Development Officer, in accordance with the Land Use Bylaw and pursuant to Section 641 (3) of the Municipal Government Act may, with the direction of Council, act as the Development Authority and receive and decide upon development permit applications for permitted uses provided, they conform to the standards of the bylaw.

15. APPROVAL PROCEDURE
a. Where the Development Officer as the Development Authority has been delegated the authority to decide upon development permit applications for permitted uses and has done so, then immediately upon issuance of the development permit the Development Officer shall cause a notice to be published in a newspaper circulating in the area

stating the location of the property for which the application has been made and the use approved.

b. Before consideration of a development permit application for a discretionary use or a proposal requiring waivers on the subject property, Council shall:
    i. Cause a notice to be issued by the designated officer to any person likely to be affected.
    ii. Ensure that the notice contains the date and time that council will hear the application for waivers of development standards.
    iii. Hear any person that claims to be affected by the decision on the application.
c. Council may then approve the development application with or without conditions or refuse the application with reasons.
d. Where Council has made a decision on a development permit application, the Development Officer acting on behalf of Council, shall cause a notice of the decision to be issued to the applicant and post a copy of the decision in the lobby of the County office.
e. When applicable, Council should seek comments from other agencies such as the planning advisor, regional health authority, Alberta Transportation, the Town of Coalhurst, the City of Lethbridge or any applicable provincial government department.

16. APPEAL PROCEDURE

- Pursuant to Section 685(4)(a) of the Municipal Government Act, if a decision with respect to a Development Permit Application is made by Council, there is no appeal to the Subdivision and Development Appeal Board.
- Pursuant to Section 685(4)(b) of the Municipal Government Act, if the Development Officer has been delegated, the Authority to decide upon Development Permit Applications as the Development Authority, then the appeal to the Subdivision Appeal Board is limited to whether the Development Officer followed the directions of Council.

3D Views
03 Base Roof
124' - 0"
02 Second Floor
112' - 0"
01 Main Floor
100' - 0"
00 1/2 Basement
88' - 0"
1 3D View - Front
03 Base Roof
124' - 0"
02 Second Floor
112' - 0"
01 Main Floor
100' - 0"
00 1/2 Basement
88' - 0"
2 3D View - Back
ALVIN REINHARD FRITZ
ARCHITECT
INC.
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project
Project Name
Enter address here

Site Plan

1 Site Plan - Parking
1" = 40'-0"

Project Name
Enter address here

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ARCHITECT
INC.

Main Floor Area Plan

1 Main Floor Plan
PG3.1 1/16" = 1'-0"

ALVIN REINHARD FRITZ ARCHITECT INC.

Elevations
03 Base Roof
124' - 0"
02 Second Floor
112' - 0"
01 Main Floor
100' - 0"
00 T/O Basement
99' - 0"
1 East Elevation
2 North Elevation
PROJECT
Project Name
Enter address here
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Elevations
03 Base Roof
124' - 0"
02 Second Floor
112' - 0"
01 Main Floor
100' - 0"
00 T/O Basement
Slab
90' - 0"
1 West Elevation
2 South Elevation
Project Name
Enter address here
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INC.
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ARCHITECT
ARTIST'S CONCEPTION

ARTIST'S CONCEPTION
ARCHITECT


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ARTIST'S CONCEPTION


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FOR CONCEPTUAL PURPOSES ONLY AND IS SUBJECT TO CHANGE

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ARCHITECT

ARTIST'S CONCEPTION
ALVIN FERNANDO PEREZ
ARCHITECT
AIA

LETHBRIDGE COUNTY
IN THE PROVINCE OF ALBERTA

BYLAW NO. 24-017

Bylaw 24-017 of Lethbridge County being a bylaw for the purpose of amending Land Use Bylaw 24-007, 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 24-017 is to re-designate Plan 1711734 Block 2 Lot 3, as shown on the sketch below, from Direct Control (D.C. – Bylaw 1456) to Direct Control (D.C.);

Bylaw 24-017: Direct Control (Light Industrial) to Direct Control (Public Institutional)

Parcels: Plan 1711734; Block 2 ; Lot 3; (SW-14-9-22-W4M) Approx 12.6 Acres
Located in Lethbridge County, AB

24-017 Direct Control to Direct Control

LETHBRIDGE COUNTY

AND WHEREAS the purpose of proposed Bylaw 24-017 is to establish the uses and regulations for a Direct Control district pertaining to the aforementioned land and are as described in Schedule “A” attached hereto;

AND WHEREAS policies in the Municipal Development Plan Bylaw No 22-001 refer to the Direct Control Designation being used by Council to regulate land use;

AND WHEREAS once an application has been submitted 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;

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:

1. The uses and regulations for the Direct Control District shall be as described in Schedule “A” attached hereto and be applied to the lands described above and identified on the above map.

2. Bylaw No 24-007 – The Land Use Bylaw of Lethbridge County is hereby amended.

3. That Bylaw No 1456, the former Direct Control Bylaw, is hereby repealed.

4. The Bylaw shall come into effect upon third and final reading hereof.

GIVEN first reading this 4th day of July 2024.

_____
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

1st Reading	October 17, 2024
2nd Reading	
Public Hearing	
3rd Reading	

Schedule A

DIRECT CONTROL

1. PURPOSE

   To provide a means whereby Council may regulate and control the use, development, or subdivision on a site-specific basis to the following lands:

   Consisting of Plan 1711734 Block 2 Lot 3.

   For the specific purposes of allowing a Place of Worship and other limited uses deemed to be appropriate for the site.

2. PERMITTED USES

   Accessory Buildings/Structures to an approved use
   Daycare
   Library
   Parks, Playgrounds, and Sports fields
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   Signs - Type d 2 (in accordance with Part 6 of the Land Use Bylaw)

   DISCRETIONARY USE
   Cemetery
   Long Term Care Facility
   Retail Sales and Uses
   Schools/Education Facilities
   Seniors Housing

3. DEFINITIONS

   Long Term Care Facility – means a health care facility with multiple accommodation or dwelling units that provides 24-hour professional supervision and care for people with complex care needs.

   All other words or terms have the same meaning as what is specified in the Land Use Bylaw.

4. MINIMUM LOT SIZE

   The minimum lot size shall be 12.6 acres.

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   Front yard – 30 feet/9.1metres
   Side yard – 20 feet/6.1 metres
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   The maximum site coverage for all principal and accessory buildings combined is 50%.

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At the discretion of the Council or the Development Officer acting as the Development Authority having regard for Part 4 of the Land Use Bylaw.

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As per the Lethbridge County Land Use Bylaw

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b. Before consideration of a development permit application for a discretionary use or a proposal requiring waivers on the subject property, Council shall:

   i. Cause a notice to be issued by the designated officer to any person likely to be affected.

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- Pursuant to Section 685(4)(b) of the Municipal Government Act, if the Development Officer has been delegated, the Authority to decide upon Development Permit Applications as the Development Authority, then the appeal to the Subdivision Appeal Board is limited to whether the Development Officer followed the directions of Council.

AGENDA ITEM REPORT

Title:	Bylaw 24-013 - Amendment to the Edgewood Stables Area Structure Plan (Bylaw 1362)- First Reading
Meeting:	Council Meeting - 17 Oct 2024
Department:	Development & Infrastructure
Report Author:	Hilary Janzen

APPROVAL(S):

Devon Thiele, Director, Development & Infrastructure	Approved - 07 Oct 2024
Cole Beck, Chief Administrative Officer	Approved - 08 Oct 2024

STRATEGIC ALIGNMENT:

Governance	Relationships	Region	Prosperity
☐	☒	☒	☐

EXECUTIVE SUMMARY:

An application has been made to amend the Edgewood Stables Area Structure Plan (Bylaw 1362) to allow for an additional 3 country residential lots.

RECOMMENDATION:

That Bylaw 24-013 be read a first time.

REASON(S) FOR RECOMMENDATION(S):

First reading of Bylaw 24-013 will allow County Administration to set the date for the Public Hearing and send out the notices for the proposed bylaw.

PREVIOUS COUNCIL DIRECTION / POLICY:

Bylaw 1362 - The Edgewood Stables Area Structure Plan was approved by County Council on April 21, 2011.

BACKGROUND INFORMATION:

An application has been made to amend the Edgewood Stables Area Structure Plan (Bylaw 1362) to allow for an additional 3 country residential lots.The applicant has submitted an updated subdivision plan, Geotechnical Evaluation, and Hydrological & Site Drainage Analysis to support the additional residential parcels.

The application has been circulated to all County Departments, the City of Lethbridge, and external agencies for review and their comments as well as any planning/strategic planning considerations will be presented at the public hearing. It is anticipated that the public hearing will be held in November 2024.

ALTERNATIVES / PROS / CONS:

County Council may refuse first reading of the Bylaw. Refusing the bylaw would be contrary to legal advice which as 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 commercial/industrial tax rate.

LEVEL OF PUBLIC PARTICIPATION:

☐ Inform ☐ Consult ☒ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

Hirsche Prop 4 Lot Subdivision - Edgewood Stables ASP Amendment Report - 2024-09-16
Bylaw 24-013 - Hirsche - Amendment to Edgewood Stables ASP
Bylaw 1362 - Edgewood Stables ASP

EDGEWOOD STABLES AREA STRUCTURE PLAN AMENDMENT - HIRSCHE 4 LOT - GROUPED COUNTRY RESIDENTIAL SUBDIVISION
SW ¼-29-9-21-W4

Submitted to
Lethbridge County

HASEGAWA
CONSULTING PROFESSIONAL ENGINEERS

PREPARED FOR:
Tyler Hirsche
Hirsche Holdings Ltd.
94010 RR 215
Lethbridge, AB T1J 5R

PREPARED BY:
Hasegawa Engineering
1220 – 31 Street North
Lethbridge, AB T1H 5J8

TABLE OF CONTENTS

List of Tables

APPENDICES

1. VISION

The proposed Hirsche grouped country residential subdivision amendment to the Edgewood Stables Area Structure Plan (ASP) has been developed through rigorous planning and careful consideration of the needs of the future property owners while considering the potential impact to neighboring existing landowners. This work complies with the current planning and design requirements set forth in the original ASP. The focus in developing this plan was to put forward a development proposal which would minimize the impact on area infrastructure, ensure a good fit with adjacent land uses and ultimately provide Lethbridge County with a cost-effective model for future acreage development.

The proposed Hirsche subdivision is a Grouped Country Residential development proposed to be developed on Lot 1 Block 1 Plan 131 2563 (SW-29-9-21-W4) within Lethbridge County along the north boundary of the City of Lethbridge. The goal of this development is to subdivide the existing 4.65ha. (11.49ac.) lot into four new country residential lots to create an environment where residents can enjoy the peace and quiet of country residential living, while maintaining easy and convenient access to the municipality of Lethbridge. Key to achieving this goal is sizing the lots to a 2-acre minimum to allow for the low density feeling of the area. This lower density also minimizes the environmental impact and gives a feeling of integrating into the natural environment.

In addition, the planning of the development was purposely kept at low density to match the existing surrounding properties. Maintaining similar density allows for expansion of development in the area without changing the feel that country residential exudes.

Overall, the development concept acknowledges and seeks to positively integrate with the existing natural and built conditions in the area while successfully offering a diverse range of housing opportunities to satisfy a broad demand for country residency. The proposal and plan have been designed to:

- Offer a new high-quality rural residential area to Lethbridge County residents
- Be compatible and complimentary with existing adjacent country residential acreages which similarly enjoy the enviable location.

2. INTRODUCTION

This Amendment to the Edgewood Stables ASP has been prepared by Hasegawa Engineering Ltd. on behalf of Tyler Hirsche to describe the development concept and municipal servicing strategy to be provided for the proposed grouped country residential development. The site (Lot 1 Block 1 Plan 131 2563) lies at SW-29-9-21-W4, bordered by 62nd Avenue North to the south and Range Road 215 to the west. Range Road 215 turns into 13th Street North in the City of Lethbridge to the south of 62nd Avenue North (refer to Figure 1 in Appendix A). The site is bordered by residential properties to the east and west and tributary coulee valleys to the north. Lands to the south are agricultural use. This Amendment describes the ultimate development of the subject lands, which are contained within the existing parcel (refer to Figure 2 in Appendix A).

As the development is intended to have four lots, an Amendment to the existing Area Structure Plan is required under Section 6.2 of the Municipal Development Plan of Lethbridge County. In addition, the proposed subdivision is governed by the Edgewood Stables ASP framework dating back to 2011 which applies to a portion of the SW 29-9-21 W4M, legally described as Lot 9, Block 1, Plan 991 2364. The subject lands are contained in a single Certificate of Title containing 4.65 hectares (11.49 acres). Refer to Appendix B for complete land title document.

A key aspect of this ASP is to show how the proposed development will work within the framework of the Edgewood Stables ASP and highlight any areas where it deviates from it. The Amendment will provide a basis for evaluation of future applications for subdivision of parcels and building development.

3. PLANS, DRAWINGS, AND CONCEPT

3.1 PLANS AND DRAWINGS

To illustrate the location of the property, site drainage, and the proposed subdivision layout, seven figures have been prepared. The figures are provided in *Appendix A* and are as follows:

- Figure 1 – Area Map
- Figure 2 – Existing Lots and Topography
- Figure 3 – Legal Plan - Existing
- Figure 4 – Conceptual Lot Layout
- Figure 5 – Grading & Drainage Plan
- Figure 6 – Servicing Plan

These plans are conceptual in nature and are to be used for planning purposes only. Upon Amendment acceptance, detailed design plans will be prepared and submitted with any subdivision application.

3.2 EXISTING CONDITIONS

The proposal is designed with the existing conditions of the land in mind. The impact on adjacent landowners and residents was carefully considered in the preparation of the plan.

The lands within the boundaries of the proposed Amendment are currently occupied by “The Stables at Pavan Park” which operates as a recreational equestrian facility complete with an arena building, horse pens/stables, and a hay barn structure. Adjacent landowners include:

- To the north – tributary coulees of the Oldman River valley
- To the east and west – country residential lot acreages.
- To the south – agricultural farmland

The boundary of the proposed Amendment area is the boundary of the single parcel containing the lands to be developed.

3.3 DEVELOPMENT OBJECTIVES

Preferred Development Concept

The preferred development concept appears in Figure 4 in Appendix A. Note that the lot layouts are tentative and may vary slightly due to design considerations. The ultimate development will create approximately 3.60 ha (8.90 acres) of net developable area. The proposed subdivision is bordered on the north by existing coulee fingers which feed into the Oldman River valley. A slope stability assessment was performed by Hasegawa Engineering using the RVARP setback criteria for lenzie silt conditions for the Stafford Coulee area. This setback determined the extent of developable lands on the north side of the property. The land area between the back of these lots and the top of coulee bank is to be dedicated as municipal reserve.

Due to the RVARP, top of coulee setback on the north side of the development, there was insufficient remaining area to create 3 new, 2acre, lots as proposed. To resolve this issue, a 0.13ac. (522m²) portion of existing Lot 1 Block 2, to the south, is to be borrowed to allow proposed lot 3 to meet the required 2.0 ac. minimum size. The remainder of the land is dedicated to the road right of way.

Lot sizes will be a minimum of 0.81 ha (2.0 acres) in size with one lot being considerably larger. The result is a proposed 4-lot development. The proposed lots will be accessed from Range Road 215 (refer to Figure 2).

Land Use Classification

The existing land use classification of the land for the proposed development is GCR (Grouped Country Residential).

Lethbridge County Municipal Development Plan

The Lethbridge County Municipal Development Plan contains directives for residential development. The location of the proposed development meets these directives for the following reasons:

- The site is located adjacent to an existing area of Country Residential Development
- The site does not contain any sensitive environmental, cultural or historical features.

3.4 POPULATION ESTIMATES

With 4 residential use lots, and assuming a dwelling on each lot, the estimated population for the development at full build out is 10 additional residents based on an assumed population of 2.5 people per household

3.5 PROPOSED LAND USE AREAS

The distribution of land use within the proposed Amendment is shown in *Table 1* below.

Table 1. Land Use Statistics

	Hectares (Acres)	Percent of Gross Area
Gross Developable Area	**4.65 (11.49)**	**100%**
Net Developable Area	**4.65 (11.49)**	**100%**
Country Residential Lots 1-4	3.60 (8.90)	77%
Road Right of Way	0.31 (0.76)	7%
Municipal Reserve	0.74 (1.83)	16%
Total	**4.65 (11.49**	**100%**
Area borrowed from Existing Lot 1 Blk 2 for proposed Lot 3	0.05 (0.12)	**1%**
Total	**4.7 (11.61)**	**101%**

4. SERVICING

To determine the viability of this development, preliminary evaluations have been performed with respect to servicing. Key service items include sewer, water, natural gas, telephone, television, and electric. Additional information on services is included in this section.

4.1 SANITARY SEWER SYSTEM

Sanitary sewage from each lot will be handled by individual private sewage treatment systems which meet or exceed the Alberta Private Sewage System Standard of Practice (2015). All systems will be approved as meeting these required standards prior to installation.

County development requirements indicate that prior to building on a lot, a soil test is required to determine the suitability of soil for supporting a septic field system. For the purpose of this Amendment, one borehole was advanced on each proposed lot, and soil samples taken to be analyzed to provide a representative indication of soil suitability for septic field. Prior to the development of each parcel, additional soil testing will be required. The soil characteristics, as detailed in this section, verify the suitability of the soil for this type of disposal system and supply the base design criterion for the required septic fields.

BDT Engineering conducted fieldwork for the septic feasibility at the subject property on February 21, 2024. Soil samples were taken from four boreholes, one on each proposed new lot, on the property (refer to Figure 4 in Appendix A for borehole locations). Classification tests including natural moisture content tests, Atterberg limits tests, and particle size distribution analyses were subsequently performed on the collected borehole samples at BDT's Lethbridge laboratory to aid in the determination of engineering properties.

The general subsurface stratigraphy comprised of topsoil, overlying clay, overlying clay till with occasional, discontinuous interbedded layers of sand, in descending order. Based on soil texture analysis, the soil can be generally classified as a loam.

The soils were classified using the soil texture classification triangle (Figure 8.1.1.10, Alberta Private Sewage System Standard of Practice 2015) and then that was used to determine Hydraulic Linear loading rates for the area. The results of this analysis are shown in Table 1 below.

Based on soil, groundwater, and site topography conditions, it is BDT's conclusion that the site should be considered a Suitability Type 2 – Moderate and as such, should adequately support a septic treatment system long-term.

Septic fields and septic tanks are to be designed, installed, and operated as per Alberta Private Sewage Systems Standard of Practice latest edition. Figure 4 in *Appendix A* shows approximate septic field sizes and locations on each lot based on estimated population of each lot.

4.2 WATER SYSTEMS

4.2.1 Potable Water

Potable water will be supplied to the subdivision via the existing 2" Rural Water Association treated water service which is located at the south side of existing riding arena building (see Fig. 5 in Appendix A). Lots 2,3, & 4 will be serviced by this waterline while lot 1 will have a cistern and have water trucked to site.

Raw Water System

There is no access to raw water rights from the SMRID for irrigation water at this time. An agreement will have to be negotiated in the future.

4.3 NATURAL GAS

The site is bordered to the south by two gas pipeline rights-of-way. A high-pressure gas line (GL 32 AP) owned by ATCO Pipelines and a low-pressure gas pipeline (2602IC) owned by ATCO Gas bisect the development area. ATCO has no plans to move the gas lines, and the setbacks and restrictions associated with the existence of these lines have been incorporated into the conceptual plan for the lot design.

A low-pressure gas service line owned by ATCO Gas services the existing facilities located in the riding arena building at the property.

Each landowner will pay for the installation of natural gas distribution infrastructure to their lot. ATCO Gas will distribute natural gas within the development and lot purchasers will be able to select a retailer for natural gas supply. An existing ATCO high pressure natural gas line runs through the east side of the development which is a potential tie in point for servicing of the residential use lots within the subdivision.

4.4 ELECTRICAL POWER

The existing electrical service for the area is overhead power lines. Fortis Alberta Inc. will provide services to the proposed subdivision and services to each property line off the existing infrastructure (refer to Figure 4).

Electrical services are to be provided by the lot owner, not by the developer.

4.5 TELEPHONE

Telus will provide services to the lots, but each individual owner must apply for the service when building.

4.6 SOLID WASTE DISPOSAL

Lot purchasers will be responsible for making arrangements for solid waste disposal. The City of Lethbridge Regional Solid waste facility is located approximately 6 km driving distance from the development. Alternatively, lot purchasers may contract with a private solid waste hauler.

4.7 MAIL DELIVERY

At the time of subdivision an application will be made to Canada Post for mail service to the development. The design of the subdivision will include an appropriate location per Canada Post guidelines. A community mailbox area at the entrance to the development will likely be required.

5. ROADS AND TRANSPORTATION

5.1 EXTERNAL ROADS

The nearest provincial highway to the development area is Secondary Highway 843 located approximately 3 km east of the development. The primary access to the subdivision will be from Range Road 215 which extends to the north from 13th Street North in the City of Lethbridge. Both accesses are gravel surfaces. No off-site improvements to the County owned roads are anticipated. The internal road servicing the lots will be gravel surfaced, to be provided at the developer's expense. Where possible, the developer will provide shared approaches for those parcels gaining access from the County roads.

6. SITE DRAINAGE AND GRADING

The objective of the stormwater management design is to ensure that there is no impact on the surrounding properties and landowners from changing the drainage pattern within the development.

This analysis was based on creating a total of four (4) lots. All drainage onsite will conform to Lethbridge County and Alberta Environment and Parks requirements. The intent of stormwater management for the development is to control runoff with the use of stormwater management retention areas such that runoff is contained and released only when permission is granted. A Site Drainage Analysis was completed for the site (*Appendix D*) and is summarized below.

6.1 SITE DRAINAGE

A survey of the subject property was conducted on Sept. 11, 2023, to determine existing ground topography and drainage courses. Drainage around the existing buildings, corals, and gravel roads is ultimately directed to the northwest and draining into the coulee valley. Existing ground slope varies from 0.7% to 8.0%

The proposed drainage plan utilizes the existing topography and established drainage courses were possible. Lots 1 & 2, on the north side of the development, are designed to be split drainage lots conveying a portion of the front lot drainage south into the roadside ditch and then west toward range road 215. The back half of lots 1 & 2 drain to the north across the property line and across the municipal reserve land and into the coulee drawing into the Oldman River valley. Lot 3 is also split drainage with the front half draining to the east into the roadside ditch, and the back half draining to the west. There is a 3-meter-wide grass swale along the east property lines of Lot 2 & 3 which directions overland flow to the north, and offsite. Lot 4, on the southside of the road, directs surface drainage to the north and into the roadside ditch, then west toward the existing ditch system along the east side of range road 215. The stormwater is then diverted north through a culvert under the newly constructed gravel road into the existing ditch system along the east side of Range Road 215.

A combination of lot grading, grass swales, roadside ditches, & culverts will be used to convey overland storm water from the four proposed lots toward the coulee draw to the north. Figure 5 in Appendix A shows the topography of the site and proposed grading and infrastructure. There are no stormwater retention areas such as dry or wet ponds as part of the design. The overall drainage plan for the proposed subdivision is designed to work within the major storm system of the Edgewood Stables ASP.

6.2 DRAINAGE MODELING

To determine the post-development drainage requirements for the proposed 4-lot subdivision, a hydrologic model of the site was prepared using a combination of GPS surveys, GeoHECHMS, and PCSWMM software. GeoHECHMS software was used to divide the resulting surface into sub basins. The software also generates flowpaths and average slopes for each sub basin. To determine the peak runoff from each basin, surface runoff analysis was performed followed by runoff modelling using PC SWMM hydrologic modeling software package. The hydrologic model of the site post-development was then analyzed using a 1:100 year 24-hour design storm event. The complete hydrological and site drainage analysis report is included in Appendix D.

The stormwater management area was designed to retain runoff volume generated and ensure that peak flow remains below predevelopment flow rates. The hydrologic model will be reviewed during the detailed design stage to confirm the required capacity of the overland drainage system and culverts.

7. ENVIRONMENTAL ASSESSMENT

The existing lot area of 4.65 ha. is currently occupied by the “Stables of Pavan Park” recreational equestrian complex. This is comprised of a riding arena building, stables, a large riding/training area, and a hay barn. Gravel roads provide access to these amenities within the park. The remaining land is covered with grass and tress/shrubs. Since this is all developed land there is no need for additional environmental assessments

The proposed subdivision area has no sign of surface contamination. There are two gas pipelines right of ways that border the property on the south side, running from southwest to northeast. One is a high-pressure gas line and the other a low-pressure line. ATCO Gas has no plans to move the pipelines. There are no active well heads, leases, or abandoned leases in the plan area.

8. MINIMUM SERVICING STANDARD

The subject property is zoned Grouped Country Residential (GCR) land use. As per Lethbridge County Land Use Bylaw No. 1404, the minimum lot size is 0.8ha. (2.0ac.) of developable land, with a maximum flexible parcel size of 1.2 to 4.05ha. (3.0 to 10ac.). The minimum setback for side yards is 6.1 meters (20 ft.) and for front yards is 15.2 meters (50 ft), as per the Edgewood Stables ASP.

Site suitability testing is required before subdivision approval and includes but is not limited to water supply, water table levels, percolation rates, contours, environmental impact assessment, etc.

9. FIRE PROTECTION

Fire protection for the proposed subdivision will be provided by the existing storm pond and dry hydrant located approximately 150 meters east of the eastern most property line (refer to Figure 5 in Appendix A for locations).

10. ARCHITECTURAL CONTROLS

Architectural control for the proposed subdivision will use the same rules and conditions of the Edgewood Stables ASP which have been included in Appendix E.

11. CONCLUSION

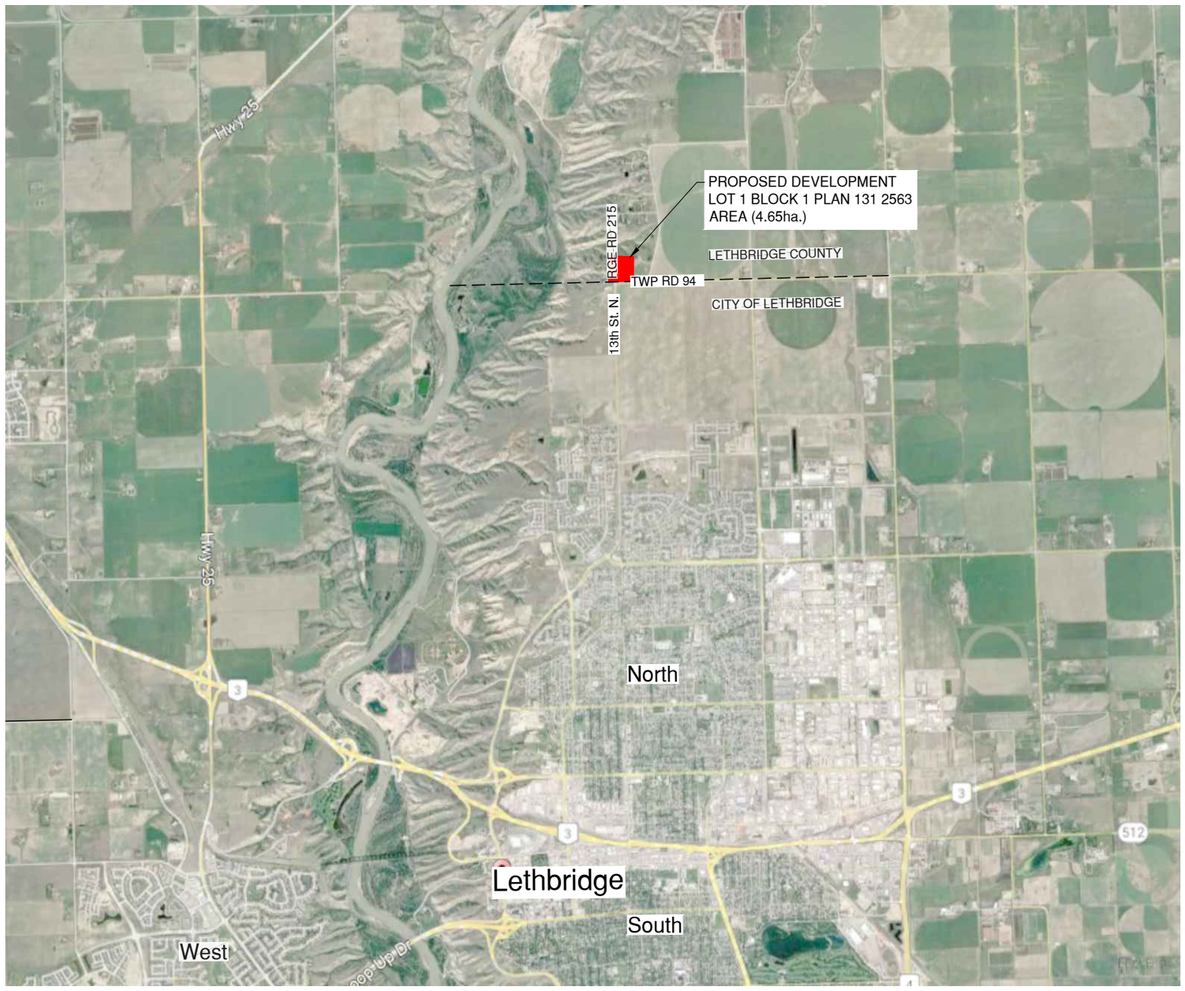
The proposed 4-Lot residential subdivision meets with the requirements established in the Municipal Development Plan and Land Use Bylaw of Lethbridge County for the development of a “County Residential” multi-lot subdivision. It also works within the framework of the Edgewood Stables Area Structure Plan. The site investigation and soils investigation performed indicate the site is suitable for this purpose.

APPENDIX A

FIGURES

ISSUE	DRAWING STATUS / REVISION	DATE (YY/MM/DD)	BY
A	FOR REPORT	24/09/11	MDO

DESIGNED	DRAWN	CHECKED	APPROVED	SCALE AND SHEET SIZE
MH	MDO	MH	MH	NTS - 11x17



HASEGAWA
CONSULTING PROFESSIONAL ENGINEERS
1220 - 31 Street North, Lethbridge, Alberta T1H 5J8
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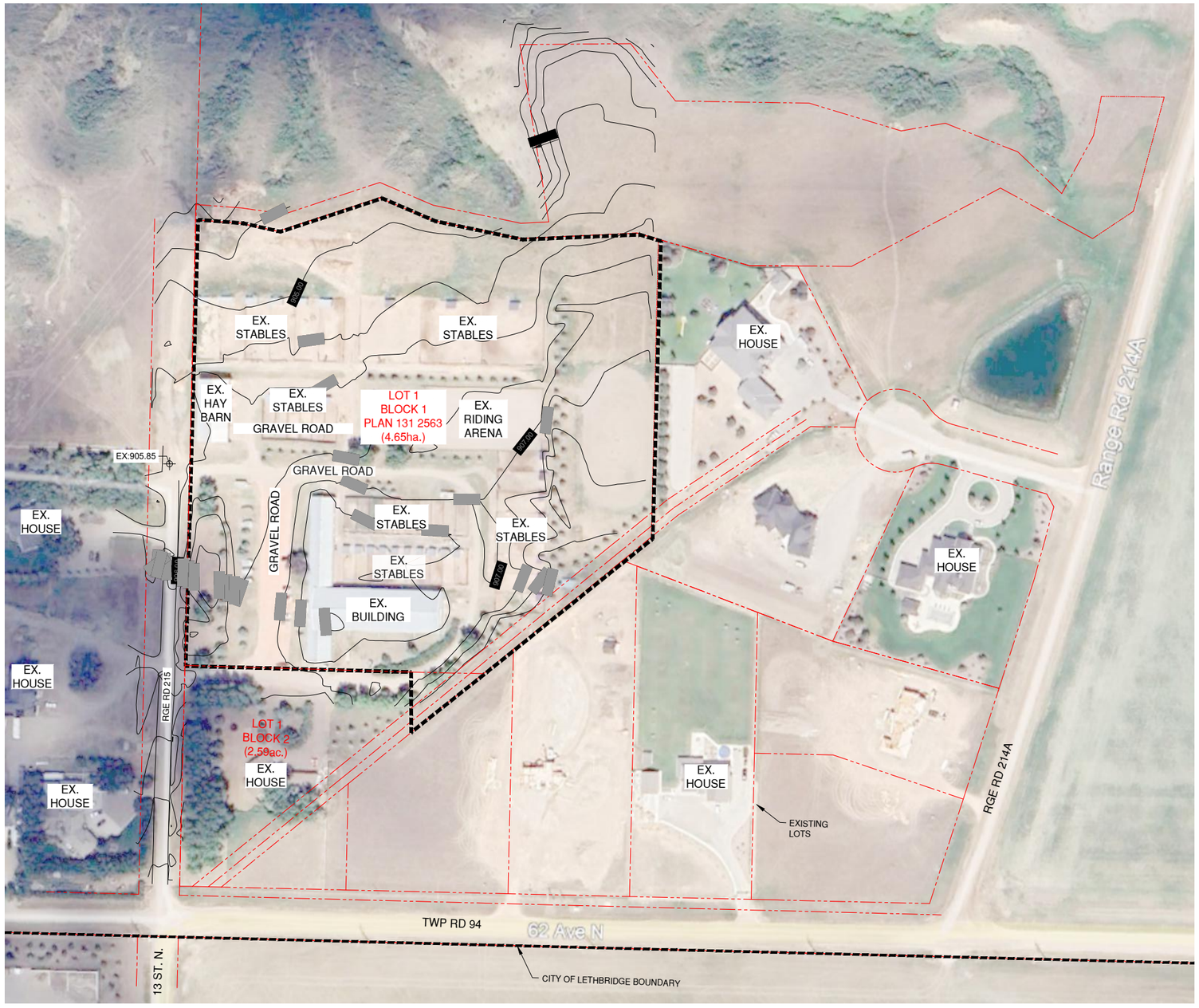
CLIENT: TYLER HIRSCHE

PROJECT: PROPOSED 4 LOT SUBDIVISION
LOT 1 BLOCK 1 PLAN 131 2563

DRAWING: AREA MAP

PROJECT NUMBER	SHEET NUMBER
21-062	FIG. 1



ISSUE	DRAWING STATUS / REVISION	DATE (YY/MM/DD)	BY
A	FOR REPORT	24/09/11	MDO

DESIGNED	DRAWN	CHECKED	APPROVED	SCALE AND SHEET SIZE
MH	MDO	MH	MH	1:2,000 - 11x17

LEGEND

- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING GROUND CONTOURS - 0.5m INTERVALS
- EXISTING LOTS

0 20 40 60 80 100 200

SCALE=1:2,000

NOTE:

- ALL DIMENSIONS SHOWN ARE IN METERS (m) UNLESS OTHERWISE NOTED
- AIR PHOTO IMAGE IS SHOWN FOR REFERENCE ONLY AND MAY NOT REFLECT CURRENT SITE CONDITIONS
- SCALE AND ROTATION ARE APPROXIMATE

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PROJECT:
PROPOSED 4 LOT SUBDIVISION
LOT 1 BLOCK 1 PLAN 131 2563

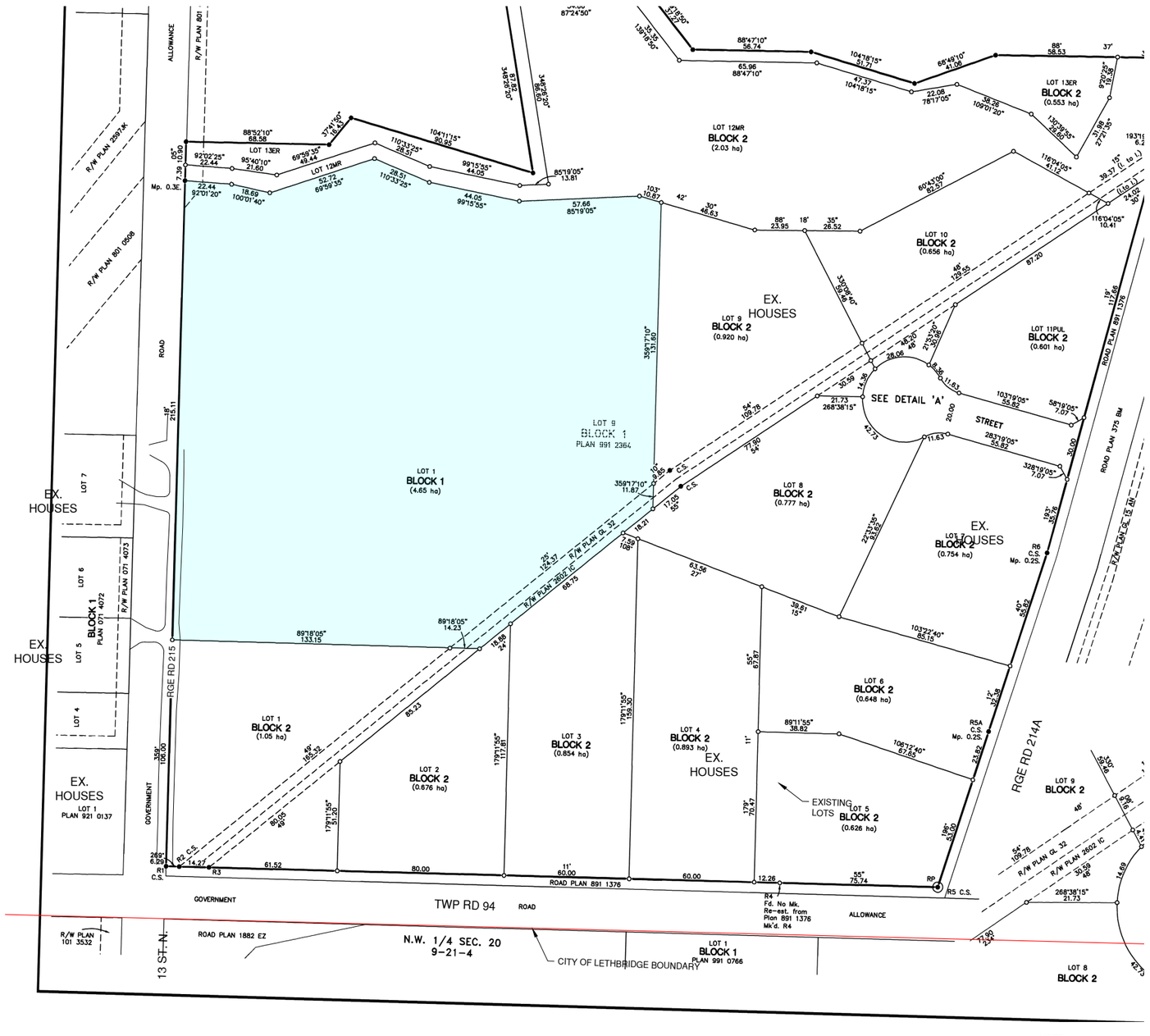
DRAWING:
EXISTING LOTS & TOPOGRAPY

PROJECT NUMBER: 21-062

SHEET NUMBER: FIG. 2

ISSUE	DRAWING STATUS / REVISION	DATE (YY/MM/DD)	BY
A	FOR REPORT	24/09/11	MDO

DESIGNED	DRAWN	CHECKED	APPROVED	SCALE AND SHEET SIZE
MH	MDO	MH	MH	1:2,000 - 11x17



LEGEND

PROPOSED SUBDIVISION AREA

NOTE:

- ALL DIMENSIONS SHOWN ARE IN METERS (m) UNLESS OTHERWISE NOTED
- AIR PHOTO IMAGE IS SHOWN FOR REFERENCE ONLY AND MAY NOT REFLECT CURRENT SITE CONDITIONS
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CLIENT: TYLER HIRSCHE

PROJECT:
PROPOSED 4 LOT SUBDIVISION
LOT 1 BLOCK 1 PLAN 131 2563

DRAWING:
LEGAL PLAN - EXISTING

PROJECT NUMBER: 21-062

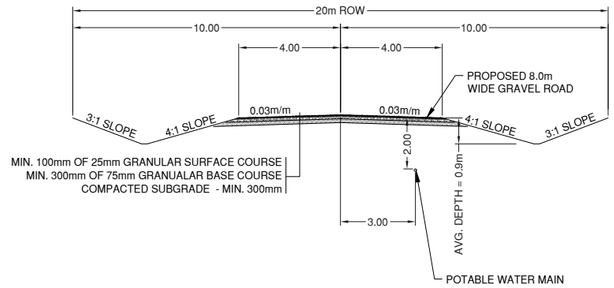
SHEET NUMBER: FIG. 3

1. SLOPE STABILITY SETBACK LINE AS DETERMINED BY RVARP SETBACK CRITERIA.
2. 1.91ac. AREA NORTH OF SLOPE STABILITY SETBACK TO TOP OF COULEE BANK TO BE DEDICATED AS MUNICIPAL RESERVE.

ISSUE	DRAWING STATUS / REVISION	DATE (YY/MM/DD)	BY
A	FOR REPORT	24/09/11	MDO

DESIGNED	DRAWN	CHECKED	APPROVED	SCALE AND SHEET SIZE
MH	MDO	MH	MH	1:2,000 - 11x17

NOTE:
- HOUSE AND SEPTIC FIELD SIZES & LOCATIONS SHOWN ARE FOR REFERENCE ONLY.
- SEPTIC (SOIL BASED TREATMENT) FIELD SUITABILITY TO BE DETERMINED AS PER ALBERTA PRIVATE SEWAGE SYSTEMS STANDARD OF PRACTICE - DECEMBER 2015 EDITION.



8.0m WIDE GRAVEL ROAD CROSS-SECTION
SCALE: 1:200

NOTE:
- ALL DIMENSIONS SHOWN ARE IN METERS (m) UNLESS OTHERWISE NOTED
- AIR PHOTO IMAGE IS SHOWN FOR REFERENCE ONLY AND MAY NOT REFLECT CURRENT SITE CONDITIONS
- SCALE AND ROTATION ARE APPROXIMATE

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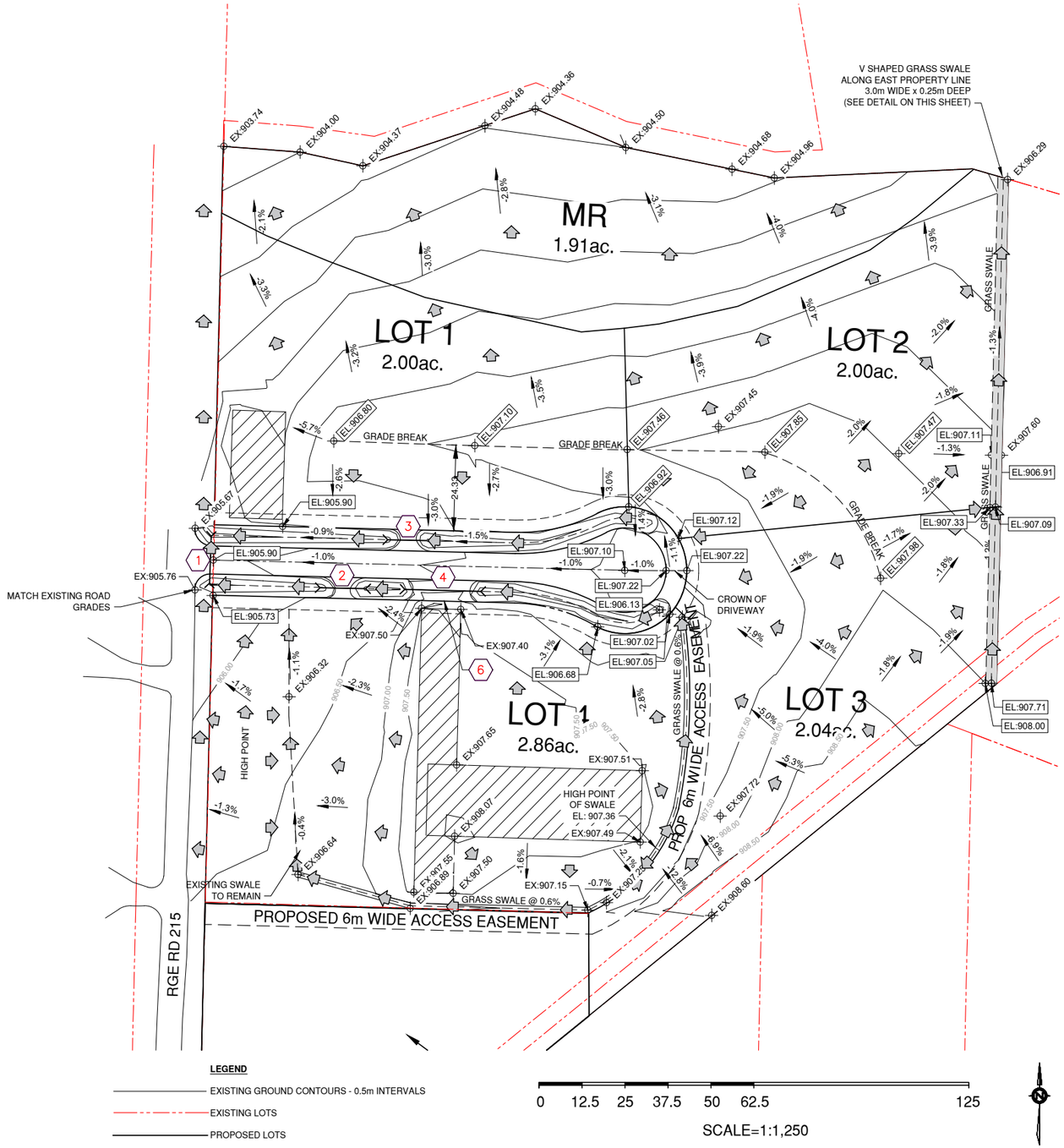
CLIENT: TYLER HIRSCHE

PROJECT:
PROPOSED 4 LOT SUBDIVISION
LOT 1 BLOCK 1 PLAN 131 2563

DRAWING:
CONCEPTUAL LOT LAYOUT

PROJECT NUMBER: 21-062

SHEET NUMBER: FIG. 4



KEYNOTES:

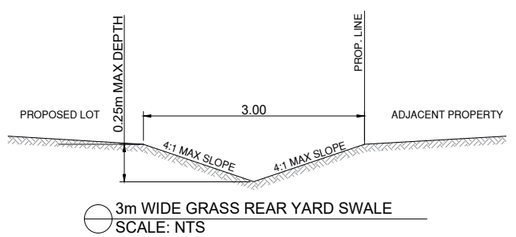
1. CULVERT 1
   L=14.0m S=0.6%
   INV IN: 904.94
   INV OUT: 904.85
2. CULVERT 2
   L=11.0m S=1.0%
   INV IN: 905.38
   INV OUT: 905.27
3. CULVERT 3
   L=12.0m S=1.0%
   INV IN: 905.39
   INV OUT: 905.27
4. CULVERT 4
   L=22.5m S=1.0%
   INV IN: 905.69
   INV OUT: 905.47
5. CULVERT 5
   L=13.0m S=1.0%
   INV IN: 906.01
   INV OUT: 905.88
6. GRADE AWAY FROM EXISTING BUILDING AT 5:1 MAX SLOPE

LEGEND

- EX:916.50 / PROP EL:916.50 — EX. GROUND SPOT ELEVATIONS / PROPOSED FINISH GROUND ELEVATION
- 0.6% — PROPOSED FINISH GROUND SLOPE
- PROPOSED FINISH GROUND CONTOURS 0.5m INTERVALS
- PROPOSED CULVERT - 600mm Ø CSP C/W RIP RAP AT EACH END
- OVERLAND DRAINAGE DIRECTION

LEGEND

- EXISTING GROUND CONTOURS - 0.5m INTERVALS
- EXISTING LOTS
- PROPOSED LOTS



3m WIDE GRASS REAR YARD SWALE
SCALE: NTS

ISSUE	DRAWING STATUS / REVISION	DATE (YY/MM/DD)	BY
A	FOR REPORT	24/09/11	MDO

DESIGNED	DRAWN	CHECKED	APPROVED	SCALE AND SHEET SIZE
MH	MDO	MH	MH	1:1,250 - 11x17

Lethbrige County Requirements

- All drainage culverts will be rip-rapped at both inlet and outlet. The size and type of rip-rap will conform to good engineering practice and acceptable to the County. Refer to Section 2.3.9 Rip Rap.
- Minimum size of roadway culvert will be 600 mm (wall thickness 1.6 mm or as required by the loading criteria).
- Minimum size of entrance culvert will be 500 mm (wall thickness 1.6 mm or as required by the loading criteria).
- Culverts will be placed so that the minimum distance from the finished grade of the roadway to the top of the pipe will be not less than one-half the diameter of the pipe or a minimum of 300 mm, whichever is greater, unless approved otherwise

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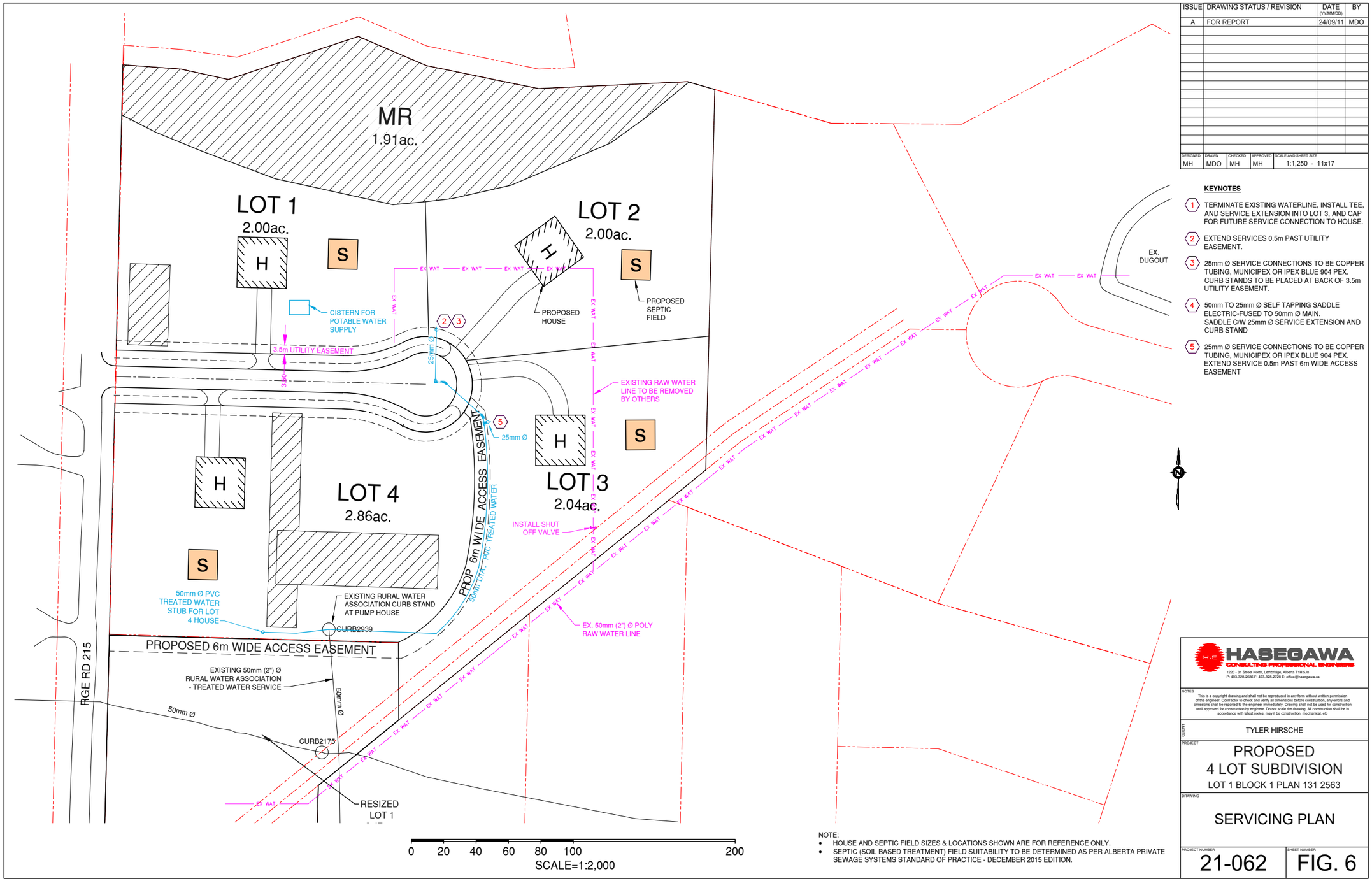
CLIENT: TYLER HIRSCHE

PROJECT:
PROPOSED 4 LOT SUBDIVISION
LOT 1 BLOCK 1 PLAN 131 2563

DRAWING:
GRADING & DRAINAGE PLAN

PROJECT NUMBER: 21-062

SHEET NUMBER: FIG. 5



ISSUE	DRAWING STATUS / REVISION	DATE (YY/MM/DD)	BY
A	FOR REPORT	24/09/11	MDO

DESIGNED	DRAWN	CHECKED	APPROVED	SCALE AND SHEET SIZE
MH	MDO	MH	MH	1:1,250 - 11x17

KEYNOTES

1. TERMINATE EXISTING WATERLINE, INSTALL TEE, AND SERVICE EXTENSION INTO LOT 3, AND CAP FOR FUTURE SERVICE CONNECTION TO HOUSE.
2. EXTEND SERVICES 0.5m PAST UTILITY EASEMENT.
3. 25mm Ø SERVICE CONNECTIONS TO BE COPPER TUBING, MUNICIPEX OR IPEX BLUE 904 PEX. CURB STANDS TO BE PLACED AT BACK OF 3.5m UTILITY EASEMENT.
4. 50mm TO 25mm Ø SELF TAPPING SADDLE ELECTRIC-FUSED TO 50mm Ø MAIN. SADDLE C/W 25mm Ø SERVICE EXTENSION AND CURB STAND
5. 25mm Ø SERVICE CONNECTIONS TO BE COPPER TUBING, MUNICIPEX OR IPEX BLUE 904 PEX. EXTEND SERVICE 0.5m PAST 6m WIDE ACCESS EASEMENT

NOTE:
- HOUSE AND SEPTIC FIELD SIZES & LOCATIONS SHOWN ARE FOR REFERENCE ONLY.
- SEPTIC (SOIL BASED TREATMENT) FIELD SUITABILITY TO BE DETERMINED AS PER ALBERTA PRIVATE SEWAGE SYSTEMS STANDARD OF PRACTICE - DECEMBER 2015 EDITION.

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CLIENT: TYLER HIRSCHE

PROJECT:
PROPOSED 4 LOT SUBDIVISION
LOT 1 BLOCK 1 PLAN 131 2563

DRAWING:
SERVICING PLAN

PROJECT NUMBER	SHEET NUMBER
21-062	FIG. 6

APPENDIX B

LAND TITLES

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0035 841 204	1312563;1;1	211 215 744

LEGAL DESCRIPTION
PLAN 1312563
BLOCK 1
LOT 1
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 4.65 HECTARES (11.49 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE
ATS REFERENCE: 4;21;9;29;SW

MUNICIPALITY: LETHBRIDGE COUNTY

REFERENCE NUMBER: 131 249 801

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
211 215 744	01/11/2021	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

HIRSCHE HOLDINGS LTD.
OF 94010 RANGE ROAD 215
LETHBRIDGE COUNTY
ALBERTA T1J 5R4

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
2311BD .	27/08/1914	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED. AS TO PORTION OR PLAN:GL32
2834IC .	19/09/1960	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		AS TO PORTION OR PLAN:2602IC "SUBJECT TO"
761 094 355	26/07/1976	IRRIGATION ORDER/NOTICE THIS PROPERTY IS INCLUDED IN THE ST. MARY RIVER IRRIGATION DISTRICT
801 081 823	30/05/1980	UTILITY RIGHT OF WAY GRANTEE - ALTALINK MANAGEMENT LTD. 2611 - 3 AVE SE CALGARY ALBERTA T2A7W7 AS TO PORTION OR PLAN:8010508 "TAKES PRIORITY OF CAVEAT 781197547 REGISTERED ON 5/12/78" (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 021161676) (DATA UPDATED BY: CHANGE OF ADDRESS 091107691)
841 146 222	30/08/1984	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.
131 249 605	01/10/2013	CAVEAT RE : DEVELOPMENT AGREEMENT PURSUANT TO MUNICIPAL GOVERNMENT ACT CAVEATOR - COUNTY OF LETHBRIDGE. 100, 905-4 AVENUE SOUTH LETHBRIDGE ALBERTA T1J4E4
131 249 804	01/10/2013	UTILITY RIGHT OF WAY GRANTEE - COUNTY OF LETHBRIDGE. AS TO PORTION OR PLAN:1312564
131 249 805	01/10/2013	UTILITY RIGHT OF WAY GRANTEE - FORTISALBERTA INC. AS TO PORTION OR PLAN:1312564
131 249 807	01/10/2013	UTILITY RIGHT OF WAY GRANTEE - ATCO GAS AND PIPELINES LTD. AS TO PORTION OR PLAN:1312565
171 196 947	02/09/2017	UTILITY RIGHT OF WAY GRANTEE - COUNTY OF LETHBRIDGE RURAL WATER ASSOCIATION LIMITED.
211 215 745	01/11/2021	MORTGAGE MORTGAGEE - ATB FINANCIAL. 8008-104 ST

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS

EDMONTON
ALBERTA T6E4E2
ORIGINAL PRINCIPAL AMOUNT: $900,000

TOTAL INSTRUMENTS: 011

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 23 DAY OF FEBRUARY, 2024 AT 04:14 P.M.

ORDER NUMBER: 49813636

CUSTOMER FILE NUMBER:

END OF CERTIFICATE

APPENDIX C

GEOTECHNICAL EVALUATION

GEOTECHNICAL EVALUATION
LOT 1 BLOCK 1 PLAN 331 2364
LETHBRIDGE COUNTY, ALBERTA

Prepared for: Hasegawa Consulting Professional Engineers
March, 2024
2024-016

BDT Engineering Ltd.
allardchrisbdt@outlook.com

CONTENTS

1.0 INTRODUCTION

This report presents the results of a geotechnical evaluation conducted by BDT Engineering Ltd. (BDT) for a proposed soil-based sewage treatment system servicing for four proposed residential lots at lot 1 block 1 plan 331 2364, in Lethbridge County, Alberta. The proposed lots range in size from approximately 2.0 to 4.32 acres, a conceptual lot layout is included in Appendix A.

The scope of work for this evaluation was outlined in a proposal emailed to Mike Oler of Hasegawa Consulting Professional Engineers (Hasegawa) on February 5, 2024. The objective of this evaluation was to determine the general subsurface conditions in the area of the proposed development and assess the feasibility of a soil-based sewage treatment system.

Authorization to proceed with this work was received by email on February 6, 2024.

2.0 PROJECT DETAILS AND SCOPE OF WORK

It is understood that the proposed development will consist of the design and construction of a private sewage treatment system for the future residential development of the above noted lot.

The scope of work for this evaluation included drilling four (4) boreholes, a laboratory program to assist in classifying subsurface soils and a discussion of the feasibility of sewage treatment system.

3.0 GEOTECHNICAL FIELD AND LABORATORY WORK

The fieldwork for this evaluation was carried out on February 21, 2024 using a truck mounted solid stem auger drill rig contracted from Chilako Drilling Services Ltd. of Coaldale, Alberta. The drill rig was equipped with 150 mm diameter solid stem continuous flight augers. The borehole locations are presented on Figure 1, in Appendix A.

Four boreholes, BH001 to BH004, were drilled at proposed septic field locations across the site. The boreholes were advanced to depths of 4.57 m below the existing ground surface.

Disturbed grab samples were obtained from each borehole at 0.75 m intervals. All soil samples were visually classified in the field, and the individual soil strata and the interface between them were noted. The borehole logs are presented in Appendix B. An explanation of the terms and symbols used on the borehole logs is also included in Appendix B.

A slotted 25 mm diameter PVC standpipe was installed in each of the boreholes to monitor groundwater levels. Auger cuttings were used to backfill around the standpipes and the boreholes were sealed at the surface with approximately 600 mm of bentonite chips.

Classification tests including natural moisture content tests, Atterberg limits tests, and particle size distribution analysis' were subsequently performed on the collected borehole samples at BDT's Lethbridge Laboratory to aid in the determination of engineering properties. All laboratory results are noted on the borehole logs or separately in Appendix B.

4.0 SITE AND SUBSURFACE CONDITIONS

4.1 SITE DESCRIPTION & TOPOGRAPHY

The site is located at lot 1 block 1 plan 331 2364 north of the intersection of 13 Street North and 62 Avenue North in Lethbridge County, Alberta. The site has a slight slope (<8%) to the coulees to the north, sloping towards the Oldman River.

4.2 SOIL CONDITIONS

It should be noted that geological conditions are innately variable. At the time of preparation of this report, information on subsurface stratigraphy was available only at discreet borehole locations. In order to develop recommendations from this information, it is necessary to make some assumptions concerning conditions other than at the borehole locations. Adequate field reviews should be provided during design and construction of the treatment system to check that these assumptions are reasonable.

The general subsurface stratigraphy comprised of topsoil, overlying clay, overlying clay till with occasional, discontinuous interbedded layers of sand, in descending order. Based on soil texture analysis, the soils can be generally classified as a loam. The following sections provide a summary of the soils encountered in the borehole logs. A more detailed description is provided on the borehole logs in Appendix B.

4.2.1 TOPSOIL

Topsoil was encountered at the surface in BH001, BH002, and BH003 and ranged in thickness from 50 mm to 200 mm. The topsoil was described as containing organics and was moist, and brown.

4.2.2 SHALE FILL

Shale Fill was encountered at the surface in BH004 and was approximately 75 mm in thickness. The shale was described as moist and red.

4.2.3 CLAY

Clay was encountered below the topsoil and was encountered up to depths of approximately 1.5 m to 3.0 m below the existing ground surface. The clay was silty with a trace of sand, firm to hard, damp to very moist, medium plastic, massive, and light brown. The results of the grain size analysis carried out on a representative sample of the clay indicated a textural composition of 35% sand, 43% silt, and 22% clay. Using Figure 2 of the Model Process for Subdivision Approval and Private Sewage, the upper clay has a textural classification of L (loam).

4.2.4 CLAY TILL

Clay till was encountered in all boreholes beneath the clay, present to the maximum depth drilled. The clay till was silty with a trace of sand and gravel. The clay till was, firm to hard, medium plastic, and moist to very moist. The clay till was massive, and olive brown with white precipitates. Coal and oxide stains were also noted throughout the clay till.

4.3 GROUNDWATER CONDITIONS

At the time of drilling, no sloughing was noted in any of the boreholes. The groundwater levels were measured on March 12, 2024. Table 4.3 summarizes the groundwater monitoring data.

Table 4.3 Groundwater Monitoring Data – March 12, 2024

Borehole Number	Depth of Standpipe (m)	Depth to Groundwater (m)
BH001	4.50	4.45
BH002	4.50	Dry
BH003	4.50	Dry
BH004	4.50	3.96

BH002 and BH003's monitoring wells were found to be dry and BH001 and BH004 showed groundwater depths of 4.45 to 3.96 m, respectively. Additionally, there were no other indicators of a high water table (i.e. mottling, gleying, etc.) noted in the field observations. Based on the results of the field drilling program and the measured groundwater levels, it is expected that the site should have adequate vertical separation throughout.

4.3.1 SPRINGS AND WELLS

No springs were observed on the site at the time of preparing this report. Based on records found on the Alberta Water Well Database, one well, GIC Well ID 1170005, was identified approximately 625 m west in the river bottom below the site. All available historic well records are provided in Appendix C.

5.0 DISCUSSION

5.1 POTENTIAL FOR GROUNDWATER MOUNDING

Based on soil descriptions, it is expected that groundwater mounding should not be an issue due to soil texture.

5.2 PREVIOUS SOILS REPORTS

At the time of preparing this report, no previous soil reports were available for review.

5.3 PROXIMITY TO EXISTING STRUCTURES / WATER BODIES

The site sits adjacent to 2 properties directly to the south. Each of these properties has a home sitting approximately 50 m and 141 m away from the nearest proposed septic field location.

Situated to the west/northwest of the site is the Oldman River. The river is approximately 1.3 km from the closest part of the site (northwest corner of property line).

Site plans illustrating the location of the wells and houses are included in Figure 1 in Appendix A.

5.4 Potential for Nutrient Loading

Based on the expected development, it is not anticipated that the nutrient loading added by the proposed treatment system will have any impact on aquifers or bodies of water in the area.

5.5 Vertical Separation From Restricting Conditions

As per Alberta Private Sewage Systems Standard of Practice, a soil-based treatment system within 2 km of a river requires a minimum of 900 mm (3 ft) of vertical separation from any restrictive condition. The upper clay (loam) was found to be present to depths of 1.5 m to 3.0 m overlying the massive clay till. Based on the results of the field drilling program, it is expected that the site should have adequate vertical separation throughout from any restricting conditions.

5.6 Septic Fields

The Safety Codes Council's, Alberta Private Sewage Systems Standard of Practice, 2021, notes that percolation testing can be used in support of a design that used site specific investigation. Previous percolation testing conducted on similar soils indicated percolation rates of between 5 mins/cm (gravel) up to 24 mins/cm (clay), which indicates the area surficial soils may be suitable for septic field development.

For design purposes, groundwater is expected to be measured below 4.0 m from the ground surface and is not expected to impact the design of the fields. The slopes of the area are less than 12%. Soils within the top 900 mm of the surface are generally considered to be loam.

During installation of the weeping trenches, the installer should pay close attention to the soil conditions encountered, to define the extent of any silt or sand pockets (areas subject to faster percolation rates) or medium to high plastic clays (areas of slower percolation rates). These should be immediately reported to the disposal field designer for review prior to completion of the septic disposal field.

6.0 CONCLUSION

Based on soil, groundwater, and site topography conditions as outlined in Table 3 of the Model Processing for Subdivision Approval and Private Sewage, it is BDT's conclusion that the site should be considered a Suitability Type 2 – Moderate and as such, should adequately support a septic treatment system long-term. See attached suitability type assessment chart in Appendix D.

7.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully Submitted,

Christopher Allard, C.E.T.

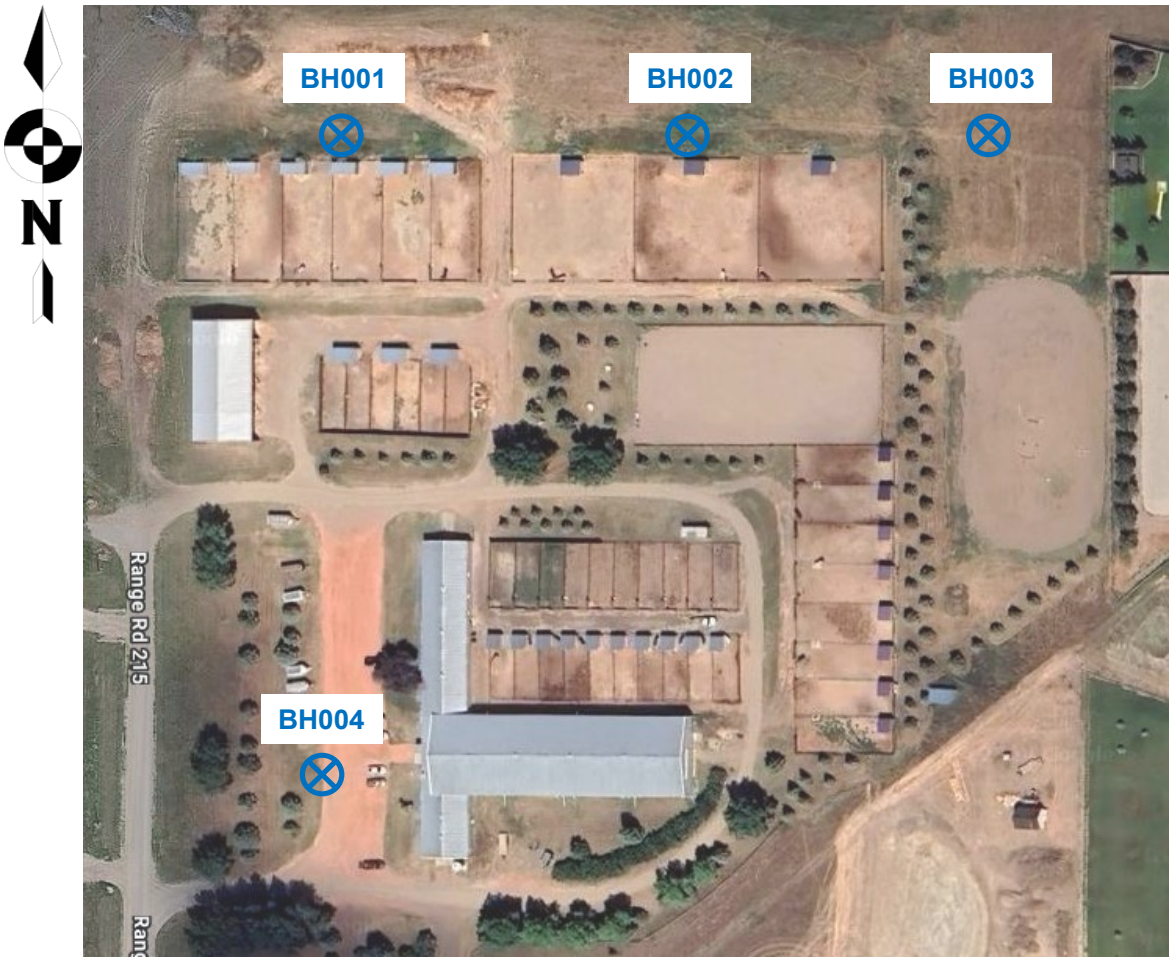
Lab Manager

BDT Engineering Ltd.

Mark Hasegawa, P.Eng.

APPENDIX A – SITE PLAN SHOWING BOREHOLE LOCATIONS & LOT LAYOUT

Figure 1 – Site Plan
Borehole Locations



LOT 1
2.0ac.
LOT 2
2.0ac.
LOT 3
2.15ac.
LOT 4
1ac.
0.4m TALL REAR YARD BERM
SEE DETAIL ON THIS SHEET
4m WIDE GRAVEL
DRIVEWAY
GRADE BREAK
RGE RD 215
Range Rd 215
PROP LINE

APPENDIX B – BOREHOLE LOGS AND TEST RESULTS

Project: Hirsche Lots Development Septic Fields		BOREHOLE NO: **BH001**
Client: Hasegawa Consulting Professional Engineers		PROJECT NO: 2024-016
	Solid Stem Auger	ELEVATION:

SAMPLE TYPE: SHELBY TUBE | CORE SAMPLE | SPT SAMPLE | GRAB SAMPLE | NO RECOVERY

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m) Water Level	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	BLOWS /150 mm	PLASTIC M.C. LIQUID (20 40 60 80)	▲VANE SHEAR (kPa)▲ 100 200 300 400 / ■BLOW COUNT■ 20 40 60 80 / ◆UNCONF. SHEAR STR. (kPa)◆ 100 200 300 400 / ●0.5 x POCKETPEN. (kPa)● 100 200 300 400	OTHER DATA	SLOTTED PIEZOMETER	Elevation (m)
0		Topsoil (50 mm)								
		Clay - silty, trace sand, stiff, damp, medium plastic, light brown		B1						
1				B2						
		Clay Till - silty, trace sand and gravel, very stiff, moist, medium plastic, olive brown, coal inclusions and oxide staining throughout.		B3						
2										
				B4						
3		- firm to stiff, moist to very moist								
				B5						
4	▼									
				B6						
5		End of borehole at 4.57 m, no sloughing or seepage. Standpipe installed to 4.57 m. Groundwater was measured at 4.45 m when monitored on March 12, 2024.								
6										
7										
8										
9										

LOGGED BY: CA	COMPLETION DEPTH: 4.57 m
REVIEWED BY: BDT	COMPLETION DATE: 24-2-21
	Page 1 of 1

AB TRANS BOREHOLE LOG HIRSCHE DEVELOPMENT SEPTIC FIELDS.GPJ AB_TRANS.GDT 24-3-12

Project: Hirsche Lots Development Septic Fields		BOREHOLE NO: **BH002**
Client: Hasegawa Consulting Professional Engineers		PROJECT NO: 2024-016
	Solid Stem Auger	ELEVATION:

SAMPLE TYPE: SHELBY TUBE | CORE SAMPLE | SPT SAMPLE | GRAB SAMPLE | NO RECOVERY

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	BLOWS /150 mm	PLASTIC M.C. LIQUID (20 40 60 80)	▲VANE SHEAR (kPa)▲ / ■BLOW COUNT■ / ◆UNCONF. SHEAR STR. (kPa)◆ / ●0.5 x POCKETPEN. (kPa)● (100 200 300 400; 20 40 60 80)	OTHER DATA	SLOTTED PIEZOMETER	Elevation (m)
0		Topsoil (200 mm)								
		Clay - silty, trace sand, stiff, moist, medium plastic, light brown		B1						
1				B2				Soil Texture: Loam		
2		Clay Till - silty, trace sand and gravel, very stiff, moist, medium plastic, olive brown, coal inclusions and oxide staining throughout		B3						
3		- very stiff to hard		B4						
				B5						
4				B6						
5		End of borehole at 4.57 m, no sloughing or seepage. Standpipe installed to 4.57 m. Standpipe dry when monitored on March 12, 2024.								
6										
7										
8										
9										

LOGGED BY: CA	COMPLETION DEPTH: 4.57 m
REVIEWED BY: BDT	COMPLETION DATE: 24-2-21
	Page 1 of 1

AB TRANS BOREHOLE LOG HIRSCHE DEVELOPMENT SEPTIC FIELDS.GPJ AB_TRANS.GDT 24-3-12

Project: Hirsche Lots Development Septic Fields		BOREHOLE NO: **BH003**
Client: Hasegawa Consulting Professional Engineers		PROJECT NO: 2024-016
	Solid Stem Auger	ELEVATION:

SAMPLE TYPE: SHELBY TUBE | CORE SAMPLE | SPT SAMPLE | GRAB SAMPLE | NO RECOVERY

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	BLOWS /150 mm	PLASTIC M.C. LIQUID (20 40 60 80)	▲ VANE SHEAR (kPa) ▲ (100 200 300 400) / ■ BLOW COUNT ■ (20 40 60 80) / ◆ UNCONF. SHEAR STR. (kPa) ◆ (100 200 300 400) / ● 0.5 x POCKETPEN. (kPa) ● (100 200 300 400)	OTHER DATA	SLOTTED PIEZOMETER	Elevation (m)
0		Topsoil (150 mm)								
		Clay - silty, trace sand, stiff, damp, medium plastic, light brown		B1						
1		- firm to stiff, moist		B2						
2				B3						
		Clay Till - silty, trace sand and gravel, very stiff, moist, medium plastic, olive brown, coal inclusions and oxide staining throughout		B4						
3				B5						
4				B6						
		End of borehole at 4.57 m, no sloughing or seepage. Standpipe installed to 4.57 m. Standpipe dry when monitored on March 12, 2024.								
5										
6										
7										
8										
9										

LOGGED BY: CA	COMPLETION DEPTH: 4.57 m
REVIEWED BY: BDT	COMPLETION DATE: 24-2-21
	Page 1 of 1

AB TRANS BOREHOLE LOG HIRSCHE DEVELOPMENT SEPTIC FIELDS.GPJ AB_TRANS.GDT 24-3-12

Project: Hirsche Lots Development Septic Fields		BOREHOLE NO: **BH004**
Client: Hasegawa Consulting Professional Engineers		PROJECT NO: 2024-016
	Solid Stem Auger	ELEVATION:

SAMPLE TYPE: SHELBY TUBE | CORE SAMPLE | SPT SAMPLE | GRAB SAMPLE | NO RECOVERY

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m) Water Level	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	BLOWS /150 mm	PLASTIC M.C. LIQUID (20 40 60 80)	▲ VANE SHEAR (kPa) ▲ (100 200 300 400) ■ BLOW COUNT ■ (20 40 60 80) ◆ UNCONF. SHEAR STR. (kPa) ◆ (100 200 300 400) ● 0.5 x POCKETPEN. (kPa) ● (100 200 300 400)	OTHER DATA	SLOTTED PIEZOMETER	Elevation (m)
0		Shale Fill (75 mm)								
		Clay - silty, trace sand, stiff to hard, moist, medium plastic, light brown		B1						
1				B2						
2		- very moist		B3						
3				B4						
		Clay Till - silty, trace sand and gravel, very stiff, moist, medium plastic, olive brown, coal inclusions and oxide staining throughout		B5						
4		- hard								
				B6						
		End of borehole at 4.57 m, no sloughing or seepage. Standpipe installed to 4.57 m. Groundwater was measured at 3.96 m when monitored on March 12, 2024.								
5										
6										
7										
8										
9										

LOGGED BY: CA	COMPLETION DEPTH: 4.57 m
REVIEWED BY: BDT	COMPLETION DATE: 24-2-21
	Page 1 of 1

AB TRANS BOREHOLE LOG HIRSCHE DEVELOPMENT SEPTIC FIELDS.GPJ AB_TRANS.GDT 24-3-12

TERMS USED ON BOREHOLE LOGS

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on 0.075mm sieve): Includes (1) clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as inferred from laboratory or in situ tests.

DESCRIPTIVE TERM	RELATIVE DENSITY	N (blows per 0.3m)
Very Loose	0 TO 20%	0 to 4
Loose	20 TO 40%	4 to 10
Compact	40 TO 75%	10 to 30
Dense	75 TO 90%	30 to 50
Very Dense	90 TO 100%	greater than 50

The number of blows, N, on a 51mm O.D. split spoon sampler of a 63.5kg weight falling 0.76m, required to drive the sampler a distance of 0.3m from 0.15m to 0.45m.

FINE GRAINED SOILS (major portion passing 0.075mm sieve): Includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as estimated from laboratory or in situ tests.

DESCRIPTIVE TERM	UNCONFINED COMPRESSIVE STRENGTH (KPA)
Very Soft	Less than 25
Soft	25 to 50
Firm	50 to 100
Stiff	100 to 200
Very Stiff	200 to 400
Hard	Greater than 400

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil.

GENERAL DESCRIPTIVE TERMS

Slickensided - having inclined planes of weakness that are slick and glossy in appearance.
Fissured - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
Laminated - composed of thin layers of varying colour and texture.
Interbedded - composed of alternate layers of different soil types.
Calcareous - containing appreciable quantities of calcium carbonate.;
Well graded - having wide range in grain sizes and substantial amounts of intermediate particle sizes.
Poorly graded - predominantly of one grain size, or having a range of sizes with some intermediate size missing.

MODIFIED UNIFIED SOIL CLASSIFICATION

MAJOR DIVISION			GROUP SYMBOL	TYPICAL DESCRIPTION
COARSE-GRAINED SOILS More than 50% retained on 75 µm sieve*	GRAVELS 50% or more of coarse fraction retained on 4.75 mm sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes 4.75 mm sieve	CLEAN SANDS	SW	Well-graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (by behavior) 50% or more passes 75 µm sieve*	SILTS Liquid limit <50		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands of slight plasticity
	SILTS Liquid limit >50		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
	CLAYS Above "A" line on plasticity chart negligible organic content Liquid limit <30		CL	Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays
	CLAYS Above "A" line on plasticity chart negligible organic content Liquid limit 30-50		CI	Inorganic clays of medium plasticity, silty clays
	CLAYS Above "A" line on plasticity chart negligible organic content Liquid limit >50		CH	Inorganic clays of high plasticity, fat clays
	ORGANIC SILTS AND CLAYS Liquid limit <50		OL	Organic silts and organic silty clays of low plasticity
	ORGANIC SILTS AND CLAYS Liquid limit >50		OH	Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils

LABORATORY CLASSIFICATION CRITERIA

Classification on basis of percentage of fines

GW, GP, SW, SP
GM, GC, SM, SC
Borderline Classification requiring use of dual symbols

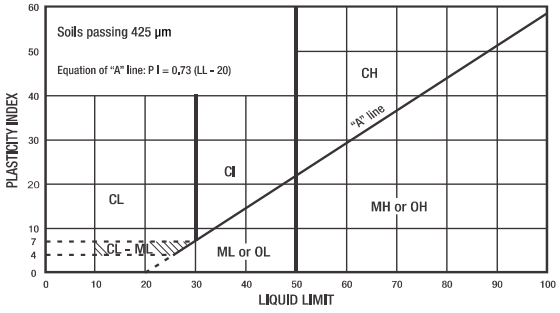
$C_U = D_{60} / D_{10}$ Greater than 4 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
Not meeting both criteria for GW	
Atterberg limits plot below "A" line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
Atterberg limits plot above "A" line or plasticity index greater than 7	

Less than 5% Pass 75 µm sieve
More than 12% Pass 75 µm sieve
5% to 12% Pass 75 µm sieve

$C_U = D_{60}/D_{10}$ Greater than 6 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
Not meeting both criteria for SW	
Atterberg limits plot below "A" line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
Atterberg limits plot above "A" line or plasticity index greater than 7	

For classification of fine-grained soils and fine fraction of coarse-grained soils.

PLASTICITY CHART



*Based on the material passing the 75 mm sieve
Reference: ASTM Designation D2487, for identification procedure see D2488. USC as modified by PFRA

SOIL COMPONENTS

FRACTION	SIEVE SIZE PASSING	SIEVE SIZE RETAINED	DEFINING RANGES OF PERCENTAGE BY MASS OF MINOR COMPONENTS PERCENTAGE	DESCRIPTOR
GRAVEL			>35 %	"and"
coarse	75 mm	19 mm		
fine	19 mm	4.75 mm	21 to 35 %	"y-adjective"
SAND				
coarse	4.75 mm	2.00 mm	10 to 20 %	"some"
medium	2.00 mm	425 µm		
fine	425 µm	75 µm	>0 to 10 %	"trace"
SILT (non plastic) or CLAY (plastic)	75 µm		as above but by behavior	

OVERSIZE MATERIAL

Rounded or subrounded

COBBLES	75 mm to 300 mm
BOULDERS	> 300 mm

Not rounded

ROCK FRAGMENTS	>75 mm
ROCKS	> 0.76 cubic metre in volume

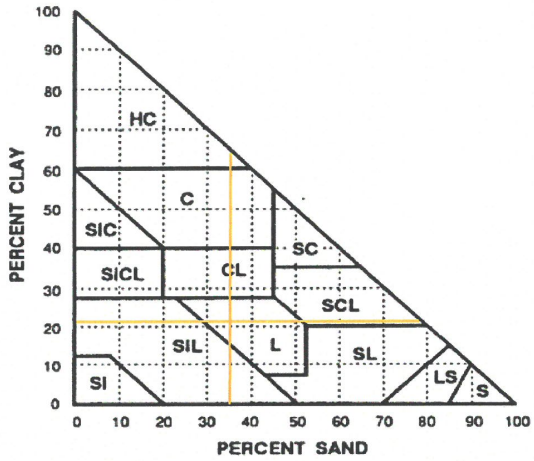
Particle Size Distribution
ASTM D6913 & D7925-21e1

BDT Engineering Ltd.

Bay G - 1710 31 St N, Lethbridge, AB T1H 5H1

Project Name / No.: 4 Lot Development - Septic Suitability
Client: Hasegawa Consulting Professional Engineers
Sample No.: 2B2
Sample Location: BH002 - ~1.5 m below existing ground
Material Type: Loam

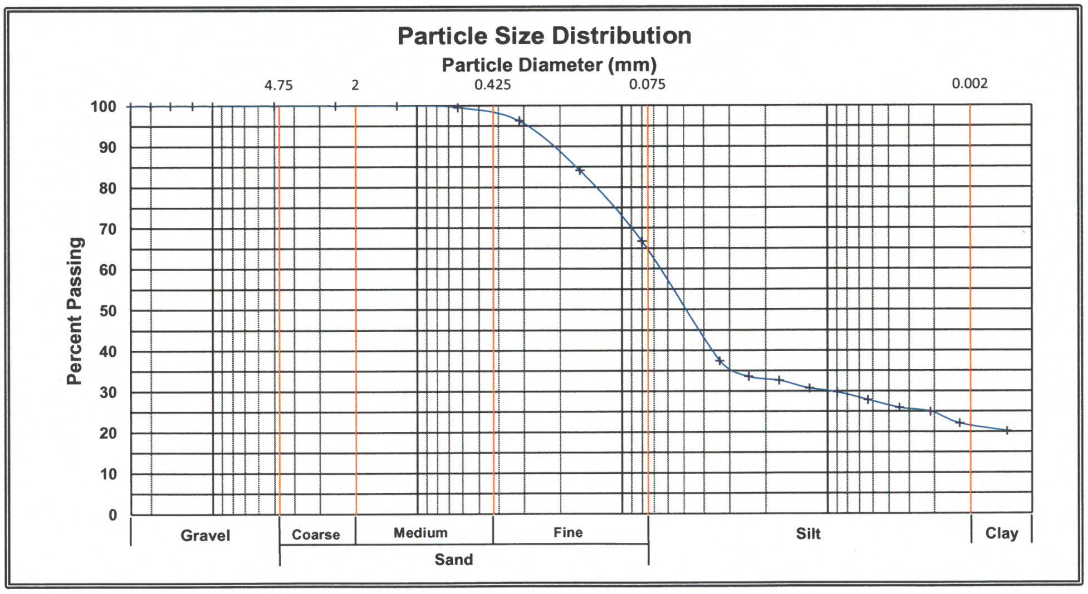
Field Technician: Christopher Allard
Lab Technician: Christopher Allard



Soil Composition	
Gravel	
Sands	35%
Silt	43%
Clay	22%

Remarks:

Additional information available upon request.



Reviewed: Christopher Allard, C.E.T.

APPENDIX C – HISTORIC WELL RECORDS

Water Well Drilling Report

View in Metric | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 1170005
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Imperial

Owner Name	Address	Town	Province	Country	Postal Code
PAVAN, LEROY & SANDRA	RR 8 - 4412	LETHBRIDGE	ALBERTA	CA	T1J 4P4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	30	9	21	4				TEST HOLE #1

Measured from Boundary of
ft from
ft from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 49.758056 Longitude -112.832500
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 2661.00 ft
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Rotary - Air

Proposed Well Use
Observation

Type of Work
Test Hole-Decommissioned
View Decommissioning Report

Plugged 2005/11/10
Plugged with Cuttings
Amount

Formation Log

Measurement in Imperial

Depth from ground level (ft)	Water Bearing	Lithology Description
14.00		Tan Alluvial Silt
20.00		Dark Gray Bearpaw Bedrock

Yield Test Summary

Measurement in Imperial

Recommended Pump Rate igpm

Test Date	Water Removal Rate (igpm)	Static Water Level (ft)

Well Completion

Measurement in Imperial

Total Depth Drilled	Finished Well Depth	Start Date	End Date
20.00 ft		2005/11/10	2005/11/10

Borehole

Diameter (in)	From (ft)	To (ft)
6.00	0.00	20.00

Surface Casing (if applicable)
Size OD : in
Wall Thickness : in
Bottom at : ft

Well Casing/Liner
Size OD : in
Wall Thickness : in
Top at : ft
Bottom at : ft

Perforations

From (ft)	To (ft)	Diameter or Slot Width(in)	Slot Length (in)	Hole or Slot Interval(in)

Perforated by

Annular Seal
Placed from ft to ft
Amount

Other Seals

Type	At (ft)

Screen Type
Size OD : in

From (ft)	To (ft)	Slot Size (in)

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KEVIN BLAND

Certification No
VC3171

Company Name
CAMFIELD DRILLING SERVICES LTD.

Copy of Well report provided to owner Date approval holder signed

Water Well Drilling Report

View in Metric | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 1170005
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Imperial

Owner Name	Address	Town	Province	Country	Postal Code
PAVAN, LEROY & SANDRA	RR 8 - 4412	LETHBRIDGE	ALBERTA	CA	T1J 4P4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	30	9	21	4				TEST HOLE #1

Measured from Boundary of
ft from
ft from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 49.758056 Longitude -112.832500
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 2661.00 ft
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Imperial

Distance From Top of Casing to Ground Level in
Is Artesian Flow
Rate igpm
Is Flow Control Installed
Describe

Recommended Pump Rate igpm
Recommended Pump Intake Depth (From TOC) ft
Pump Installed
Type
Depth ft
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth ft
Gas
Depth ft
Well Disinfected Upon Completion
Geophysical Log Taken
Remedial Action Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
PULLED CASING BACKFILLED HOLE WITH CUTTINGS & BENT. CHIPS

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
KEVIN BLAND

Certification No
VC3171

Company Name
CAMFIELD DRILLING SERVICES LTD.

Copy of Well report provided to owner
Date approval holder signed

APPENDIX D – SUITABILITY TYPE ASSESSMENT CHART

Site Variable	Suitability Type 2 - Moderate Characteristics	Site Characteristics
Soil texture and structure See Table 7A.1.5 in Private Sewage System Standard of Practice (PSSSP) for suitable soil texture classifications.	Soil texture is finer or coarser than ideal but is still suited for treatment field use. Texture class in this type typically includes sandy clay loam, clay loam, loamy coarse sand. Structure is a medium to strong grade of Blocky, granular, prismatic or columnar	Soil texture classified as a loam.
Depth of Suitable Soil	Soil is moderately suitable to at least 2.5 m (8 feet) in depth to bedrock, impermeable layers, or saturated soils. Limited suitability at depths below 1.5m (5 feet) may be present.	Soil is suitable to 4.5 m.
Hydraulic Capability of Soil Soil characteristics are required to rate permeability.	Soils are rated as well drained and have good to moderate permeability.	Site soil is expected to have moderate permeability.
Soil Horizons	Soil horizons have moderate textural contrast and mild stratification of materials and indicators that suggest moderate restriction to vertical water movement	See sections 4.2 of report.
Depth to Water Table	No indication of saturated soil conditions or water table to a depth greater than 2.5 m (8 ft.)	See table 4.3 Groundwater Monitoring Data.
Topography of proposed site	Land has a slight slope (0 – 8%) that is convex in nature	Land has a slight slope of <8%
Flooding	None, protected	None, protected.
Density	Existing or planned development of a moderate density. Surrounding density less than 30 parcels per ¼ section.	Planned development - low density residential.
Encumbrances (ie. Wells, water sources, surface water, buildings, property lines, lines of easement, interceptors or drainage ditches, cuts, banks, fills, driveways or parking areas, existing on-site sewage systems, or underground utilities)	Encumbrances cause moderate siting limitations but sufficient setbacks exist and two suitable sites for on-site sewage systems have been identified.	Sufficient room for setbacks from identified encumberances.
Parcel Size	Sufficient parcel size	Large parcel size.
Surface Water	Effect on surface water is not a concern with proper on-site system design and siting. On-site location is not limited by required separation from surface water body.	Development site >1,300 m from water body, no impact to surface water is expected.

APPENDIX D

HYDROLOGICAL & SITE DRAINAGE ANALYSIS

HYDROLOGICAL and SITE DRAINAGE ANALYSIS

Tyler Hirsche Subdivision

PREPARED FOR:
Tyler Hirsche
Hirsche Holdings Ltd.
94010 RR 215
Lethbridge, AB T1J 5R

PREPARED BY:
Hasegawa Engineering
1220 – 31st Street North
Lethbridge, Alberta T1H 5J8

Issue/Revision Log

Issue/Revision #	Issued By	Date	Issue / Revision Description
1	M. Hasegawa	2024-03-07	

Report Authors

Report Prepared By:

Dave Chalmers, CET.
Hasegawa Engineering

Report Reviewed and Approved By:

Mark Hasegawa, P.Eng.
Hasegawa Engineering

TABLE OF CONTENTS

1.0 Introduction

On behalf of Tyler Hirsche, Hasegawa Engineering (HE) has completed storm water modeling for a proposed 4-lot subdivision just north of Lethbridge, Alberta.

2.0 Site Conditions

The site consists of approximately 11.5 acres of land accessed off of 13 Street and 62 Avenue North as shown in Figure 1 (Appendix A). At this location, 62 Avenue North forms the north boundary for the City of Lethbridge. Presently, the land is used as an equestrian facility with outdoor riding areas and outdoor pens. Impervious surfaces consist of horse shelters in each of the outdoor pens, a large enclosed arena, a hay barn and graveled local roadways.

The proposed subdivision would keep the hay barn and arena while dividing the land into a 1.9 acre municipal reserve area on the north and 4 lots arranged around a central east/west road running into the subdivision as shown in Figure 2. Lots 1-3 are approximately 2 acres each and Lot 4 is 2.86 acres. The existing hay barn remains as part of Lot 1 and the existing riding arena is part of Lot 4. The existing ground generally slopes at about 2% to the northwest with runoff flowing into a coulee bordering the development to the north.

3.0 Surface Runoff Design Criteria

3.1 Onsite Runoff

The existing site was surveyed using GPS. GeoHECHMS software was used to divide the resulting surface into sub basins. The software also generates flowpaths and average slopes for each sub basin. The footprint of roofed structures were treated as impervious areas and graveled roads were assumed to be 70% impervious, other areas were modeled as pervious surface. The results show several flows converging to form two main flow paths to the coulee edge. These were modeled flowing separately down the coulee and joining at the coulee bottom. A plan view of the predevelopment model is included as Figure 3 in the Appendix.

In order to determine the peak runoff from each basin, surface runoff analysis was performed followed by runoff modelling using PCSWMM software. Rainfall intensity data used in modelling was obtained from a 24 hour/100 year modified Chicago storm. This design storm is a synthetic storm event that is derived from Lethbridge data obtained from Environment Canada and is used for City of Lethbridge runoff modelling. This storm event has a time step of 5 minutes, a total rainfall of 110 mm and a peak intensity of 255 mm/hour occurring at 0.3 of storm duration – the rainfall distribution can be seen in upper part of Figure 5 which shows rainfall intensities through the storm.

Standard values for infiltration in typical soils were obtained from City of Lethbridge (Design Standards 2021). Manning's N was set as follows:

- For pervious areas, an N of 0.05 was used if the permeable area in the subcatchment was predominately bare soil in riding areas, changing to 0.15 if the permeable area was predominately grassed areas.
- For subcatchments where the impervious area was predominately roof surfaces, an N of 0.01 was used compared to 0.03 if the impervious surface was mostly gravel roads.

An initial moisture deficit of 0.25 was assumed for non-irrigated land. Sheet flow was assumed on the lots with ditch flow modeled along the roads south and west of the property, and as the flow starts down the coulee. Using the design storm and these assumptions, the predevelopment model returns a peak flow of 1.249 m3/sec at the outfall (coulee bottom).

A post development runoff model was created using the proposed design surface. Lots 1-3 have a grade break to create split drainage flowing generally to the front and rear of the lots. In the model, runoff flowing to the front of the lots is captured in a 0.8m deep ditch on either side of the proposed east/west development road which flows west into the existing ditch of the County road. Runoff flowing to the rear of Lot 1 is released northwest into the County ditch or north into the municipal reserve where it joins runoff heading north into the coulee. In the back of Lot 2, runoff flows either north into the municipal reserve or northeast to the back property line where is captured by a 0.25m deep swale running along the east side of the development. Runoff in the back of Lot 3 also is captured by this swale and directed north to the northeast corner of the development where it continues into the coulee. A swale is also recommended along the property line between Lot 2 and 3 to keep runoff in each lot from flowing across the neighboring lot. Runoff in the rear of Lot 4 flows south to existing drainage routes south of the development or west into the County ditch.

Each lot is divided into several subcatchments dictated by slope direction or other flow paths such as buildings, outlet culverts or swales. Soil suction head and conductivity remained unchanged from the predevelopment model, moisture deficit was assumed to decrease to 0.15 for irrigated lawns. A single Manning's N of 0.15 for native grass was used for pervious surfaces; for pervious surfaces, N remained at 0.01 (roofs) or 0.03 (gravel roads). Each lot was assumed to have 345 m^2 100% impervious surface in the house footprint. Driveways on each lot were modeled as gravel roads with 70% impervious surface. The hay barn and arena facility are to remain and were again modeled as impervious surfaces in the appropriate subcatchments.

Sheet flow was again assumed across the lots with ditch flow in the swales, along the proposed central road, along the roads south and west of the property, and as the flow starts down the coulee. Other existing ditches around the periphery (south and west) are not well defined in the topo provided and were modeled as 0.3m deep, 3.4m across the top and 1m across the bottom. Culverts were modeled where roads and approaches cross the ditches. The proposed central east/west road was modeled as 70% impervious gravel surface with 100% pervious ditches. Based on the design surface, these are V-ditches 0.8m deep and 6m wide at the top.

Offsite flow was not anticipated to be a factor and was not modeled. A plan view outline of the resulting post development model is included in the Appendix as Figure 4. Key input parameters for SWMM analysis along with summaries of the post development computer simulations are included in Appendix B.

4.0 Surface Runoff Results

Table A below compares pre and post-development runoff at the individual outflow locations where runoff leaves the site as well as combined runoff at the coulee bottom outflow. Table A shows a decrease in volume at several individual outflow locations (as a result of the development altering the flowpaths) but the overall volume increases as expected. However, it can also be seen that even where volumes increase, post development peak outflows throughout are kept at or below predevelopment rates.

Table A: Pre/Post Runoff Outflow Comparisons at Coulee Bottom

	Peak Development Outflow Rate		Total Outflow Volume	
	Pre Dev	**Post Dev**	**Pre Dev**	**Post Dev**
Lot 4 South Outflow	0.110 m^3/sec	0.097 m^3/sec	157 m^3	131 m^3
Lot 4 SW Outflow	0.162 m^3/sec	0.130 m^3/sec	249 m^3	196 m^3
Municipal Reserve NW Outflow	0.862 m^3/sec	0.794 m^3/sec	2179 m^3	2593 m^3
Lot 2 NE Outflow	0.399 m^3/sec	0.372 m^3/sec	885 m^3	1013 m^3
Combined Total Outflow at Coulee Bottom Outflow	1.249 m^3/sec	1.151 m^3/sec	3062 m^3	3605 m^3

Post-development flows are shown graphically in Figures 5 of Appendix A. This is followed by Figure 6 which compares pre and post-development total flows at the coulee bottom outflow and allows a comparison of flow duration.

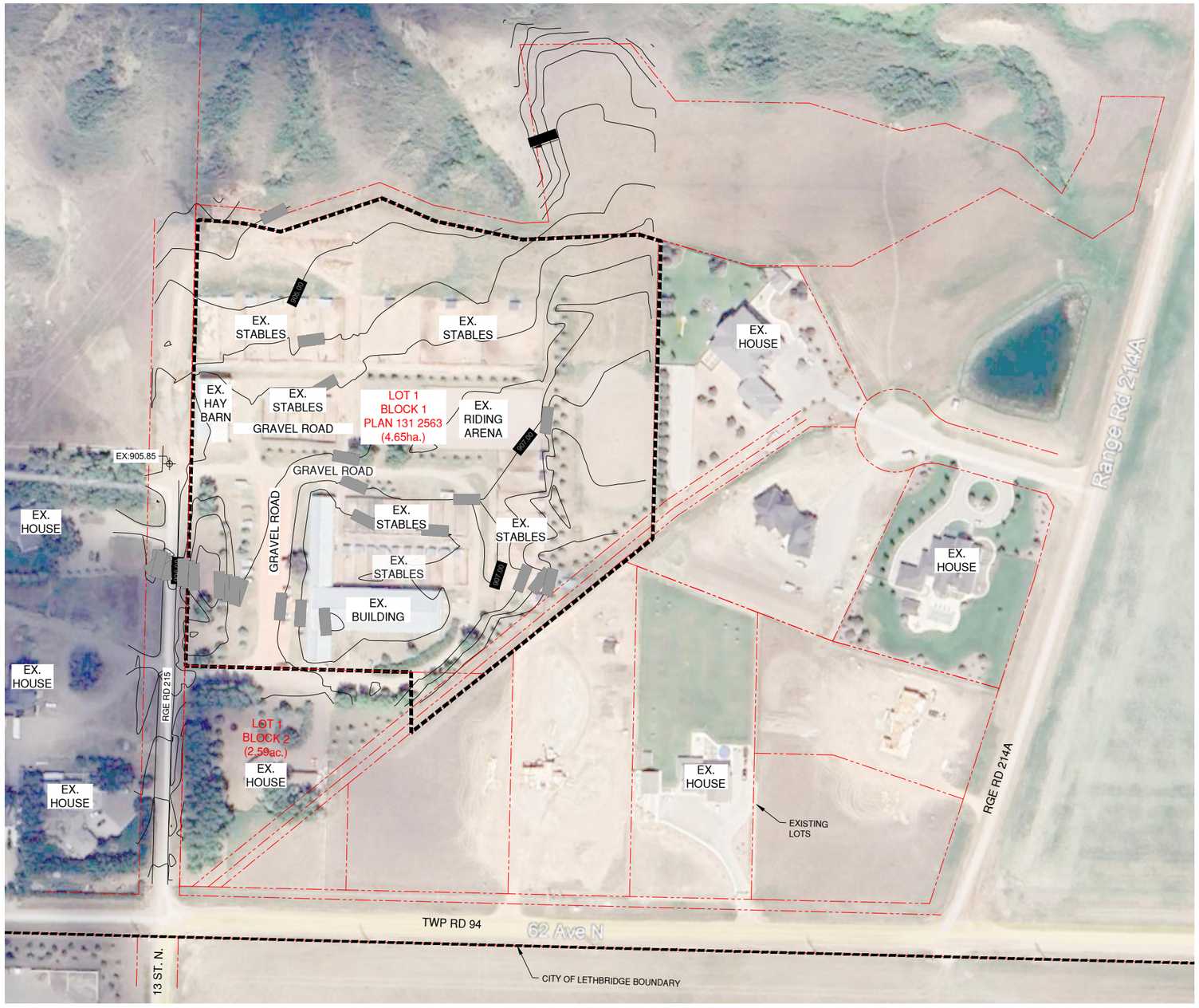
The culverts as modeled consist of 600mm corrugated metal culverts under the approaches of lots 1 and 4, and twin 600mm culverts under the main approach into the development – as noted above, the County ditch along the west side is poorly defined here and may not be deep enough for 600mm culverts. Also note that the model shows some minor flooding north of this culvert; this ditch should be evaluated and remediated if necessary to allow proper flow.

5.0 Conclusion

Runoff modeling shows that the proposed development can be designed to compensate for increases in post development runoff rates. Peak flows can be attenuated to below predevelopment levels. These benefits exist in storms below the 100 year storm also.

APPENDICES

APPENDIX A-FIGURES



ISSUE	DRAWING STATUS / REVISION	DATE (YY/MM/DD)	BY
A	FOR REPORT	24/09/11	MDO

DESIGNED	DRAWN	CHECKED	APPROVED	SCALE AND SHEET SIZE
MH	MDO	MH	MH	1:2,000 - 11x17

LEGEND

- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING GROUND CONTOURS - 0.5m INTERVALS
- EXISTING LOTS

0 20 40 60 80 100 200

SCALE=1:2,000

NOTE:

- ALL DIMENSIONS SHOWN ARE IN METERS (m) UNLESS OTHERWISE NOTED
- AIR PHOTO IMAGE IS SHOWN FOR REFERENCE ONLY AND MAY NOT REFLECT CURRENT SITE CONDITIONS
- SCALE AND ROTATION ARE APPROXIMATE

HASEGAWA
CONSULTING PROFESSIONAL ENGINEERS
1220 - 31 Street North, Lethbridge, Alberta T1H 5J8
P: 403-328-2686 F: 403-328-2728 E: office@hasegawa.ca

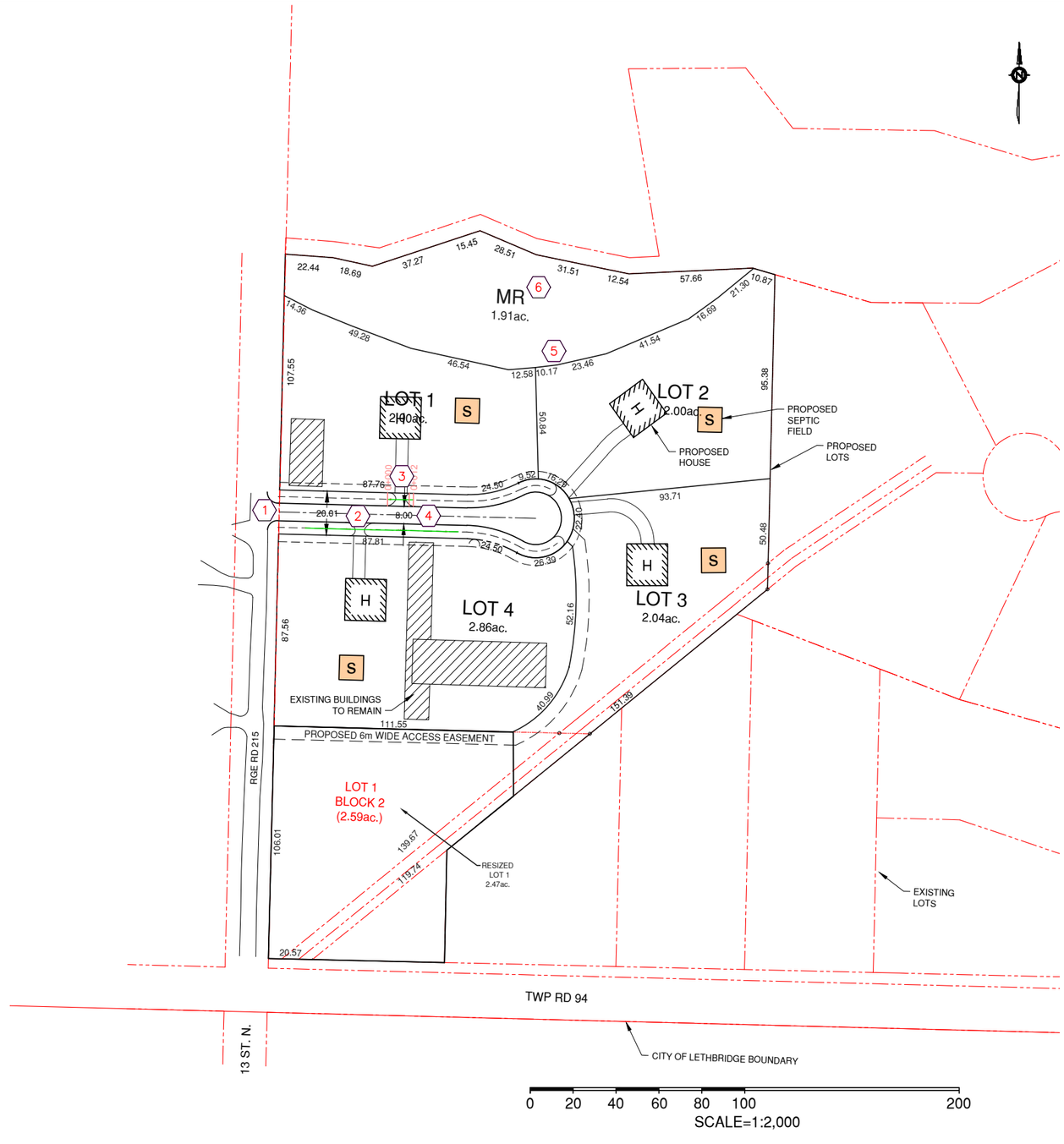
CLIENT: TYLER HIRSCHE

PROJECT: PROPOSED 4 LOT SUBDIVISION
LOT 1 BLOCK 1 PLAN 131 2563

DRAWING: EXISTING LOTS & TOPOGRAPHY

PROJECT NUMBER: 21-062

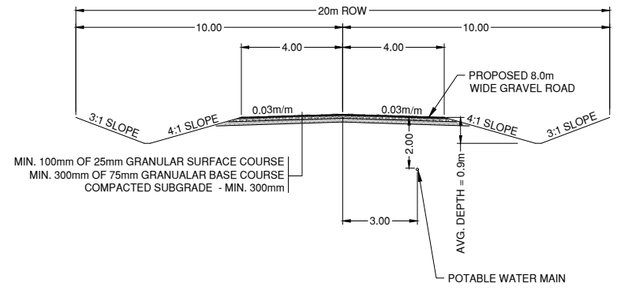
SHEET NUMBER: FIG. 1



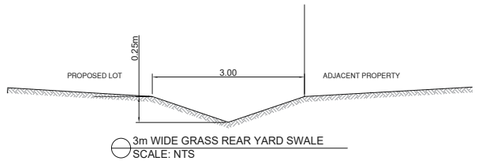
KEYNOTES:

1. CULVERT 1
   L=14.0m S=0.6%
   INV IN: 904.94
   INV OUT: 904.85
2. CULVERT 2
   L=11.0m S=1.0%
   INV IN: 905.38
   INV OUT: 905.27
3. CULVERT 3
   L=12.0m S=1.0%
   INV IN: 905.39
   INV OUT: 905.27
4. CULVERT 4
   L=22.5m S=1.0%
   INV IN: 905.69
   INV OUT: 905.47
5. SLOPE STABILITY SETBACK LINE AS DETERMINED BY RVARP SETBACK CRITERIA.
6. 1.91ac. AREA NORTH OF SLOPE STABILITY SETBACK TO TOP OF COULEE BANK TO BE DEDICATED AS MUNICIPAL RESERVE.

NOTE:
- HOUSE AND SEPTIC FIELD SIZES & LOCATIONS SHOWN ARE FOR REFERENCE ONLY.
- SEPTIC (SOIL BASED TREATMENT) FIELD SUITABILITY TO BE DETERMINED AS PER ALBERTA PRIVATE SEWAGE SYSTEMS STANDARD OF PRACTICE - DECEMBER 2015 EDITION.



8.0m WIDE GRAVEL ROAD CROSS-SECTION
SCALE: 1:200



3m WIDE GRASS REAR YARD SWALE
SCALE: NTS

NOTE:
- ALL DIMENSIONS SHOWN ARE IN METERS (m) UNLESS OTHERWISE NOTED
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- SCALE AND ROTATION ARE APPROXIMATE

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CLIENT: TYLER HIRSCHE

PROJECT:
PROPOSED LOT LAYOUT
LOT 1 BLOCK 1 PLAN 131 2563

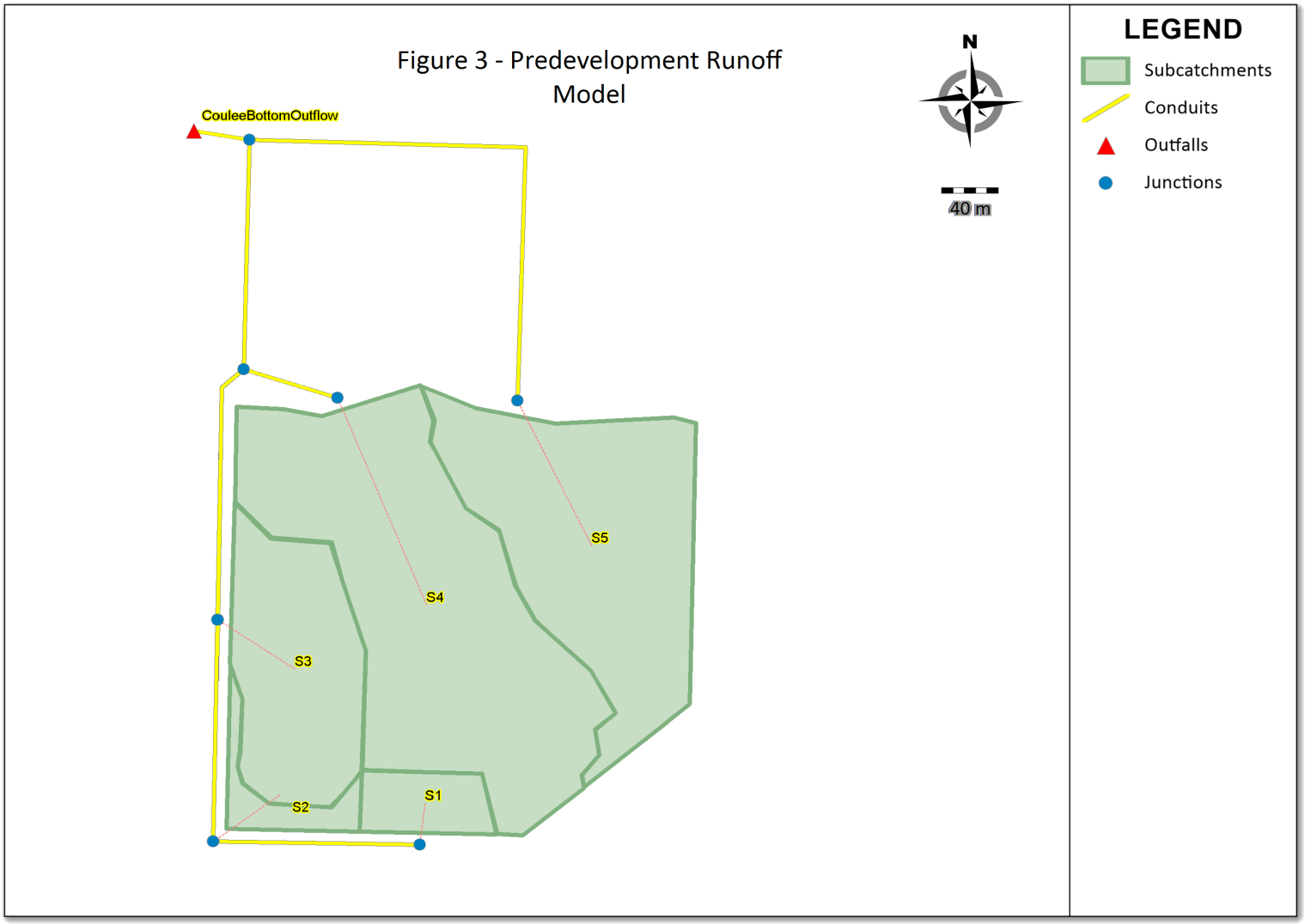
DRAWING:
CONCEPTUAL LOT LAYOUT

PROJECT NUMBER: 21-062

SHEET NUMBER: FIG. 2

APPENDIX B-SWMM SUMMARIES

Figure 3 - Predevelopment Runoff Model



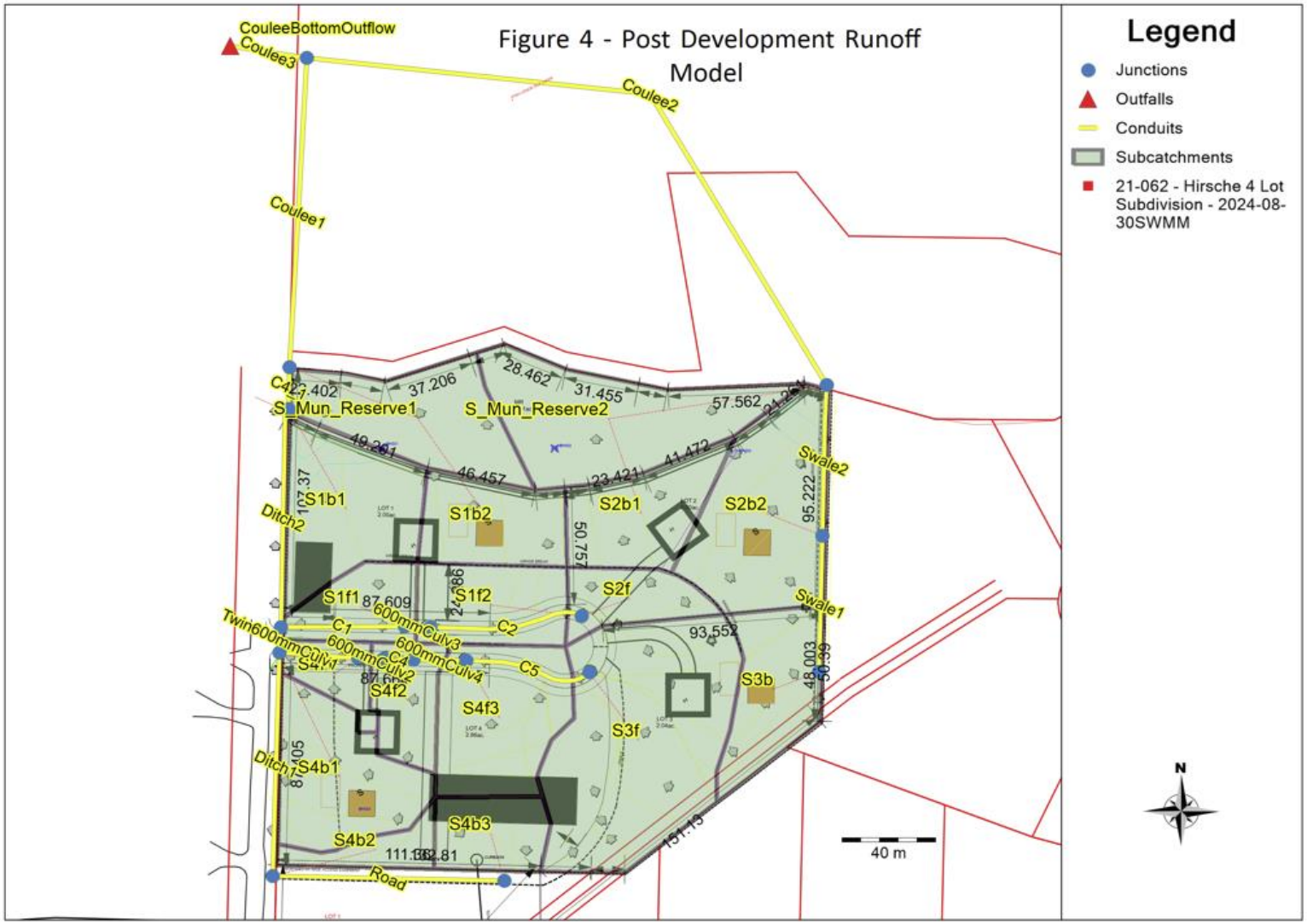


Figure 4 - Post Development Runoff Model
CouleeBottomOutflow
Coulee3
Coulee2
Coulee1
C4
27.402
S_Mun_Reserve1
37.206
28.462
31.455
S_Mun_Reserve2
57.562
49.261
46.457
23.421
41.472
Swale2
107.37
S1b1
S1b2
S2b1
S2b2
95.222
Ditch2
50.757
S1f1
87.609
S1f2
24.186
S2f
Swale1
Twin600mmCulv1
C1
600mmCulv3
C2
93.552
600mmCulv2
C4
600mmCulv4
C5
S4f1
87.602
S4f2
S3b
48.003
50.99
S4f3
S3f
Ditch1
87.105
S4b1
S4b3
S4b2
111.86
82.81
151.15
Road
40 m
N
Legend
Junctions
Outfalls
Conduits
Subcatchments
21-062 - Hirsche 4 Lot Subdivision - 2024-08-30SWMM

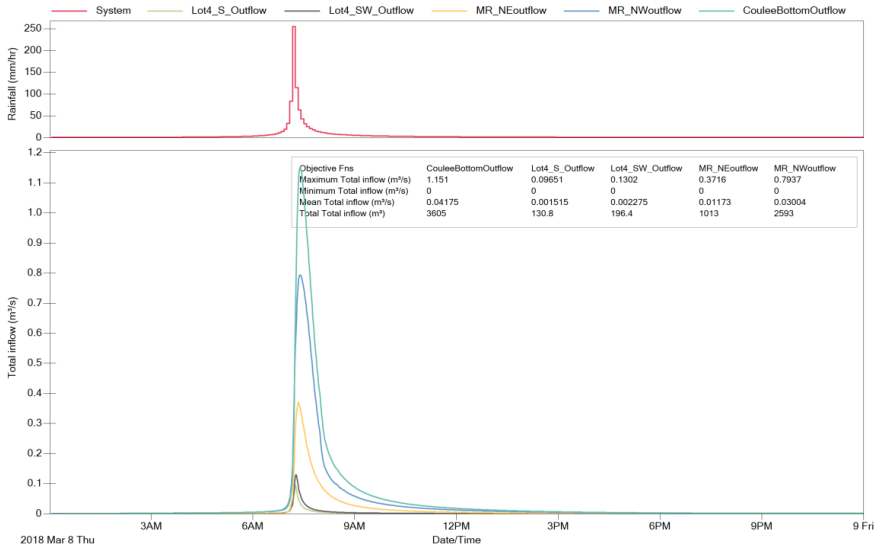


Figure 5 – Design Storm Rainfall (top) with Resulting Runoff at Outflow Locations in Post Development Model

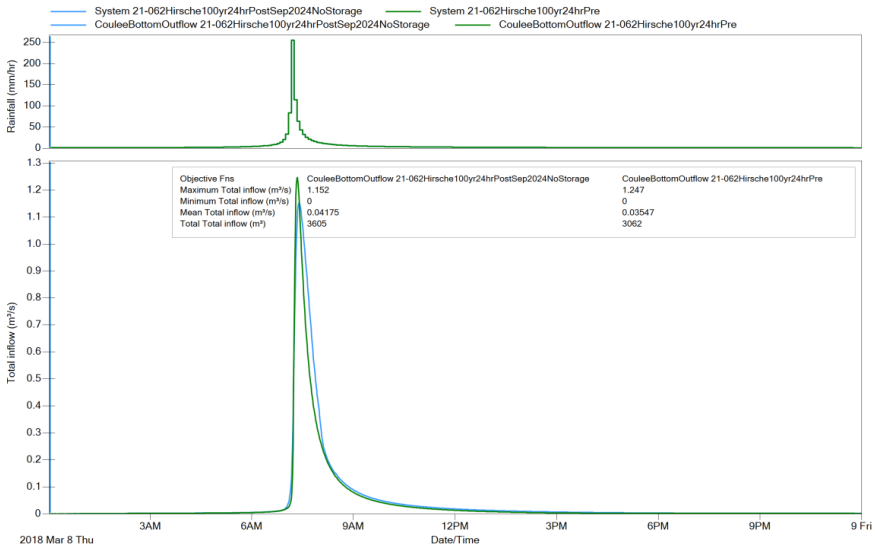


Figure 6 – Design Storm Rainfall Comparing Resulting Pre and Post Development Runoff in Coulee Bottom

```
[TITLE]
21-062 Hirsche Subdivision Post Dev Model - Lot Storage
Allowable Release = 1.249 m3/sec

[OPTIONS]
;;Options            Value
;;------------------ ------------
FLOW_UNITS           CMS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING         DYNWAVE
LINK_OFFSETS         DEPTH
MIN_SLOPE            0
ALLOW_PONDING        YES
SKIP_STEADY_STATE    NO

START_DATE           03/08/2018
START_TIME           00:00:00
REPORT_START_DATE    03/08/2018
REPORT_START_TIME    00:00:00
END_DATE             03/09/2018
END_TIME             00:00:00
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 Type	Time Intrvl	Snow Catch	Data Source
100yr24hr	INTENSITY	0:05	1.0	TIMESERIES 100yr24hr

[SUBCATCHMENTS]

;;Name	Raingage	Outlet	Total Area	Pcnt. Imperv	Width	Pcnt. Slope	Curb Length	Snow Pack
S_Mun_Reserve1	100yr24hr	MR_NWoutflow	0.329681	0	25.814	2.19	0	
S_Mun_Reserve2	100yr24hr	MR_NEoutflow	0.449419	0	35.189	2.19	0	
S1b1	100yr24hr	J21	0.3452	15.5	69.04	5.9	0	
S1b2	100yr24hr	S_Mun_Reserve1	0.2217	7.8	63.343	5.1	0	
S1f1	100yr24hr	J9	0.1557	42.8	62.28	2.6	0	
S1f2	100yr24hr	J11	0.2182	57.7	87.28	2.7	0	
S2b1	100yr24hr	S_Mun_Reserve2	0.2369	9.3	67.686	5.3	0	
S2b2	100yr24hr	J25	0.4502	3.8	46.896	2.1	0	
S2f	100yr24hr	J11	0.1376	12.9	26.98	1.9	0	
S3b	100yr24hr	J7	0.2464	0	41.763	1.8	0	
S3f	100yr24hr	J16	0.72	12.6	73.469	4.05	0	
S4b1	100yr24hr	J3	0.3255	5.3	48.582	2.6	0	
S4b2	100yr24hr	Lot4_SW_Outflow	0.0833	15.4	19.833	2.8	0	
S4b3	100yr24hr	Lot4_S_Outflow	0.149	40.9	59.6	2.12	0	
S4f1	100yr24hr	J20	0.0964	24	30.125	1.8	0	
S4f2	100yr24hr	J19	0.1462	37.8	32.489	4.3	0	
S4f3	100yr24hr	J17	0.3349	27	49.25	2.43	0	

[SUBAREAS]

;;Subcatchment	N-Imperv	N-Perv	S-Imperv	S-Perv	PctZero	RouteTo	PctRouted
S_Mun_Reserve1	0.01	0.15	1	3	25	OUTLET	
S_Mun_Reserve2	0.01	0.15	1	3	25	OUTLET	
S1b1	0.01	0.15	1	3	25	OUTLET	
S1b2	0.01	0.15	1	3	25	OUTLET	
S1f1	0.03	0.15	1	3	25	OUTLET	
S1f2	0.03	0.15	1	3	25	OUTLET	
S2b1	0.01	0.15	1	3	25	OUTLET	
S2b2	0.01	0.15	1	3	25	OUTLET	
S2f	0.03	0.15	1	3	25	OUTLET	

```
S3b              0.03       0.15       1          3          25         OUTLET
S3f              0.01       0.15       1          3          25         OUTLET
S4b1             0.03       0.15       1          3          25         OUTLET
S4b2             0.01       0.15       1          3          25         OUTLET
S4b3             0.01       0.15       1          3          25         OUTLET
S4f1             0.03       0.15       1          3          25         OUTLET
S4f2             0.01       0.15       1          3          25         OUTLET
S4f3             0.03       0.15       1          3          25         OUTLET

[INFILTRATION]
;;Subcatchment   Suction    HydCon     IMDmax
;;-------------- ---------- ---------- ----------
S_Mun_Reserve1   292.2      0.5        0.15
S_Mun_Reserve2   292.2      0.5        0.15
S1b1             292.2      0.5        0.15
S1b2             292.2      0.5        0.15
S1f1             292.2      0.5        0.15
S1f2             292.2      0.5        0.15
S2b1             292.2      0.5        0.15
S2b2             292.2      0.5        0.15
S2f              292.2      0.5        0.15
S3b              292.2      0.5        0.15
S3f              292.2      0.5        0.15
S4b1             292.2      0.5        0.15
S4b2             292.2      0.5        0.15
S4b3             292.2      0.5        0.15
S4f1             292.2      0.5        0.15
S4f2             292.2      0.5        0.15
S4f3             292.2      0.5        0.15

[JUNCTIONS]
;;               Invert     Max.       Init.      Surcharge  Ponded
;;Name           Elev.      Depth      Depth      Depth      Area
;;-------------- ---------- ---------- ---------- ---------- ----------
J_CouleeBottom   883.6      0.3        0          0          100
J10              905.39     0.8        0          0          0
J11              906.536    0.8        0          0          0
J16              906.1      0.8        0          0          0
J17              905.69     0.8        0          0          50
J18              905.47     0.8        0          0          50
J19              905.38     0.8        0          0          50
```

```
J20              905.27     0.8        0          0          50
J21              904.6      0.375      0          0          0
J25              906.6      0.25       0          0          0
J3               904.94     0.8        0          0          50
J7               907.39     0.25       0          0          0
J8               904.85     0.8        0          0          100
J9               905.27     0.8        0          0          0
Lot4_S_Outflow   907.17     0.3        0          0          100
Lot4_SW_Outflow  906.51     0.3        0          0          100
MR_NEoutflow     906.01     0.25       0          0          0
MR_NWoutflow     903.74     0.3        0          0          0

[OUTFALLS]
;;               Invert     Outfall    Stage/Table      Tide
;;Name           Elev.      Type       Time Series      Gate
;;-------------- ---------- ---------- ---------------- --------
CouleeBottomOutflow 881.6   NORMAL                      NO

[CONDUITS]
;;               Inlet            Outlet                      Manning    Inlet      Outlet     Init.      Max.
;;Name           Node             Node             Length     N          Offset     Offset     Flow       Flow
;;-------------- ---------------- ---------------- ---------- ---------- ---------- ---------- ---------- ---------
-
600mmCulv2       J19              J20              11         0.01       0          0          0          0
600mmCulv3       J10              J9               12         0.01       0          0          0          0
600mmCulv4       J17              J18              22.5       0.01       0          0          0          0
C1               J9               J8               52.235     0.01       0          0          0          0
C2               J11              J10              65.263     0.01       0          0          0          0
C3               J20              J3               33.184     0.01       0          0          0          0
C4               J18              J19              12.33      0.01       0          0          0          0
C4_1             J21              MR_NWoutflow     19         0.01       0          0          0          0
C5               J16              J17              54.252     0.01       0          0          0          0
Coulee1          MR_NWoutflow     J_CouleeBottom   140        0.01       0          0          0          0
Coulee2          MR_NEoutflow     J_CouleeBottom   220        0.01       0          0          0          0
Coulee3          J_CouleeBottom   CouleeBottomOutflow 15      0.01       0          0          0          0
Ditch1           Lot4_SW_Outflow  J3               96.499     0.01       0          0          0          0
Ditch2           J8               J21              94.833     0.01       0          0          0          0
Road             Lot4_S_Outflow   Lot4_SW_Outflow  97.849     0.01       0          0          0          0
Swale1           J7               J25              54         0.01       0          0          0          0
Swale2           J25              MR_NEoutflow     49         0.01       0          0          0          0
Twin600mmCulv1   J3               J8               14         0.01       0          0          0          0
```

```
[XSECTIONS]
;;Link           Shape        Geom1            Geom2      Geom3      Geom4      Barrels
;;-------------- ------------ ---------------- ---------- ---------- ---------- ----------
600mmCulv2       CIRCULAR     0.6              0          0          0          1          5
600mmCulv3       CIRCULAR     0.6              0          0          0          1          5
600mmCulv4       CIRCULAR     0.6              0          0          0          1          5
C1               IRREGULAR    .8m_ditch        0          0          0          1
C2               IRREGULAR    .8m_ditch        0          0          0          1
C3               IRREGULAR    .8m_ditch        0          0          0          1
C4               IRREGULAR    .8m_ditch        0          0          0          1
C4_1             IRREGULAR    .3m_ditch        0          0          0          1
C5               IRREGULAR    .8m_ditch        0          0          0          1
Coulee1          IRREGULAR    .3m_ditch        0          0          0          1
Coulee2          IRREGULAR    0.2m_swale       0          0          0          1
Coulee3          IRREGULAR    .3m_ditch        0          0          0          1
Ditch1           IRREGULAR    .3m_ditch        0          0          0          1
Ditch2           IRREGULAR    .3m_ditch        0          0          0          1
Road             IRREGULAR    .3m_ditch        0          0          0          1
Swale1           IRREGULAR    0.25m_swale      0          0          0          1
Swale2           IRREGULAR    0.25m_swale      0          0          0          1
Twin600mmCulv1   CIRCULAR     0.6              0          0          0          2          5

[TRANSECTS]
;;Transect Data in HEC-2 format
;
NC 0.03     0.03     0.03
X1 .25m_berm         3        0        0        0.0      0.0      0        0        0
GR 0.25     0        0        13       0.25     15
;
NC 0.03     0.03     0.03
X1 .3m_ditch         4        0.0      0.0      0.0      0.0      0.0      0.0      0.0
GR 0.3      0        0        1.2      0        2.2      0.3      3.4
;
NC 0.04     0.04     0.04
X1 .8m_ditch         3        0.0      0.0      0.0      0.0      0.0      0.0      0.0
GR 0.8      0        0        3        0.8      6
;
NC 0.03     0.03     0.03
X1 0.25m_swale       3        0.0      0.0      0.0      0.0      0.0      0.0      0.0
GR 0.25     0        0        1.5      0.25     3
```

```
;
NC 0.03     0.03     0.03
X1 0.2m_swale        4        0.0      0.0      0.0      0.0      0.0      0.0      0.0
GR 0.2      0        0        1        0        2        0.2      3
;
NC 0.04     0.04     0.04
X1 RearLotSwale      3        0.0      0.0      0.0      0.0      0.0      0.0      0.0
GR 0.4      0        0        8        0.4      8.6
;
NC 0.04     0.04     0.04
X1 sheetflow         4        0        0        0.0      0.0      0        0        0
GR 0.1      0        0        1        0        9        0.1      10

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

[CURVES]
;;Name           Type       X-Value    Y-Value
;;-------------- ---------- ---------- ----------
Berm1            Storage    0          1
Berm1                       0.2        129
Berm1                       0.4        524

Berm2            Storage    0          7
Berm2                       0.2        143
Berm2                       0.4        425

Berm3            Storage    0          6
Berm3                       0.2        82
Berm3                       0.4        161

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
100yr24hr                   0:00       0
100yr24hr                   0:05       0.763
100yr24hr                   0:10       0.771
100yr24hr                   0:15       0.779
100yr24hr                   0:20       0.787
100yr24hr                   0:25       0.796
```

100yr24hr	0:30	0.804
100yr24hr	0:35	0.813
100yr24hr	0:40	0.822
100yr24hr	0:45	0.831
100yr24hr	0:50	0.841
100yr24hr	0:55	0.851
100yr24hr	1:00	0.861
100yr24hr	1:05	0.871
100yr24hr	1:10	0.881
100yr24hr	1:15	0.892
100yr24hr	1:20	0.903
100yr24hr	1:25	0.914
100yr24hr	1:30	0.926
100yr24hr	1:35	0.938
100yr24hr	1:40	0.95
100yr24hr	1:45	0.963
100yr24hr	1:50	0.976
100yr24hr	1:55	0.99
100yr24hr	2:00	1.004
100yr24hr	2:05	1.018
100yr24hr	2:10	1.033
100yr24hr	2:15	1.048
100yr24hr	2:20	1.064
100yr24hr	2:25	1.08
100yr24hr	2:30	1.097
100yr24hr	2:35	1.114
100yr24hr	2:40	1.132
100yr24hr	2:45	1.151
100yr24hr	2:50	1.17
100yr24hr	2:55	1.191
100yr24hr	3:00	1.211
100yr24hr	3:05	1.233
100yr24hr	3:10	1.256
100yr24hr	3:15	1.279
100yr24hr	3:20	1.304
100yr24hr	3:25	1.329
100yr24hr	3:30	1.356
100yr24hr	3:35	1.384
100yr24hr	3:40	1.413
100yr24hr	3:45	1.443
100yr24hr	3:50	1.475

100yr24hr	3:55	1.509
100yr24hr	4:00	1.544
100yr24hr	4:05	1.581
100yr24hr	4:10	1.62
100yr24hr	4:15	1.661
100yr24hr	4:20	1.705
100yr24hr	4:25	1.751
100yr24hr	4:30	1.8
100yr24hr	4:35	1.853
100yr24hr	4:40	1.908
100yr24hr	4:45	1.967
100yr24hr	4:50	2.031
100yr24hr	4:55	2.099
100yr24hr	5:00	2.172
100yr24hr	5:05	2.251
100yr24hr	5:10	2.337
100yr24hr	5:15	2.43
100yr24hr	5:20	2.532
100yr24hr	5:25	2.643
100yr24hr	5:30	2.765
100yr24hr	5:35	2.9
100yr24hr	5:40	3.051
100yr24hr	5:45	3.219
100yr24hr	5:50	3.409
100yr24hr	5:55	3.625
100yr24hr	6:00	3.873
100yr24hr	6:05	4.159
100yr24hr	6:10	4.496
100yr24hr	6:15	4.897
100yr24hr	6:20	5.383
100yr24hr	6:25	5.985
100yr24hr	6:30	6.748
100yr24hr	6:35	7.75
100yr24hr	6:40	9.123
100yr24hr	6:45	11.117
100yr24hr	6:50	14.266
100yr24hr	6:55	19.931
100yr24hr	7:00	32.779
100yr24hr	7:05	83.515
100yr24hr	7:10	255.206
100yr24hr	7:15	114.934

100yr24hr	7:20	63.946
100yr24hr	7:25	43.017
100yr24hr	7:30	31.998
100yr24hr	7:35	25.321
100yr24hr	7:40	20.889
100yr24hr	7:45	17.754
100yr24hr	7:50	15.429
100yr24hr	7:55	13.641
100yr24hr	8:00	12.226
100yr24hr	8:05	11.08
100yr24hr	8:10	10.134
100yr24hr	8:15	9.34
100yr24hr	8:20	8.665
100yr24hr	8:25	8.083
100yr24hr	8:30	7.577
100yr24hr	8:35	7.133
100yr24hr	8:40	6.74
100yr24hr	8:45	6.39
100yr24hr	8:50	6.077
100yr24hr	8:55	5.794
100yr24hr	9:00	5.538
100yr24hr	9:05	5.304
100yr24hr	9:10	5.091
100yr24hr	9:15	4.895
100yr24hr	9:20	4.714
100yr24hr	9:25	4.547
100yr24hr	9:30	4.392
100yr24hr	9:35	4.248
100yr24hr	9:40	4.114
100yr24hr	9:45	3.989
100yr24hr	9:50	3.871
100yr24hr	9:55	3.761
100yr24hr	10:00	3.657
100yr24hr	10:05	3.559
100yr24hr	10:10	3.467
100yr24hr	10:15	3.38
100yr24hr	10:20	3.297
100yr24hr	10:25	3.219
100yr24hr	10:30	3.144
100yr24hr	10:35	3.073
100yr24hr	10:40	3.006

100yr24hr	10:45	2.941
100yr24hr	10:50	2.88
100yr24hr	10:55	2.821
100yr24hr	11:00	2.765
100yr24hr	11:05	2.711
100yr24hr	11:10	2.659
100yr24hr	11:15	2.61
100yr24hr	11:20	2.562
100yr24hr	11:25	2.516
100yr24hr	11:30	2.472
100yr24hr	11:35	2.43
100yr24hr	11:40	2.389
100yr24hr	11:45	2.35
100yr24hr	11:50	2.312
100yr24hr	11:55	2.275
100yr24hr	12:00	2.24
100yr24hr	12:05	2.205
100yr24hr	12:10	2.172
100yr24hr	12:15	2.14
100yr24hr	12:20	2.109
100yr24hr	12:25	2.079
100yr24hr	12:30	2.05
100yr24hr	12:35	2.021
100yr24hr	12:40	1.994
100yr24hr	12:45	1.967
100yr24hr	12:50	1.941
100yr24hr	12:55	1.916
100yr24hr	13:00	1.892
100yr24hr	13:05	1.868
100yr24hr	13:10	1.845
100yr24hr	13:15	1.822
100yr24hr	13:20	1.8
100yr24hr	13:25	1.779
100yr24hr	13:30	1.758
100yr24hr	13:35	1.738
100yr24hr	13:40	1.718
100yr24hr	13:45	1.699
100yr24hr	13:50	1.68
100yr24hr	13:55	1.661
100yr24hr	14:00	1.643
100yr24hr	14:05	1.626

100yr24hr	14:10	1.609
100yr24hr	14:15	1.592
100yr24hr	14:20	1.576
100yr24hr	14:25	1.56
100yr24hr	14:30	1.544
100yr24hr	14:35	1.529
100yr24hr	14:40	1.514
100yr24hr	14:45	1.499
100yr24hr	14:50	1.485
100yr24hr	14:55	1.47
100yr24hr	15:00	1.457
100yr24hr	15:05	1.443
100yr24hr	15:10	1.43
100yr24hr	15:15	1.417
100yr24hr	15:20	1.404
100yr24hr	15:25	1.392
100yr24hr	15:30	1.38
100yr24hr	15:35	1.368
100yr24hr	15:40	1.356
100yr24hr	15:45	1.344
100yr24hr	15:50	1.333
100yr24hr	15:55	1.322
100yr24hr	16:00	1.311
100yr24hr	16:05	1.3
100yr24hr	16:10	1.289
100yr24hr	16:15	1.279
100yr24hr	16:20	1.269
100yr24hr	16:25	1.259
100yr24hr	16:30	1.249
100yr24hr	16:35	1.239
100yr24hr	16:40	1.23
100yr24hr	16:45	1.221
100yr24hr	16:50	1.211
100yr24hr	16:55	1.202
100yr24hr	17:00	1.193
100yr24hr	17:05	1.185
100yr24hr	17:10	1.176
100yr24hr	17:15	1.168
100yr24hr	17:20	1.159
100yr24hr	17:25	1.151
100yr24hr	17:30	1.143

100yr24hr	17:35	1.135
100yr24hr	17:40	1.127
100yr24hr	17:45	1.119
100yr24hr	17:50	1.112
100yr24hr	17:55	1.104
100yr24hr	18:00	1.097
100yr24hr	18:05	1.089
100yr24hr	18:10	1.082
100yr24hr	18:15	1.075
100yr24hr	18:20	1.068
100yr24hr	18:25	1.061
100yr24hr	18:30	1.055
100yr24hr	18:35	1.048
100yr24hr	18:40	1.041
100yr24hr	18:45	1.035
100yr24hr	18:50	1.028
100yr24hr	18:55	1.022
100yr24hr	19:00	1.015
100yr24hr	19:05	1.01
100yr24hr	19:10	1.004
100yr24hr	19:15	0.998
100yr24hr	19:20	0.992
100yr24hr	19:25	0.986
100yr24hr	19:30	0.98
100yr24hr	19:35	0.974
100yr24hr	19:40	0.969
100yr24hr	19:45	0.963
100yr24hr	19:50	0.958
100yr24hr	19:55	0.952
100yr24hr	20:00	0.947
100yr24hr	20:05	0.942
100yr24hr	20:10	0.936
100yr24hr	20:15	0.931
100yr24hr	20:20	0.926
100yr24hr	20:25	0.921
100yr24hr	20:30	0.916
100yr24hr	20:35	0.911
100yr24hr	20:40	0.908
100yr24hr	20:45	0.901
100yr24hr	20:50	0.897
100yr24hr	20:55	0.892

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100yr24hr                 21:00     0.887
100yr24hr                 21:05     0.883
100yr24hr                 21:10     0.878
100yr24hr                 21:15     0.874
100yr24hr                 21:20     0.869
100yr24hr                 21:25     0.865
100yr24hr                 21:30     0.861
100yr24hr                 21:35     0.856
100yr24hr                 21:40     0.852
100yr24hr                 21:45     0.848
100yr24hr                 21:50     0.844
100yr24hr                 21:55     0.84
100yr24hr                 22:00     0.835
100yr24hr                 22:05     0.831
100yr24hr                 22:10     0.827
100yr24hr                 22:15     0.823
100yr24hr                 22:20     0.82
100yr24hr                 22:25     0.816
100yr24hr                 22:30     0.812
100yr24hr                 22:35     0.808
100yr24hr                 22:40     0.804
100yr24hr                 22:45     0.801
100yr24hr                 22:50     0.797
100yr24hr                 22:55     0.793
100yr24hr                 23:00     0.79
100yr24hr                 23:05     0.786
100yr24hr                 23:10     0.783
100yr24hr                 23:15     0.779
100yr24hr                 23:20     0.776
100yr24hr                 23:25     0.772
100yr24hr                 23:30     0.769
100yr24hr                 23:35     0.766
100yr24hr                 23:40     0.762
100yr24hr                 23:45     0.759
100yr24hr                 23:50     0.756
100yr24hr                 23:55     0.752
100yr24hr                 24:00     0.749

[REPORT]
;;Reporting Options
INPUT      NO
```

```
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]

[MAP]
DIMENSIONS       84824.1623       5513927.9699     85113.7417       5514336.2481
UNITS            Meters

[COORDINATES]
;;Node           X-Coord          Y-Coord
;;-------------- ---------------- ----------------
J_CouleeBottom   84879.761        5514302.706
J10              84931.924        5514056.256
J11              84995.913        5514061.122
J16              84999.181        5514036.633
J17              84947.206        5514041.843
J18              84924.825        5514042.15
J19              84912.482        5514042.588
J20              84901.365        5514042.806
J21              84872.048        5514150.65
J25              85097.683        5514095.809
J3               84868.209        5514045.16
J7               85096.369        5514036.89
J8               84868.833        5514056.101
J9               84921.155        5514056.525
Lot4_S_Outflow   84963.332        5513946.528
Lot4_SW_Outflow  84865.336        5513948.538
MR_NEoutflow     85099.587        5514161.01
MR_NWoutflow     84872.466        5514168.862
CouleeBottomOutflow 84847.325        5514307.69

[VERTICES]
;;Link           X-Coord          Y-Coord
;;-------------- ---------------- ----------------
C2               84992.422        5514062.463
C2               84988.834        5514062.762
C2               84984.707        5514062.164
C2               84979.863        5514060.13
```

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C2               84968.5          5514056.303
C2               84957.137        5514055.466
C5               84997.718        5514035.475
C5               84995.725        5514034.287
C5               84992.908        5514033.304
C5               84990.568        5514033.038
C5               84987.339        5514033.038
C5               84984.169        5514033.696
C5               84977.83         5514036.627
C5               84970.653        5514039.557
C5               84962.579        5514041.172
Coulee2          85024.751        5514286.946
Ditch2           84870.481        5514148.021
Swale2           85098.799        5514144.352

[POLYGONS]
;;Subcatchment   X-Coord          Y-Coord
;;-------------- ---------------- ----------------
S_Mun_Reserve1   84955.018        5514160.111
S_Mun_Reserve1   84976.43         5514115.464
S_Mun_Reserve1   84976.08         5514115.427
S_Mun_Reserve1   84930.664        5514125.115
S_Mun_Reserve1   84872.8          5514148.794
S_Mun_Reserve1   84873.456        5514167.971
S_Mun_Reserve1   84896.49         5514165.835
S_Mun_Reserve1   84913.084        5514162.709
S_Mun_Reserve1   84951.548        5514175.074
S_Mun_Reserve1   84955.018        5514160.111
S_Mun_Reserve2   84955.018        5514160.111
S_Mun_Reserve2   84951.548        5514175.074
S_Mun_Reserve2   84963.196        5514178.818
S_Mun_Reserve2   84989.833        5514167.751
S_Mun_Reserve2   85032.585        5514159.008
S_Mun_Reserve2   85090.151        5514161.602
S_Mun_Reserve2   85060.905        5514139.133
S_Mun_Reserve2   85021.782        5514122.75
S_Mun_Reserve2   84999.615        5514117.922
S_Mun_Reserve2   84976.43         5514115.464
S_Mun_Reserve2   84955.018        5514160.111
S1b1             84930.674        5514125.113
S1b1             84926.546        5514083.996
```

S1b1	84904.523	5514084.615
S1b1	84889.878	5514075.449
S1b1	84870.287	5514060.641
S1b1	84871.146	5514100.433
S1b1	84872.8	5514148.794
S1b1	84930.664	5514125.115
S1b1	84930.674	5514125.113
S1b2	84926.546	5514083.996
S1b2	84930.674	5514125.113
S1b2	84976.08	5514115.427
S1b2	84988.959	5514116.792
S1b2	84989.768	5514082.221
S1b2	84926.546	5514083.996
S1f1	84926.534	5514083.997
S1f1	84925.76	5514049.307
S1f1	84869.333	5514050.701
S1f1	84870.287	5514060.641
S1f1	84889.878	5514075.449
S1f1	84904.523	5514084.615
S1f1	84926.534	5514083.997
S1f2	84925.76	5514049.307
S1f2	84926.534	5514083.997
S1f2	84989.767	5514082.221
S1f2	84990.176	5514065.732
S1f2	84989.069	5514047.807
S1f2	84925.76	5514049.307
S2b1	85045.094	5514103.099
S2b1	85033.76	5514079.569
S2b1	85028.199	5514081.304
S2b1	84991.111	5514082.183
S2b1	84989.768	5514082.221
S2b1	84988.959	5514116.792
S2b1	84999.615	5514117.922
S2b1	85021.782	5514122.75
S2b1	85060.905	5514139.133
S2b1	85061.298	5514139.434
S2b1	85045.094	5514103.099
S2b2	85045.094	5514103.099
S2b2	85061.298	5514139.434
S2b2	85090.151	5514161.602
S2b2	85090.606	5514161.622

S2b2	85100.579	5514158.939
S2b2	85098.365	5514065.781
S2b2	85056.372	5514061.727
S2b2	85052.359	5514066.585
S2b2	85043.091	5514074.756
S2b2	85036.318	5514078.772
S2b2	85033.76	5514079.569
S2b2	85045.094	5514103.099
S2f	84990.176	5514065.732
S2f	84989.767	5514082.221
S2f	85028.199	5514081.304
S2f	85036.318	5514078.772
S2f	85043.091	5514074.756
S2f	85052.359	5514066.585
S2f	85056.372	5514061.727
S2f	85004.61	5514056.87
S2f	84989.069	5514047.807
S2f	84990.176	5514065.732
S3b	85063.701	5514038.823
S3b	85064.336	5514042.45
S3b	85062.517	5514048.971
S3b	85060.394	5514054.885
S3b	85057.968	5514058.524
S3b	85056.372	5514061.727
S3b	85098.365	5514065.781
S3b	85097.224	5514015.448
S3b	85067.222	5513991.385
S3b	85053.094	5513980.314
S3b	85052.976	5513993.705
S3b	85058.846	5514011.598
S3b	85063.701	5514038.823
S3f	85053.094	5513980.314
S3f	85014.311	5513949.924
S3f	84978.385	5513950.237
S3f	84982.935	5513971.057
S3f	84977.13	5513991.353
S3f	84978.623	5513996.214
S3f	84983.232	5514007.38
S3f	84992.678	5514016.714
S3f	84991.999	5514035.947
S3f	84989.069	5514047.807

S3f	85004.61	5514056.87
S3f	85056.372	5514061.727
S3f	85057.968	5514058.524
S3f	85060.394	5514054.885
S3f	85062.517	5514048.971
S3f	85064.336	5514042.45
S3f	85063.701	5514038.823
S3f	85058.846	5514011.598
S3f	85052.976	5513993.705
S3f	85053.094	5513980.314
S4b1	84901.09	5514010.737
S4b1	84909.675	5514010.635
S4b1	84909.674	5514010.596
S4b1	84909.45	5514001.927
S4b1	84909.417	5514001.116
S4b1	84934.271	5513992.513
S4b1	84934.077	5513982.621
S4b1	84923.171	5513968.576
S4b1	84903.067	5513964.949
S4b1	84892.247	5513959.687
S4b1	84885.684	5513958.738
S4b1	84867.471	5513962.279
S4b1	84869.034	5514036.488
S4b1	84901.173	5514019.739
S4b1	84901.09	5514010.737
S4b2	84934.077	5513982.621
S4b2	84933.516	5513951.453
S4b2	84867.016	5513953.239
S4b2	84867.471	5513962.279
S4b2	84885.684	5513958.738
S4b2	84892.247	5513959.687
S4b2	84903.067	5513964.949
S4b2	84923.171	5513968.576
S4b2	84934.077	5513982.621
S4b3	84933.516	5513951.453
S4b3	84934.077	5513982.621
S4b3	84979.583	5513982.775
S4b3	84982.935	5513971.057
S4b3	84978.385	5513950.237
S4b3	84933.516	5513951.453
S4f1	84901.173	5514019.739

```
S4f1             84869.034        5514036.488
S4f1             84869.333        5514050.701
S4f1             84907.098        5514049.719
S4f1             84906.439        5514020.366
S4f1             84909.935        5514020.153
S4f1             84909.675        5514010.635
S4f1             84901.09         5514010.737
S4f1             84901.173        5514019.739
S4f2             84907.098        5514049.719
S4f2             84941.334        5514048.962
S4f2             84935.122        5514035.938
S4f2             84934.271        5513992.513
S4f2             84909.417        5514001.116
S4f2             84909.935        5514020.153
S4f2             84906.439        5514020.366
S4f2             84907.098        5514049.719
S4f3             84977.13         5513991.353
S4f3             84979.583        5513982.775
S4f3             84934.077        5513982.621
S4f3             84935.122        5514035.938
S4f3             84941.334        5514048.962
S4f3             84989.069        5514047.807
S4f3             84991.999        5514035.947
S4f3             84992.678        5514016.714
S4f3             84983.232        5514007.38
S4f3             84978.623        5513996.214
S4f3             84977.13         5513991.353

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

```
[TITLE]
21-062 Hirsche Subdivision Predev Model


[OPTIONS]
FLOW_UNITS           CMS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING         DYNWAVE
START_DATE           3/8/2018
START_TIME           00:00
REPORT_START_DATE    3/8/2018
REPORT_START_TIME    00:00
END_DATE             3/9/2018
END_TIME             00:00
SWEEP_START          1/1
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
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
;;-------------- --------- ------ ------ ----------
100yr24hr        INTENSITY 0:05   1.0    TIMESERIES 100yr24hr

[SUBCATCHMENTS]
;;                                              Total    Pcnt.            Pcnt.    Curb     Snow
```

```
;;Name           Raingage         Outlet           Area     Imperv   Width    Slope    Length   Pack
;;-------------- ---------------- ---------------- -------- -------- -------- -------- -------- --------
S1               100yr24hr        Lot4_S_Outflow   0.1973   38.4     54.806   2        0
S3               100yr24hr        J3               0.8122   28.7     79.627   2        0
S5               100yr24hr        MR_NEoutflow     1.45     1.5      78.804   2        0
S4               100yr24hr        J5               2.051    9.9      69.291   2        0
S2               100yr24hr        Lot4_SW_Outflow  0.1413   8.6      39.25    2        0

[SUBAREAS]
;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv     PctZero    RouteTo    PctRouted
;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
S1               0.01       0.15       1          10         25         OUTLET
S3               0.03       0.15       1          10         25         OUTLET
S5               0.01       0.05       1          10         25         OUTLET
S4               0.01       0.05       1          10         25         OUTLET
S2               0.03       0.15       1          10         25         OUTLET

[INFILTRATION]
;;Subcatchment   Suction    HydCon     IMDmax
;;-------------- ---------- ---------- ----------
S1               292.2      0.5        0.25
S3               292.2      0.5        0.25
S5               292.2      0.5        0.25
S4               292.2      0.5        0.25
S2               292.2      0.5        0.25

[JUNCTIONS]
;;               Invert     Max.       Init.      Surcharge  Ponded
;;Name           Elev.      Depth      Depth      Depth      Area
;;-------------- ---------- ---------- ---------- ---------- ----------
MR_NEoutflow     904.56     0.3        0          0          100
J3               905.58     0.3        0          0          0
Lot4_S_Outflow   907.17     0.3        0          0          100
MR_NWoutflow     902.72     0.3        0          0          100
Lot4_SW_Outflow  906.51     0.3        0          0          100
J_CouleeBottom   883.6      0.3        0          0          100
J5               904.35     0.1        0          0          0

[OUTFALLS]
;;               Invert     Outfall    Stage/Table      Tide
;;Name           Elev.      Type       Time Series      Gate
;;-------------- ---------- ---------- ---------------- ----
CouleeBottomOutflow 881.6      NORMAL                     NO

[CONDUITS]
;;               Inlet            Outlet                      Manning    Inlet      Outlet     Init.      Max.
```

```
;;Name           Node             Node             Length     N          Offset     Offset     Flow       Flow
;;-------------- ---------------- ---------------- ---------- ---------- ---------- ---------- ---------- ----------
Berm_4           MR_NEoutflow     J_CouleeBottom   220        0.01       0          0          0          0
C1               J3               MR_NWoutflow     126        0.01       0          0          0          0
C2               Lot4_S_Outflow   Lot4_SW_Outflow  99         0.01       0          0          0          0
C3               Lot4_SW_Outflow  J3               112        0.01       0          0          0          0
C4               MR_NWoutflow     J_CouleeBottom   140        0.01       0          0          0          0
C5               J_CouleeBottom   CouleeBottomOutflow 15         0.01       0          0          0          0
C6               J5               MR_NWoutflow     60         0.01       0          0.19       0          0

[XSECTIONS]
;;Link           Shape        Geom1            Geom2      Geom3      Geom4      Barrels
;;-------------- ------------ ---------------- ---------- ---------- ---------- ----------
Berm_4           IRREGULAR    .2m_swale        0          0          0          1
C1               IRREGULAR    0.3m_ditch       0          0          0          1
C2               IRREGULAR    0.3m_ditch       0          0          0          1
C3               IRREGULAR    0.3m_ditch       0          0          0          1
C4               IRREGULAR    0.3m_ditch       0          0          0          1
C5               IRREGULAR    0.3m_ditch       0          0          0          1
C6               IRREGULAR    sheetflow        0          0          0          1

[TRANSECTS]

NC 0.03     0.03     0.03
X1 .25m_berm        3        0        0        0.0       0.0       0        0        0
GR 0.25     0        0        13       0.25     15

NC 0.03     0.03     0.03
X1 .2m_swale        4        0.0      0.0      0.0       0.0       0.0      0.0      0.0
GR 0.2      0        0        1        0        2         0.2       3

NC 0.04     0.04     0.04
X1 sheetflow        4        0        0        0.0       0.0       0        0        0
GR 0.1      0        0        1        0        9         0.1       10

NC 0.03     0.03     0.03
X1 0.3m_ditch       4        0.0      0.0      0.0       0.0       0.0      0.0      0.0
GR 0.3      0        0        1.2      0        2.2       0.3       3.4

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

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
```

100yr24hr	0:00	0
100yr24hr	0:05	0.763
100yr24hr	0:10	0.771
100yr24hr	0:15	0.779
100yr24hr	0:20	0.787
100yr24hr	0:25	0.796
100yr24hr	0:30	0.804
100yr24hr	0:35	0.813
100yr24hr	0:40	0.822
100yr24hr	0:45	0.831
100yr24hr	0:50	0.841
100yr24hr	0:55	0.851
100yr24hr	1:00	0.861
100yr24hr	1:05	0.871
100yr24hr	1:10	0.881
100yr24hr	1:15	0.892
100yr24hr	1:20	0.903
100yr24hr	1:25	0.914
100yr24hr	1:30	0.926
100yr24hr	1:35	0.938
100yr24hr	1:40	0.95
100yr24hr	1:45	0.963
100yr24hr	1:50	0.976
100yr24hr	1:55	0.99
100yr24hr	2:00	1.004
100yr24hr	2:05	1.018
100yr24hr	2:10	1.033
100yr24hr	2:15	1.048
100yr24hr	2:20	1.064
100yr24hr	2:25	1.08
100yr24hr	2:30	1.097
100yr24hr	2:35	1.114
100yr24hr	2:40	1.132
100yr24hr	2:45	1.151
100yr24hr	2:50	1.17
100yr24hr	2:55	1.191
100yr24hr	3:00	1.211
100yr24hr	3:05	1.233
100yr24hr	3:10	1.256
100yr24hr	3:15	1.279
100yr24hr	3:20	1.304
100yr24hr	3:25	1.329
100yr24hr	3:30	1.356
100yr24hr	3:35	1.384
100yr24hr	3:40	1.413
100yr24hr	3:45	1.443

100yr24hr	3:50	1.475
100yr24hr	3:55	1.509
100yr24hr	4:00	1.544
100yr24hr	4:05	1.581
100yr24hr	4:10	1.62
100yr24hr	4:15	1.661
100yr24hr	4:20	1.705
100yr24hr	4:25	1.751
100yr24hr	4:30	1.8
100yr24hr	4:35	1.853
100yr24hr	4:40	1.908
100yr24hr	4:45	1.967
100yr24hr	4:50	2.031
100yr24hr	4:55	2.099
100yr24hr	5:00	2.172
100yr24hr	5:05	2.251
100yr24hr	5:10	2.337
100yr24hr	5:15	2.43
100yr24hr	5:20	2.532
100yr24hr	5:25	2.643
100yr24hr	5:30	2.765
100yr24hr	5:35	2.9
100yr24hr	5:40	3.051
100yr24hr	5:45	3.219
100yr24hr	5:50	3.409
100yr24hr	5:55	3.625
100yr24hr	6:00	3.873
100yr24hr	6:05	4.159
100yr24hr	6:10	4.496
100yr24hr	6:15	4.897
100yr24hr	6:20	5.383
100yr24hr	6:25	5.985
100yr24hr	6:30	6.748
100yr24hr	6:35	7.75
100yr24hr	6:40	9.123
100yr24hr	6:45	11.117
100yr24hr	6:50	14.266
100yr24hr	6:55	19.931
100yr24hr	7:00	32.779
100yr24hr	7:05	83.515
100yr24hr	7:10	255.206
100yr24hr	7:15	114.934
100yr24hr	7:20	63.946
100yr24hr	7:25	43.017
100yr24hr	7:30	31.998
100yr24hr	7:35	25.321

100yr24hr	7:40	20.889
100yr24hr	7:45	17.754
100yr24hr	7:50	15.429
100yr24hr	7:55	13.641
100yr24hr	8:00	12.226
100yr24hr	8:05	11.08
100yr24hr	8:10	10.134
100yr24hr	8:15	9.34
100yr24hr	8:20	8.665
100yr24hr	8:25	8.083
100yr24hr	8:30	7.577
100yr24hr	8:35	7.133
100yr24hr	8:40	6.74
100yr24hr	8:45	6.39
100yr24hr	8:50	6.077
100yr24hr	8:55	5.794
100yr24hr	9:00	5.538
100yr24hr	9:05	5.304
100yr24hr	9:10	5.091
100yr24hr	9:15	4.895
100yr24hr	9:20	4.714
100yr24hr	9:25	4.547
100yr24hr	9:30	4.392
100yr24hr	9:35	4.248
100yr24hr	9:40	4.114
100yr24hr	9:45	3.989
100yr24hr	9:50	3.871
100yr24hr	9:55	3.761
100yr24hr	10:00	3.657
100yr24hr	10:05	3.559
100yr24hr	10:10	3.467
100yr24hr	10:15	3.38
100yr24hr	10:20	3.297
100yr24hr	10:25	3.219
100yr24hr	10:30	3.144
100yr24hr	10:35	3.073
100yr24hr	10:40	3.006
100yr24hr	10:45	2.941
100yr24hr	10:50	2.88
100yr24hr	10:55	2.821
100yr24hr	11:00	2.765
100yr24hr	11:05	2.711
100yr24hr	11:10	2.659
100yr24hr	11:15	2.61
100yr24hr	11:20	2.562
100yr24hr	11:25	2.516

100yr24hr	11:30	2.472
100yr24hr	11:35	2.43
100yr24hr	11:40	2.389
100yr24hr	11:45	2.35
100yr24hr	11:50	2.312
100yr24hr	11:55	2.275
100yr24hr	12:00	2.24
100yr24hr	12:05	2.205
100yr24hr	12:10	2.172
100yr24hr	12:15	2.14
100yr24hr	12:20	2.109
100yr24hr	12:25	2.079
100yr24hr	12:30	2.05
100yr24hr	12:35	2.021
100yr24hr	12:40	1.994
100yr24hr	12:45	1.967
100yr24hr	12:50	1.941
100yr24hr	12:55	1.916
100yr24hr	13:00	1.892
100yr24hr	13:05	1.868
100yr24hr	13:10	1.845
100yr24hr	13:15	1.822
100yr24hr	13:20	1.8
100yr24hr	13:25	1.779
100yr24hr	13:30	1.758
100yr24hr	13:35	1.738
100yr24hr	13:40	1.718
100yr24hr	13:45	1.699
100yr24hr	13:50	1.68
100yr24hr	13:55	1.661
100yr24hr	14:00	1.643
100yr24hr	14:05	1.626
100yr24hr	14:10	1.609
100yr24hr	14:15	1.592
100yr24hr	14:20	1.576
100yr24hr	14:25	1.56
100yr24hr	14:30	1.544
100yr24hr	14:35	1.529
100yr24hr	14:40	1.514
100yr24hr	14:45	1.499
100yr24hr	14:50	1.485
100yr24hr	14:55	1.47
100yr24hr	15:00	1.457
100yr24hr	15:05	1.443
100yr24hr	15:10	1.43
100yr24hr	15:15	1.417

100yr24hr	15:20	1.404
100yr24hr	15:25	1.392
100yr24hr	15:30	1.38
100yr24hr	15:35	1.368
100yr24hr	15:40	1.356
100yr24hr	15:45	1.344
100yr24hr	15:50	1.333
100yr24hr	15:55	1.322
100yr24hr	16:00	1.311
100yr24hr	16:05	1.3
100yr24hr	16:10	1.289
100yr24hr	16:15	1.279
100yr24hr	16:20	1.269
100yr24hr	16:25	1.259
100yr24hr	16:30	1.249
100yr24hr	16:35	1.239
100yr24hr	16:40	1.23
100yr24hr	16:45	1.221
100yr24hr	16:50	1.211
100yr24hr	16:55	1.202
100yr24hr	17:00	1.193
100yr24hr	17:05	1.185
100yr24hr	17:10	1.176
100yr24hr	17:15	1.168
100yr24hr	17:20	1.159
100yr24hr	17:25	1.151
100yr24hr	17:30	1.143
100yr24hr	17:35	1.135
100yr24hr	17:40	1.127
100yr24hr	17:45	1.119
100yr24hr	17:50	1.112
100yr24hr	17:55	1.104
100yr24hr	18:00	1.097
100yr24hr	18:05	1.089
100yr24hr	18:10	1.082
100yr24hr	18:15	1.075
100yr24hr	18:20	1.068
100yr24hr	18:25	1.061
100yr24hr	18:30	1.055
100yr24hr	18:35	1.048
100yr24hr	18:40	1.041
100yr24hr	18:45	1.035
100yr24hr	18:50	1.028
100yr24hr	18:55	1.022
100yr24hr	19:00	1.015
100yr24hr	19:05	1.01

100yr24hr	19:10	1.004
100yr24hr	19:15	0.998
100yr24hr	19:20	0.992
100yr24hr	19:25	0.986
100yr24hr	19:30	0.98
100yr24hr	19:35	0.974
100yr24hr	19:40	0.969
100yr24hr	19:45	0.963
100yr24hr	19:50	0.958
100yr24hr	19:55	0.952
100yr24hr	20:00	0.947
100yr24hr	20:05	0.942
100yr24hr	20:10	0.936
100yr24hr	20:15	0.931
100yr24hr	20:20	0.926
100yr24hr	20:25	0.921
100yr24hr	20:30	0.916
100yr24hr	20:35	0.911
100yr24hr	20:40	0.908
100yr24hr	20:45	0.901
100yr24hr	20:50	0.897
100yr24hr	20:55	0.892
100yr24hr	21:00	0.887
100yr24hr	21:05	0.883
100yr24hr	21:10	0.878
100yr24hr	21:15	0.874
100yr24hr	21:20	0.869
100yr24hr	21:25	0.865
100yr24hr	21:30	0.861
100yr24hr	21:35	0.856
100yr24hr	21:40	0.852
100yr24hr	21:45	0.848
100yr24hr	21:50	0.844
100yr24hr	21:55	0.84
100yr24hr	22:00	0.835
100yr24hr	22:05	0.831
100yr24hr	22:10	0.827
100yr24hr	22:15	0.823
100yr24hr	22:20	0.82
100yr24hr	22:25	0.816
100yr24hr	22:30	0.812
100yr24hr	22:35	0.808
100yr24hr	22:40	0.804
100yr24hr	22:45	0.801
100yr24hr	22:50	0.797
100yr24hr	22:55	0.793

```
100yr24hr                  23:00      0.79
100yr24hr                  23:05      0.786
100yr24hr                  23:10      0.783
100yr24hr                  23:15      0.779
100yr24hr                  23:20      0.776
100yr24hr                  23:25      0.772
100yr24hr                  23:30      0.769
100yr24hr                  23:35      0.766
100yr24hr                  23:40      0.762
100yr24hr                  23:45      0.759
100yr24hr                  23:50      0.756
100yr24hr                  23:55      0.752
100yr24hr                  24:00      0.749


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

[TAGS]

[MAP]
DIMENSIONS       0               0               10000           10000
UNITS            None

[COORDINATES]
;;Node           X-Coord         Y-Coord
;;-------------- --------------- ----------------
MR_NEoutflow     450.98          -190.344
J3               208.309         -372.101
Lot4_S_Outflow   372.134         -558.311
MR_NWoutflow     229.407         -164.65
Lot4_SW_Outflow  204.522         -555.85
J_CouleeBottom   234.197         25.6
J5               305.372         -187.926
CouleeBottomOutflow 189.097         33.265

[VERTICES]
;;Link           X-Coord         Y-Coord
;;-------------- --------------- ----------------
Berm_4           457.712         19.356
C1               211.49          -179.582
```

[Polygons]

;;Subcatchment	X-Coord	Y-Coord
S1	323.197	-547.516
S1	325.182	-497.561
S1	325.739	-496.874
S1	422.411	-499.603
S1	434.106	-549.888
S1	323.197	-547.516
S3	251.298	-304.534
S3	300.029	-308.415
S3	300.515	-311.566
S3	328.06	-397.683
S3	324.825	-497.085
S3	314.691	-511.1
S3	298.519	-528.134
S3	249.573	-523.822
S3	228.873	-507.65
S3	224.345	-493.635
S3	226.717	-481.344
S3	228.226	-437.573
S3	218.308	-408.68
S3	222.094	-274.868
S3	251.298	-304.534
S5	383.915	-206.554
S5	373.344	-178.44
S5	417.203	-196.658
S5	482.111	-209.244
S5	577.776	-204.242
S5	595.488	-209.072
S5	590.68	-441.749
S5	504.924	-510.956
S5	503.346	-500.745
S5	516.616	-485.001
S5	513.692	-463.634
S5	530.335	-449.014
S5	511.218	-415.502
S5	465.784	-372.993
S5	449.815	-344.203
S5	435.871	-297.421
S5	409.33	-279.652
S5	380.091	-224.773
S5	383.915	-206.554
S4	517.411	-483.983
S4	502.828	-500.786
S4	505.002	-511.491

```
S4               455.183          -550.549
S4               434.857          -549.752
S4               422.502          -499.933
S4               325.464          -496.609
S4               328.377          -397.632
S4               309.206          -339.825
S4               300.653          -307.972
S4               252.302          -304.009
S4               222.439          -274.146
S4               223.435          -195.508
S4               261.255          -197.393
S4               292.64           -203.416
S4               372.53           -177.737
S4               382.992          -207.221
S4               380.139          -224.34
S4               409.305          -279.502
S4               436.252          -298.524
S4               449.25           -343.858
S4               464.785          -372.391
S4               510.119          -413.921
S4               530.409          -449.428
S4               513.606          -462.743
S4               517.411          -483.983
S2               325.182          -497.561
S2               323.197          -547.516
S2               215.423          -545.21
S2               218.541          -409.947
S2               228.286          -437.623
S2               226.337          -479.333
S2               224.388          -493.366
S2               228.286          -507.789
S2               250.116          -524.55
S2               300.791          -527.669
S2               325.182          -497.561

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

ARCHITECTURAL CONTROLS

RESTRICTIVE COVENANT AND ARCHITECTURAL CONTROLS

EDGEWOOD ESTATES

THIS AGREEMENT made this ___ day of _____, 2011.

BETWEEN:

EDGEWOOD STABLES LTD.
(Grantor)

-and-

EDGEWOOD STABLES LTD.
(Grantee)

WHEREAS EDGEWOOD STABLES LTD. (at the time of the registration of these Restrictive Covenants and Architectural Controls) is the registered owner of the development known as **EDGEWOOD ESTATES** situated in the County of Lethbridge, in the Province of Alberta (hereinafter called the "Subdivision"), and is in the process of developing the Subdivision into a series of country residential lots;

AND WHEREAS the controls contained herein are intended to implement standards of appearance and quality in the Subdivision by attaching certain restrictions, covenants and conditions restrictive in nature in respect of the exterior design, use (to the extent that use is a function of design) and development, to each lot located within the Subdivision (hereinafter referred to as a "Lot", or referred to as the said "Lands" when referring collectively to all of the lots located within the Subdivision) and each and every part thereof and the buildings, structures, improvements and premises to be erected on each and every part of the Lands;

AND WHEREAS the restrictions, covenants and conditions herein are not meant to detract or derogate in any way from any applicable laws, regulations or by-laws (including but not limited to land use by-laws of the County of Lethbridge or the City of Lethbridge as may be enacted from time to time), but are in addition and supplementary to, the restrictions, covenants and conditions contained in any such laws, regulations and by-laws;

AND WHEREAS the Grantor covenants with the Grantee to observe and comply with the following restrictions and architectural controls, the burden of which shall run with each of the lots:

PLAN 111 _____, Block 2, Lots 1-10 INCLUSIVE

EXCEPTING THEREOUT ALL MINES AND MINERALS

(S.W. ¼ SEC. 29, TWP. 9, RGE. 21, W4M)

hereinafter called the "Lands".

This covenant shall be binding upon and inure to the benefit of the respective heirs, executors, administers, successors and assigns of the parties.

BUILDING SPECIFICATIONS

1. No residence shall be constructed on the Lands which encroaches upon or straddles the property line with any lot adjacent to it on either side, regardless of ownership of the adjacent lot.

2. No residence shall be constructed on the Lands which shall have a floor area above grade of less than 2000 square feet. The measurements may include the outer walls of the residence but shall exclude any garage, patio, porch, or the like part of a building. Only one detached dwelling may be erected on a lot. All other County of Lethbridge Bylaws will apply.

3. No building shall be constructed on the Lands more than two stories above front-grade.

4. No mobile home, trailer, manufactured home, or previously built residence or building or structure shall be allowed to be placed upon or moved onto any of the aforedescribed Lands (quality house packages which require substantial on-site construction and assembly may be permitted with the approval of the Development Manager).

5. A granny suite or legal suite may be constructed upon the said Lands, but must:

    i Be approved under the County of Lethbridge Land Use Bylaw, accompanied by an approved development permit from the County.

    ii Exist within the framework of the home itself, such as a suite above the garage or in the basement, indistinguishable to an onlooker from the street; or

    iii Exist within the said Lands, but outside of the main residence and conform with the exterior finish and overall look of the main residence and fall within the proper permitted setbacks of the municipality and must be no more than 900 square feet (83.612 square meters) and must be included as part of the overall design concept of the house and yard development and must be approved in size and location by the Development Manager and must have sufficient parking on the said Lands.

6. Lot owners must consult the Development Manager for any building development that incorporates a walk-out basement, prior to proceeding with construction, to determine if the same is permitted, and if so, what requirements there may be with respect to the same.

7. No building shall be constructed upon the said Lands until the "Plot and Design Plan" has been approved by the Development Manager. The Plot and Design Plan must be approved in accordance with the overall plan and layout of the development as determined by the Development Manager. In particular, the orientation of the driveway and garage of each residence will be determined by the Development Manager to ensure maximum green space exists between adjacent Lands. The decision of the

Development Manager is final. It is strongly recommended that the owner seek direction from the Development Manager prior to making final decisions regarding a house plan.

8. Each residence constructed on the Lands is encouraged to be designed so as to explore the potential of each lot to arrive at a design which resolves the needs of the family intended to occupy the residence in terms of layout and finish. The design of the residence shall reflect the unique features of each lot in terms of view, orientation, climate, access and integration of indoors with outdoor space. Each home design must be conceived as a simple and honest expression of present day architectural forms and without the use of eclectic or regional styles.

9. Exterior finishes will be approved on case-by-case basis.

SETBACKS

10. All buildings or structures shall be within the parameters of the building envelope and must comply with the Land Use Bylaw of the County of Lethbridge in force at the time of the granting of the Development Permit.

ROOFING MATERIALS

11. No roof shall be constructed on any residence on said Lands with a roof pitch of less than 5:12. No metal cladding or metal sheeting on the roof area shall be permitted unless approved by the Development Manager. Tar and gravel roofing, and rolled roofing are not acceptable. Acceptable roofing materials include:

    i architectural asphalt shingles;

    ii laminate shingles;

    iii concrete tiles;

    iv shakes;

    v slate tiles; or

    vi metal roofing simulating slate, shakes, or shingles

12. The roof colour of any permanent structure (including but not limited to the residential dwelling and garage) located on a Lot shall be compatible with the colour of the exterior finish of the residential dwelling on such Lot.

GARAGE

13. No garage shall be constructed on the Lands unless it is a minimum of double attached or detached garage of the minimum dimensions of 6.7056 meters by 7.3152 meters (22 feet by 24 feet) and must be included as part of the overall design concept of the house and yard development and the exterior finish must be similar to that of the main residence and the roof line and pitch of the roof on the garage must be compatible with the design of the main residence.

14. Any detached garage or other outbuilding must be set back no less than 7.62 meters (25 feet) from the property line.

15. Any detached garage being built on the property must be approved in size and location by the Development Manager.

16. The Lands shall not be used for the storage of

- Abandoned vehicles or equipment, non-functioning vehicles or equipment, auto or truck bodies, and other vehicles or equipment not currently in a functioning state; and
- Gasoline, diesel fuel or similar fuel or volatile, explosive or dangerous substances other than those used for ordinary household or acreage purposes in quantities reasonably appropriate for ordinary household or acreage use.

CODE & BY-LAW COMPLIANCE

17. No building shall be constructed on the Lands unless it meets or exceeds the Alberta Building Code and complies with all By-laws of the County of Lethbridge, in the Province of Alberta. Prior to construction of a building (including accessory structures such as detached garages, shed, etc.) the lot owner must obtain all necessary local, provincial and federal permits including a development permit from the County of Lethbridge, regardless of obtaining approval for construction by the "Development Manager."

LANDSCAPING

18. A "Landscaping plan" for the front portion of each yard must be included with each Design Plan showing the driveways, sidewalks, fencing, ground cover and planting material. No ponds will be allowed on the lots.

FENCING & LIGHTING

19. No individual fence shall be constructed which does not comply with the Land Use By-Law of the County of Lethbridge and the location of which must be approved by the Development Manager. All fences must be maintained in a structurally sound and esthetically pleasing condition. No lot owner is required to construct a fence.

20. All fencing materials must be approved by the Development Manager. The approved materials are a 4 ft. in height, polyester powder coated black chain link fence for any back and side yards. Simulated wrought iron, stone or brick will be accepted for architectural feature fences. It is preferred that trees and shrubs be used wherever windbreak or privacy is desired.

21. If Lot owners choose to have a lighted gate post(s), the light(s) must coordinate with the chosen streetlights. The placement and height will be standard throughout the subdivision to provide a consistency of light. The developer will supply the details per request.

ANIMALS

22. Owners of any lot may keep domestic animals, but domestic animals are restricted to dogs and cats.

LOT GRADING AND RETAINING WALLS

23. No construction shall be carried out on the Lands until a "lot grading" plan is approved by the Development Manager. The plan must include the finished floor levels for all levels of the house including the bottom of footings and garage elevations. The finished sod grades at the house must be shown as well as arrows indicating drainage patterns, or swales. The grade at each corner of the lot shall be compatible with that of its neighboring land as to achieve efficient service water drainage away from that house and other developments and must not change existing drain patterns or block or interfere in any with the drainage ditch along the boulevard. Any deviation from the recommended grade levels must be presented in writing to the Development Manager and a written decision must be required before any deviation from the recommended grade levels is carried out on the said Lands. The cost of retaining walls situated on a Lot shall be the responsibility of the Lot Owner. All retaining walls and their foundations are to be within Lot boundaries. Landowners are responsible for ensuring that drainage courses are protected and maintained. Landowners are responsible for adhering to final lot grade requirements.

24. Any Owner which has an easement for a drainage corridor on their Lot shall not suffer or permit dirt, fill, loan, gravel, paper, other debris, weeds snow, ice, or slush (collectively referred to as "material") to fill or other wise accumulate or remain upon the said lands and which would:

    - Restrict, impair, impede, alter or otherwise interfere with the drainage across said lands including, without limiting the generality of the foregoing drainage a grass swale, concrete or asphalt gutter or other drainage gutter or other drainage control structure which may be erected on the said lands.

    - Alter, remove, damage or other wise interfere with any drainage control fence, grass swale, concrete or asphalt drainage gutter or other drainage control structure which may be erected on the said lands.

PROCEDURE FOR DEVELOPMENT APPROVALS

25. All parties constructing any structure on the aforedescribed Lands must submit the following to the Development Manager:

    - Plot and design plan showing all building locations, setbacks, driveways, sidewalks, fences and Landscaping;
    - Lot grading plan, showing all grades and lot corner elevations;
    - Landscaping plan showing the Landscaping design of the front portion of the yard;
    - House plans showing the layout of each level including roof design and dimensions including:
        i Building elevation of each side of the house showing window types and sizes, finishes, roof, elevations, chimneys, flues and vents; and

ii Cross sections showing foundation and footing elevations and all dimensions, in particular the relationship between all levels including the garage;

- Completed development and permit application forms; and
- A sample or description of all exterior finishing material including colour schemes.

26. All requested and provided information will be processed by the Development Manager within one week of receipt if the information is deemed acceptable. If the application does not comply with the Architectural Controls or other by-laws and regulations, then the application will be returned to the applicant marked "unacceptable".

27. No Lot Owner shall submit an Application to the Development Manager that does not include the requirements contained in Paragraph 32 above.

28. The decision of the Development Manager is final and binding and, in order to avoid delays, it is recommended that a preliminary consultation be made with the Development Manager prior to the application submission.

29. There shall be no deviation from the plans contained in an approved Application unless the same is consented to in writing by the Development Manager.

30. In the event:

- a building on the property is not completed in its entirety in accordance with the Architectural Controls and the approved plans, or
- the workmanship on the building is judged by the Development Manager at its sole discretion to be incompatible with the Architectural Control;

The Developer may, but is not obligated to;

- Complete the building in accordance with the Architectural Controls, or the approved plans, as the case may be; or
- Replace the unacceptable workmanship, all at the purchaser's expense.

31. Any monies expended by the Developer to complete the building in accordance with the Architectural Controls, or the approved plans, as the case may be, or replace unacceptable workmanship shall become a charge on the building being built and a caveat or other charging document may be registered by the Developer against title to the property and the Developer may apply the Architectural Controls Security Deposit to any such monies expended; and, take all steps available to it at law to collect any other such monies so expended.

Prior to construction of a building (including accessory structures such as detached garages, shed, etc.) the lot owner must obtain all necessary local, provincial and federal permits including a development permit from the County of Lethbridge, regardless of obtaining approval for construction by the "Development Manager."

MAINTENANCE

32. Every lot owner shall keep his lot, including gardens and all improvements thereon, in good order and repair including but not limited to the seeding, watering and mowing of grass, the pruning and cutting of all trees and shrubbery, and the painting, or other appropriate external care, of all buildings and other structures in the manner and with the frequency that is consistent with good property management.

33. All lots/acreages must be cared for in a husbandly manner in order to maintain high quality land investments

GENERAL

34. The Developer and the Development Manager shall be responsible for the interpretation of the Architectural Controls and may modify any of the provisions stated therein at their sole discretion. Any dispute which may arise in connection with the Architectural Controls shall be determined by the Developer whose decision shall be final and binding.

35. Failure on the part of the Developer or the Development Manager to enforce promptly and fully the conditions, covenants, and restrictions of the Architectural Controls shall not be deemed to be a waiver of the right of the Developer to enforce the conditions, covenants and restrictions of the Architectural Controls.

36. All owners shall be expected to take normal precautions to prevent damage to installed improvements. In particular, they shall:

    - Protect all service lines including telephone, cable, electricity, gas, and water lines on the owner's property and extending to the adjoining Lands.
    - Protect driveway accesses, culverts, roads, ditches, etc., when it is necessary for vehicles to be driven across them.
    - Keep the road in front of the lot clean during construction, and keep the ditch and catch basin free of debris and in working order at all times.
    - Avoid placing excess soil or constructions debris on adjacent lots.

37. Any damage to installed improvements noticed prior to construction must be identified to the Development Manager at the time of discovery. The Manager will record the damage, and attempt to identify the party responsible for causing the damage. If this can be determined, the Development Manager will attempt to recover the cost to repair the damage from the party causing the damage. Any damage to improvements not identified prior to construction will be assumed to be caused by the owner, unless the owner can identify a third party who caused the damage. If the Development Manager is unable to recover the cost to repair the damage from the third party, the owner shall become responsible for the cost of the repair. Any damage caused by the owner must be repaired at the owner's cost.

38. The Lot Owner shall take all measures necessary to protect any and all survey pins located on each Lot. If it is required to replace a damaged or missing survey pin, the same must be done by an Alberta Land Surveyor, and the cost of the same shall be at the sole expense of the Lot Owner.

39. Any owner of any lot within the Development may enforce the Architectural Controls or other Controls of this Restrictive Covenant.

40. Each lot shall be deemed to form part of a Building Scheme, the land use and building restrictions and conditions contained in the Restrictive Covenants and Architectural Controls shall be deemed to be covenants running with each of the lots and shall be binding upon each individual owner of each lot and for the benefit of the owners of all the other lots set out herein and their successors in title or such subsequent plan of subdivision of the same area as may hereinafter be filed. The Developer, or any inspection agency contract by it, shall in its sole discretion determine the date when completion of construction has occurred.

41. Notice from the Development Manager as required in this document may be affected by personal service, regular mail to the last address provided by the Owner to the Development Manager, or by posting the Notice to the Door of the dwelling located upon the Owner's lands. Notice from the Owner to the Development Manager as required in this document shall be affected by personal service upon the Development Manager.

42. Should any one or more provisions of this Restrictive Covenant be determined to be illegal, unenforceable or otherwise invalid, the same will be severed, but all other provisions will remain in effect.

43. IT IS NOT THE INTENTION OF THESE RESTRICTIVE COVENANTS OR ARCHITECTURAL CONTROLS TO IMPOSE ANY LIABILITIES ON THE DEVELOPER OR THE DEVELOPMENT MANAGER.

44. Time shall be of the essence of these Restrictive Covenants and Architectural Controls.

45. The failure by the Developer, Development Manager or any consultant hired in connection with these Controls to require performance of any provision of these Controls shall not affect their right to require performance at any time thereafter, nor shall a waiver of any breach or default of these Controls constitute a waiver of any subsequent breach or default or a waiver of the provision itself unless the subsequent breach or default was waived in writing by the Development Manager.

46. If a lot has natural drainage, access must be granted for maintenance, if maintenance is required.

PROPOSED TIME LINE SCHEDULE FOR DEVELOPMENT UPON THE AFORESAID LAND

47. Purchase of Lands by Owner.

48. Initial consultation with the Development Manager.

49. Drawings (Plot and Design Plan, Driveway Placement, Grading Plan, House Plan, etc.) completed with a Stamp of Approval by Development Manager.

50. Upon title being made available, and upon receipt of the required permits, the builder can proceed with the construction phase that must be completed within four (4) years of the Closing Date.

51. Upon completion of the house and other structures in accordance with the approved plans and permits, the Owner of the Lands notifies the Development Manager that he can make an inspection.

52. After inspection and acceptable completion within the terms of the Restrictive Covenant and Architectural Controls set out herein, the Architectural Control deposit shall be refunded by the Development Manager to the owner.

IN WITNESS WHEREOF the Grantor and Grantee have set their hands and seals effective as of this _____ day of _____, 2011.

GRANTOR
Edgewood Stables Ltd.

_____
Signature

Seal

GRANTEE
Edgewood Stables Ltd.

_____
Signature

Seal

BEST SMALL & MEDIUM EMPLOYERS IN CANADA

info@swg.ca
www.swg.ca

Stewart Weir

LETHBRIDGE COUNTY

IN THE PROVINCE OF ALBERTA

BY-LAW NO. 24-013

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

Bylaw 24-013 of Lethbridge County, being a Bylaw for the purposed of amending the Edgewood Stables Area Structure Plan Bylaw 1362.

WHEREAS the landowners wish to further subdivide Plan 1312563, Block 1, Lot 1, contained within the Edgewood Stables Area Structure Plan;

AND WHEREAS the County's Municipal Development Plan requires that developers prepare an amendment to the Area Structure Plan to ensure sound development occurs within the County;

AND WHEREAS the landowner/developer have prepared amendment to the "Edgewood Stables 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 "Edgewood Stables Area Structure Plan" as amended by Bylaw No.24-013, is attached as "Appendix A".

GIVEN first reading this 17th day of October, 2024.

_____
Reeve

_____
CAO

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

_____
Reeve

_____
CAO

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

_____
Reeve

_____
CAO

Edgewood Stables

Area Structure Plan

Bylaw No. 1362
County of Lethbridge
Portion SW 29-9-21 W4M

Prepared For: Edgewood Stables

Prepared By: Stewart Weir

Our File No: LB35 33737

Date: April 11, 2011

Naturally Resourceful

Table Of Contents

FIGURES

APPENDICES

SW 29-9-21 W4M

1.0 INTRODUCTION

1.1 Plan Purpose

The Area Structure Plan (ASP) is intended to provide the framework to establish the transition of the poor agricultural lands currently designated Lethbridge Urban Fringe to Grouped Country Residential use. This ASP will provide development and implementation guidelines and a framework for the Developer to efficiently and, in an environmentally responsible manner, create a new Country Residential Subdivision.

This ASP provides a framework for the development of a parcel of land in the County of Lethbridge located in the SW 29-9-21 W4M, being legally described as Lot 9, Block 1, Plan 991 2364. The ASP will guide land use and infrastructure development of the subject site, facilitate the protection of the portion of the plan area adjacent to tributary coulee valleys to the north, and demonstrate the way in which new development will integrate into the surrounding land use. The ASP will also contain a conceptual subdivision design for the plan area in accordance with the County of Lethbridge standards.

The Area Structure Plan has been prepared in accordance with the provisions of Section 633 of the Municipal Government Act, which states the following:

Area structure plan

"633(1) For the purpose of providing a framework for subsequent subdivision and development of an area of land, a council may by bylaw adopt an area structure plan.

(2) An area structure plan

(a) must describe

(i) the sequence of development proposed for the area,

(ii) the land uses proposed for the area, either generally or with respect to specific parts of the area,

(iii) the density of population proposed for the area either generally or with specific parts of the area, and

(iv) the general location of major transportation routes and public utilities,

and

(b) may contain any other matters the council considers necessary."

1.2 Plan Vision and Objectives

1.2.1 Vision

Vision Statement: To provide a high quality grouped country residential development within the County of Lethbridge striking a balance between existing land uses, recreational pursuits and protection of the environment and which is in line with similar developments in place in the two parcels of land to the north.

1.2.2 ASP Objectives

- Maintain or enhance the quality of life within and adjacent to the ASP area,
- Provide mechanisms to ensure the quality of surface and groundwater is not impacted by the proposed development,
- Minimize the impacts on neighbouring properties and the community at large.

1.3 Plan Area

The ASP applies to a portion of the SW 29-9-21 W4M, legally described as Lot 9, Block 1, Plan 991 2364, which is located in the south western region of the County of Lethbridge, immediately north of the City of Lethbridge boundary. The subject lands are contained in a single Certificate of Title containing ± 15.95 hectares (39.41 Acres). The location is highlighted in Figure 01.

SW 29-9-21 W4M

Figure 1 - Project Area

The ASP area is primarily a rural agricultural landscape with small land holdings. The site is bounded by The City of Lethbridge corporate limits to the south, tributary coulee valleys of the Oldman River to the North and West and farmed agricultural land to the east. Country Residential subdivisions are located to the north of the proposed development. Road access to the site is available from Township Road 94 and Range Road 214A. Figure 02 illustrates the plan area's local context.

2.0 EXISTING CONDITIONS

2.1 Surface Geology and Topography

The proposed Edgewood Stables development is bounded on the north by tributary coulee valleys, comprising the Old Man River Valley; to the south by municipal Township Road 94; to the east by municipal Range Road 214A and

to the west by a local gravel access road. The existing site supports prairie grasses with an overall gradient towards the coulee valleys.

The lands are primarily vacant agricultural with a number of tree stands in the coulees. The predominant land use in the surrounding area is agricultural, interspersed with pockets of country residential developments. The landform is gently rolling pasture characterized by minor depressions and hollows.

The plan area drains to the North into the Oldman River valley. Minor depressions and hollows pond small amounts of water, but ultimately drain into the surface soils. This soil is reported to have very rapid permeability rates. The geotechnical report did not indicate a high water table in this area.

The area south of the top of the coulee bank has no environmental, topographical, or physical constraints that would inhibit the proposed use of these lands for residential purposes. The lands lying north of the development setback line (as determined by the Development Setback Assessment – Appendix A) will be protected from development impact by dedicating the lands as Municipal Reserve (MR) and Environmental Reserve (ER).

The Development Setback Assessment, completed by EBA Engineering Consultants of Lethbridge, concluded that a setback of 4H:1V (4 metres horizontal distance to 1 metre vertical difference) would be appropriate for this site. This restriction takes into account the recommendations of the City of Lethbridge Bylaw #5277, specifically with regards to translational failures along the top of the Lenzie Silts deposit. This assumed failure line extends from the contact elevation at the slope face to the existing ground surface at prairie level.

A second factor would require a minimum setback distance of 6 metres form the Top of Bank to protect developed property from shallow crest failures. The contact elevation of the Lenzie Silts deposit has been taken by EBA as elevation 875.0 m. This contact elevation is based on published data from the AMEC report conducted as part of the development of City Bylaw #5277.

Based on the various aspects of the slope stability analysis conducted for the development, a development setback line using the minimum requirements of Bylaw #5277 was recommended. This setback line was established by extending a 4H:1V line from topographic elevation 875 m. Where this line extends less than 6.0m from the Top of Bank, the minimum recommended setback distance is 6.0 m.

The EBA report also provided recommended development guidelines for the area within the Development Setback line which are consistent with an Environmental and Municipal Reserve dedication.

Figure 04 depicts the topography of the plan area and shows the established Development Setback line.

2.2 Existing Land Use

The existing Land Use Area is zoned as Lethbridge Urban Fringe (LUF). The ASP area is covered with prairie grasses and slopes toward the coulee valleys to the north/north west. The western portion of the site is currently in use as a boarding stable whereas the eastern portion is currently used for pasture and is vacant, except for the dugout located on the south central portion of the property.

The proposed development will be developed in a single phase with the existing stable and out-buildings in the western portion of the site left as one large lot.

2.3 Existing Services and Utilities

There is a local water line supplying potable water from the City of Lethbridge owned by the County of Lethbridge Rural Water Association Ltd. near the development area. The water line runs parallel to Range Road 214A just east of the subdivision.

There currently is no regional municipal sanitary service in the area. Local wastewater is disposed via septic tanks and septic fields or mound systems.

The development area is bounded by gravel roadways on the south by Township Road 94 and on the east by Range Road 214A. Range Road 214A is paralleled by a gas pipeline and waterline to the east of the road.

The site is bisected by two gas pipeline right-of-ways. A high pressure gas line (GL 32 AP) owned by ATCO Pipelines and a low pressure gas pipeline (2602IC) owned by ATCO Gas bisect the development area. ATCO has no plans to move the gas lines and the setbacks and restrictions associated with the existence of these lines have been incorporated into the conceptual plan for the lot design.

A low pressure gas service line owned by ATCO Gas services the existing facilities located in the western portion of the site.

Regional storm water is managed through the use of open drainage ditches adjacent to municipal roads.

2.4 County of Lethbridge Policy Framework

2.4.1 Municipal Development Plan

The County of Lethbridge Municipal Development Plan's (MDP) Special Planning Areas map shows the plan area as "Area B". The MDP identifies Area B as being well suited to highway service type development. The MDP also states, "Land uses other than agricultural may be considered if conditions can be demonstrated that altering the land use is a sound consideration". The proposed Isolated Country Residential development proposed is a logical use for this area and would serve to complement similar developments to the north.

2.4.2 County of Lethbridge Municipal Development Plan

According to Section 6.3.3 (c) l of The County of Lethbridge MDP:

"*The County shall encourage the design of residential areas that provide open space and incorporate natural areas while minimizing fragmentation and safeguarding the environmental sustainability of the area under development".*

This proposed development of 14 lots, comprised of 1 Public Utility Lot, one MR lot, one ER lot and 11 residential lots, varying in size from 0.7 ha (1.73 Acres) to 4.7 hectares (11.61 Acres), along with the preservation of the natural state of the coulees and areas contained within the Development Setback line, would satisfy the MDP.

2.4.3 Land Use Bylaw

The County of Lethbridge Land Use Bylaw (LUB) shows the subject site districted as LUF.

The LUB states:

"Grouped country residential uses will be encouraged to locate within the areas shown in the municipal development plan as being areas where confined feeding operations are restricted. In these areas, with an approved area structure plan, council may redesignate parcels of land having consideration for:

(i) protection of high quality agricultural land,

(ii) comments from affected persons,

(iii) effects on the irrigation system."

Site suitable testing is required before subdivision approval and includes but is not limited to water supply, water table levels, percolation rates, contours, environmental impact assessments and review of past mining activities. The Land Use By-law states that the minimum parcel size is 0.40 ha (1 acre).

2.4.4 Intermunicipal Development Plan (County Bylaw #1254)

As this development is directly adjacent to the limits of the City of Lethbridge and thus falls within the boundaries of the Intermunicipal Development Plan, comments from the City of Lethbridge have been taken into account.

2.5 Issues Arising From Public Process

2.5.1 Public Hearing

The public hearing for the Edgewood Stables development was held March 17, 2011 in the County of Lethbridge council chambers. The public hearing was attended by approximately 30 local residents, the developer and representatives from Stewart Weir & Co Ltd. Comments from the public hearing are summarized below:

- Residents to the west expressed concerns with the density of the proposed subdivision.
- One resident to the west would prefer not to have a subdivision opposite their driveway.
- All residents expressed the need for architectural controls.

3.0 DEVELOPMENT CONCEPT

3.1 Plan Goals

The goals of this Area Structure Plan are as follows:

1. To provide a detailed framework for future development within the plan boundaries that is consistent with the objectives outlined in the County of Lethbridge Municipal Development Plan.
2. To ensure that development is compatible with existing land uses.
3. To provide efficient and economically feasible servicing options for the plan area.
4. To maintain a safe development setback from the coulee valley.

3.2 Land use Concepts

The concept for the plan area is residential rural estate development with a net density of 1 unit per 1.13 hectare. The MR dedication would amount to approximately 16% which exceeds the MGA requirement of 10%.

The proposed development consists of 14 lots, comprised of one Public Utility Lot, one MR lot, one ER lot and 11 residential lots.

Each residential lot meets the bylaw's minimum requirement of 1 acre of developable area.

4.0 POLICY

4.1 Environment

The adjacent coulee valley is tributary to the Oldman River and will be carefully protected throughout the development of the plan area. A Development Setback Assessment conducted by EBA Engineering Consultants Ltd. provided a recommended development setback from the top of bank based on site reconnaissance, stability analysis and assumed post-development groundwater conditions. The area between the coulees and the Development Setback line will be protected through the dedication of an Environmental Reserve (ER) and a Municipal Reserve (MR), which will restrict the use and development of those areas. The County will assume ownership of the Reserve lands.

4.2 Residential

The plan area is generally a rural, agricultural landscape with some similar country residential developments to the north. The current policies, provisions and regulations of the Municipal Development Plan and Land Use Bylaw will apply to the proposed country residential subdivision.

4.3 Municipal Reserve

The developer is prepared to dedicate the lands between the development setback line and the top of bank as Municipal Reserve (MR). The vision for the MR is as a link between the river valley trails in Pavan Park and the areas to the north and east of the development. The proposed trails would be located to the north of the City of Lethbridge's cemetery located in the NE ¼ Sec. 19-9-21 W4M. This link would provide a safe route for recreational users to gain access to the river valley and the Park. See Figure 7.

4.4 Environment Reserve

The area between the top of bank and the coulees will be protected through the dedication of the lands as ER.

4.5 Roadways

The nearest provincial highway to the development area is Secondary Highway 843 located approximately 3.3 km east of the development.

The primary access to the subdivision will be from Range Road 214A and 13th Street North. Both accesses are gravel surfaces. No off-site improvements to the County owned roads are anticipated. The internal road will require asphalt surfacing, to be provided at the developer's expense. Where possible, the developer will provide shared approaches for those parcels gaining access from the County roads.

4.6 Potable Water

County of Lethbridge Rural Water Association Ltd. (CLRWA) has a rural potable water distribution line running parallel to Range Road 214A. The developer has placed a deposit to ensure service from the CLRWA and provide priority to the development when allocating resources within the CLRWA's water license.

If the CLRWA has insufficient capacity to provide water service to the Edgewood Stables development water will be the responsibility of the individual lot owners to have potable water provided by truck haul to private cisterns located within each property.

4.7 Wastewater

A site assessment was performed by means of a geotechnical investigation. Soil samples were collected for laboratory testing. The results from the site assessment and soil sample tests support on-site sewage treatment by private on site sewage treatment mound systems. See Appendix B.

The means of selecting an on site sewer system will be in accordance with "Alberta Private Sewage Systems Standard of Practice 2009". The sewer systems will be engineered to meet these standards. Based on the soil logs collected and defined within the soils investigation report, the site has mixed soil compositions. Half of the test pits indicated soils classified as heavy clay; the remainder of the test holes indicated marginal

conformance with Safety Codes Council 2009 Handbook for design and construction of septic disposal fields. In general terms site specific soil testing would be required to support in-field septic systems at time of construction or an alternative means of providing a disposal field is adopted, such as a septic field mound system.

Treatment mounds are an effective method in difficult soil conditions such as too fast or too slow soil percolation rates. The percolation rate for the plan area is 0.53 minutes per 25mm (1 inch). According to the "Alberta Private Sewage Systems Standard of Practice 2009" handbook a percolation rate in the range of 5 to 60 minutes per 25mm (1 inch) is necessary for the proper operation and long term success of a disposal field. Therefore a treatment mound for the plan area will be a viable method of effluent treatment and disposal. Despite the clay content the site is heavily dispersed with large rock lenses which aid in the drainage and dispersal of surface water.

A sewage treatment mound is a seepage bed elevated by clean sand fill to provide an adequate separation distance between the clay and rock layer in the mound and the barrier layer such as saturated soil conditions or bedrock. The mound must be carefully constructed to provide adequate sewage treatment. A treatment mound includes a layer of specifically graded, clean sand that the effluent is spread over then slowly percolates through as more effluent is applied. This provides an excellent aerobic environment for the removal of organic loading in the sewage effluent. It operates similar to a sand filter in removing the organic loading.

Once the organic loading has been removed by the sand layer, higher long term infiltration rates into the soil can be achieved. The sand layer is overlain with gravel or chambers to assist in the distribution of the effluent over the entire surface of the sand layer and provide a brief storage area for the effluent as it is pumped onto the mound. This is then covered and a side berm created using loamy sand. The covering soil (the loamy sand) must be very porous to assure good aerobic conditions in the sand layer.

4.8 Storm Water Management

4.8.1 Existing Drainage

Contours generated from the site topographic survey indicate natural drainage toward the North West of the site, draining into the coulee valley. Existing ground slope varies from 1.5% to 8.0%.

Figure 05 shows existing surface drainage paths within and around the proposed subdivision.

4.8.2 Proposed Storm Water Management

Overview

The County of Lethbridge Engineering Guidelines and Minimun Servicing Standards (May, 2009) requires new development areas to be designed using the major/minor system concept, and shall be of sufficient capacity to carry storm runoff from the ultimate development.

Minor System

In general, a minor system is designed for drainage to accommodate the runoff, which would occur in relative frequent (e.g. 1:5 year) return period rainfall events and snowmelt during spring season. More specifically, the minor system is typically applied to the buried drainage network of local and trunk sewers, inlets and street gutters, which have traditionally provided conveyance of storm water runoff from road surface.

Major System

The major system is designed to control flooding and to accommodate runoff rates and volumes for a 100-year return period rainfall event. For instance, when the rate of storm runoff generated by less frequent, more intense, rainfall events may exceed the capacity of the minor system, subsequent ponding may occur in depression areas or follow whatever overflow escape route is available.

Runoff Control

The increased rate of runoff can usually be controlled by means of stormwater retention facilities that temporarily hold the excess runoff and release it at a controlled rate. Normally, the form of runoff control includes:

- Catchbasin inlet control
- Detention/Retention pond
- Infiltration areas

Wet or dry retention ponds are the most commonly used for runoff control. They are used for temporary storage of excess runoff which is released at a pre-defined rate. In less frequent cases where discharge is not feasible, a retention facility is constructed, where evaporation and infiltration maintain water levels.

We propose to utilize a wet pond system constructed for storage of stormwater runoff, to provide the added benefit of sediment settling and reduction of organic contaminants. Dry ponds only retain storm water during the actual rainfall event and are not considered to provide treatment benefits. As the configuration requirements for dry ponds tend to be less restrictive than those for wet ponds, the dry pond storage concept can be applied in a very linear form, such as natural or manmade channel.

Design Considerations

The majority of surface runoff will be captured and directed to the proposed detention pond located in the low lying terrain, in the northwest corner of the proposed subdivision. This facility would be designed to accommodate current drainage patterns and the intention of improving quality of storm water effluent before it discharges into Oldman River.

The proposed detention pond will centralize the collection of storm water and be designed to have adequate water available for fire protection. The proposed location will be accessible to emergency vehicles serving the proposed subdivision as well as future development.

Since this is only a preliminary conceptual study other concerns should be included for Municipal Reserves (MR), Environmental Reserves (ER) and flood plain level. All these factors need to be verified and investigated during the detailed design.

Other Considerations

In urban areas without an underground storm water system, road side ditches provide drainage for both the minor and major storm water systems. Comments from the City of Lethbridge indicated that driveway access onto lots have in the past caused issues with ditch drainage. The subdivision will minimize accesses from municipal roads as shown on Figure 3. Culverts under these accesses will be sized correctly to not impede ditch drainage.

4.8.3 Proposed System

Storm drainage system for the proposed subdivision will incorporate the concept as outlined previously. Individual lots will be graded for positive drainage into the roadside ditches/municipal reserve. Lot grading design will prevent any lot to lot drainage. Due to the natural gradient the proposed layout favors walk out basement developments. Split lot drainage will be incorporated into the design. There will be controlled drainage from driveways and walkways to roadside ditches, and all other areas will follow natural drainage patterns.

A detention pond will be designed to accommodate the 1:100 year storm event and to control discharge from the subdivision to under the allowable limit.

Figure 05 provides the proposed drainage directions and the location of the Storm Pond. Final location and sizing of the pond will be determined during the detailed design phase. It should be noted that the area of the PUL can be adjusted to accommodate an appropriately sized storm pond.

The Storm Water Management Plan has been prepared in accordance with Alberta Environment requirements. At the time of subdivision approval, the developer will obtain any approvals required under the Water Act.

4.8.4 Existing Dugout

It is anticipated that the existing dugout will be filled in prior to the development of Lot 4.

4.9 Fire Protection

The County of Lethbridge Municipal Development Plan (Bylaw #1331) under Section 6.16.3 Policies requires:

Fire Protection – The County shall require an applicant/developer to provide a plan or method for fire protection / suppression, which meets the guidelines set forth in the County Municipal Engineering Guidelines and Minimum Servicing Standards.

4.10 Summary

The following table provides a statistical overview of the area and percentages of gross developable area by land use in the plan area.

Table 4.1 Land Use Area Estimate

Land Use Category	Total (ha)	%
Gross Development Area (GDA)	15.95	100
ER / MR	2.59	16.3
Residential Lots	12.48	78.2
Internal Roadways	0.27	1.7
Storm Ponds (PUL)	0.61	3.8

5.0 IMPLEMENTATION

The re-designation to Group Country Residential was adopted on March 17 under Bylaw 1363. Upon adoption of the Area Structure Plan, the developer will submit an application for subdivision.

5.1 Subdivision and Development

5.1.1 All developers shall be required to enter into development agreements with the County as a condition of subdivision approval.

5.1.2 Detailed engineering drawings and specifications for roads, water, sanitary sewer, storm sewer, and shallow utilities shall be prepared by the developer and approved by the County prior to executing the development agreement on the subject lands.

5.1.3 As the lot sizes and yields identified in this plan are conceptual, a development of 11 residential lots, one Public Utility lot, one MR lot and one ER lot shall be permitted in the plan area without amendment to this ASP.

5.1.4 In order to minimize direct access to the County roads, shared access will be provided where possible.

5.1.5 All development must meet the County of Lethbridge Engineering Guidelines and Minimum Servicing Standards (May, 2009)

6.0 ENVIRONMENTAL ASSESSMENT

Approximately 16 hectares of grassed pasture and a previously developed horse stable encompass the plan area. The predominant land use in the surrounding area is agricultural, interspersed with pockets of County residential developments.

The plan area has no sign of surface contamination. There are two gas pipeline right of ways that bisect the property, running from southwest to northeast. One is a high pressure gas line and the other a low pressure line. ATCO Gas has no plans to move the pipelines. Crossing agreements will be required for driveways crossing the pipeline in the east cul-de-sac. No development will be allowed on the right of ways. There are no active well heads, leases, or abandoned leases in the plan area.

7.0 MINIMUM SERVICING STANDARD

The County of Lethbridge Land Use Bylaw No. 1211 for Grouped Country Residential (GCR) states that the minimum parcel size is 0.4 ha (1 acre). The minimum setback for side yards is 6.1 meters (20 ft.) and for front yards is 15.2 meters (50 ft).

Site suitability testing is required before subdivision approval and includes but is not limited to water supply, water table levels, percolation rates, contours, environmental impact assessment, etc.

8.0 FIRE PROTECTION

Each development must have adequate water available for fire protection. For residential developments the requirement is generally 4000 gallons (15.14 m3) of usable water per household. The plan area of 11 lots will have a requirement of 40,000 gallons (227.10 m3) available for fire protection. In addition to providing the required water (which must be available for use at all times) the developer will be required to provide access to it; this will require the construction of an approach, the installation of one dry fire hydrant. The storm pond will require safety measures such as berms and fencing at the County's discretion. According to the County design guidelines and construction standards for subdivision developments fire protection requirements are to be in accordance with the NFPA 1142. The design of fire pond would also need to be in accordance with Alberta Environment's wet pond standards in the publication entitled "Storm Water Management Guidelines for the Province of Alberta".

Some general design parameters to consider for fire ponds are:

a) Maximum 4:1 to 5:1 side slopes above active storage zone
b) Maximum 5:1 to 7:1 interior side slopes in active storage zone
c) Maximum 3:1 exterior side slopes
d) Permanent depth to be a maximum of 3.0m and a minimum of 2.0m
e) Maximum water level should be below adjacent house basement footings.

Incorporated into the design of the fire pond will be a dry hydrant. A dry hydrant is a non-pressurized pipe system permanently installed in ponds that provide a suction supply of water to a fire department tank truck. In any area without water mains and domestic fire hydrants, the dry hydrant concept can provide a simple cost-effective solution to the need for access to water sources without delay.

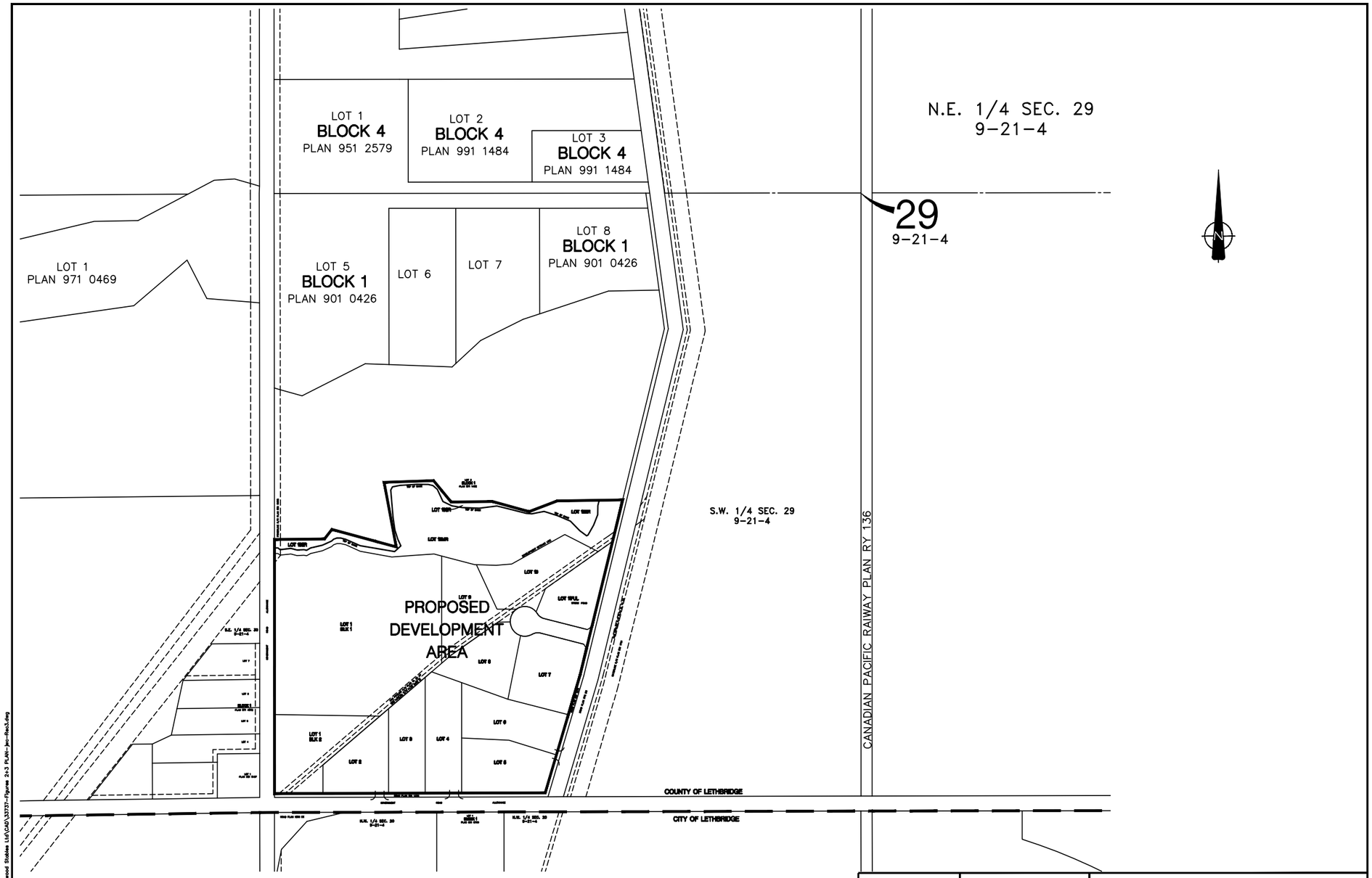
9.0 ARCHITECURAL CONTROLS

Further to concerns expressed at the Public Hearing, the Developer has provided proposed Architectural Controls which are attached as Appendix D.

10.0 CONCLUSION

The proposed site meets with the requirements established in the Municipal Development Plan and Land Use Bylaw of Lethbridge County for the development of a “County Residential” multi-lot subdivision. The site investigation and soils investigation performed indicate the site is suitable for this purpose.

FIGURES



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SURVEYED		
DESIGNED		
DRAWN	BP/JES	10/07/28
CHECKED	CP	10/07/28
APP'D BY		
ISSUED FOR CONSTRUCTION		
ISSUED FOR APPROVAL		

CONSULTANT

Stewart Weir

Naturally Resourceful

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PERMIT NUMBER P 292
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

FILE No.: LB35.33737

EDGEWOOD STABLES LTD.

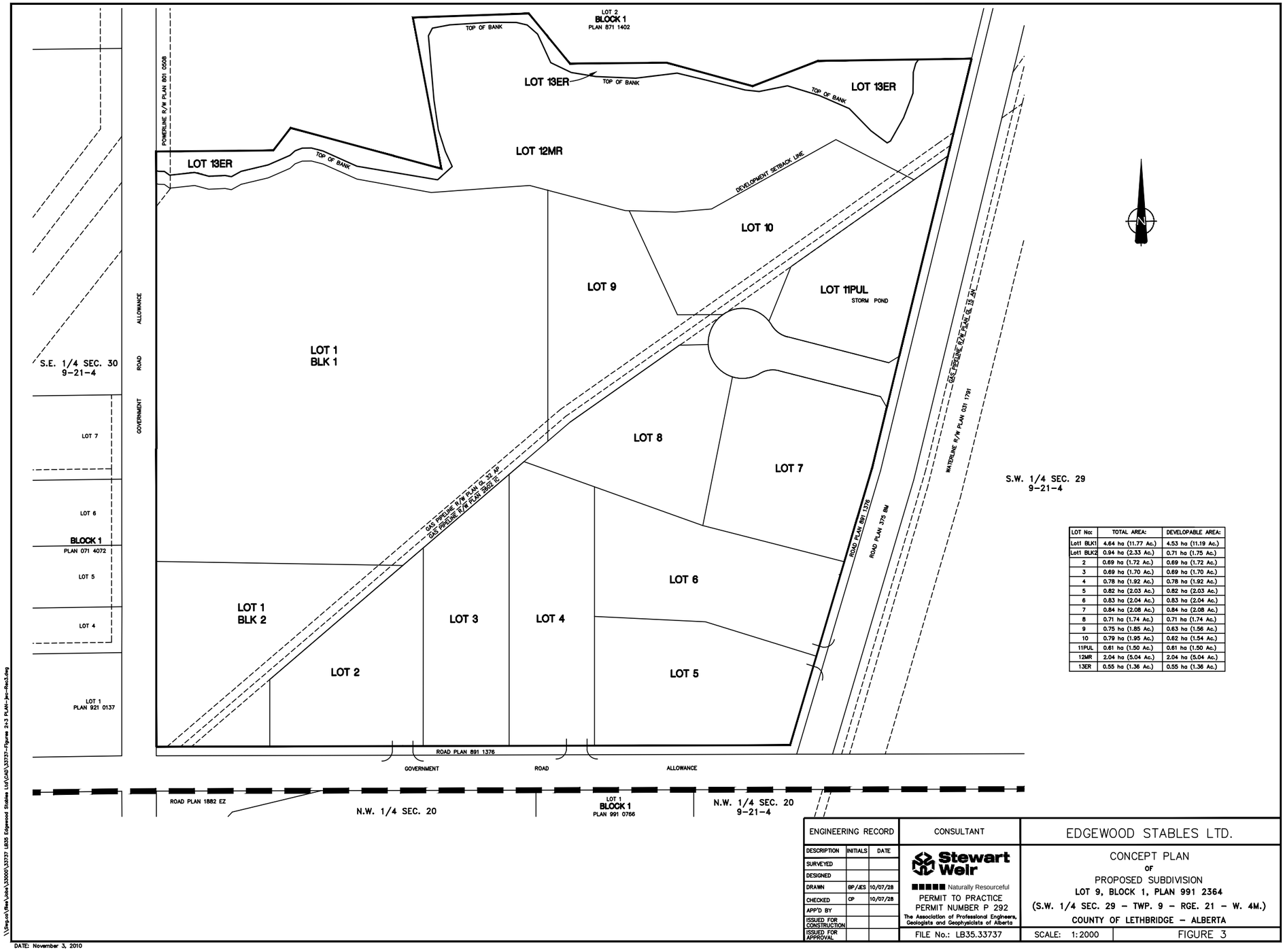
OVERALL PLAN
OF
PROPOSED SUBDIVISION AND AREA
LOT 9, BLOCK 1, PLAN 991 2364
(S.W. 1/4 SEC. 29 – TWP. 9 – RGE. 21 – W. 4M.)
COUNTY OF LETHBRIDGE – ALBERTA

SCALE: 1:5000

FIGURE 2

\\Stewart Weir Jobs\35000\33737 LBSS Edgewood Stables Ltd\Civil\33737-Figure 2-3 PLAN-jes-Rev2.dwg

DATE: November 3, 2010



LOT No:	TOTAL AREA:	DEVELOPABLE AREA:
Lot1 BLK1	4.64 ha (11.77 Ac.)	4.53 ha (11.19 Ac.)
Lot1 BLK2	0.94 ha (2.33 Ac.)	0.71 ha (1.75 Ac.)
2	0.69 ha (1.72 Ac.)	0.69 ha (1.72 Ac.)
3	0.69 ha (1.70 Ac.)	0.69 ha (1.70 Ac.)
4	0.78 ha (1.92 Ac.)	0.78 ha (1.92 Ac.)
5	0.82 ha (2.03 Ac.)	0.82 ha (2.03 Ac.)
6	0.83 ha (2.04 Ac.)	0.83 ha (2.04 Ac.)
7	0.84 ha (2.08 Ac.)	0.84 ha (2.08 Ac.)
8	0.71 ha (1.74 Ac.)	0.71 ha (1.74 Ac.)
9	0.75 ha (1.85 Ac.)	0.63 ha (1.56 Ac.)
10	0.79 ha (1.95 Ac.)	0.62 ha (1.54 Ac.)
11PUL	0.61 ha (1.50 Ac.)	0.61 ha (1.50 Ac.)
12MR	2.04 ha (5.04 Ac.)	2.04 ha (5.04 Ac.)
13ER	0.55 ha (1.36 Ac.)	0.55 ha (1.36 Ac.)

ENGINEERING RECORD		
DESCRIPTION	INITIALS	DATE
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DESIGNED		
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CHECKED	CP	10/07/28
APP'D BY		
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FILE No.: LB35.33737

EDGEWOOD STABLES LTD.

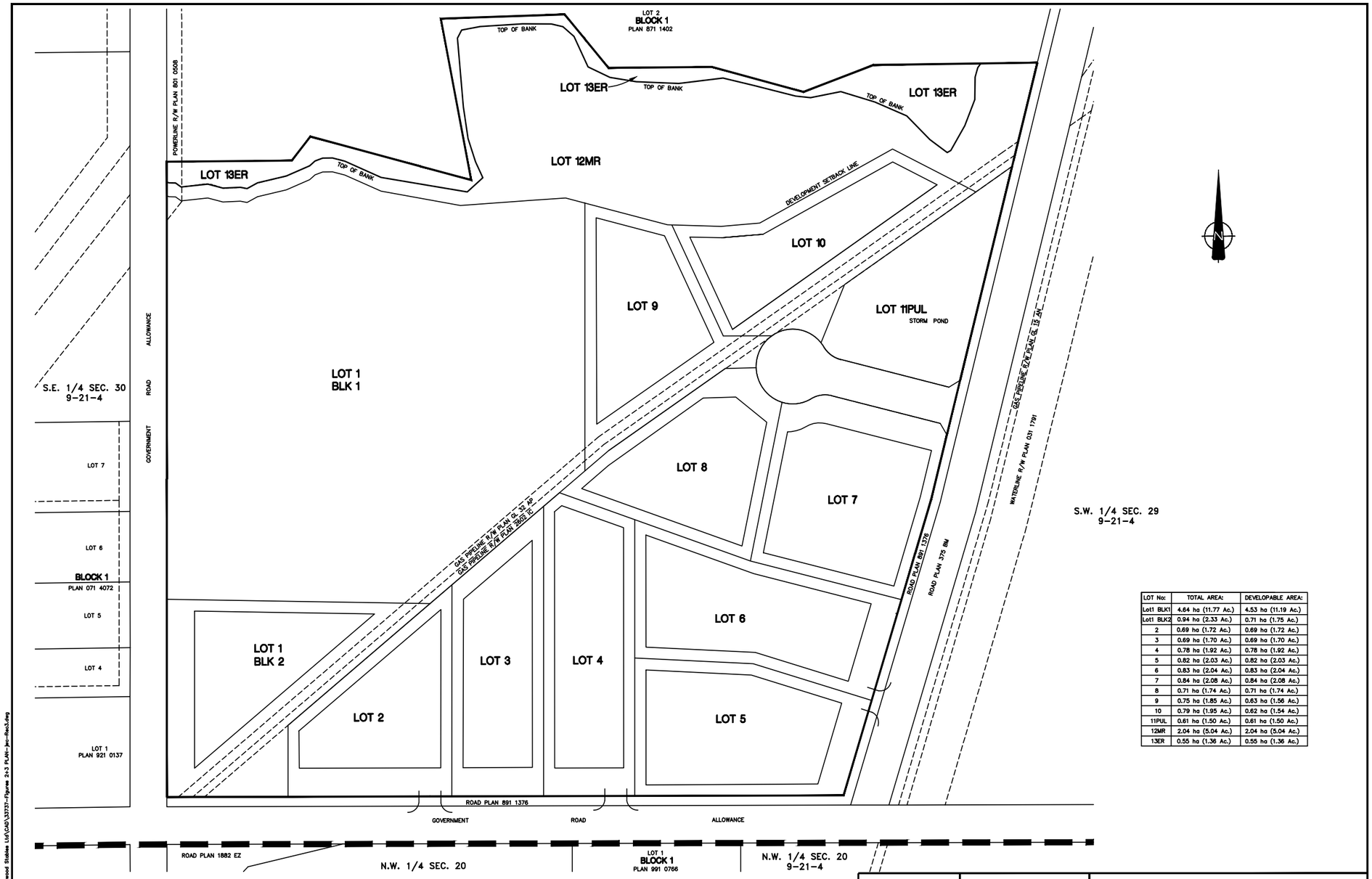
CONCEPT PLAN
OF
PROPOSED SUBDIVISION
LOT 9, BLOCK 1, PLAN 991 2364
(S.W. 1/4 SEC. 29 – TWP. 9 – RGE. 21 – W. 4M.)
COUNTY OF LETHBRIDGE – ALBERTA

SCALE: 1:2000

FIGURE 3

\\Stewart\Data\Jobs\330000\33737 LB35 Edgewood Stables Ltd\Civil\33737-Figure 2-3 PLAN-jes-Rev2.dwg

DATE: November 3, 2010



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EDGEWOOD STABLES LTD.

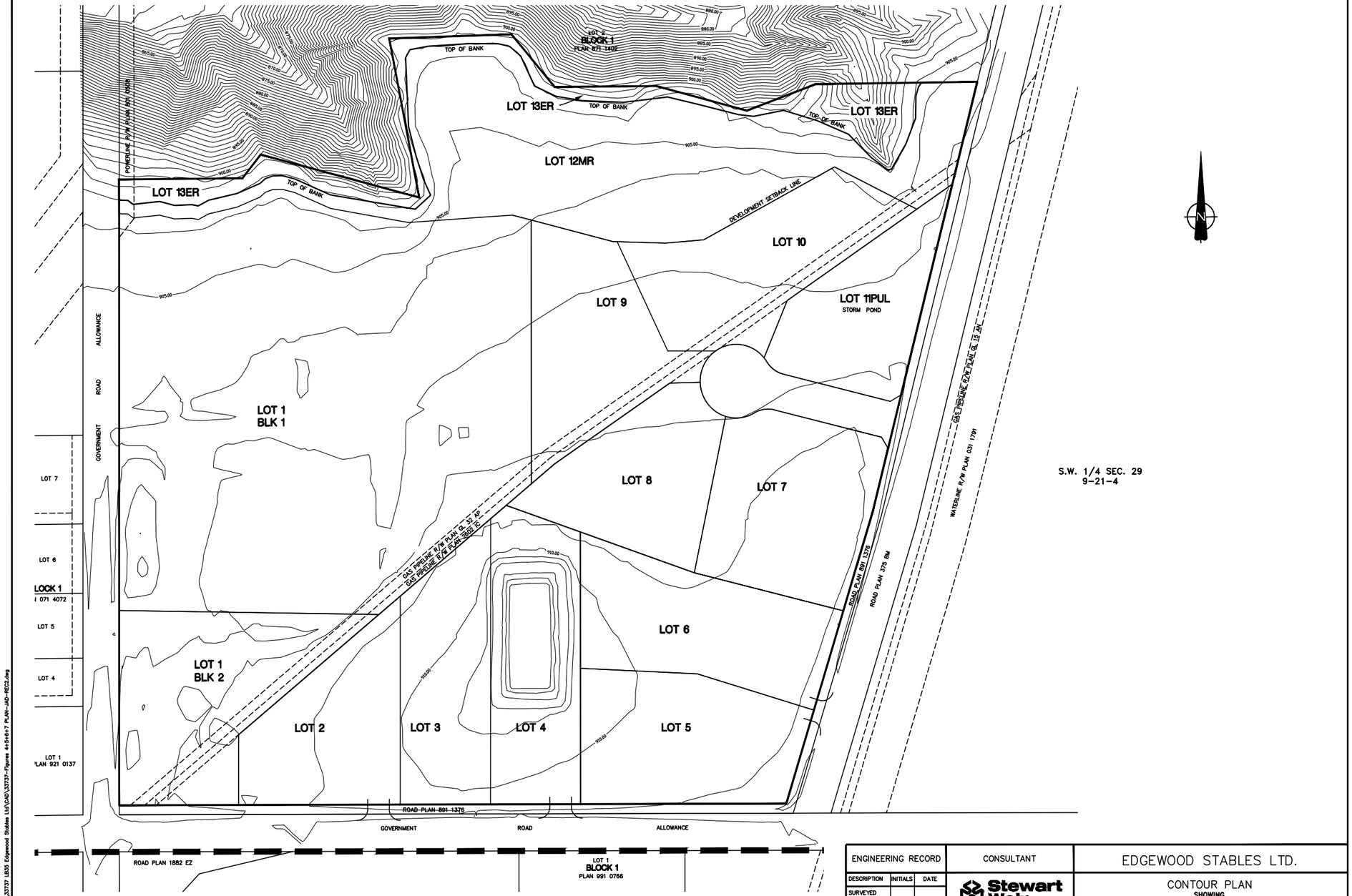
CONCEPT PLAN
OF
PROPOSED SUBDIVISION
LOT 9, BLOCK 1, PLAN 991 2364
(S.W. 1/4 SEC. 29 – TWP. 9 – RGE. 21 – W. 4M.)
COUNTY OF LETHBRIDGE – ALBERTA

SCALE: 1:2000

FIGURE 3a

\\Stewart Files\Jobs\335000\33737 LB35 Edgewood Stables Ltd\Civil\33737-Figure 2-3 PLAN-Jes-Rev2.dwg

DATE: November 3, 2010



\\Swg.ca\files\Lethbridge\33000\33737 LB35 Edgewood Stables Ltd\CAD\33737-Figures 4+5+6+7 PLAN-HAD-REC2.dwg

DATE: November 3, 2010

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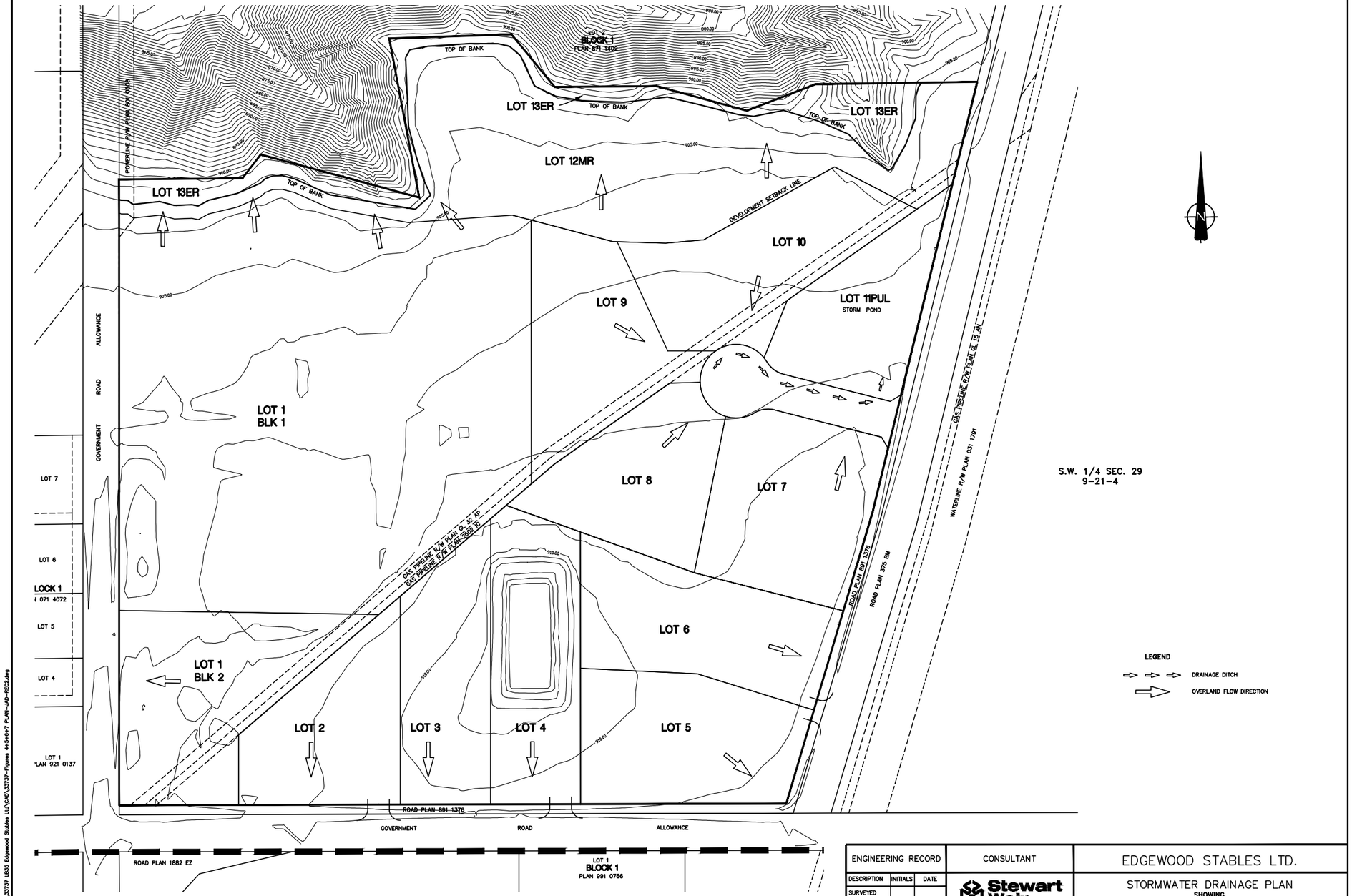
EDGEWOOD STABLES LTD.

CONTOUR PLAN
SHOWING
PROPOSED SUBDIVISION
OF
LOT 9, BLOCK 1, PLAN 991 2364
(S.W. 1/4 SEC. 29 – TWP. 9 – RGE. 21 – W. 4M.)
COUNTY OF LETHBRIDGE – ALBERTA

SCALE: 1:2000

FIGURE 4



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DATE: November 3, 2010

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DESIGNED		
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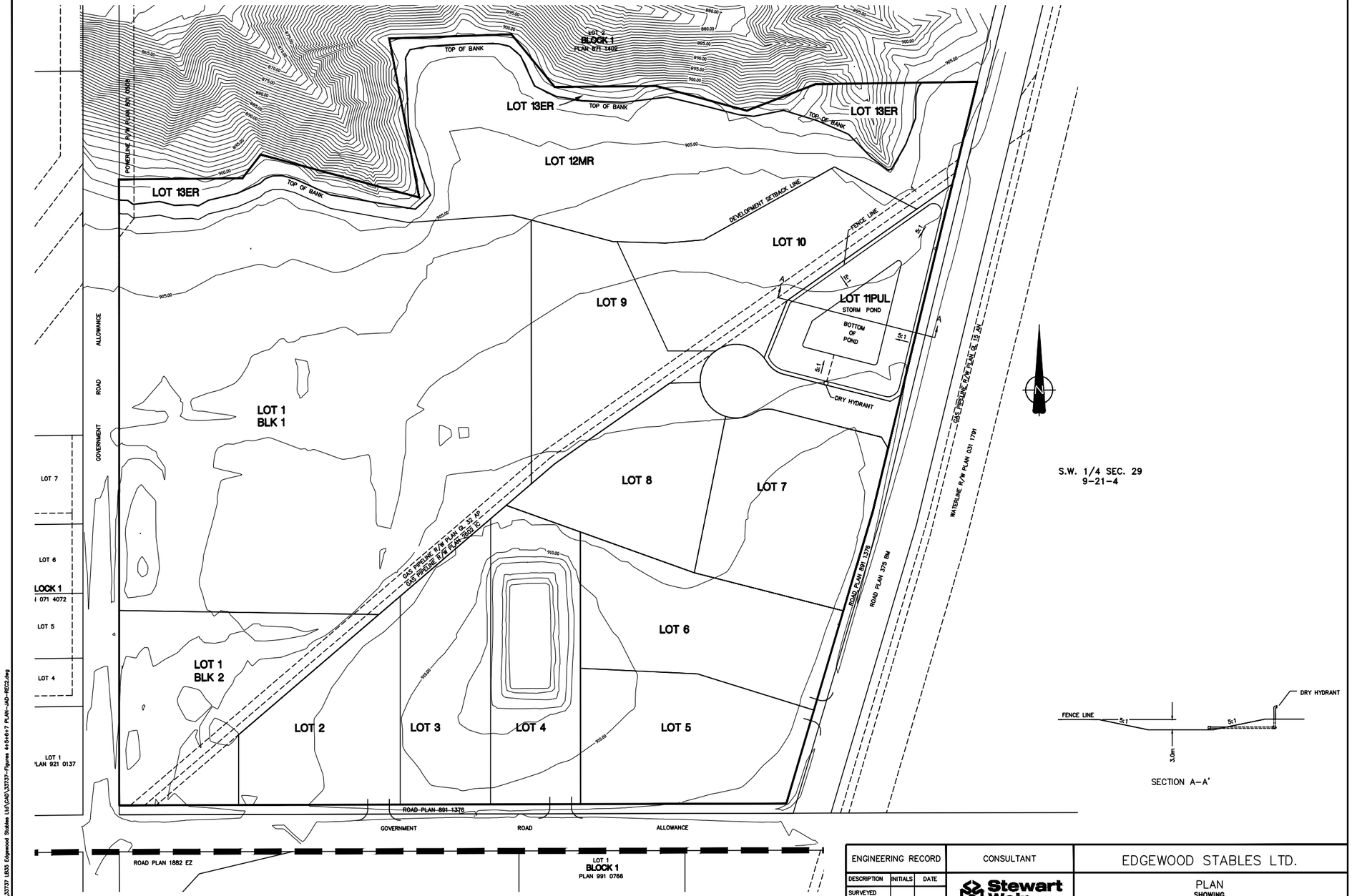
EDGEWOOD STABLES LTD.

STORMWATER DRAINAGE PLAN
SHOWING
PROPOSED SUBDIVISION
OF
LOT 9, BLOCK 1, PLAN 991 2364
(S.W. 1/4 SEC. 29 – TWP. 9 – RGE. 21 – W. 4M.)
COUNTY OF LETHBRIDGE – ALBERTA

SCALE: 1:2000

FIGURE 5



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FILE No.: LB35.33737

EDGEWOOD STABLES LTD.

PLAN
SHOWING
FIRE PROTECTION POND
OF
LOT 9, BLOCK 1, PLAN 991 2364
(S.W. 1/4 SEC. 29 – TWP. 9 – RGE. 21 – W. 4M.)
COUNTY OF LETHBRIDGE – ALBERTA

SCALE: 1:2000

FIGURE 6

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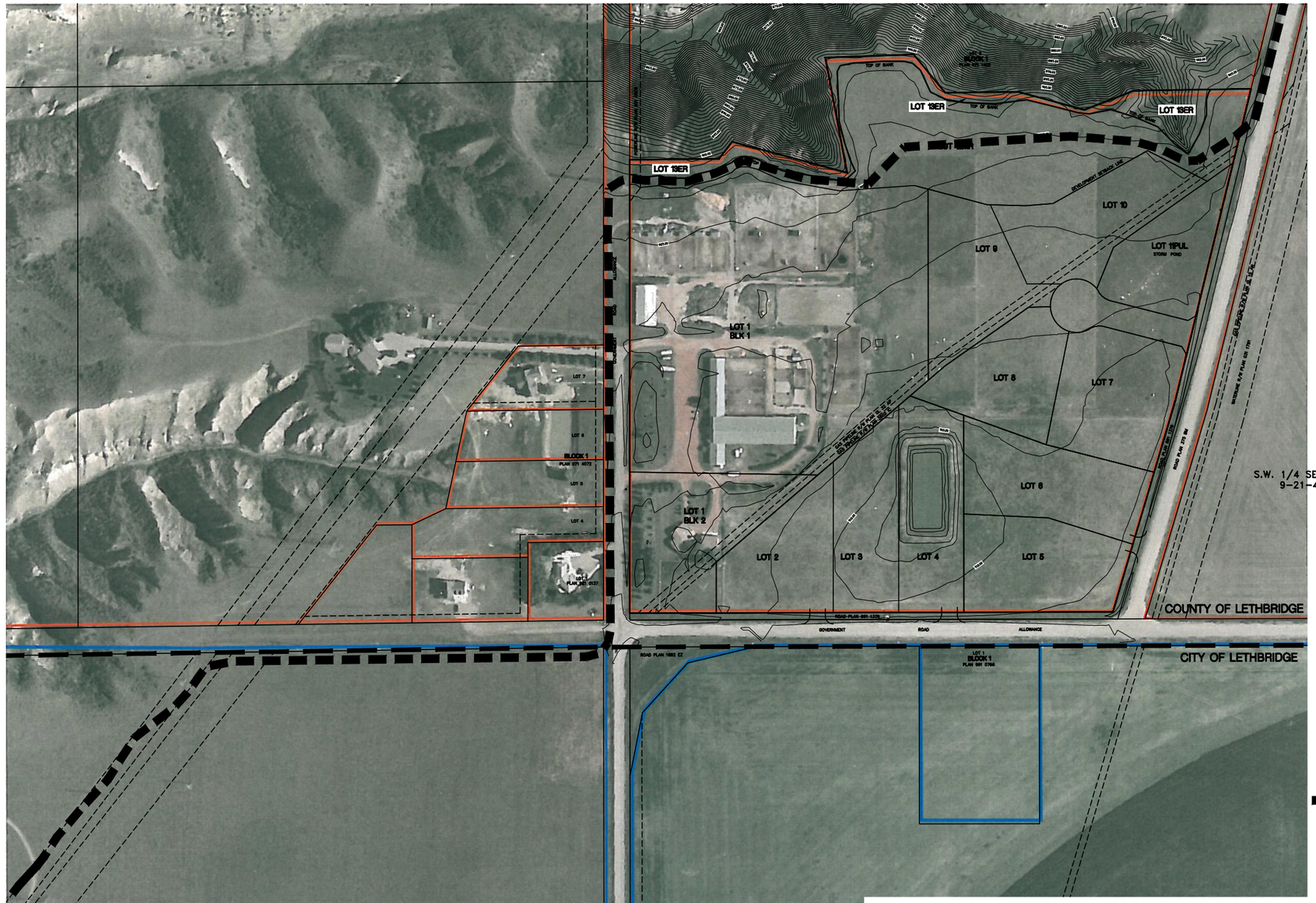
DATE: November 3, 2010



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EDGEWOOD STABLES LTD.

PLAN
SHOWING
TRAIL SYSTEM
LINK TO PAVEN PARK
OF
LOT 9, BLOCK 1, PLAN 991 2364
(S.W. 1/4 SEC. 29 – TWP. 9 – RGE. 21 – W. 4M.)
COUNTY OF LETHBRIDGE – ALBERTA

SCALE: 1:3000 | FIGURE 7

\\Shares\files\Jobs\33000\33737 LB35 Edgewood Stables Ltd\CAD\33737-Figures 4+5+6+7 PLAN-JAD-REC2.dwg

DATE: January 11, 2011

APPENDIX 'A'

DEVELOPMENT SETBACK ASSESSMENT

Stewart Weir

ISSUED FOR USE

DEVELOPMENT SETBACK ASSESSMENT
EDGEWOOD STABLES SUBDIVISION
LETHBRIDGE, ALBERTA

L12101748

April 2010

EBA Engineering Consultants Ltd.
p. 403.329.9009 • f. 403.328.8817
442 - 10 Street N • Lethbridge, Alberta T1H 2C7 • CANADA

TABLE OF CONTENTS

PAGE

FIGURES

APPENDICES

1.0 INTRODUCTION

This report presents the results of a geotechnical slope stability assessment conducted by EBA Engineering Consultants Ltd. (EBA) for a proposed rural residential development to be located north of Lethbridge, Alberta.

The scope of work for the slope stability assessment was outlined in a proposal issued to Mrs. Connie Petersen, P.Eng, of Stewart Weir. The objective was to determine the stability of the slopes abutting the proposed development area and to recommend appropriate minimum development setback distance requirements from the Top of Bank[1].

The minimum development setback distance requirements were established from a slope stability assessment conducted for this site, as well as a review of the recommended setback guidelines established by the City of Lethbridge Bylaw #5277, "River Valley Area Redevelopment Plan" (RVARP), as adopted on July 26, 2004 by the City of Lethbridge.

Authorization to proceed with this evaluation was provided by Mrs. Petersen.

2.0 PROJECT DETAILS AND SCOPE OF WORK

The property is located in the County of Lethbridge, Alberta, in Lot 9, Block 1, Plan 9912364, within the SW ¼ of Section 29, Township 9, Range 21, W4M. The subject site is shown on Figure 1. The proposed development is bounded to the north by tributary coulee valleys, comprising the Oldman River Valley, to the south by Township Road 94, to the east by Range Road 214A, and to the west by a gravel driveway.

Given the proximity of the adjacent slopes to the development, the scope of work for this evaluation included visual reconnaissance of the development site and surrounding slopes, as well as a geotechnical review of the adjacent slopes' stability. As part of EBA's review of the RVARP guidelines, the evaluation also considered the recommendations pertaining to safe development setbacks as detailed in the study conducted by AMEC Earth and Environmental Limited (AMEC) entitled "City of Lethbridge Phase II Development Setback Assessment Oldman River Valley Slopes" issued in November 2002. The guidelines were considered in the recommendations for development setback distances for this development.

3.0 SITE DESCRIPTION

3.1 SURFACE DESCRIPTION

Visual site reconnaissance was completed by EBA's geotechnical engineers, Mr. Nana Addo, E.I.T. and Mr. Trevor Curtis, E.I.T. on March 23, 2010. A number of photographs were taken during the site reconnaissance conducted by EBA for this evaluation and are included in this report.

[1] Top of Bank: means the line where the general trend of the slope changes from greater than 15% to less than 15%, as determined by field survey.

The development property was covered with prairie grasses, with an overall surface gradient towards the coulee valleys, generally to the north/northwest. The west portion of the site was noted to be in use as a horse ranch. There is a retention pond east of the horse ranch, as shown on Figure 1. EBA understands that both the ranch and retention pond are to remain post development. A gas pipeline right-of-way bisects the property, running form southwest to northeast, as shown on Figure 1.

To the north/northwest of the site is a deeply incised coulee draw, which extends towards the Oldman River Valley to the west. Based on a topographical map provided by Mike Spencer Geometric (Spencer), the northern slope extends downward for approximately 40 m. Figure 2 depicts the three slope profiles surveyed for this development by Spencer. The general slope profiles in the middle and lower zones are approximately 1.5 horizontal to 1 vertical (1.5H:1V), as surveyed by Spencer. The upper portions of the slope appear to average approximately 3 horizontal to 1 vertical (3H:1V), with some localized steeper sections. The slope faces are well vegetated with prairie grasses, weeds, and some shrubs. Small, isolated surficial slumps, skin failures, and cracks were noted within the slope faces, attributed to surficial precipitation runoff and desiccation. Areas of heavy brush cover, shown on the photographs, are indications of trace water seepage out of the slope face.

As part of the evaluation, EBA reviewed aerial photographs taken of the project area between 1950 and present day. The review indicated that the subject property has remained undeveloped with respect to structures or rural development, with adjacent lands being used for crop cultivation and ranch land. There appears to be no evidence of significant slope instabilities within the slopes bordering the property (north-facing slopes), however, some more severe slope failures, comprising surficial slope face slumping, were noted within the south-facing slopes on the opposite side of the coulee draw. Further discussion on slope stability is presented in subsequent sections of this report.

4.0 SUBSURFACE CONDITIONS

4.1 GEOLOGY

EBA reviewed published reports regarding the geological history of the Lethbridge area. A brief summary, in descending order, of the general stratigraphy is presented below.

- Lacustrine Deposit; a fine-grained Lacustrine deposit overlies the Buffalo Lake Till, with thickness varying from non-existent to 8 m.
- Buffalo Lake Till; characterized by a lack of cohesion which often leads to slumping of this deposit. A single period of consolidation has resulted in the development of vertical stress cracks, well oxidized, with some limited bedding.
- Lenzie Silts; unit consists of buff, stratified, calcareous silt and silty sand. The deposit includes black or grey varved clays and poorly sorted till-like colluvium with coarse fragments. This is a glacial lake deposit that formed in a peri-glacial (prior to deposition

of Buffalo Lake Till) lake environment during a temporary halt, as continental ice advanced. Overlying the cross-bedded sediments are lake clays deposited in thin, well-bedded laminae. Based on the AMEC report data, the elevation of the top of the Lenzie layer is approximately 875 m.

- Labuma Till; columnar, massive till, which is hard as a result of consolidation pressure from overlying ice, deposited during Laurentide glaciation.
- Basal Till; massive till, hard, brown to grey.
- Saskatchewan Sands and Gravels; clean, well-sorted and bedded, rounded to subrounded river gravel deposit with a sandy matrix. The depth of this layer appears to be below the base of valley elevation.
- Oldman Formation Bedrock; relatively massive, sedimentary deposit in both brackish and freshwater environments (non-marine), light grey to light brownish grey in colour, contains cross-bedded silty clay shales, siltstones, calcareous sandstones, ironstones, bentonitic clay, and coal layers. The depth of bedrock is well below the base of coulee valley elevation in this area.

4.2 MINING ACTIVITY

Research was conducted to review the possible existence of mine workings within the boundary of the proposed development area using a publication (#88 – 45) by ERCB (Coal Mine Atlas, Operating and Abandoned Coal Mines in Alberta, 1988). Based on this publication, there was an underground mine, #1219, located on the NW ¼ of Sec. 29-9-21, W4M. EBA recommends further review of coal mine workings underlying the site boundaries prior to any development.

5.0 SLOPE STABILITY EVALUATION

5.1 GENERAL

EBA's scope of work included a review of the present stability of the coulee slopes abutting the perimeter limits of the site (primarily north perimeter) and of any potential future slope instability affecting development on the property (i.e., setback requirements).

The recommendations for stability analyses and appropriate development setback limits, as presented in Bylaw #5277 (referenced in Section 1.0) were also reviewed by EBA and incorporated as part of EBA's recommendations. The slope stability analysis and review is discussed in the following sections. The minimum factor of safety (FOS) recommended for slope instability affecting the property is 1.5, which is considered acceptable by current engineering practices.

5.2 PRESENT SLOPE STABILITY

The present stability of the slopes adjacent to the development area has been reviewed, based on site reconnaissance and analytical techniques for circular and block failures. Visual observations of the slopes in the project area generally indicate the slopes are currently stable, as evidenced by a lack of recent slope instability (visual reconnaissance and aerial photograph review), excepting some minor skin failures.

The current stability of the slopes adjacent to the proposed development footprint has been evaluated by means of limit equilibrium analyses. It is noted that potential failure surfaces (block or circular) within the upper soil deposits, as well as deep seated failures have been analyzed. It is noted that slope instabilities founded on the bedrock are not considered relevant for this development, considering the depth of bedrock (in excess of 5 m and below the valley base).

Representative soil parameters were selected for the analytical review. It should be noted that these parameters represent an assumed soil profile, as no borehole exploration was conducted as part of this evaluation. Stability analyses have been developed from a collaboration of local geotechnical experience.

The slope stability analyses, using representative soil parameters, indicate that the existing slopes are currently stable, corroborating the existing visual evidence noted during the site reconnaissance. The analyses indicate FOS for shallow slope face failures are slightly higher than 1.0 for the slope faces, using the soil strength parameters assumed for this evaluation. With respect to moderate depth instability affecting the slope crests, the factor of safety is approximately 1.5. Deeper seated failures indicate factors of safety affecting the slope crest of greater than 1.7.

5.3 IMPACT OF DEVELOPMENT ON SLOPE STABILITY

As the moisture content of a soil mass approaches saturation, the friction between soil particles decreases thus reducing the soils strength and ability to resist slope movements. Any increase in the level of soil saturation will reduce the stability of the slopes.

Development of the site will bring about changes in the factors which contribute to the present stability of the slopes. Evaporation of soil moisture will be reduced by the presence of ground cover such as the proposed building(s) and roadway structures. Irrigation and possible leakage of water from underground utilities in addition to septic fields will increase the amount of water infiltrating the site subsoils. This combination of reduced evaporation of subsoil moisture and increased infiltration of water to the subsoils is considered to be the most significant influence of development on the factors that contribute to the present stability of the slopes. Increasing soil moisture content produces a reduction in the total cohesion, as the apparent cohesion is reduced or lost, and an increase in the pore pressure ratio reduces the effective stress. The result is a corresponding decrease in the factor of safety. Post development conditions, including a general increase in soil saturation, have been considered in this stability analysis.

5.4 DEVELOPMENT SETBACK REQUIREMENTS

Based on the stability analysis and findings during the site reconnaissance, as well as assumed post-development groundwater conditions, appropriate development setbacks were derived for the slopes with the setback limits measured from the Top of Bank.

In addition, two other factors were given consideration in determining the recommending minimum development setback limits for this development. The first was taking into account the recommendations of the City of Lethbridge Bylaw #5277, specifically with regards to translational failures along the top of the Lenzie Silts deposit. Where the Lenzie Silts contact elevation is encountered, the worst case scenario for an instability impacting property at the Top of Bank is represented by a 4H:1V assumed failure line, extending from the contact elevation at the slope face to the existing ground surface at prairie level.

The second factor would require a minimum setback distance of 6 m from the Top of Bank to protect developed property from shallow crest failures.

As noted, given the depth of bedrock well below the coulee valley elevation, the Bylaw requirements for bedrock failures are not considered to apply.

The contact elevation of the Lenzie Silts deposit has been taken by EBA as elevation 875.0 m. This contact elevation is based on published data from the AMEC report conducted as part of the development of City Bylaw #5277.

Based on the various aspects of the slope stability analysis conducted for the development, as provided in this report, a development setback line using the minimum requirements of Bylaw #5277 is recommended, as shown on Figure 1. This setback line was established by extending a 4H:1V line from topographic elevation 875 m. Where this line extends less than 6.0 m from the Top of Bank, the minimum recommended setback distance is 6.0 m.

5.5 RECOMMENDED DEVELOPMENT GUIDELINES

Figure 1 presents the minimum recommended setback line recommended. Precautionary measures which should also be included in this development (with respect to slope stability issues) are outlined as follows.

- Any fill excavated during development should not be disposed of within the development restriction zone unless directed otherwise after a review by the project's geotechnical engineer. The development restriction zone is the area of land between the development setback line and the Top of Bank and on the slopes.
- Positive grading should be provided to ensure surface drainage from the development is directed as either sheet flow over the crest of the slopes or away from the slopes into a stormwater management facility.
- All utilities and plumbing should be carefully installed and inspected to ensure they are in good working order.

- Irrigation within the restrictive development zone should be prohibited.
- The development recommendations of this geotechnical report should be closely adhered to.

The upper coulee slopes should be treated as a restricted development zone. This involves:

- No excavation on the valley slope without review by a geotechnical engineer;
- No clearing of vegetation;
- No fill to be placed on the crest of the slopes or on the slopes;
- No water is to be discharged directly on to the slope face; and
- Maintain vegetation cover along the crest and on the slope.

Notwithstanding the setback distances recommended, some sloughing and slope movements will occur. The development will result in a general increase in the degree of saturation of the site subsoils which may cause minor sloughing of the top portion of the slope. The setback distance is not intended to prevent failure of the slope but rather to prevent such failures from directly affecting developed areas of the site.

6.0 REVIEW OF DESIGN AND CONSTRUCTION

EBA should be given the opportunity to review the final footprint location of any structures proposed for the site, as well as details of the design and specifications related to geotechnical aspects of this project, prior to development of the site.

7.0 LIMITATIONS

Recommendations presented herein are based on a geotechnical evaluation comprising a field reconnaissance and a review of geotechnical data from literature sources and historical air photos. The conditions discussed in this report are considered to be reasonably representative of the site. If, however, conditions other than those reported are noted during subsequent phases of the project, EBA should be notified and given the opportunity to review our current recommendations in light of new findings. Recommendations presented herein may not be valid if an adequate level of monitoring is not provided during development of the site.

This report and its contents are intended for the sole use of Stewart Weir and their agents. EBA does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Stewart Weir and their agents, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in EBA's Services Agreement and in the General Conditions provided in Appendix A of this report.

8.0 CLOSURE

We trust this report satisfies your present requirements. We would be pleased to provide further information that may be needed during design and to advise on the geotechnical aspects of specifications for inclusion in contract documents. Should you require additional information or monitoring services, please do not hesitate to contact our office.

Respectfully submitted,
EBA Engineering Consultants Ltd.

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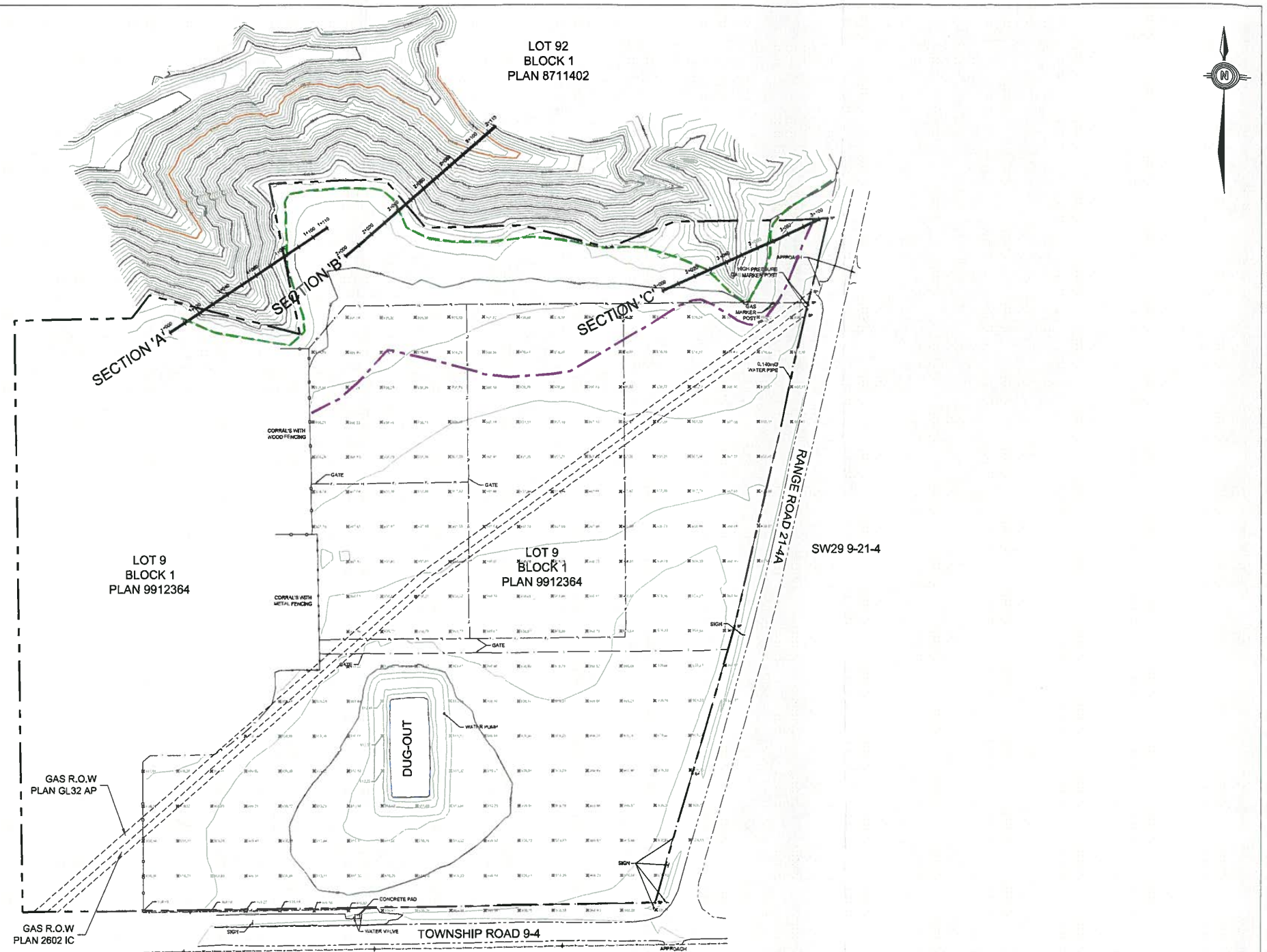
/hms

PERMIT TO PRACTICE
EBA ENGINEERING CONSULTANTS LTD.
Signature: Jim Ryan
Date: April 13, 2010.
PERMIT NUMBER: P245
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

FIGURES



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LEGEND

- DEVELOPMENT SETBACK LINE
- APPROXIMATE TOP OF BANK
- LENZIE SILT LAYER EL 875 m.

CLIENT

Stewart Weir

EGDEWOOD STABLES SUBDIVISION
SLOPE STABILITY ASSESSMENT

SITE PLAN

EBA Engineering Consultants Ltd.

PROJECT NO.	DWN	CKD	REV	
L12101748	LCH	NA	0	Figure 1
OFFICE: Lethbridge	DATE: April 7, 2010			

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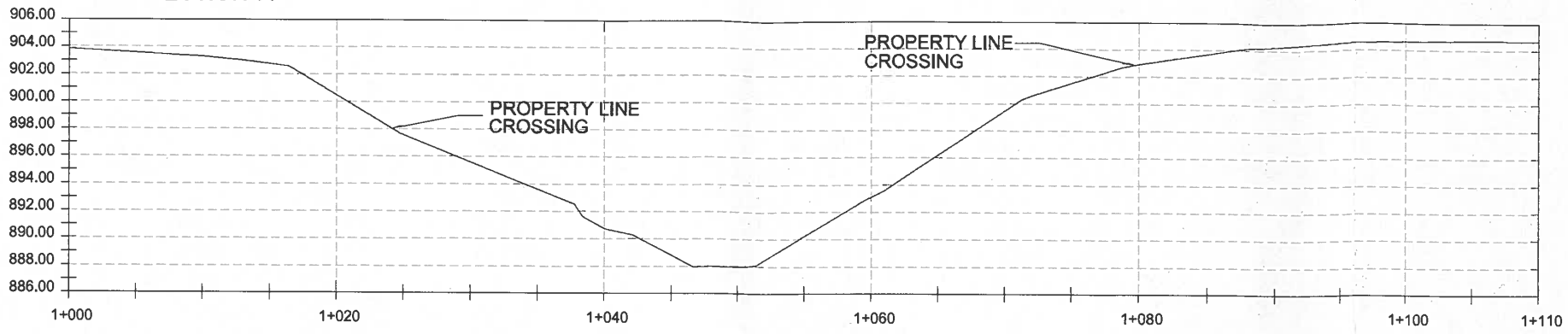

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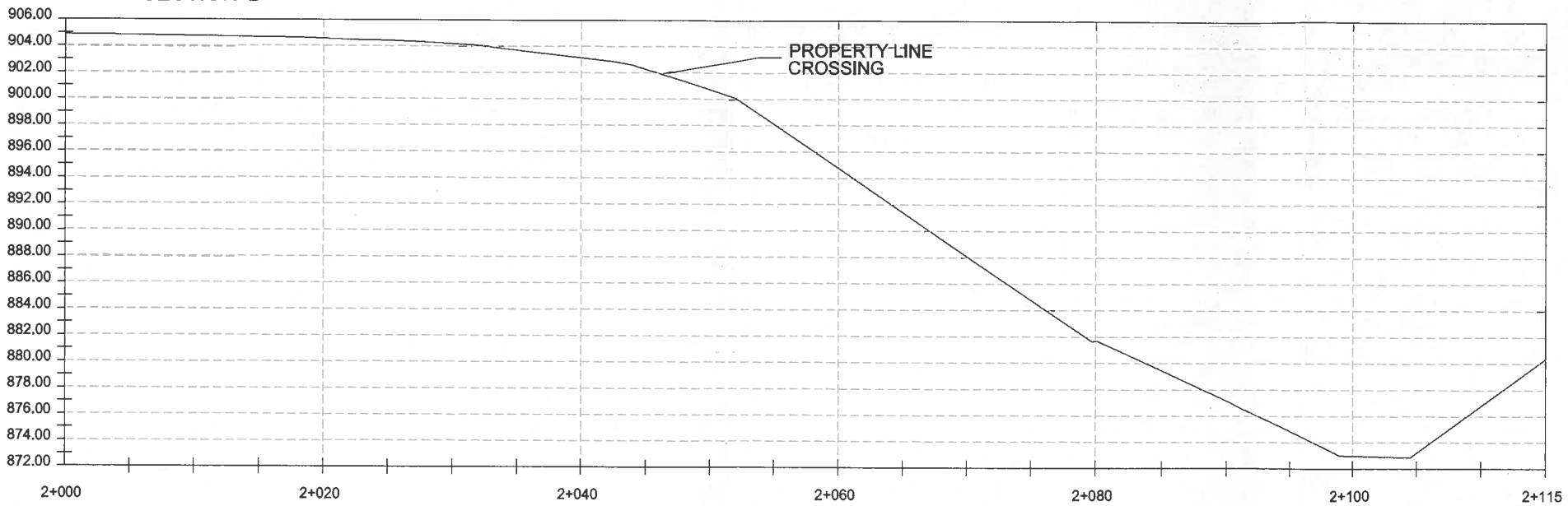

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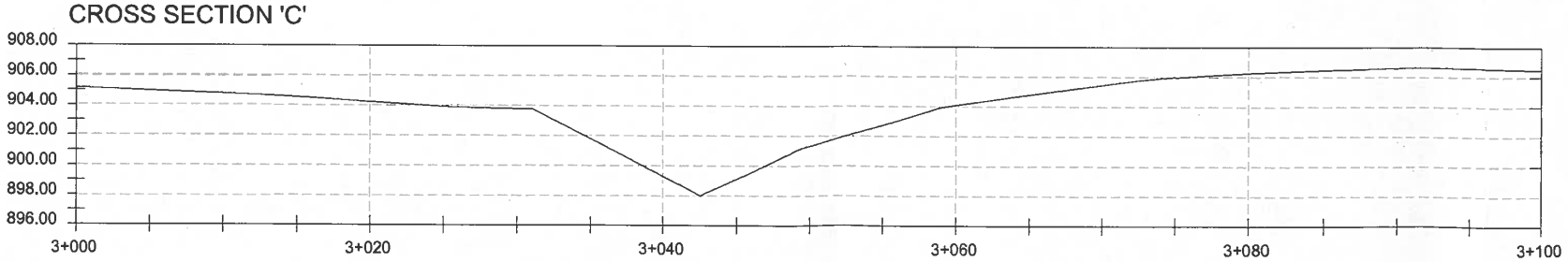

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CLIENT

Stewart Weir

EGDEWOOD STABLES SUBDIVISION
SLOPE STABILITY ASSESSMENT

SLOPE PROFILES

EBA Engineering Consultants Ltd.

PROJECT NO.	DWN	CKD	REV
L12101748	LCH	NA	0
OFFICE: Lethbridge	DATE: April 7, 2010		

Figure 2

APPENDIX

APPENDIX A GEOTECHNICAL REPORT – GENERAL CONDITIONS

GEOTECHNICAL REPORT – GENERAL CONDITIONS

This report incorporates and is subject to these "General Conditions".

1.0 USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment.

This report and the recommendations contained in it are intended for the sole use of EBA's Client. EBA does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA's Client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA's instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of EBA's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. EBA's instruments of professional service will be used only and exactly as submitted by EBA.

Electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

3.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, EBA has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

4.0 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. EBA does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

5.0 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

6.0 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. EBA does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

7.0 SURFACE WATER AND GROUNDWATER CONDITIONS

Surface and groundwater conditions mentioned in this report are those observed at the times recorded in the report. These conditions vary with geological detail between observation sites; annual, seasonal and special meteorologic conditions; and with development activity. Interpretation of water conditions from observations and records is judgemental and constitutes an evaluation of circumstances as influenced by geology, meteorology and development activity. Deviations from these observations may occur during the course of development activities.

8.0 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

9.0 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

10.0 INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

11.0 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

12.0 DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

13.0 BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

14.0 SAMPLES

EBA will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the Client's expense upon written request, otherwise samples will be discarded.

APPENDIX

APPENDIX B SITE PHOTOGRAPHS

Photo 1
Vegetation along North Perimeter Slopes (Looking South)

Photo 2
North Perimeter Slopes (Looking West)

Photo 3
North Perimeter Slopes (Looking East)

Photo 4
Skin Failures on North Perimeter Slopes (Looking South)

APPENDIX 'B'

SEPTIC FIELD FEASIBILITY ASSESSMENT

Stewart Weir

ISSUED FOR USE

SEPTIC FIELD FEASIBILITY ASSESSMENT
EDGEWOOD STABLES
LETHBRIDGE, ALBERTA

L12101796

July 2010

EBA Engineering Consultants Ltd.
p. 403.329.9009 • f. 403.328.8817
442 - 10 Street N • Lethbridge, Alberta T1H 2C7 • CANADA

TABLE OF CONTENTS

PAGE

FIGURES

APPENDICES

1.0 INTRODUCTION

This report presents the results of a septic field feasibility assessment conducted by EBA Engineering Consultants Ltd. (EBA) for a proposed residential subdivision development to be located in Lot 9, Block 1, Plan 9912364, in the SW ¼ of Section 29-009-21 W4M, north of Lethbridge, Alberta.

The scope of work for this evaluation was described in a proposal issued to Ms. Connie Petersen of Stewart Weir on June 22, 2010 (EBA File: PL12101796). The original proposal was modified and re-issued after discussions with Stewart Weir. The objective of this evaluation was to assess the feasibility of septic disposal fields for the proposed residential development.

Authorization to proceed with this evaluation was provided by Ms. Petersen on behalf of Mr. Daryl Dennis.

2.0 PROJECT DETAILS AND SCOPE OF WORK

Based on discussions with Stewart Weir, it is understood that the County of Lethbridge requires a septic field feasibility assessment be conducted to determine if the site soils are suitable for septic fields.

The requested work scope for this assessment comprised the sampling of soils from six (6) testpits, a laboratory program to assist in classifying the subsurface soils, and a report providing recommendations on soil suitability for septic fields.

3.0 GEOTECHNICAL FIELD WORK

The fieldwork for this evaluation was carried out on July 7, 2010. EBA's field representative was Mr. Jackson Meadows, C.E.T.

Six testpits were dug by Mr. Dennis within the estimated septic disposal field footprints in select locations to depths below ground surface of approximately 1 m (BH001 through BH004) and 3 m (BH005 and BH006). The approximate testpit locations (as selected on site by Mr. Dennis) are shown on Figure 1.

In all of the testpits, disturbed grab samples were obtained at a depth of 600 mm below ground surface. All soil samples were visually classified in the field and the individual soil strata and the interfaces between them were noted. The testpit logs are presented in Appendix B. An explanation of the terms and symbols used on the testpit logs is also included in Appendix B.

A slotted 25 mm diameter PVC standpipe was installed in each of the 3 m testpits in order to monitor groundwater levels.

Classification tests, including hydrometer analysis, were subsequently performed in the laboratory on samples collected from the testpits to aid in the determination of soil properties. The results of the laboratory tests are presented on the testpit logs in Appendix B and are discussed in this report.

4.0 SITE AND SUBSURFACE CONDITIONS

4.1 SITE CONDITIONS

The proposed development property is bounded to the north by tributary coulee valleys, comprising the Oldman River Valley, to the south by Township Road 94, to the east by Range Road 214A, and to the west by a gravel driveway.

The property was covered with prairie grasses, with an overall surface gradient towards the coulee valleys, generally to the north/northwest. The west portion of the site was noted to be in use as a horse ranch. There is a retention pond east of the horse ranch, as shown on Figure 1. EBA understands that both the ranch and retention pond are to remain post development. A gas pipeline right-of-way (ROW) bisects the property, running from southwest to northeast, as shown on Figure 1.

4.2 GROUNDWATER CONDITIONS

Groundwater levels were measured within the standpipes on July 14, 2010. The following table summarizes the groundwater monitoring data.

TABLE 1: GROUNDWATER LEVELS

Borehole Number	Depth of Standpipe (m)	Groundwater Monitoring Data July 14, 2010
		Depth to Groundwater (m)
005	3.0	Dry
006	3.0	Dry

4.3 SEPTIC FIELD ANALYSIS

EBA performed soil texture analyses on soil samples obtained from the proposed septic disposal field sites. The hydrometer/grain size analyses results are included in Appendix C. The results are indicated in the following table.

TABLE 2: SOIL TEXTURE ANALYSIS

Borehole Number	% Sand	% Silt	% Clay	Soil Classification
001	30	45	25	Loam
002	35	39	26	Loam
003	6	62	32	Silty Clay Loam
004	4	61	35	Silty Clay Loam
005	17	55	28	Silty Loam
006	6	50	44	Silty Clay

The soil samples were classified as above (referenced from Figure 8.1.1.10. of the Alberta Private Sewage Systems Standard of Practice 2009 Handbook). Based on these classifications, the surficial soils at the BH001, BH002, and BH005 generally satisfy the requirements of the Safety Code Council (as required by the 2009 Handbook) for design and construction of a septic disposal field. However, the surficial soils at BH003, BH004, and BH006 do not satisfy the Safety Code's requirements for septic disposal fields due to unacceptably high clay content.

In all areas where surficial soils did not meet the Safety Code's requirements (BH003, BH004, and BH006), consideration should be given to relocating the septic disposal fields to acceptable areas or alternate means of establishing a disposal field, such as construction of a septic field mound or other such industry acceptable measures be considered.

The 2009 Handbook stipulates that when using the results of a soil texture classification (determined in Figure 8.1.1.10 of the Handbook) to size a system, the disposal field shall be sized so that the effluent loading rate per day shall not exceed the following rates:

- 40.7 L per square meter (0.83 Imperial gallons per square foot) in loam to clay textured soils (BH001, BH002, and BH005).

Furthermore, the soil infiltration surface loading rates should not exceed the amounts set out in Table 8.1.10 based on the soil characteristics identified in this evaluation. In addition, the natural separation between the point of effluent infiltration into the soil and the groundwater should be a minimum of 1.5 m. Given the groundwater levels (dry to 3 m depth), all six sites meet the natural separation requirements.

It is recommended that the specific site selection of the proposed septic fields be carefully considered by the septic field installer to satisfy these requirements and those of the Regulations Having Jurisdiction [Municipality, Alberta Environment (AENV), Alberta Labour]. This requirement is in accordance with the provincial regulations, which state that two percolation tests are required within the final footprint of the field by the installer. Following the site-specific testing, the septic disposal field should be designed and sized accordingly by the disposal field designer. It is further recommended that the design footprint of any building structures be determined once the final disposal field is selected, to ensure the appropriate gravity flow or pumping requirements are satisfied.

During installation of the weeping trenches, the installer should pay close attention to the soil conditions to define the extent of high plastic clay layers which generally indicate areas with percolation rates below the minimum guidelines. These should be reported to the disposal field designer for review prior to completion of the septic disposal field.

The information provided herein is intended to be a preliminary assessment of the feasibility of septic disposal fields for the proposed development as per the provincial regulations. Site specific municipal regulations or siting requirement guidelines with respect to the local health unit, if applicable, have not been addressed.

5.0 LIMITATIONS

This report and its contents are intended for the sole use of Stewart Weir and their agents. EBA does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Stewart Weir, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in EBA's Services Agreement and in the General Conditions provided in Appendix A of this report.

6.0 CLOSURE

We trust this report satisfies your present requirements. Should you require additional information or monitoring services, please do not hesitate to contact our office.

Respectfully submitted,
EBA Engineering Consultants Ltd.

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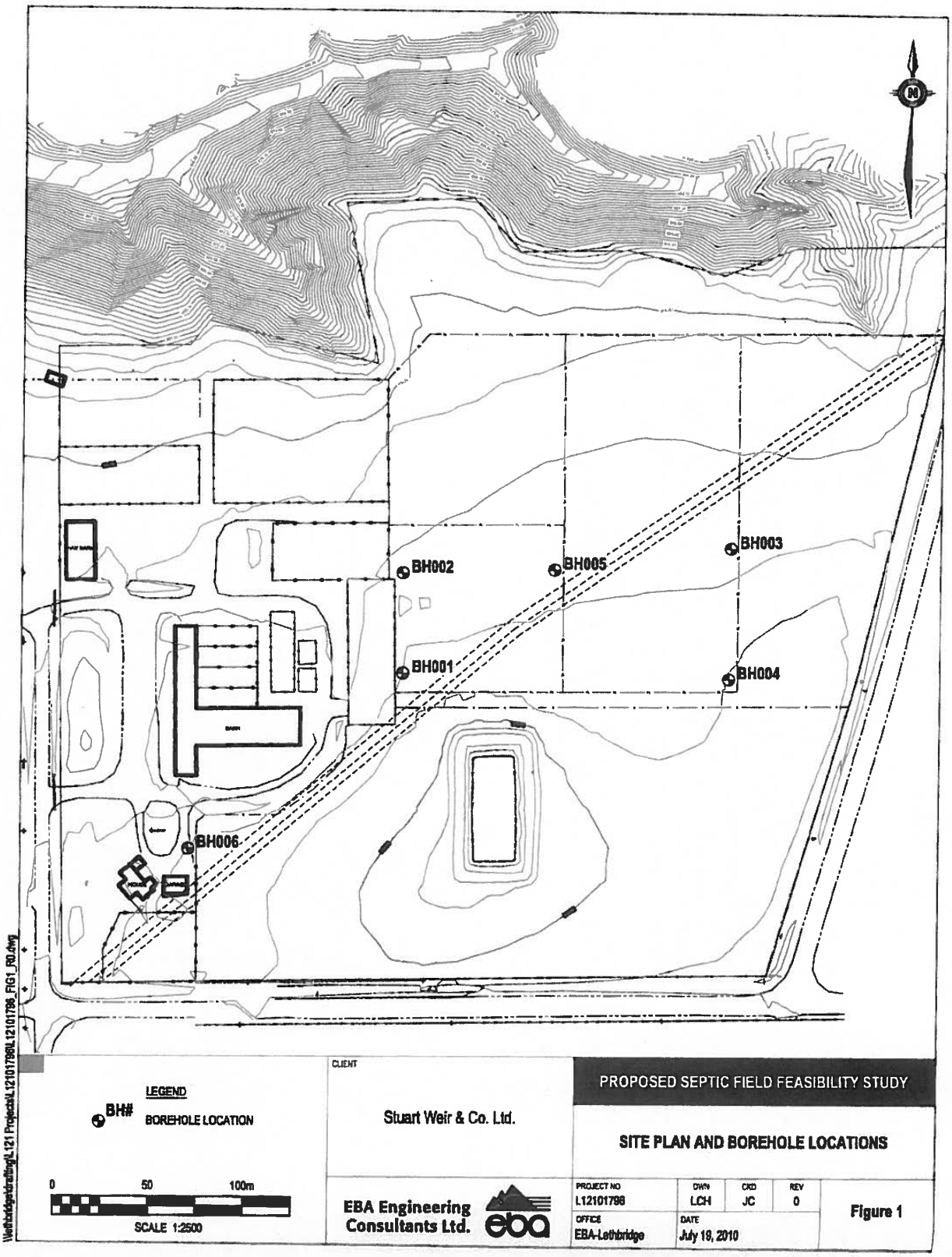
/hms

PERMIT TO PRACTICE
EBA ENGINEERING CONSULTANTS LTD.
Signature
Date July 23, 2010
PERMIT NUMBER: P245
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

FIGURE


BH002
BH005
BH003
BH001
BH004
BH006
LEGEND
BH#
BOREHOLE LOCATION
0
50
100m
SCALE 1:2500
CLIENT
Stuart Weir & Co. Ltd.
PROPOSED SEPTIC FIELD FEASIBILITY STUDY
SITE PLAN AND BOREHOLE LOCATIONS
EBA Engineering Consultants Ltd.
eba
PROJECT NO
L12101798
DWN
LCH
CKD
JC
REV
0
OFFICE
EBA-Lethbridge
DATE
July 19, 2010
Figure 1

APPENDIX A

APPENDIX A GEOTECHNICAL REPORT – GENERAL CONDITIONS

GEOTECHNICAL REPORT – GENERAL CONDITIONS

This report incorporates and is subject to these "General Conditions".

1.0 USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment.

This report and the recommendations contained in it are intended for the sole use of EBA's Client. EBA does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA's Client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA's instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of EBA's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. EBA's instruments of professional service will be used only and exactly as submitted by EBA.

Electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

3.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, EBA has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

4.0 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. EBA does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

5.0 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

6.0 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. EBA does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

7.0 SURFACE WATER AND GROUNDWATER CONDITIONS

Surface and groundwater conditions mentioned in this report are those observed at the times recorded in the report. These conditions vary with geological detail between observation sites; annual, seasonal and special meteorologic conditions; and with development activity. Interpretation of water conditions from observations and records is judgemental and constitutes an evaluation of circumstances as influenced by geology, meteorology and development activity. Deviations from these observations may occur during the course of development activities.

8.0 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

9.0 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

10.0 INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

11.0 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

12.0 DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

13.0 BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

14.0 SAMPLES

EBA will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the Client's expense upon written request, otherwise samples will be discarded.

15.0 INFORMATION PROVIDED TO EBA BY OTHERS

During the performance of the work and the preparation of the report, EBA may rely on information provided by persons other than the Client. While EBA endeavours to verify the accuracy of such information when instructed to do so by the Client, EBA accepts no responsibility for the accuracy or the reliability of such information which may affect the report.

APPENDIX B

APPENDIX B BOREHOLE LOGS

TERMS USED ON BOREHOLE LOGS

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on 0.075mm sieve): includes (1) clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as inferred from laboratory or in situ tests.

DESCRIPTIVE TERM	RELATIVE DENSITY	N (blows per 0.3m)
Very Loose	0 to 20%	0 to 4
Loose	20 to 40%	4 to 10
Compact	40 to 75%	10 to 30
Dense	75 to 90%	30 to 50
Very Dense	90 to 100%	greater than 50

The number of blows, N, on a 51mm O.D. split spoon sampler of a 63.5kg weight falling 0.76m, required to drive the sampler a distance of 0.3m from 0.15m to 0.45m.

FINE GRAINED SOILS (major portion passing 0.075mm sieve): includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as estimated from laboratory or in situ tests.

DESCRIPTIVE TERM	UNCONFINED COMPRESSIVE STRENGTH (kPa)
Very Soft	Less Than 25
Soft	25 to 50
Firm	50 to 100
Stiff	100 to 200
Very Stiff	200 to 400
Hard	Greater Than 400

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil.

GENERAL DESCRIPTIVE TERMS

Slickensided	- having inclined planes of weakness that are slick and glossy in appearance.
Fissured	- containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
Laminated	- composed of thin layers of varying colour and texture.
Interbedded	- composed of alternate layers of different soil types.
Calcareous	- containing appreciable quantities of calcium carbonate.
Well Graded	- having wide range in grain sizes and substantial amounts of intermediate particle sizes.
Poorly graded	- predominantly of one grain size, or having a range of sizes with some intermediate size missing.

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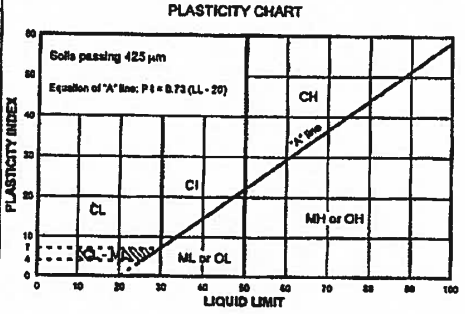
MODIFIED UNIFIED SOIL CLASSIFICATION

MAJOR DIVISION			GROUP SYMBOL	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA
COARSE-GRAINED SOILS More than 50% retained on 75 µm sieve*	GRAVELS 50% or more of coarse fraction retained on 4.75 mm sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	Classification on basis of percentage of fines: GW, GP, SW, SP, GM, GC, SM, SC. Borderline Classification requiring use of dual symbols. Less than 5% Pass 75 µm sieve; More than 12% Pass 75 µm sieve; 5% to 12% Pass 75 µm sieve. $C_U = D_{60}/D_{10}$ Greater than 4; $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines	Not meeting both criteria for GW
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures	Atterberg limits plot below "A" line or plasticity index less than 4 / Atterberg limits plot above "A" line or plasticity index greater than 7 / Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures	
	SANDS More than 50% of coarse fraction passes 4.75 mm sieve	CLEAN SANDS	SW	Well-graded sands and gravelly sands, little or no fines	$C_U = D_{60}/D_{10}$ Greater than 6; $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
			SP	Poorly graded sands and gravelly sands, little or no fines	Not meeting both criteria for SW
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures	Atterberg limits plot below "A" line or plasticity index less than 4 / Atterberg limits plot above "A" line or plasticity index greater than 7 / Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures	
FINE-GRAINED SOILS (by behavior) 50% or more passes 75 µm sieve*	SILTS	Liquid limit <50	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands of slight plasticity	For classification of fine-grained soils and fine fraction of coarse-grained soils.
		Liquid limit >50	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts	
	CLAYS Above "A" line on plasticity chart negligible organic content	Liquid limit <30	CL	Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		Liquid limit 30-50	CI	Inorganic clays of medium plasticity, silty clays	
		Liquid limit >50	CH	Inorganic clays of high plasticity, fat clays	
	ORGANIC SILTS AND CLAYS	Liquid limit <50	OL	Organic silts and organic silty clays of low plasticity	
		Liquid limit >50	OH	Organic clays of medium to high plasticity	
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils	

PLASTICITY CHART



*Based on the material passing the 75 mm sieve
Reference: ASTM Designation D2487, for identification procedure see D2488. USC as modified by PFRA

SOIL COMPONENTS

FRACTION	SIEVE SIZE PASSING	SIEVE SIZE RETAINED	DEFINING RANGES OF PERCENTAGE BY MASS OF MINOR COMPONENTS: PERCENTAGE	DESCRIPTOR
GRAVEL				
coarse	75 mm	19 mm	>35 %	"and"
fine	19 mm	4.75 mm	21 to 35 %	"y-adjective"
SAND			10 to 20 %	"some"
coarse	4.75 mm	2.00 mm	>0 to 10 %	"trace"
medium	2.00 mm	425 µm		
fine	425 µm	75 µm		
SILT (non plastic) or CLAY (plastic)	75 µm		as above but by behavior	

OVERSIZE MATERIAL

Rounded or subrounded

COBBLES 75 mm to 300 mm
BOULDERS > 300 mm

Not rounded

ROCK FRAGMENTS >75 mm
ROCKS > 0.76 cubic metre in volume

EBA Engineering Consultants Ltd.

2046 - Revised July 09.cdr

PROJECT: SEPTIC FIELD FEASIBILITY STUDY	CLIENT: STEWART, WEIR & CO. LTD.	PROJECT NO. - BOREHOLE NO.
LOCATION: SW 1/4 29-9-21-W4M	DRILL METHOD: 150mm SOLID STEM AUGER	L12101796 - 10BH001
CITY: LETHBRIDGE, AB	PROJECT ENGINEER: NANA ADDO	

SAMPLE TYPE: DISTURBED | NO RECOVERY | SPT | A-CASING | SHELBY TUBE | CORE

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT (PLASTIC / M.C. / LIQUID)	STANDARD PENETRATION (N) 20 40 60 80 / UNCONFINED (kPa) 50 100 150 200 / POCKET PEN. (kPa) 100 200 300 400	Depth (ft)
0	TOPSOIL - clay, silty, sandy, moist, dark brown, roots, organics			PLASTIC M.C. LIQUID 20 40 60 80		0
	CLAY - silty, trace to some sand, very moist, firm, medium to high plastic, light brown to grey brown		B1			
1	End of Borehole @ 1.0m					5
	No Seepage or Sloughing on Completion					
2						
3						10
3.5						11

eba	LOGGED BY: JKM	COMPLETION DEPTH: 1m
	REVIEWED BY: NA	COMPLETE: 7/7/2010
	DRAWING NO: B1	Page 1 of 1

GEOTECHNICAL L12101796 SEPTIC FEILD ANALYSIS, EDGEWOOD STABLES.GPJ EBA.GDT 10/07/22

PROJECT: SEPTIC FIELD FEASIBILITY STUDY	CLIENT: STEWART, WEIR & CO. LTD.	PROJECT NO. - BOREHOLE NO.
LOCATION: SW 1/4 29-9-21-W4M	DRILL METHOD: 150mm SOLID STEM AUGER	L12101796 - 10BH002
CITY: LETHBRIDGE, AB	PROJECT ENGINEER: NANA ADDO	

SAMPLE TYPE: DISTURBED | NO RECOVERY | SPT | A-CASING | SHELBY TUBE | CORE

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT (PLASTIC — M.C. — LIQUID; 20 40 60 80)	STANDARD PENETRATION (N) 20 40 60 80; UNCONFINED (kPa) 50 100 150 200; POCKET PEN. (kPa) 100 200 300 400	Depth (ft)
0	TOPSOIL - clay, silty, sandy, moist, dark brown, roots, organics					0
	CLAY - silty, some sand to sandy, damp to moist, stiff to very stiff, medium plastic, brown, roots and root hairs		B1			
1	End of Borehole @ 1.0m					5
	No Seepage or Sloughing on Completion					
2						
3						10
3.5						11

EBA	LOGGED BY: JKM	COMPLETION DEPTH: 1m
	REVIEWED BY: NA	COMPLETE: 7/7/2010
	DRAWING NO: B2	Page 1 of 1

GEOTECHNICAL L12101796 SEPTIC FEILD ANALYSIS, EDGEWOOD STABLES.GPJ EBA.GDT 10/7/22

PROJECT: SEPTIC FIELD FEASIBILITY STUDY	CLIENT: STEWART, WEIR & CO. LTD.	PROJECT NO. - BOREHOLE NO.
LOCATION: SW 1/4 29-9-21-W4M	DRILL METHOD: 150mm SOLID STEM AUGER	L12101796 - 10BH003
CITY: LETHBRIDGE, AB	PROJECT ENGINEER: NANA ADDO	

SAMPLE TYPE: DISTURBED | NO RECOVERY | SPT | A-CASING | SHELBY TUBE | CORE

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT (PLASTIC M.C. LIQUID 20 40 60 80)	STANDARD PENETRATION (N) 20 40 60 80 / UNCONFINED (kPa) 50 100 150 200 / POCKET PEN. (kPa) 100 200 300 400	Depth (ft)
0	TOPSOIL - clay, silty, sandy, moist, dark brown, roots, organics					0
	CLAY - silty, some sand to sandy, damp to moist, very stiff, medium plastic, light brown to brown, white precipitates		B1			
1	End of Borehole @ 1.0m					5
	No Seepage or Sloughing on Completion					
2						
3						10
3.5						11

eba	LOGGED BY: JKM	COMPLETION DEPTH: 1m
	REVIEWED BY: NA	COMPLETE: 7/7/2010
	DRAWING NO: B3	Page 1 of 1

GEOTECHNICAL L12101796 SEPTIC FEALD ANALYSIS, EDGEWOOD STABLES GPJ EBA.GDT 10/07/22

PROJECT: SEPTIC FIELD FEASIBILITY STUDY	CLIENT: STEWART, WEIR & CO. LTD.	PROJECT NO. - BOREHOLE NO.
LOCATION: SW 1/4 29-9-21-W4M	DRILL METHOD: 150mm SOLID STEM AUGER	L12101796 - 10BH004
CITY: LETHBRIDGE, AB	PROJECT ENGINEER: NANA ADDO	

SAMPLE TYPE: DISTURBED | NO RECOVERY | SPT | A-CASING | SHELBY TUBE | CORE

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT	PLASTIC M.C. LIQUID (20 40 60 80)	STANDARD PENETRATION (N) (20 40 60 80) / UNCONFINED (kPa) (50 100 150 200) / POCKET PEN. (kPa) (100 200 300 400)	Depth (ft)
0	TOPSOIL - clay, silty, sandy, moist, dark brown, roots, organics						0
	CLAY - silty, some sand to sandy, damp to moist, very stiff, medium plastic, light brown, white precipitates, occasional sand lenses		B1				
1	End of Borehole @ 1.0m						5
	No Seepage or Sloughing on Completion						
2							
3							10
3.5							11

eba	LOGGED BY: JKM	COMPLETION DEPTH: 1m
	REVIEWED BY: NA	COMPLETE: 7/7/2010
	DRAWING NO: B4	Page 1 of 1

GEOTECHNICAL L12101796 SEPTIC FEILD ANALYSIS, EDGEWOOD STABLES.GPJ EBA GDT 10/07/22

PROJECT: SEPTIC FIELD FEASIBILITY STUDY	CLIENT: STEWART, WEIR & CO. LTD.	PROJECT NO. - BOREHOLE NO.
LOCATION: SW 1/4 29-9-21-W4M	DRILL METHOD: 150mm SOLID STEM AUGER	L12101796 - 10BH005
CITY: LETHBRIDGE, AB	PROJECT ENGINEER: NANA ADDO	

SAMPLE TYPE: DISTURBED | NO RECOVERY | SPT | A-CASING | SHELBY TUBE | CORE

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT (PLASTIC / M.C. / LIQUID)	STANDARD PENETRATION (N) / UNCONFINED (kPa) / POCKET PEN. (kPa)	Depth (ft)
0	TOPSOIL - clay, silty, sandy, moist, dark brown, roots, organics					0
	CLAY - silty, some sand to sandy, damp, very stiff, medium plastic, light brown to brown, white precipitates		B1			
1						5
2	CLAY (TILL) - silty, some sand, trace gravel, damp to moist, very stiff, medium plastic, brown, coal and oxide specks, occasional sand pockets to 20mm, white precipitates					
3	End of Borehole @ 1.0m					10
	No Seepage or Sloughing on Completion Slotted PVC Standpipe Installed to 3.0m Borehole Measured Dry July 14, 2010					
3.5						11

LOGGED BY: JKM	COMPLETION DEPTH: 3m
REVIEWED BY: NA	COMPLETE: 7/7/2010
DRAWING NO: B5	Page 1 of 1

GEOTECHNICAL L12101796 SEPTIC FEILD ANALYSIS, EDGEWOOD STABLES.GPJ EBA.GDT 10/07/22

PROJECT: SEPTIC FIELD FEASIBILITY STUDY	CLIENT: STEWART, WEIR & CO. LTD.	PROJECT NO. - BOREHOLE NO.
LOCATION: SW 1/4 29-9-21-W4M	DRILL METHOD: 150mm SOLID STEM AUGER	L12101796 - 10BH006
CITY: LETHBRIDGE, AB	PROJECT ENGINEER: NANA ADDO	

SAMPLE TYPE: DISTURBED | NO RECOVERY | SPT | A-CASING | SHELBY TUBE | CORE

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT (PLASTIC / M.C. / LIQUID)	STANDARD PENETRATION (N) / UNCONFINED (kPa) / POCKET PEN. (kPa)	Depth (ft)
0	TOPSOIL - clay, silty, sandy, moist, dark brown, roots, organics					0
	CLAY (FILL) - silty, some sand, trace gravel, moist, stiff, medium plastic, brown to dark brown, coal and oxide specks, occasional sand lenses red shale specks					
1	CLAY - silty, some sand, moist to very moist, firm to stiff, medium plastic, brown to dark brown		B1			5
2	CLAY (TILL) - silty, some sand, trace gravel, moist, stiff, medium plastic, brown to dark brown, coal and oxide specks, occasional sand lenses					
3	End of Borehole @ 1.0m					10
	No Seepage or Sloughing on Completion Slotted PVC Standpipe Installed to 3.0m Borehole Measured Dry July 14, 2010					
3.5						11

eba	LOGGED BY: JKM	COMPLETION DEPTH: 3m
	REVIEWED BY: NA	COMPLETE: 7/7/2010
	DRAWING NO: B6	Page 1 of 1

GEOTECHNICAL L12101796 SEPTIC FEILD ANALYSIS, EDGEWOOD STABLES.GPJ EBA.GDT 10/07/22

APPENDIX C

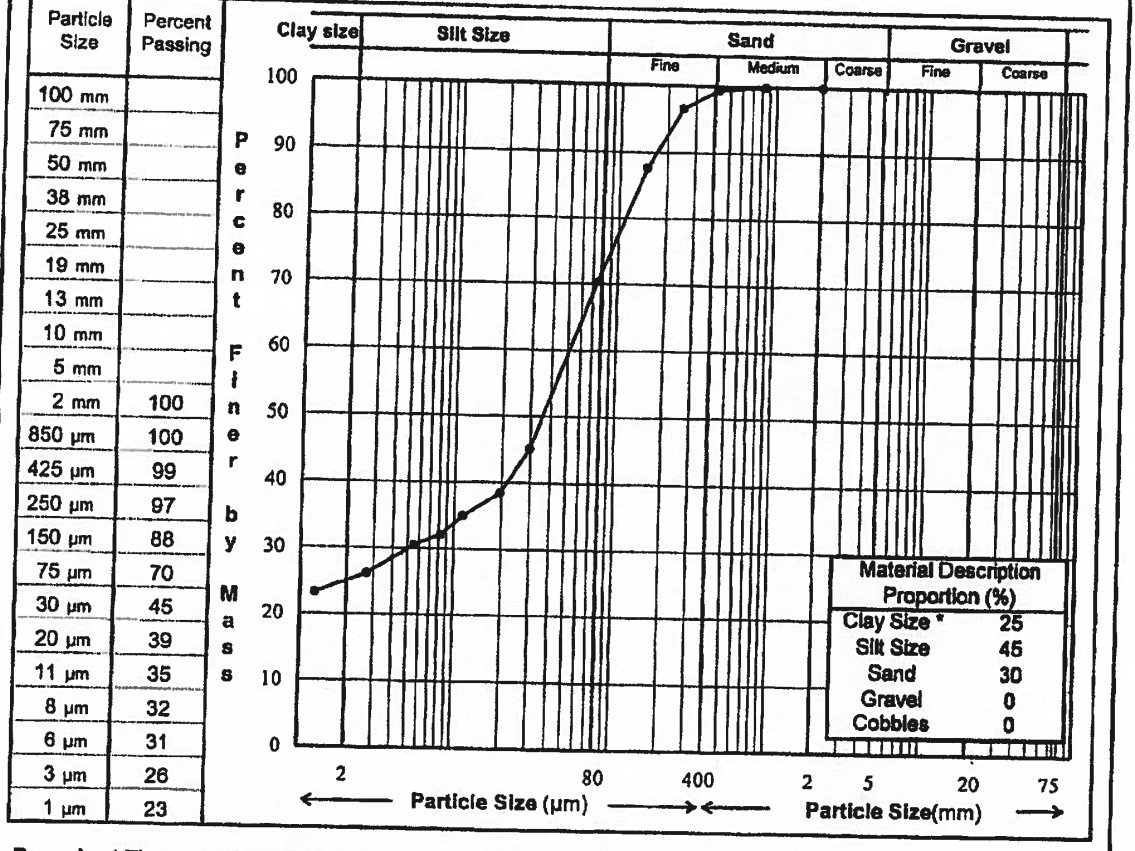
APPENDIX C LABORATORY RESULTS

PARTICLE SIZE ANALYSIS (Hydrometer) TEST REPORT

ASTM D422

Project:	Septic Field Feasibility Assmt.	Sample No.:	
Client:	Stewart Weir & Company	Borehole/ TP:	10BH001
Project No.:	L12101796	Depth:	0.6-0.9m
Location:	N-5513320 E-0368913	Date Tested	July 12, 10 By: AF
Description **:	clay, silty, some sand		

Particle Size	Percent Passing
100 mm	
75 mm	
50 mm	
38 mm	
25 mm	
19 mm	
13 mm	
10 mm	
5 mm	
2 mm	100
850 µm	100
425 µm	99
250 µm	97
150 µm	88
75 µm	70
30 µm	45
20 µm	39
11 µm	35
8 µm	32
6 µm	31
3 µm	26
1 µm	23



Remarks: * The upper clay size of 2 µm is as per the Canadian Foundation Manual.

** The description is behaviour based & subject to EBA description protocols.

Reviewed By: _____ P.Eng.

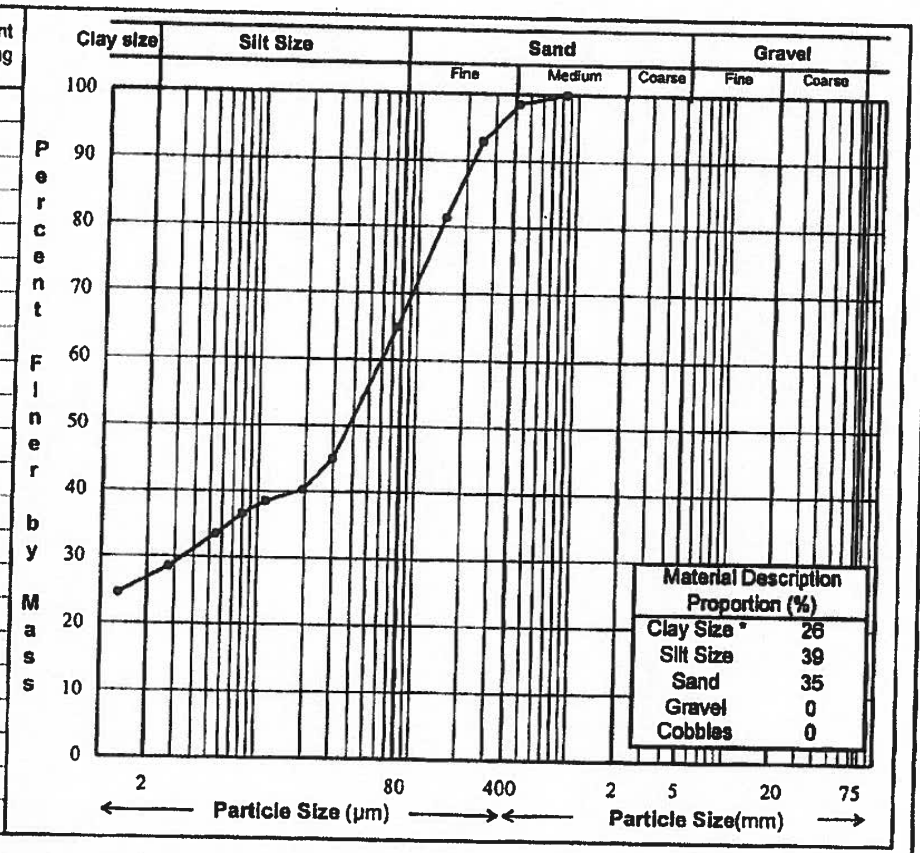
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS (Hydrometer) TEST REPORT

ASTM D422

Project:	Septic Field Feasibility Assmt.	Sample No.:	
Client:	Stewart Weir & Company	Borehole/ TP:	10BH002
Project No.:	L12101796	Depth:	0.6-0.9m
Location:	N-5513407 E-0368916	Date Tested	July 12, 10 By: AF
Description **:	clay, silty, some sand		

Particle Size	Percent Passing
100 mm	
75 mm	
50 mm	
38 mm	
25 mm	
19 mm	
13 mm	
10 mm	
5 mm	
2 mm	
850 µm	100
425 µm	99
250 µm	93
150 µm	81
75 µm	65
30 µm	45
19 µm	40
11 µm	38
8 µm	37
6 µm	34
3 µm	29
1 µm	25



Remarks: * The upper clay size of 2 µm is as per the Canadian Foundation Manual.

** The description is behaviour based & subject to EBA description protocols.

Reviewed By: _____ P.Eng.

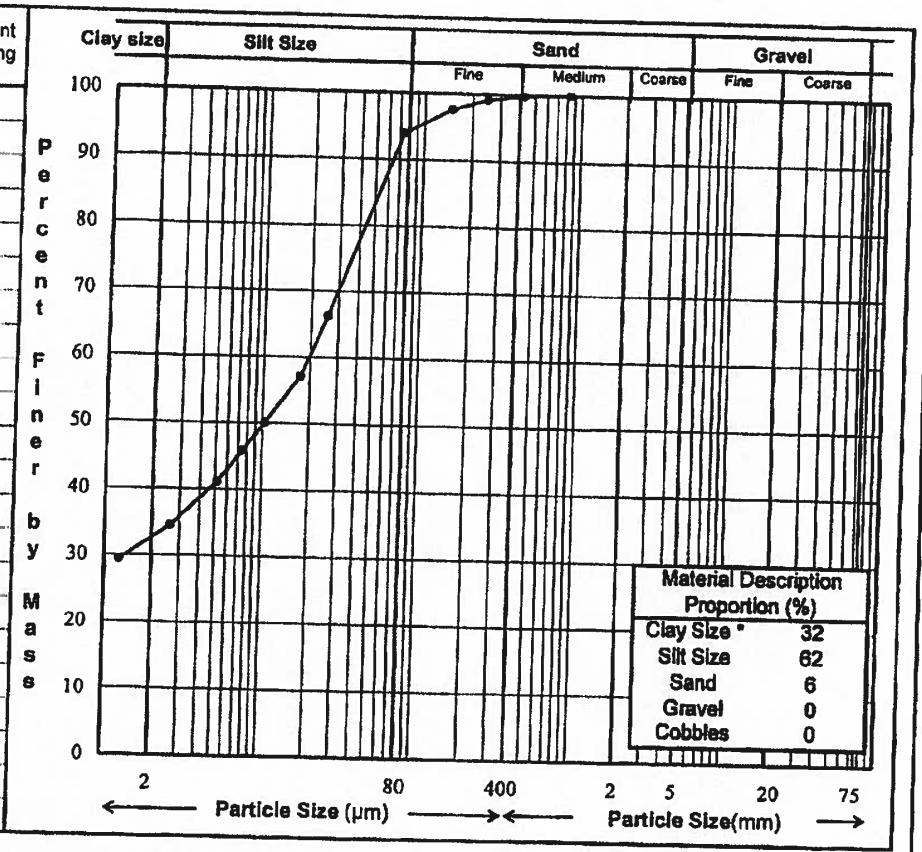
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS (Hydrometer) TEST REPORT

ASTM D422

Project:	Septic Field Feasibility Assmt. Edgewooc	Sample No.:	
Client:	Stewart Weir & Company	Borehole/ TP:	10BH003
Project No.:	L12101796	Depth:	0.6-0.9m
Location:	N-5513306 E-0369004	Date Tested	July 12, 10 By: AF
Description **:	clay, silty, tace sand		

Particle Size	Percent Passing
100 mm	
75 mm	
50 mm	
38 mm	
25 mm	
19 mm	
13 mm	
10 mm	
5 mm	
2 mm	
850 µm	100
425 µm	100
250 µm	99
150 µm	98
75 µm	94
26 µm	66
17 µm	57
10 µm	50
8 µm	46
5 µm	41
3 µm	35
1 µm	29



Remarks: * The upper clay size of 2 µm is as per the Canadian Foundation Manual.

** The description is behaviour based & subject to EBA description protocols.

Reviewed By: _____ P.Eng.

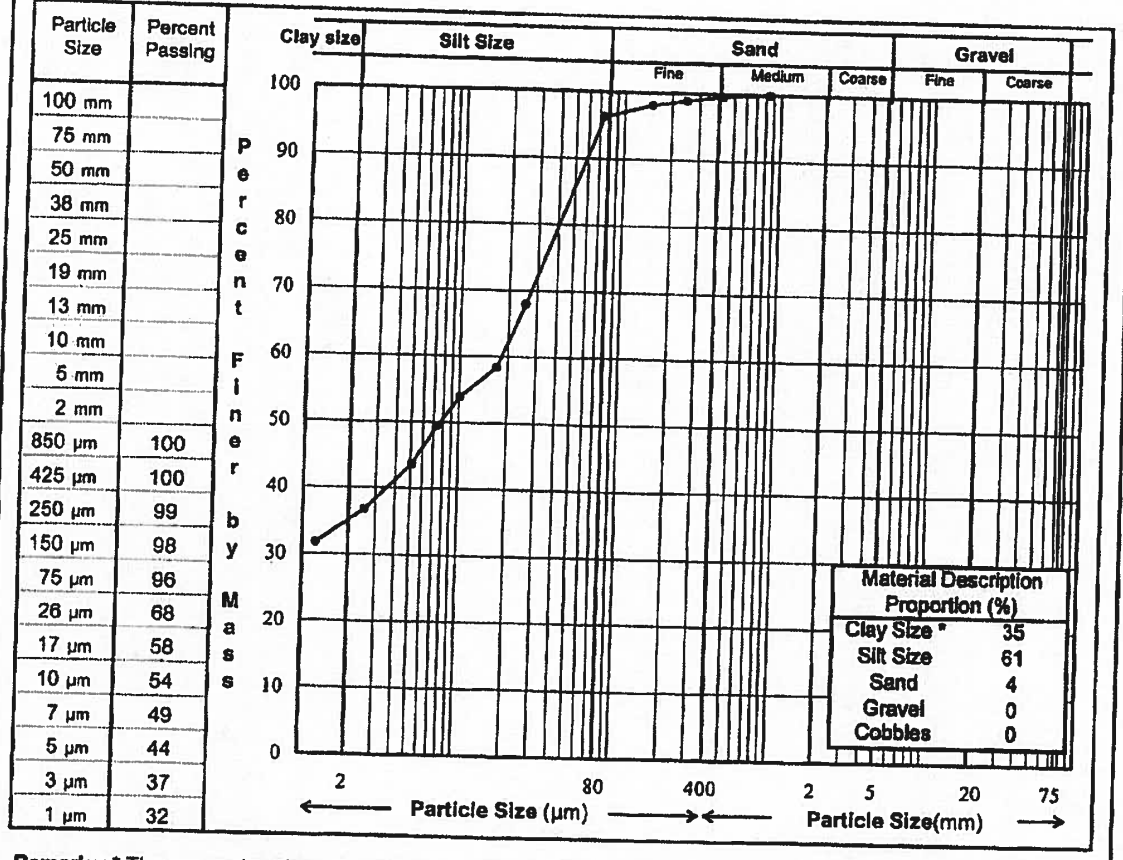
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS (Hydrometer) TEST REPORT

ASTM D422

Project:	Septic Field Feasibility Assmt. Edgewoo	Sample No.:	
Client:	Stewart Weir & Company	Borehole/ TP:	10bh004
Project No.:	L12101796	Depth:	0.6-0.9m
Location:	N5513296 E-0369040	Date Tested	July 12, 10 By: AF
Description **:	clay, silty, trace sand		

Particle Size	Percent Passing
100 mm	
75 mm	
50 mm	
38 mm	
25 mm	
19 mm	
13 mm	
10 mm	
5 mm	
2 mm	
850 µm	100
425 µm	100
250 µm	99
150 µm	98
75 µm	96
26 µm	68
17 µm	58
10 µm	54
7 µm	49
5 µm	44
3 µm	37
1 µm	32



Remarks: * The upper clay size of 2 µm is as per the Canadian Foundation Manual.

** The description is behaviour based & subject to EBA description protocols.

Reviewed By: _____ P.Eng.

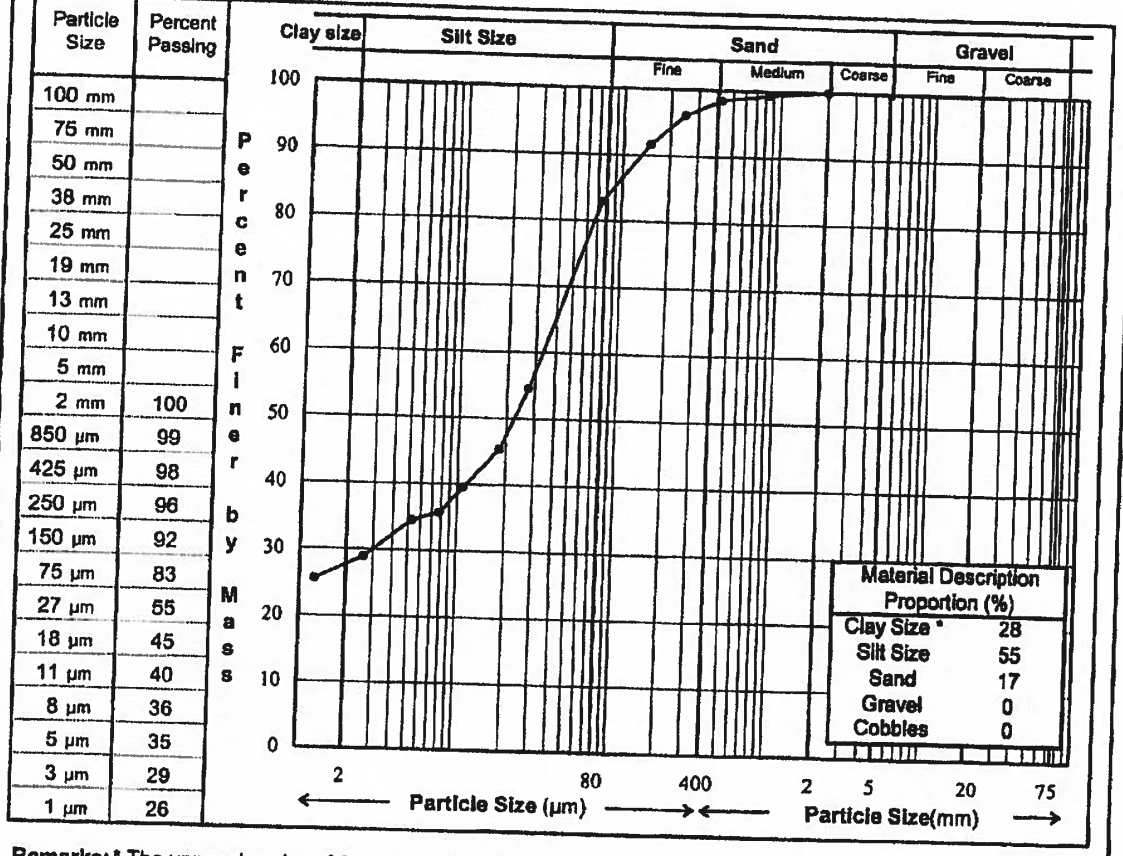
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS (Hydrometer) TEST REPORT

ASTM D422

Project:	Septic Field Feasibility Assmt.	Sample No.:	
Client:	Stewart Weir & Company	Borehole/ TP:	10BH005
Project No.:	L12101796	Depth:	0.6-0.9m
Location:	N-5513444 E-0369011	Date Tested	July 12, 10 By: AF
Description **:	clay, silty, some sand		

Particle Size	Percent Passing
100 mm	
75 mm	
50 mm	
38 mm	
25 mm	
19 mm	
13 mm	
10 mm	
5 mm	
2 mm	100
850 µm	99
425 µm	98
250 µm	96
150 µm	92
75 µm	83
27 µm	55
18 µm	45
11 µm	40
8 µm	36
5 µm	35
3 µm	29
1 µm	26



Remarks: * The upper clay size of 2 µm is as per the Canadian Foundation Manual.

** The description is behaviour based & subject to EBA description protocols.

Reviewed By: _____ P.Eng.

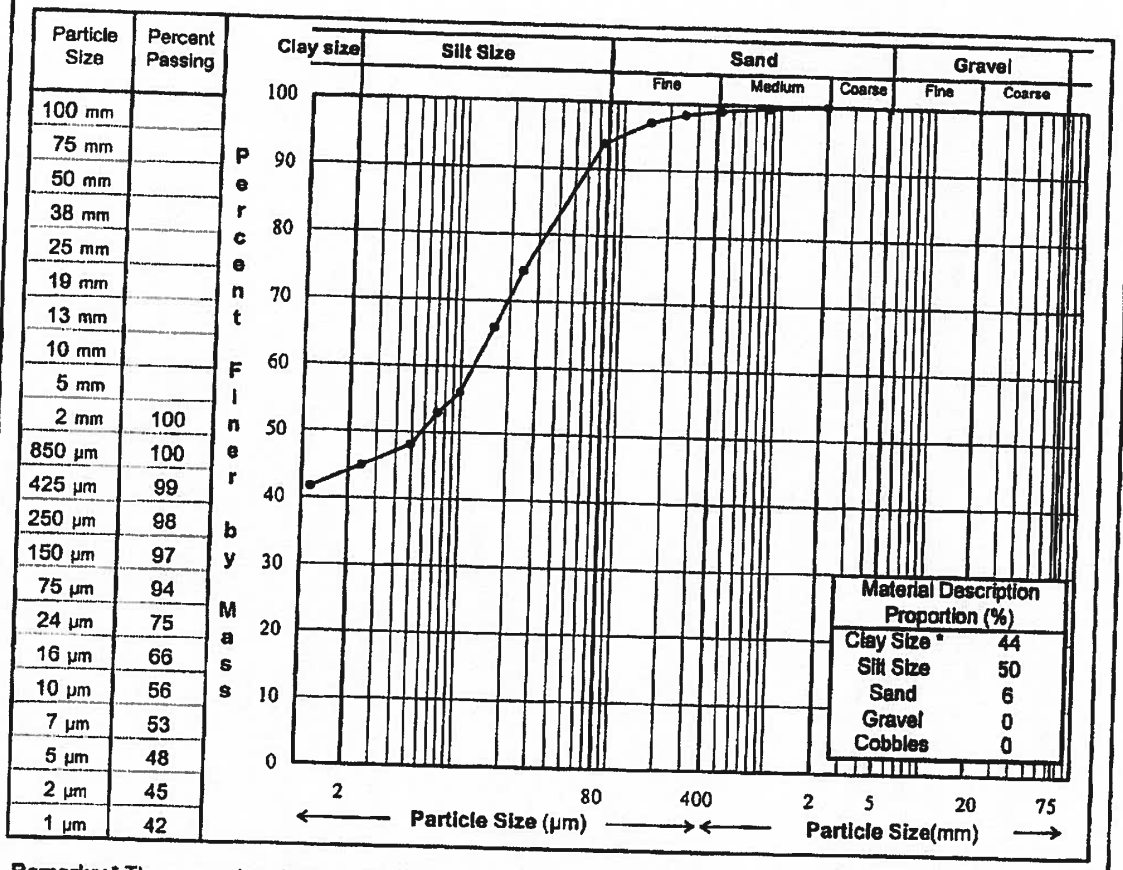
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS (Hydrometer) TEST REPORT

ASTM D422

Project:	Septic Field Feasibility Assmt.	Sample No.:		
Client:	Stewart Weir & Company	Borehole/ TP:	10BH006	
Project No.:	L12101796	Depth:	0.6-0.9m	
Location:	N-5513231 E-0368713	Date Tested	July 12, 10	By: AF
Description **:	clay and silt, trace sand			

Particle Size	Percent Passing
100 mm	
75 mm	
50 mm	
38 mm	
25 mm	
19 mm	
13 mm	
10 mm	
5 mm	
2 mm	100
850 µm	100
425 µm	99
250 µm	98
150 µm	97
75 µm	94
24 µm	75
16 µm	66
10 µm	56
7 µm	53
5 µm	48
2 µm	45
1 µm	42



Remarks: * The upper clay size of 2 µm is as per the Canadian Foundation Manual.

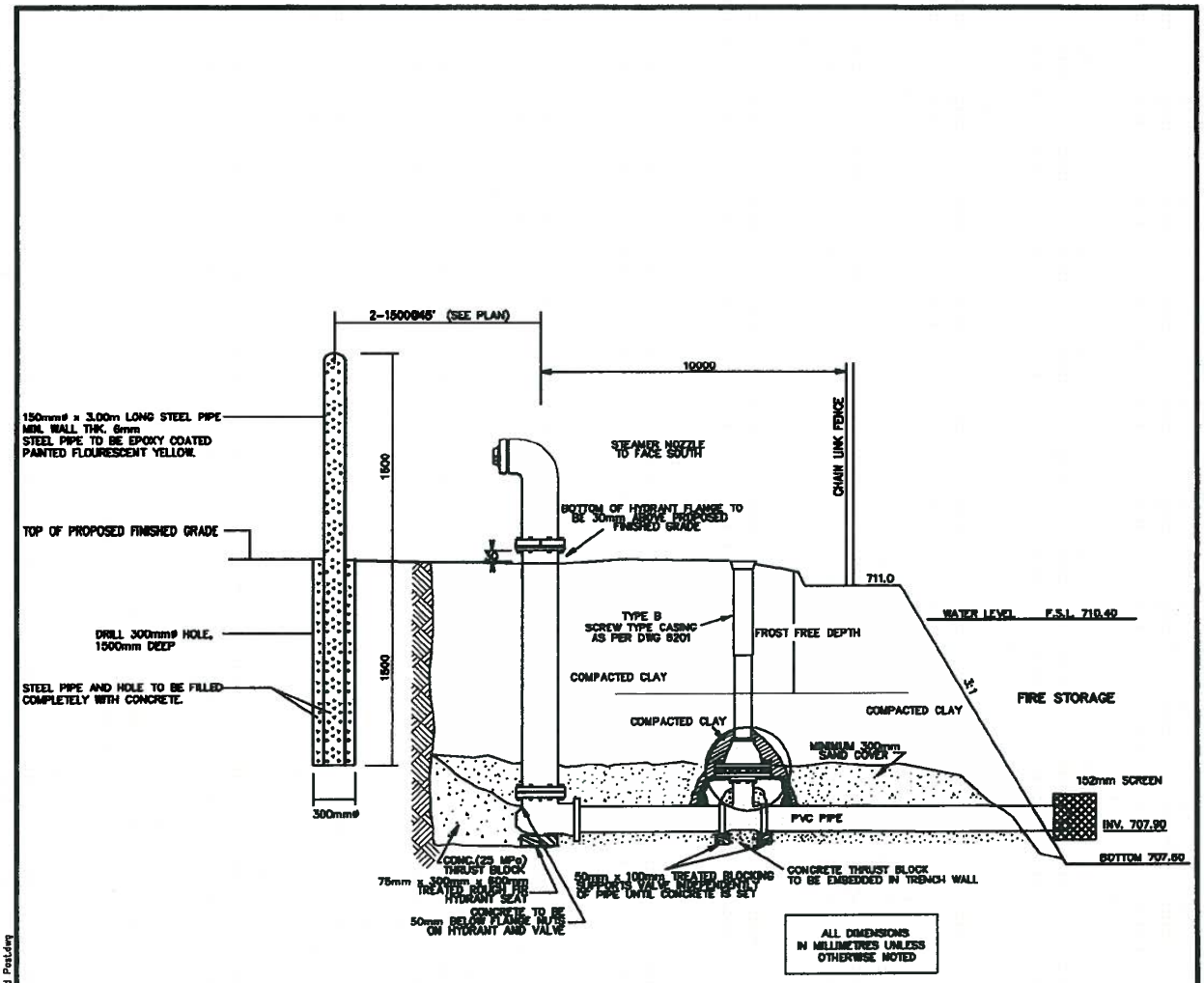
** The description is behaviour based & subject to EBA description protocols.

Reviewed By: _____ P.Eng.

EBA Engineering Consultants Ltd.

APPENDIX 'C'

DRY HYDRANT DETAILS



NOTES:

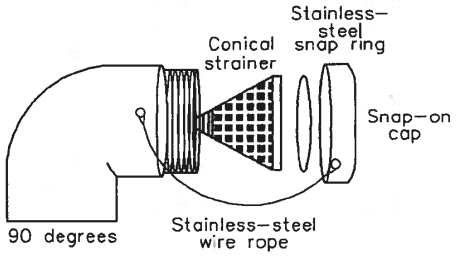
1. GRADE AT BOTTOM OF HYDRANT FLANGE IS 30mm PLUS 20mm PER METRE DISTANCE FROM FACE OF CURB ABOVE ESTABLISHED (EXISTING OR PROPOSED) CURB TOP ELEVATION.
2. SEE DRAWING 6303 FOR CATHODIC PROTECTION REQUIREMENTS

COUNTY OF LETHBRIDGE

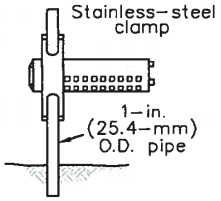
General Municipal Servicing Standards

Rev.	Stewart Weir		TYPICAL DRY HYDRANT CONNECTION	
Rev.				
Rev.				
Rev.	File No.:	Design:	Approved:	Figure 3053
Date: 2008	Drawn: JES	Scale NTS		

\\Sws.ca\Files\Jobs\33000\33737 LB35 Edgewood Stables Ltd\CAD\Hydrant Details\3053-Dry Hydrant Connection with Guard Post.dwg

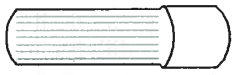


Dry hydrant head #227
[Specify 90 degrees, 45 degrees,or straight and 4½-in.(114-mm), 5-in.(127-mm),or 6-in.(152-mm) NH male thread]



Strainer support clamp #230

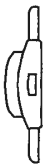
6-in. (152mm) PVC dry hydrant strainer #224 (for horizontal installations)



6-in. (152mm) barrel strainer #234 (for vertical installations)

SUCTION HOSE ADOPTERS

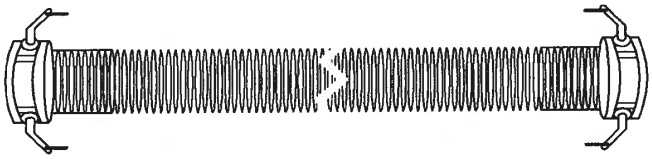
Long-handle quick connect #225Q [specify size 4-in.-6in. (101.5mm-152mm)]



Long-handle female to male NST thread #225FM [specify size 2½-in.-6in. (63.5mm-152mm)]

Long-handle double female swivel NST thread #225DF [specify size 2½-in.-6in. (63.5mm-152mm)]

Reflective signs: 6-in.x12-in. (152-mmx304.8-mm) self adhesive label #229L; 12-in.x16-in. (304.8-mmx406-mm) aluminum sign (less post) #229S



10-ft(3.05-m) flex-suction hose (clear) #226
[specify hose diameter 4 in. (102mm), 5 in.(127mm), or 6 in.(152mm) and NH threads or quick-locking couplings]

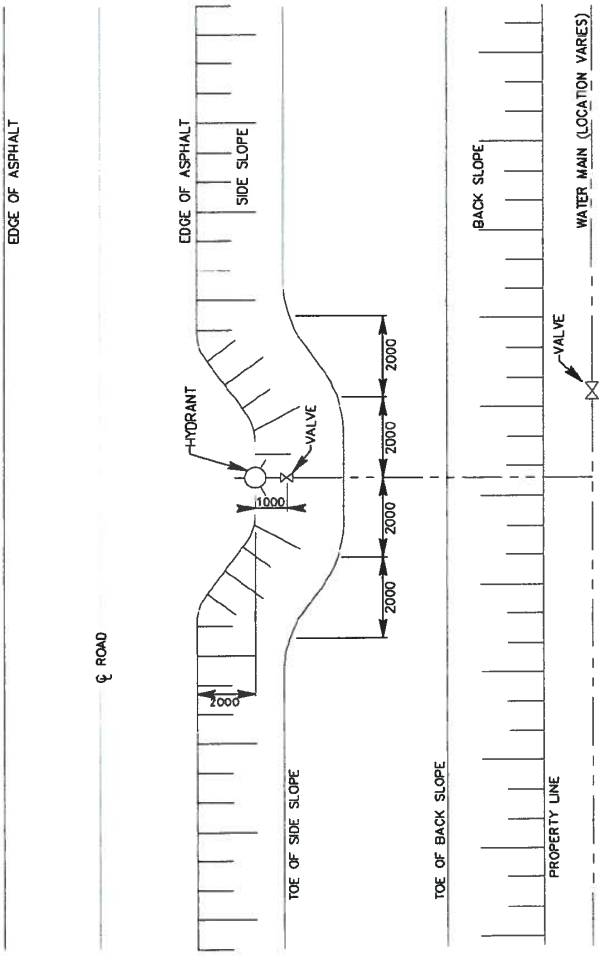
ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED

COUNTY OF LETHBRIDGE

General Municipal Servicing Standards

Rev.	Stewart Weir	DRY HYDRANT CONNECTION DETAIL	
Rev.			
Rev.			
Rev.	File No.:	Design:	Approved:
Date: 2008	Drawn: EPL	Scale NTS	Figure 3054

\\Eng-cvl\Files\Jobs\33000\33737 LB35 Edgewood Stables Ltd\CAD\Hydrant Details\3054-Dry Hydrant Connection Detail.dwg



NOTE:

1. WATER MAIN AND HYDRANTS MAY BE LOCATED EITHER SIDE OF ROAD
2. STREET LIGHTS TO BE OPPOSITE SIDE OF WATERMAIN.

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED

COUNTY OF LETHBRIDGE

General Municipal Servicing Standards

Rev.	Stewart Weir	TYPICAL SHOULDER WIDENING FOR FIRE HYDRANT–RURAL STANDARD	
Rev.			
Rev.			
Rev.	File No.:	Design:	Approved:
Date: 2008	Drawn: T.L.B.	Scale NTS	Figure 3055

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APPENDIX 'D'

ARCHITECTURAL CONTROLS

RESTRICTIVE COVENANT AND ARCHITECTURAL CONTROLS

EDGEWOOD ESTATES

THIS AGREEMENT made this ___ day of _____, 2011.

BETWEEN:

EDGEWOOD STABLES LTD.
(Grantor)

-and-

EDGEWOOD STABLES LTD.
(Grantee)

WHEREAS EDGEWOOD STABLES LTD. (at the time of the registration of these Restrictive Covenants and Architectural Controls) is the registered owner of the development known as **EDGEWOOD ESTATES** situated in the County of Lethbridge, in the Province of Alberta (hereinafter called the "Subdivision"), and is in the process of developing the Subdivision into a series of country residential lots;

AND WHEREAS the controls contained herein are intended to implement standards of appearance and quality in the Subdivision by attaching certain restrictions, covenants and conditions restrictive in nature in respect of the exterior design, use (to the extent that use is a function of design) and development, to each lot located within the Subdivision (hereinafter referred to as a "Lot", or referred to as the said "Lands" when referring collectively to all of the lots located within the Subdivision) and each and every part thereof and the buildings, structures, improvements and premises to be erected on each and every part of the Lands;

AND WHEREAS the restrictions, covenants and conditions herein are not meant to detract or derogate in any way from any applicable laws, regulations or by-laws (including but not limited to land use by-laws of the County of Lethbridge or the City of Lethbridge as may be enacted from time to time), but are in addition and supplementary to, the restrictions, covenants and conditions contained in any such laws, regulations and by-laws;

AND WHEREAS the Grantor covenants with the Grantee to observe and comply with the following restrictions and architectural controls, the burden of which shall run with each of the lots:

PLAN 111 _____, Block 2, Lots 1-10 INCLUSIVE

EXCEPTING THEREOUT ALL MINES AND MINERALS

(S.W. ¼ SEC. 29, TWP. 9, RGE. 21, W4M)

hereinafter called the "Lands".

This covenant shall be binding upon and inure to the benefit of the respective heirs, executors, administers, successors and assigns of the parties.

BUILDING SPECIFICATIONS

1. No residence shall be constructed on the Lands which encroaches upon or straddles the property line with any lot adjacent to it on either side, regardless of ownership of the adjacent lot.

2. No residence shall be constructed on the Lands which shall have a floor area above grade of less than 2000 square feet. The measurements may include the outer walls of the residence but shall exclude any garage, patio, porch, or the like part of a building. Only one detached dwelling may be erected on a lot. All other County of Lethbridge Bylaws will apply.

3. No building shall be constructed on the Lands more than two stories above front-grade.

4. No mobile home, trailer, manufactured home, or previously built residence or building or structure shall be allowed to be placed upon or moved onto any of the aforedescribed Lands (quality house packages which require substantial on-site construction and assembly may be permitted with the approval of the Development Manager).

5. A granny suite or legal suite may be constructed upon the said Lands, but must:

    i Be approved under the County of Lethbridge Land Use Bylaw, accompanied by an approved development permit from the County.

    ii Exist within the framework of the home itself, such as a suite above the garage or in the basement, indistinguishable to an onlooker from the street; or

    iii Exist within the said Lands, but outside of the main residence and conform with the exterior finish and overall look of the main residence and fall within the proper permitted setbacks of the municipality and must be no more than 900 square feet (83.612 square meters) and must be included as part of the overall design concept of the house and yard development and must be approved in size and location by the Development Manager and must have sufficient parking on the said Lands.

6. Lot owners must consult the Development Manager for any building development that incorporates a walk-out basement, prior to proceeding with construction, to determine if the same is permitted, and if so, what requirements there may be with respect to the same.

7. No building shall be constructed upon the said Lands until the "Plot and Design Plan" has been approved by the Development Manager. The Plot and Design Plan must be approved in accordance with the overall plan and layout of the development as determined by the Development Manager. In particular, the orientation of the driveway and garage of each residence will be determined by the Development Manager to ensure maximum green space exists between adjacent Lands. The decision of the

Development Manager is final. It is strongly recommended that the owner seek direction from the Development Manager prior to making final decisions regarding a house plan.

8. Each residence constructed on the Lands is encouraged to be designed so as to explore the potential of each lot to arrive at a design which resolves the needs of the family intended to occupy the residence in terms of layout and finish. The design of the residence shall reflect the unique features of each lot in terms of view, orientation, climate, access and integration of indoors with outdoor space. Each home design must be conceived as a simple and honest expression of present day architectural forms and without the use of eclectic or regional styles.

9. Exterior finishes will be approved on case-by-case basis.

SETBACKS

10. All buildings or structures shall be within the parameters of the building envelope and must comply with the Land Use Bylaw of the County of Lethbridge in force at the time of the granting of the Development Permit.

ROOFING MATERIALS

11. No roof shall be constructed on any residence on said Lands with a roof pitch of less than 5:12. No metal cladding or metal sheeting on the roof area shall be permitted unless approved by the Development Manager. Tar and gravel roofing, and rolled roofing are not acceptable. Acceptable roofing materials include:

    i architectural asphalt shingles;

    ii laminate shingles;

    iii concrete tiles;

    iv shakes;

    v slate tiles; or

    vi metal roofing simulating slate, shakes, or shingles

12. The roof colour of any permanent structure (including but not limited to the residential dwelling and garage) located on a Lot shall be compatible with the colour of the exterior finish of the residential dwelling on such Lot.

GARAGE

13. No garage shall be constructed on the Lands unless it is a minimum of double attached or detached garage of the minimum dimensions of 6.7056 meters by 7.3152 meters (22 feet by 24 feet) and must be included as part of the overall design concept of the house and yard development and the exterior finish must be similar to that of the main residence and the roof line and pitch of the roof on the garage must be compatible with the design of the main residence.

14. Any detached garage or other outbuilding must be set back no less than 7.62 meters (25 feet) from the property line.

15. Any detached garage being built on the property must be approved in size and location by the Development Manager.

16. The Lands shall not be used for the storage of

- Abandoned vehicles or equipment, non-functioning vehicles or equipment, auto or truck bodies, and other vehicles or equipment not currently in a functioning state; and
- Gasoline, diesel fuel or similar fuel or volatile, explosive or dangerous substances other than those used for ordinary household or acreage purposes in quantities reasonably appropriate for ordinary household or acreage use.

CODE & BY-LAW COMPLIANCE

17. No building shall be constructed on the Lands unless it meets or exceeds the Alberta Building Code and complies with all By-laws of the County of Lethbridge, in the Province of Alberta. Prior to construction of a building (including accessory structures such as detached garages, shed, etc.) the lot owner must obtain all necessary local, provincial and federal permits including a development permit from the County of Lethbridge, regardless of obtaining approval for construction by the "Development Manager."

LANDSCAPING

18. A "Landscaping plan" for the front portion of each yard must be included with each Design Plan showing the driveways, sidewalks, fencing, ground cover and planting material. No ponds will be allowed on the lots.

FENCING & LIGHTING

19. No individual fence shall be constructed which does not comply with the Land Use By-Law of the County of Lethbridge and the location of which must be approved by the Development Manager. All fences must be maintained in a structurally sound and esthetically pleasing condition. No lot owner is required to construct a fence.

20. All fencing materials must be approved by the Development Manager. The approved materials are a 4 ft. in height, polyester powder coated black chain link fence for any back and side yards. Simulated wrought iron, stone or brick will be accepted for architectural feature fences. It is preferred that trees and shrubs be used wherever windbreak or privacy is desired.

21. If Lot owners choose to have a lighted gate post(s), the light(s) must coordinate with the chosen streetlights. The placement and height will be standard throughout the subdivision to provide a consistency of light. The developer will supply the details per request.

ANIMALS

22. Owners of any lot may keep domestic animals, but domestic animals are restricted to dogs and cats.

LOT GRADING AND RETAINING WALLS

23. No construction shall be carried out on the Lands until a "lot grading" plan is approved by the Development Manager. The plan must include the finished floor levels for all levels of the house including the bottom of footings and garage elevations. The finished sod grades at the house must be shown as well as arrows indicating drainage patterns, or swales. The grade at each corner of the lot shall be compatible with that of its neighboring land as to achieve efficient service water drainage away from that house and other developments and must not change existing drain patterns or block or interfere in any with the drainage ditch along the boulevard. Any deviation from the recommended grade levels must be presented in writing to the Development Manager and a written decision must be required before any deviation from the recommended grade levels is carried out on the said Lands. The cost of retaining walls situated on a Lot shall be the responsibility of the Lot Owner. All retaining walls and their foundations are to be within Lot boundaries. Landowners are responsible for ensuring that drainage courses are protected and maintained. Landowners are responsible for adhering to final lot grade requirements.

24. Any Owner which has an easement for a drainage corridor on their Lot shall not suffer or permit dirt, fill, loan, gravel, paper, other debris, weeds snow, ice, or slush (collectively referred to as "material") to fill or other wise accumulate or remain upon the said lands and which would:

    - Restrict, impair, impede, alter or otherwise interfere with the drainage across said lands including, without limiting the generality of the foregoing drainage a grass swale, concrete or asphalt gutter or other drainage gutter or other drainage control structure which may be erected on the said lands.

    - Alter, remove, damage or other wise interfere with any drainage control fence, grass swale, concrete or asphalt drainage gutter or other drainage control structure which may be erected on the said lands.

PROCEDURE FOR DEVELOPMENT APPROVALS

25. All parties constructing any structure on the aforedescribed Lands must submit the following to the Development Manager:

    - Plot and design plan showing all building locations, setbacks, driveways, sidewalks, fences and Landscaping;
    - Lot grading plan, showing all grades and lot corner elevations;
    - Landscaping plan showing the Landscaping design of the front portion of the yard;
    - House plans showing the layout of each level including roof design and dimensions including:
        i Building elevation of each side of the house showing window types and sizes, finishes, roof, elevations, chimneys, flues and vents; and

ii Cross sections showing foundation and footing elevations and all dimensions, in particular the relationship between all levels including the garage;

- Completed development and permit application forms; and
- A sample or description of all exterior finishing material including colour schemes.

26. All requested and provided information will be processed by the Development Manager within one week of receipt if the information is deemed acceptable. If the application does not comply with the Architectural Controls or other by-laws and regulations, then the application will be returned to the applicant marked "unacceptable".

27. No Lot Owner shall submit an Application to the Development Manager that does not include the requirements contained in Paragraph 32 above.

28. The decision of the Development Manager is final and binding and, in order to avoid delays, it is recommended that a preliminary consultation be made with the Development Manager prior to the application submission.

29. There shall be no deviation from the plans contained in an approved Application unless the same is consented to in writing by the Development Manager.

30. In the event:

- a building on the property is not completed in its entirety in accordance with the Architectural Controls and the approved plans, or
- the workmanship on the building is judged by the Development Manager at its sole discretion to be incompatible with the Architectural Control;

The Developer may, but is not obligated to;

- Complete the building in accordance with the Architectural Controls, or the approved plans, as the case may be; or
- Replace the unacceptable workmanship, all at the purchaser's expense.

31. Any monies expended by the Developer to complete the building in accordance with the Architectural Controls, or the approved plans, as the case may be, or replace unacceptable workmanship shall become a charge on the building being built and a caveat or other charging document may be registered by the Developer against title to the property and the Developer may apply the Architectural Controls Security Deposit to any such monies expended; and, take all steps available to it at law to collect any other such monies so expended.

Prior to construction of a building (including accessory structures such as detached garages, shed, etc.) the lot owner must obtain all necessary local, provincial and federal permits including a development permit from the County of Lethbridge, regardless of obtaining approval for construction by the "Development Manager."

MAINTENANCE

32. Every lot owner shall keep his lot, including gardens and all improvements thereon, in good order and repair including but not limited to the seeding, watering and mowing of grass, the pruning and cutting of all trees and shrubbery, and the painting, or other appropriate external care, of all buildings and other structures in the manner and with the frequency that is consistent with good property management.

33. All lots/acreages must be cared for in a husbandly manner in order to maintain high quality land investments

GENERAL

34. The Developer and the Development Manager shall be responsible for the interpretation of the Architectural Controls and may modify any of the provisions stated therein at their sole discretion. Any dispute which may arise in connection with the Architectural Controls shall be determined by the Developer whose decision shall be final and binding.

35. Failure on the part of the Developer or the Development Manager to enforce promptly and fully the conditions, covenants, and restrictions of the Architectural Controls shall not be deemed to be a waiver of the right of the Developer to enforce the conditions, covenants and restrictions of the Architectural Controls.

36. All owners shall be expected to take normal precautions to prevent damage to installed improvements. In particular, they shall:

    - Protect all service lines including telephone, cable, electricity, gas, and water lines on the owner's property and extending to the adjoining Lands.
    - Protect driveway accesses, culverts, roads, ditches, etc., when it is necessary for vehicles to be driven across them.
    - Keep the road in front of the lot clean during construction, and keep the ditch and catch basin free of debris and in working order at all times.
    - Avoid placing excess soil or constructions debris on adjacent lots.

37. Any damage to installed improvements noticed prior to construction must be identified to the Development Manager at the time of discovery. The Manager will record the damage, and attempt to identify the party responsible for causing the damage. If this can be determined, the Development Manager will attempt to recover the cost to repair the damage from the party causing the damage. Any damage to improvements not identified prior to construction will be assumed to be caused by the owner, unless the owner can identify a third party who caused the damage. If the Development Manager is unable to recover the cost to repair the damage from the third party, the owner shall become responsible for the cost of the repair. Any damage caused by the owner must be repaired at the owner's cost.

38. The Lot Owner shall take all measures necessary to protect any and all survey pins located on each Lot. If it is required to replace a damaged or missing survey pin, the same must be done by an Alberta Land Surveyor, and the cost of the same shall be at the sole expense of the Lot Owner.

39. Any owner of any lot within the Development may enforce the Architectural Controls or other Controls of this Restrictive Covenant.

40. Each lot shall be deemed to form part of a Building Scheme, the land use and building restrictions and conditions contained in the Restrictive Covenants and Architectural Controls shall be deemed to be covenants running with each of the lots and shall be binding upon each individual owner of each lot and for the benefit of the owners of all the other lots set out herein and their successors in title or such subsequent plan of subdivision of the same area as may hereinafter be filed. The Developer, or any inspection agency contract by it, shall in its sole discretion determine the date when completion of construction has occurred.

41. Notice from the Development Manager as required in this document may be affected by personal service, regular mail to the last address provided by the Owner to the Development Manager, or by posting the Notice to the Door of the dwelling located upon the Owner's lands. Notice from the Owner to the Development Manager as required in this document shall be affected by personal service upon the Development Manager.

42. Should any one or more provisions of this Restrictive Covenant be determined to be illegal, unenforceable or otherwise invalid, the same will be severed, but all other provisions will remain in effect.

43. IT IS NOT THE INTENTION OF THESE RESTRICTIVE COVENANTS OR ARCHITECTURAL CONTROLS TO IMPOSE ANY LIABILITIES ON THE DEVELOPER OR THE DEVELOPMENT MANAGER.

44. Time shall be of the essence of these Restrictive Covenants and Architectural Controls.

45. The failure by the Developer, Development Manager or any consultant hired in connection with these Controls to require performance of any provision of these Controls shall not affect their right to require performance at any time thereafter, nor shall a waiver of any breach or default of these Controls constitute a waiver of any subsequent breach or default or a waiver of the provision itself unless the subsequent breach or default was waived in writing by the Development Manager.

46. If a lot has natural drainage, access must be granted for maintenance, if maintenance is required.

PROPOSED TIME LINE SCHEDULE FOR DEVELOPMENT UPON THE AFORESAID LAND

47. Purchase of Lands by Owner.

48. Initial consultation with the Development Manager.

49. Drawings (Plot and Design Plan, Driveway Placement, Grading Plan, House Plan, etc.) completed with a Stamp of Approval by Development Manager.

50. Upon title being made available, and upon receipt of the required permits, the builder can proceed with the construction phase that must be completed within four (4) years of the Closing Date.

51. Upon completion of the house and other structures in accordance with the approved plans and permits, the Owner of the Lands notifies the Development Manager that he can make an inspection.

52. After inspection and acceptable completion within the terms of the Restrictive Covenant and Architectural Controls set out herein, the Architectural Control deposit shall be refunded by the Development Manager to the owner.

IN WITNESS WHEREOF the Grantor and Grantee have set their hands and seals effective as of this _____ day of _____, 2011.

GRANTOR
Edgewood Stables Ltd.

_____
Signature

Seal

GRANTEE
Edgewood Stables Ltd.

_____
Signature

Seal

BEST SMALL & MEDIUM EMPLOYERS IN CANADA

info@swg.ca
www.swg.ca

Stewart Weir

AGENDA ITEM REPORT

Title:	Capital Projects Update
Meeting:	Council Meeting - 17 Oct 2024
Department:	Development & Infrastructure
Report Author:	Devon Thiele

APPROVAL(S):

Cole Beck, Chief Administrative Officer — Approved - 11 Oct 2024

STRATEGIC ALIGNMENT:


Governance


Relationships


Region


Prosperity

EXECUTIVE SUMMARY:

This report provides an update as of the third quarter of 2024 on the ongoing capital projects within the County, outlining their progress, challenges, and any significant changes. A breakdown of each project, including timelines and budget status, is included in the attached document. The purpose of this update is to ensure council remains informed on the status of these projects.

As this is the first update report from the department, administration would like to also review the preferred frequency and content with Council.

RECOMMENDATION:

That County Council receive this report for Information.

REASON(S) FOR RECOMMENDATION(S):

This report is meant to inform County Council on the ongoing capital projects of the Development and Infrastructure Department.

PREVIOUS COUNCIL DIRECTION / POLICY:

None.

BACKGROUND INFORMATION:

The County's capital projects are designed to address key infrastructure needs, improve service delivery, and meet the community's long-term growth objectives. These projects, ranging from water and wastewater upgrades to road and bridge improvements, are critical for sustaining the County's operational efficiency and supporting its development goals.

ALTERNATIVES / PROS / CONS:

None

FINANCIAL IMPACT:

N/A

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

Council Projects Update

County Capital Project Update Summary

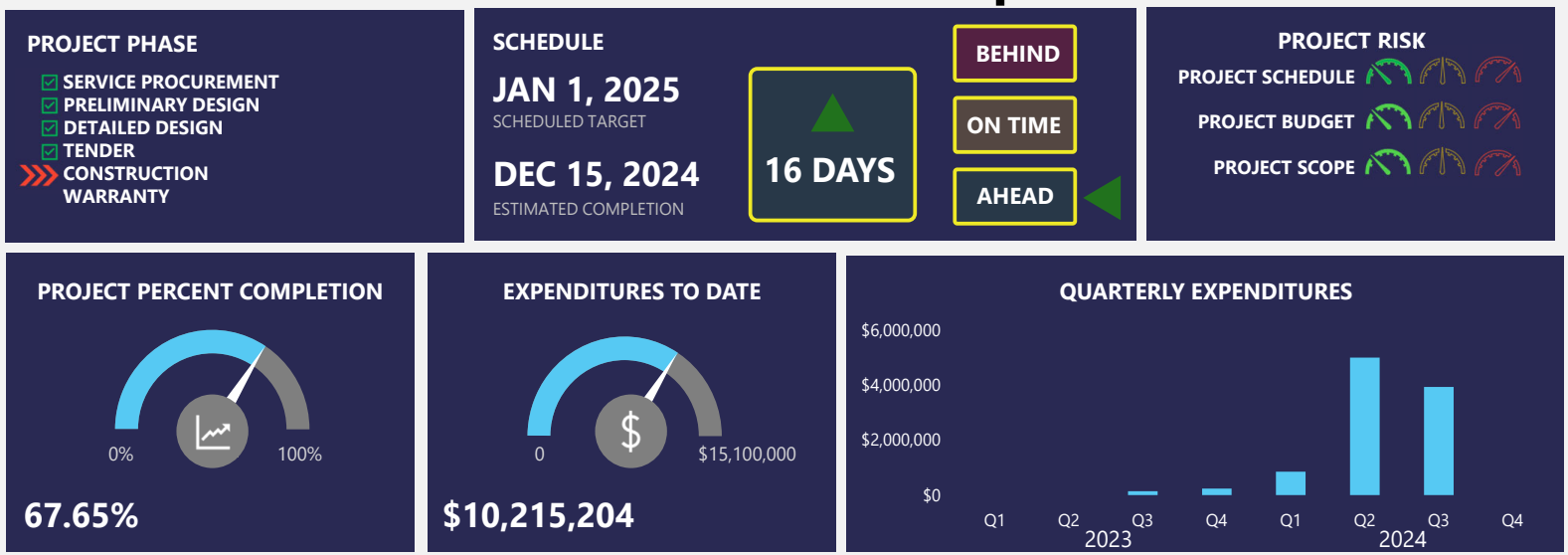
PROJECT NAME	SCHEDULE	BUDGET	SCOPE	IMPACT TO PUBLIC	COMMENTS
Eastern Industrial Transmission Pipeline				LOW	Project progressing ahead of schedule and on budget.
Admin Roof Replacement				LOW	Project completed, in warranty phase.
McNally Road Re-Construction				LOW	Project completed, in warranty phase.
RAVE Industrial Park Upgrades				MEDIUM	Project is in construction phase, nearing completion.
Bridge File 79589 Replacement				LOW	Project completed, in warranty phase.
Bridge File 79601 Replacement				LOW	Project tender awarded, in pre-construction phase.
Bridge File 70758 Replacement				LOW	Project in service procurement phase.
Bridge File 79230 Repair				MEDIUM	Project in detailed design phase.
Westview Road Cement Stabilization				MEDIUM	Project is in construction phase, nearing completion.
Shaughnessy Lagoon & Road Upgrades				MEDIUM	AMWWP grant application will be submitted again, with construction scheduled for 2025.
Broxburn Wastewater Treatment				LOW	Project is in regulatory review phase. Also reviewing design alternatives.
Park Lake Road Overlay				LOW	Project completed, in warranty phase.
Mountain Meadows Slope Failure				LOW	Project to be re-tendered in January 2025.
Bulk Water Fill Access Control and Monitor				HIGH	Project in material procurement phase.

Regional Projects Update Summary

PROJECT NAME	NOTES
Horsefly Spillway	Ph 1 is complete (Taber lake to Oldman River). Ph 2 in land acquisition and engineering phase. Ph 3 tender is awarded and construction will commence in the irrigation off-season.
Malloy Ph 2B	Contract awarded, pre-construction meeting scheduled for Oct 15.
South Coaldale Stormwater Management	Additional grant funding received, project will be presented during Capital Budget deliberations.
Regional Water Concept Development Study	In the data acquisition and engineering phase.
Regional Wastewater Concept Development Study	In the data acquisition and engineering phase.
Accessibility to Water Through Enhanced Irrigation Networks Study	ACP grant submitted to the Province.

Eastern Industrial Transmission Pipeline

SCOPE
Installation of 18.3km of pipeline for regional water delivery



Notes: Project is progressing ahead of schedule and within budget.

Admin. Building Roof Replacement

SCOPE
Replacement of roof with slope package

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ☑ DETAILED DESIGN
- ☑ TENDER
- ☑ CONSTRUCTION
- WARRANTY

SCHEDULE

May 31, 2024
SCHEDULED TARGET

July 29, 2024
ACTUAL COMPLETION

59 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

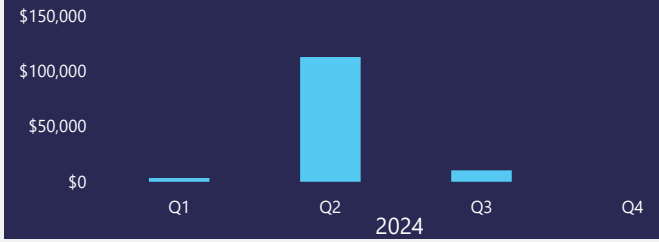
PROJECT PERCENT COMPLETION

100%

EXPENDITURES TO DATE

$127,125

QUARTERLY EXPENDITURES



Notes: Project schedule was delayed due to re-design of slope package after inconsistent slopes found upon removal of existing roof.

McNally Road Re-Construction

SCOPE
Grade widening, re-construction and paving of 1.7km of road

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ☑ DETAILED DESIGN
- ☑ TENDER
- ☑ CONSTRUCTION
- WARRANTY

SCHEDULE

Nov 15, 2023
SCHEDULED TARGET

Aug 1, 2024
ACTUAL COMPLETION

260 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

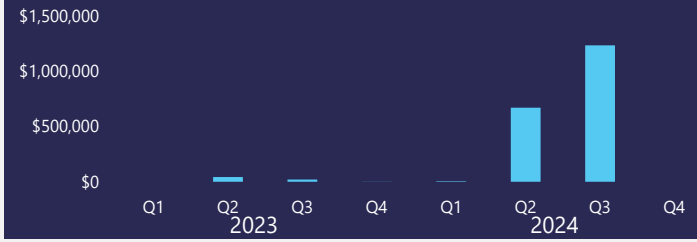
PROJECT PERCENT COMPLETION

100%

EXPENDITURES TO DATE

$2,075,671

QUARTERLY EXPENDITURES



Notes: Project schedule was delayed due to a 6-month delay in Fortis infrastructure relocations require before construction could commence.

RAVE Industrial Park Upgrades

SCOPE
Water, Wastewater, Stormwater, and Road upgrades

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ☑ DETAILED DESIGN
- ☑ TENDER
- CONSTRUCTION
- WARRANTY

SCHEDULE

Nov 15, 2023
SCHEDULED TARGET

Oct 15, 2024
ESTIMATED COMPLETION

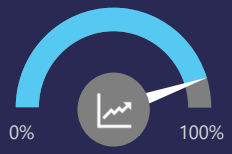
336 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

PROJECT PERCENT COMPLETION

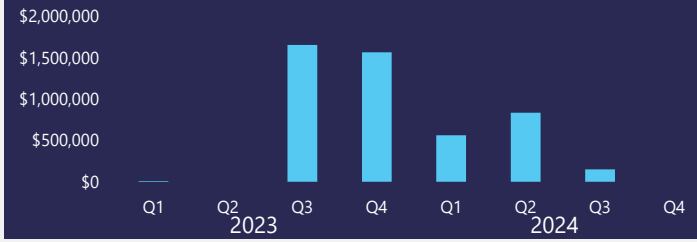


91.3%

EXPENDITURES TO DATE

$4,772,245

QUARTERLY EXPENDITURES



Notes: Project schedule delayed due to multiple utility conflicts and relocations required, Fortis installation delays, and contractor delays.

Bridge File 79589 Replacement

SCOPE
Replacement of standard bridge with twin culverts

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ☑ DETAILED DESIGN
- ☑ TENDER
- ☑ CONSTRUCTION
- WARRANTY

SCHEDULE

March 15, 2024
SCHEDULED TARGET

Feb 16, 2024
ACTUAL COMPLETION

28 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

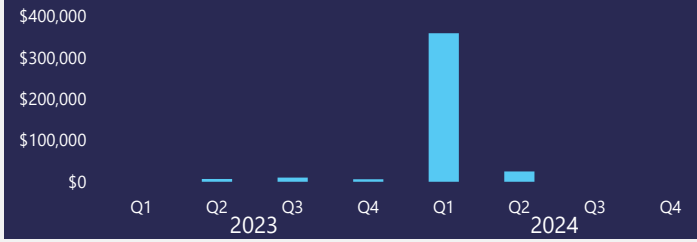
PROJECT PERCENT COMPLETION

100%

EXPENDITURES TO DATE

$407,885

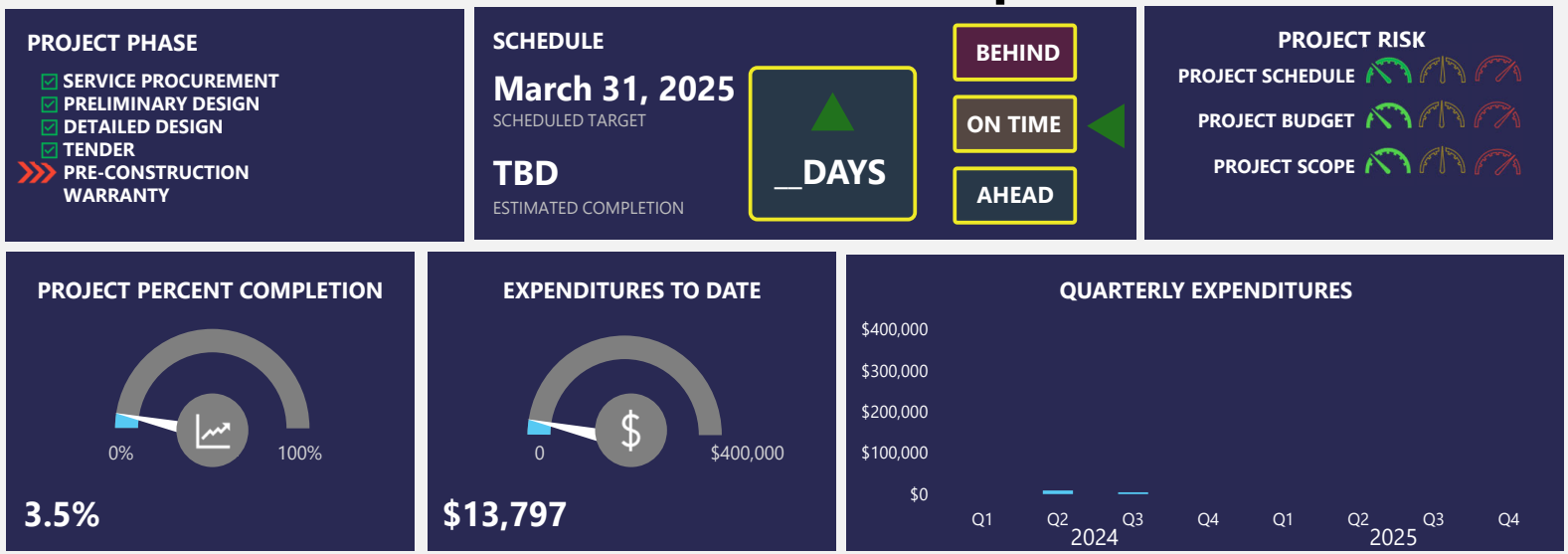
QUARTERLY EXPENDITURES



Notes: Project was completed ahead of schedule and is in the warranty phase.

Bridge File 79601 Replacement

SCOPE
Replacement of bridge culvert with larger bridge culvert



Notes: Project schedule yet to be submitted.

Bridge File 70758 Replacement

SCOPE
Replacement of culvert bridge with larger culvert bridge

PROJECT PHASE

- SERVICE PROCUREMENT
- PRELIMINARY DESIGN
- DETAILED DESIGN
- TENDER
- CONSTRUCTION
- WARRANTY

SCHEDULE

Aug 31, 2025
SCHEDULED TARGET

TBD
ESTIMATED COMPLETION

_DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

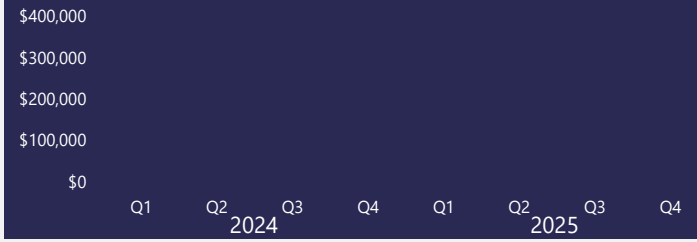
PROJECT PERCENT COMPLETION

0%

EXPENDITURES TO DATE

$0

QUARTERLY EXPENDITURES



Notes: Project Request for Proposal (RFP) advertised for consultants to bid on. This bridge is not crossing an Irrigation District canal, and thus we are not bound by the irrigation season to complete this project.

Bridge File 79230 Repair

SCOPE
Repair of Major Bridge at CPKC Marshalling yard

PROJECT PHASE

- [x] SERVICE PROCUREMENT
- [x] PRELIMINARY DESIGN
- [ ] DETAILED DESIGN
- [ ] TENDER
- [ ] CONSTRUCTION
- [ ] WARRANTY

SCHEDULE

Aug 31, 2025
SCHEDULED TARGET

TBD
ESTIMATED COMPLETION

_DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

PROJECT PERCENT COMPLETION

2.6%

EXPENDITURES TO DATE

$5,265

QUARTERLY EXPENDITURES

Notes: Tender will be advertised shortly to contractors. This bridge is not crossing an Irrigation District canal, and thus we are not bound by the irrigation season to complete this project.

Westview Road Cement Stabilization

SCOPE
Cement Stabilization and Double Chip seal of 5.5km of road

PROJECT PHASE

- [x] SERVICE PROCUREMENT
- [x] PRELIMINARY DESIGN
- [x] DETAILED DESIGN
- [x] TENDER
- [ ] CONSTRUCTION
- [ ] WARRANTY

SCHEDULE

Oct 30, 2024
SCHEDULED TARGET

Oct 30, 2024
ESTIMATED COMPLETION

0 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

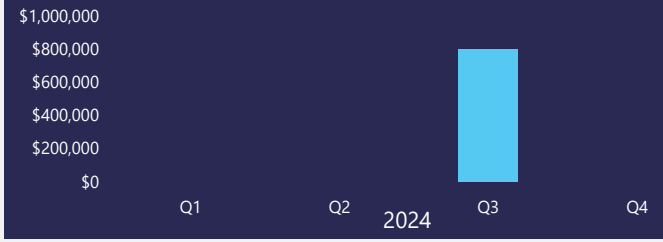
PROJECT PERCENT COMPLETION

95%

EXPENDITURES TO DATE

$801,283

QUARTERLY EXPENDITURES



Notes: Project schedule extended due to additional scope added to project. Chip sealing will be completed by Oct 11th with line painting occurring prior to November.

Shaughnessy Lagoon & Road Upgrades

SCOPE
Lagoon and transfer structure rehab, replacement of Logan St

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ⋙ DETAILED DESIGN
- TENDER
- CONSTRUCTION
- WARRANTY

SCHEDULE

Nov 31, 2024
SCHEDULED TARGET

Nov 31, 2025
ESTIMATED COMPLETION

365 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

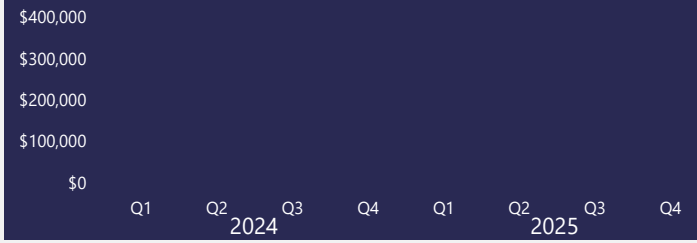
PROJECT PERCENT COMPLETION

0%

EXPENDITURES TO DATE

$0

QUARTERLY EXPENDITURES



Notes: Alberta Municipal Water/Wastewater Partnership (AMWWP) grant applied for, with notification at the end of June 2024 that we were not successful. Project has been carried forward to 2025 and we will re-apply for AMWWP grant. If not successful, we will proceed with the project utilizing the budget originally identified.

Broxburn Wastewater Treatment

SCOPE
Replacement of wastewater treatment system

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ☑ DETAILED DESIGN
- ☑ TENDER
- REGULATORY APPROVALS (AEPA, AHS)
- CONSTRUCTION
- WARRANTY

SCHEDULE

Nov 15, 2025
SCHEDULED TARGET

Nov 15, 2025
ESTIMATED COMPLETION

0 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

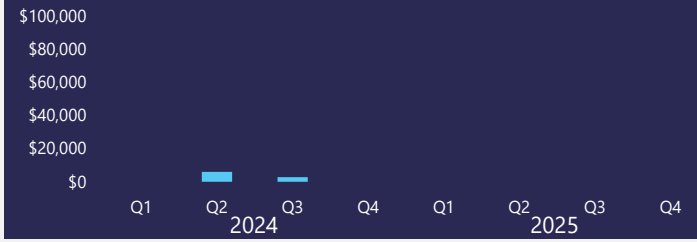
PROJECT PERCENT COMPLETION

0.5%

EXPENDITURES TO DATE

$8,859

QUARTERLY EXPENDITURES



Notes: Project is facing regulatory approval concerns as Alberta Environment and Protected Areas (AEPA) and Alberta Health Services (AHS) initially indicated wastewater re-use would be considered. They have now indicated they probably will not approve the design as proposed. We are working with AEPA and AHS, but are also reviewing alternative treatment methods to ensure compliance.

Park Lake Road Overlay

SCOPE
Asphalt overlay of 6.4km of road

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ☑ DETAILED DESIGN
- ☑ TENDER
- ☑ CONSTRUCTION
- WARRANTY

SCHEDULE

Nov 30, 2023
SCHEDULED TARGET

Nov 13, 2023
ACTUAL COMPLETION

17 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

PROJECT PERCENT COMPLETION

100%

EXPENDITURES TO DATE

$1,724,568

QUARTERLY EXPENDITURES

Notes: Project was completed ahead of schedule and is in the warranty phase.

Mountain Meadows Slope Failure

SCOPE
Rehabilitation of slope failure

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ☑ DETAILED DESIGN
- ⋙ TENDER
- PRE-CONSTRUCTION
- WARRANTY

SCHEDULE

Nov 30, 2024
SCHEDULED TARGET

July 31, 2025
ESTIMATED COMPLETION

244 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

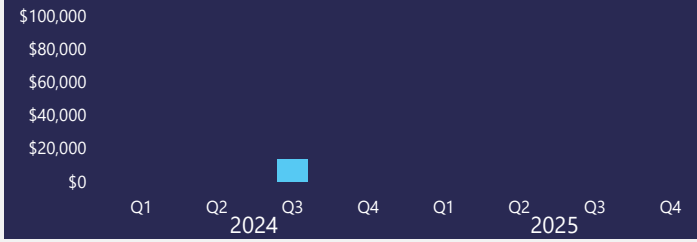
PROJECT PERCENT COMPLETION

5.5%

EXPENDITURES TO DATE

$13,800

QUARTERLY EXPENDITURES



Notes: Tender was issued to Pre-qualified contractors. Contractor scheduling prohibited competitive pricing and tender was cancelled as a result. Project will be re-tendered in the spring of 2025 to ensure better pricing. As an interim measure, concrete blocks will be placed at the toe of the slope to help prevent further regression.

Bulk Water Fill Access Control and Monitor

SCOPE
Replace outdated hardware and software systems

PROJECT PHASE

- ☑ SERVICE PROCUREMENT
- ☑ PRELIMINARY DESIGN
- ☑ DETAILED DESIGN
- MATERIAL PROCURMENT
- CONSTRUCTION
- WARRANTY

SCHEDULE

March 31, 2025
SCHEDULED TARGET

March 31, 2025
ESTIMATED COMPLETION

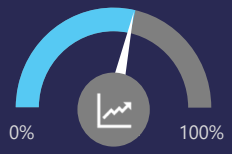
0 DAYS

BEHIND
ON TIME
AHEAD

PROJECT RISK

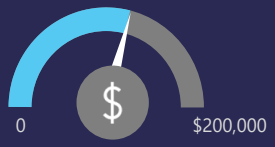
PROJECT SCHEDULE
PROJECT BUDGET
PROJECT SCOPE

PROJECT PERCENT COMPLETION



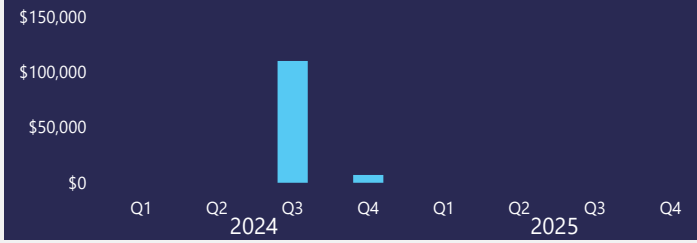
58.9%

EXPENDITURES TO DATE



$117,783

QUARTERLY EXPENDITURES



Notes: Purchase order issued to vendor and materials are on order. Quotes received for electrical installation. Communications and Implementation plan is being developed. The intent is to run the current system and new system in parallel, conduct robust testing of the new system once installed, and once we ensure all systems are running properly, we will switch over to the new system.

AGENDA ITEM REPORT

Title:	St. Joseph School Sponsorship Request - Esports Program Development 2024
Meeting:	Council Meeting - 17 Oct 2024
Department:	Corporate Services
Report Author:	Kurtis Krizsan

APPROVAL(S):

Cole Beck, Chief Administrative Officer — Approved - 15 Oct 2024

STRATEGIC ALIGNMENT:

 **Governance** ☐

 **Relationships** ☒

 **Region** ☐

 **Prosperity** ☐

EXECUTIVE SUMMARY:

The County has received a letter from the St. Joseph School regarding a sponsorship request to assist with the development of their Esports Program.

RECOMMENDATION:

That County Council deny the request for funding of the St. Joseph School Esports Program as per County Policy #161.

REASON(S) FOR RECOMMENDATION(S):

The recommendation has been made based solely on the eligibility criteria of the Donation Policy #161, specifically;

Section 1. Eligibility

a. Consideration of providing support of community programs, organizations, events and activities through donations shall be limited to those that demonstrate any of the following:
(i) a need for financial support or specific in-kind from the County;
(ii) are held for the enjoyment and benefit of the general public;
(iii) are hosted on a yearly basis or recognize significant milestones events; and/or
(iv) take place within the County boundaries.

b. The following are <u>not eligible</u> for support under this policy
(i) private functions;
(ii) capital facilities and equipment including requests for gravel donations;
(iii) youth and adult sports teams and associated programs/events, activities and school reunions; and
(iv) programs, organizations, events and activities that receive support from the County through other programs or policies.

(v) major County and inter-County events (eg. Lethbridge International Air Show).

PREVIOUS COUNCIL DIRECTION / POLICY:

Council has a Donantions Policy in place and has made various donations in the past.

BACKGROUND INFORMATION:

St. Joseph School is seeking funding for the purchase of computers in order to develop an Esports program for the youth within the community of Coaldale. Esports is the competitive play of specific video games that requires dedication, training and a high level of teamwork. Esports is an international industry that will soon exceed all other sports organizations in both participation and viewership. St Joseph school is requesting $2,000 from the County to go towards the total funding required to begin the Esports program of $10,000.

ALTERNATIVES / PROS / CONS:

County Council support the funding request:
PRO - Would provide financial support for the Coalhurst High School Esports program initiative.
CON - Would contradict the the Donation Policy.

FINANCIAL IMPACT:

If the $2,000 donation funding was approved it could come from the donation reserve that has a current balance of $16,172.

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

161 Donations to Community Organizations REVISED 2021
County of Lethbridge Donation Request for St. Joseph School

Lethbridge County Policy Handbook

EFFECTIVE: **August 1, 2013** **SECTION: 100 NO. 161 Page 1 of 7**

APPROVED BY: **County Council** **SUBJECT: Donations to Community Organizations, Programs, Events & Activities**

REVISED DATE: **September 2, 2021**

Purpose

- To establish consistent guidelines for Council to donate financial resources or provide in-kind support to community programs, organizations, events & activities.
- To provide the authority to the Chief Administrative Officer (CAO) regarding requests for donations up to a value of $200.
- To provide clear procedures for Administration and Council to provide and respond to requests for donations.

Policy Statement

Lethbridge County appreciates the positive contributions that community organizations make to the quality of life in the County, and recognizes that municipal government support may be required to help further the goals of community programs, organizations, events and activities.

Policy Guidelines and Procedures

1. Eligibility
   a. Consideration of providing support of community programs, organizations, events and activities through donations shall be limited to those that demonstrate any of the following:

      (i) a need for financial support or specific in-kind from the County;
      (ii) are held for the enjoyment and benefit of the general public;
      (iii) are hosted on a yearly basis or recognize significant milestones events; and/or
      (iv) take place within the County boundaries.

   b. The following are not eligible for support under this policy

      (i) private functions;
      (ii) capital facilities and equipment including requests for gravel donations;

(iii) youth and adult sports teams and associated programs/events, activities and school reunions; and

(iv) programs, organizations, events and activities that receive support from the County through other programs or policies.

(v) major County and inter-County events (eg. Lethbridge International Air Show).

2. Donations

   a. Donations may be cash or in-kind contributions
   b. In-kind contributions are donations that do not involve a direct cash contribution but instead might include providing promotional items or County services or other materials or supplies.

3. Criteria

   a. In evaluating each application, decisions will be based on merit with consideration being given to the following:

      (i) evidence for the need;
      (ii) number of local residents served;
      (iii) quality of management (established track record, proposal well thought out, etc.);
      (iv) number of local volunteers;

(v) mitigation of barriers to services for people with mental and physical disabilities and minority groups;
(vi) level of involvement with other community partners;
(vii) agreement to acknowledge the County's contribution in all publicity related events or activities relating to the event.

4. Funding Allotment & Allocation
   a. The County shall support this based on the following:

      (i) Applicants are able to request a maximum amount of $500 or up to $1,000 for in-kind donations.
      No gravel will be granted. The funds will be provided from the Donations Reserve. Any donations exceeding the policy limits will be allocated from Councillor's Discretionary Reserve funds.

5. Grant Applications
   a. Applications must be completed in full and contain the following:

      (i) name, address and contact information for the organization;
      (ii) the amount of financial support being requested;
      (iii) a description of the program, event or activity and associated dates and timelines;
      (iv) a budget identifying the proposed revenue and expenditure pertinent to the request;
      (v) an explanation of how the County's support will be recognized during the program, event or activity.

(vi) completed application forms must be submitted to the County. If the application is not properly filled-out, the grant application will not be considered.

(vii) must be received at least 30 days before the date of the need for support.

b. County Council shall be the deciding authority on all applications, except for donation requests of $200 or less, which the CAO will have the authority to approve.

6. Accountability of Funds

a. Applicants will be notified in writing once a final decision on their application has been made.

b. Applicants who are provided with support pursuant to this policy shall be accountable for the expenditures of funds provided.

c. The entire amount of financial support provided must be used exclusively for the program, organization, event or activity identified in the application.

d. The community programs, activities and events must be conducted within six months of the date the donation is approved.

e. If the community programs, activities or events do not occur within the allotted time, a written letter of request for an extension must be submitted. If an extension is not received, or if an extension is not granted, the community organization or group shall return all the funds provided by the County.

f. The County's support must be recognized during the program, event or activity in the manner described in the application.

g. Organizations, programs, events and actives receiving support pursuant to this policy must be conducted in accordance with all applicable laws, statutes, and regulations.

7. Door Prizes

a. If the request is for a door prize, silent auction item or other similar promotional item, a written request is required. Funds for door prizes, silent auctions items or promotional items of a value of a $200 or less shall be decided upon by the CAO.

--- DONATION REQUEST APPLICATION ---

Community Organization:_____

Name:

_____

Address: _____

Phone Number/Cell Number: _____

Board of Directors (Names & Positions): _____

_____

_____

_____

Amount of Funding Requested or Description of In-Kind Donation Requested:
$ _____

Description of Request including Timelines:

_____

_____

_____

_____

Other sources of funding: _____

Total cost of program, event or activity: $ _____

Total Budget:

_____

_____

Description of how Lethbridge County's contribution may be recognized:

_____

_____

Other supporting information (Please attach separate sheet if necessary):

_____

_____

_____

_____
Name (please print)

_____
Signature on behalf of Community Organization

_____
Date

Phone Number: _____

Email: _____

Address: _____

_____

***** Donations made by Lethbridge County are not to be regarded as a commitment by the County to continue such donations in the future.**

--- DONATION REQUEST APPLICATION ---

Community Organization: ST. Joseph School

Name: Jennifer Morrison (Admin. Assistant)

Address: 1413 23 ave Coaldale, AB T1M1L6

Phone Number/Cell Number: 403-345-3373

Board of Directors (Names & Positions):

Brent Christensen - Principal

Bruce Gal - Associate Principal

Jennifer Morrison - Admin Assistant

Amount of Funding Requested or Description of In-Kind Donation Requested:
$ 2000

Description of Request including Timelines:

We are hoping to have our e-sports option up and running for our third quarter/second Semester starting Jan. 28/24.

Other sources of funding: School Fundraisers: Hot lunches

Total cost of program, event or activity: $ 10,000

Total Budget:

We have currently raised $4000 but we need $10,000 to buy all the equipment to get us started.

LETHBRIDGE COUNTY

Lethbridge County Policy Handbook

Description of how Lethbridge County's contribution may be recognized:
Sponsorship banner in E-sports lab, recognition on our social media sites, digital sign, newsletter

Other supporting information (Please attach separate sheet if necessary):
I have attached a copy of our business proposal

Jennifer Morrison
Name (please print)

Jennifer Morrison
Signature on behalf of Community Organization

September 25, 2024
Date

Phone Number: 403-345-3373

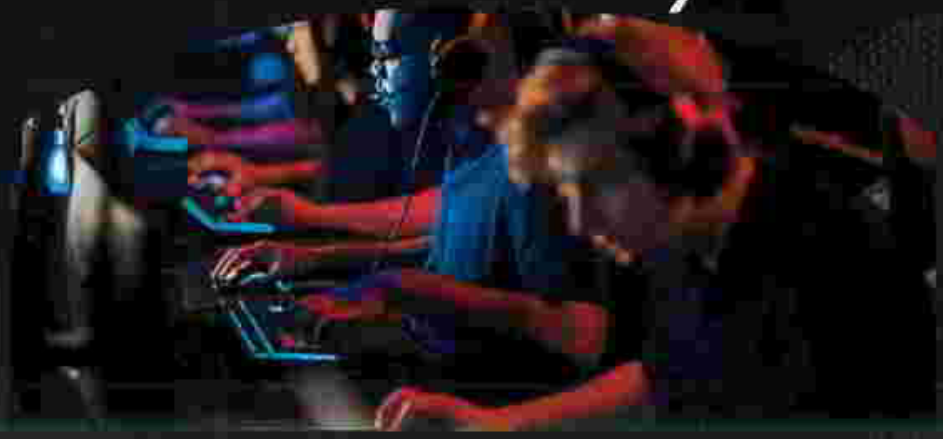
Email: morrisonj@holyspirit.ab.ca

Address: 1413 23 ave, Coaldale, AB T1M 1L6

***** Donations made by Lethbridge County are not to be regarded as a commitment by the County to continue such donations in the future.**

ST. JOSEPH SCHOOL

Business Proposal



E SPORTS

June, 2024

TABLE OF *Contents*

01

INTRODUCTION

eSPORTS

"How can you possibly call it a **sport**?"

Esports, or electronic sports, is a rapidly growing industry centered around competitive video gaming. It involves organized, multiplayer video game competitions, particularly between professional players, individually or as teams. These events draw large audiences both in-person and online, making Esports a significant player in the entertainment sector. As such, St. Joseph School is planning to launch a new Esports program for junior high students starting next year. This initiative aims to provide students with an engaging extracurricular activity that leverages their interest in video games to develop critical skills such as teamwork, strategic thinking, and problem-solving. To ensure the success of this program, we are seeking sponsorship to help fund the necessary equipment, including Nintendo Switch consoles, monitors, two 50-inch TVs, and a variety of games.

02

MARKET *Opportunity*

The Esports industry is experiencing exponential growth, with a global audience expected to reach 577 million by 2024. This surge in popularity presents a unique opportunity for educational institutions to integrate Esports into their programs, fostering a new avenue for student engagement and learning. As Esports gain mainstream recognition, schools that offer such programs position themselves at the forefront of innovative education, attracting students and families interested in modern, forward-thinking extracurricular options.

03

CURRENT *Situation*

St. Joseph School currently lacks the infrastructure to support an Esports program. While there is significant interest among students and parents, the school requires financial assistance to acquire the necessary technology. The equipment needed includes:

10 - Nintendo Switch consoles to offer a range of popular games suitable for competitive play.

10 - High-quality monitors to ensure a smooth and immersive gaming experience.

10 - office chairs

2 - 50-inch TVs for spectators and training sessions, enhancing the community and educational aspects of the program.

A selection of Nintendo Gift cards to purchase online games that are both competitive and educational, fostering a well-rounded Esports curriculum.

04

TARGET *Audience*

The primary target audience for the Esports program at St. Joseph School includes junior high students interested in video gaming and competitive sports, eager to develop skills like teamwork and strategic thinking. Additionally, parents seeking educational and constructive activities for their children are a key demographic, likely to support a program that offers both entertainment and educational value. Potential sponsors—companies and organizations recognizing the marketing and community engagement potential within Esports and education—are essential for the initiative's success, benefiting from increased brand visibility and association with a forward-thinking, youth-focused program.

The Esports program at St. Joseph School will emphasize a balanced lifestyle, integrating a crucial health component. While gaming develops cognitive and strategic skills, promoting physical health and well-being is equally important. The program will encourage regular exercise, incorporating physical activity into daily routines, and structured breaks during practice sessions to ensure students move, stretch, and avoid prolonged inactivity. Additionally, it will advocate for outdoor activities to balance screen time. This holistic approach aims to cultivate skilled gamers who also understand the importance of physical health.

05

Benefits for SPONSORSHIP

Sponsoring St. Joseph School's Esports program offers several benefits:

ESPORT CANADA

Brand Visibility: Sponsors will gain visibility among a young, tech-savvy demographic and their families, enhancing brand recognition and loyalty.

Community Engagement: Sponsors can demonstrate their commitment to education and community development, aligning their brand with positive, forward-thinking initiatives.

Marketing Opportunities: Sponsors can leverage the program for marketing campaigns, including logo placement on equipment, event banners, and promotional materials.

07

Budget ALLOCATION

To launch the Esports program at St. Joseph School, we need approximately $13,200 to cover the necessary equipment and resources. The budget allocation is as follows:

10 Nintendo Switches: $500 each
10 Monitors: $300 each
2 Big Screen TVs: $600 each
10 Office Chairs: $300 each
Gift Cards for Games: $1,000
The total budget required is $13,200. Here's a breakdown of the budget allocation:

Nintendo Switches: $5,000
Monitors: $3,000
Big Screen TVs: $1,200
Office Chairs: $3,000
Gift Cards for Games: $1,000

THANK You

The introduction of an Esports program at St. Joseph School represents a significant opportunity to enhance student engagement, develop essential skills, and position the school as a leader in innovative education. We are seeking sponsorship to help fund the purchase of Nintendo Switch consoles, monitors, two 50-inch TVs, and games. By partnering with us, sponsors will not only contribute to the growth and success of our students but also benefit from increased brand visibility and community engagement.

403-345-3373

Sjoffice@holyspirit.ab.ca

1413 23 ave, Coaldale, AB

AGENDA ITEM REPORT

Title:	Request for Sponsorship - Agri-food Innovation Expo - November 26 - 28, 2024
Meeting:	Council Meeting - 17 Oct 2024
Department:	Administration
Report Author:	Mattie Watson

APPROVAL(S):

Cole Beck, Chief Administrative Officer — Approved - 11 Oct 2024

STRATEGIC ALIGNMENT:

 ☐ **Governance**

 ☒ **Relationships**

 ☐ **Region**

 ☒ **Prosperity**

EXECUTIVE SUMMARY:

A request for partnership (sponsorship) was received for the 2024 Agri-food Innovation Expo at the Agri-food Hub and Trade Centre, to be held November 26-28, 2024.

Sponsorship Levels range from $2,500 to $20,000. Administration has reviewed each option and determined a Silver Partner sponsorship would be a good fit. It includes an exhibitor booth, six passes for the event, multiple areas of recognition, an item in delegate bags and sponsorship of one of the nutritional breaks. After discussions with organizers, we would also have the opportunity to have our recent local business videos shown on the TV screens in the Agri-food Hub during the event.

Administration was planning to purchase a booth at the event prior to this request, at a cost of $950. A booth does not include additional registrations, which are $75/person for a single day and $150/person for the full conference, should members of Council wish to attend.

RECOMMENDATION:

That Council approve a Silver Partner sponsorship for the Agri-food Innovation Expo, at a cost of $7,500.

REASON(S) FOR RECOMMENDATION(S):

As Alberta's most productive agricultural community, Lethbridge County is also home to a growing number of agri-food processors. Providing sponsorship to this event can show the County's commitment to our agri-food industry and our support for innovation and sustainability in agriculture.

PREVIOUS COUNCIL DIRECTION / POLICY:

Council has provided sponsorship for agriculture-related events in the past, most recently the Canada's Outstanding Young Farmers Event at $5,000, to be held this year as well.

BACKGROUND INFORMATION:

This event focuses on bringing agri-food businesses together with experts and other organizations to learn how to grow and diversify their operations.

Topics include sustainability in agriculture (with the Whole Leaf CEO as a panelist), retail growth and export strategies, marketing, food safety, HR practices and more.

Event website: https://agrifoodexpo.ca/

ALTERNATIVES / PROS / CONS:

If the County does not provide sponsorship, this results in no funds being spent, but does not give the opportunity to be involved at a higher level and further show our commitment to growing and supporting our agri-food sector.

FINANCIAL IMPACT:

$7,500 for a Silver Partner Sponsorship.

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

ATTACHMENTS:

AFIE24_Partnership Opportunities


AGRI-FOOD
INNOVATION EXPO
2024
PARTNERSHIP
OPPORTUNITIES
agrifoodexpo.ca
AGRI-FOOD
INNOVATION EXPO
Nov. 26-28, 2024 | Lethbridge, AB
Agri-food Hub & Trade Centre
Lethbridge & District Exhibition

Helping agri-food businesses to build their toolkit.

The second annual Agri-Food Innovation Expo will take place at the Agri-food Hub & Trade Centre in Lethbridge, Alberta from November 26 - 28, 2024. This unique event is hosted in partnership with Lethbridge & District Exhibition and Westerner Park and will alternate between the two venues year over year. The goal of this expo is to provide the agri-food industry with an opportunity to gather and celebrate food production, share information, learn, and grow and most importantly to network with other like-minded food industry professionals.

Topics covered will include consumer trends, marketing, supply chain challenges and opportunities, food safety and sustainability, innovative food technology and production systems, as well as business solutions such as financing and attracting investment.

Participants will leave the event with a "toolkit" of knowledge that will help them as they develop and expand their businesses and create new opportunities in the sector.

To learn more about our partnership opportunities, visit AgriFoodExpo.ca or email sales@agrifoodexpo.ca.

2024 PARTNERSHIP OPPORTUNITIES

Presenting Partner $20,000

- Main stage welcome message & keynote introduction
- Reserved seating for conference attendees in the main hall
- Opportunity to provide a moderator for a main stage panel
- Partner highlight on one of our pre-event eblasts
- Logo recognition on the Agri-Food Innovation Expo website, program, signage and all available promotional materials
- Opportunity to display a 15-60 second static or video advertisement on digital signage at the venue
- Verbal recognition by emcee throughout the expo
- A full-page ad in the conference program
- 10'x20' exhibit space
- Ten complimentary registrations
- Social media recognition
- Opportunity to provide an item in the delegate bags
- Opportunity to provide pop-up banners to be placed in main hall

Gold Partner $10,000

- Branding on one of the following (4 available): Day 1 Lunch, Day 2 Lunch, Day 1 Breakfast, Day 2 Breakfast
- Partner highlight on one of our pre-event eblasts
- Logo recognition on the Agri-Food Innovation Expo website, program, signage and all available promotional materials
- Opportunity to display a 15-60 second static or video advertisement on digital signage at the venue
- Verbal recognition by emcee throughout the expo
- A 1/2-page ad in the conference program
- 10'x10' exhibit space
- Opportunity to provide a session host
- Eight complimentary registrations
- Social media recognition
- Opportunity to provide an item in the delegate bags
- Opportunity to provide pop-up banners to be placed in main hall

Silver Partner $7,500

- Logo recognition on the Agri-Food Innovation Expo website and program
- Verbal recognition by emcee throughout the expo
- A 1/4-page ad in the conference program
- 10'x10' Exhibit Space
- Branding on one of our nutritional breaks (4 available)
- Opportunity to provide a session host
- Six complimentary registrations
- Social media recognition
- Opportunity to provide an item in the delegate bags
- Opportunity to provide pop-up banners to be placed in main hall

Bronze Partner $4,500

- Logo recognition on the Agri-Food Innovation Expo website and program
- Verbal recognition by emcee throughout the expo
- A 1/4-page ad in the conference program
- 6' Micro booth (table top display)
- Opportunity to provide a session host
- Four complimentary registrations
- Social media recognition
- Opportunity to provide an item in the delegate bags
- Opportunity to provide pop-up banners to be placed in main hall

Friend Partner $2,500

- Logo recognition on the Agri-Food Innovation Expo website and program
- Verbal recognition by emcee throughout the expo
- Opportunity to provide a session host
- Two complimentary registrations
- Social media recognition
- Opportunity to provide pop-up banners to be placed in main hall
- Opportunity to provide an item in the delegate bags

2024 EXHIBIT OPPORTUNITIES

Exhibit spaces are also available for Agri-Food Innovation Expo 2024. Pelase see our website to learn more about how you can showcase your brand and products by purchasing an exhibit space.


AGRI-FOOD
INNOVATION EXPO

LETHBRIDGE & DISTRICT EXHIBITION

Westerner Park

AgriFoodExpo.ca

ALBERTA
MUNICIPAL AFFAIRS
Office of the Minister
MLA, Calgary-Hays

AR116752

October 2, 2024

Dear Chief Elected Officials:

The Government is Alberta is increasingly concerned about the federal carbon tax's impact on municipalities. For the provincial government to better understand the pressures municipalities are facing and advocate to the federal government on your behalf, we are requesting that all Alberta municipalities share data relating to the impact of the carbon tax on your operations, both directly and indirectly.

I am inviting you to share your municipality's feedback through this online survey, https://extranet.gov.ab.ca/opinio6/s?s=64826, which will be open until 4:00pm on October 9, 2024.

If you have any questions regarding the survey, I encourage you to connect with us at ma.engagement@gov.ab.ca.

I look forward to hearing your perspectives on this important issue.

Sincerely,

Ric McIver
Minister of Municipal Affairs

cc: Chief Administrative Officers

320 Legislature Building, 10800 - 97 Avenue, Edmonton, Alberta T5K 2B6 Canada Telephone 780-427-3744 Fax 780-422-9550

Remembrance Day Committee
General Stewart Branch No. 4
2019 4th Avenue South
Lethbridge, AB
T1J 5X5

October 10, 2024

Tory Campbell – Reeve
County of Lethbridge
#100 905 4 Avenue South
Lethbridge, AB
T1J 4E4
tcampbell@lethcounty.ca

Dear Tory:

Re: Remembrance Day Service 2024

The Remembrance Day Committee cordially invites you to participate as a VIP in this years Remembrance Day Parade and Service, Monday, November 11, 2024.

You are asked to be at the **Agri-food Hub & Trade Centre** no later than **10:00 A.M.** Upon arrival, please go to the **Designated Area in Trade Hall "C"**.

As you will be placing a wreath, we ask you to go to the designated area in Trade Hall "C when the **M.C. announces the wreath laying**. Your wreath will be provided. A representative must be present for a wreath to be laid.

Please RSVP to Jacquie McLean at 403-393-8362 or email jacksmc42@gmail.com.

We look forward to your participation in the Remembrance Day Service and thank you for your support and co-operation.

Yours truly

John Ross

John Ross
Chairman
Remembrance Day Committee

AGENDA ITEM REPORT

Title: Lethbridge County Council Attendance Update - September 2024
Meeting: Council Meeting - 17 Oct 2024
Department: Administration
Report Author: Candice Robison

APPROVAL(S):

Candice Robison, Executive Assistant — Approved - 09 Oct 2024

STRATEGIC ALIGNMENT:


Governance ☒


Relationships ☐


Region ☐


Prosperity ☐

EXECUTIVE SUMMARY:

To remain transparent to its citizens, Lethbridge County Council members report on their activities and events attended throughout the month.

RECOMMENDATION:

No motion required.

REASON(S) FOR RECOMMENDATION(S):

To remain transparent to the citizens of Lethbridge County.

PREVIOUS COUNCIL DIRECTION / POLICY:

A County Council update is provided monthly.

BACKGROUND INFORMATION:

In order to remain transparent to its citizens, Lethbridge County Council members provide a monthly report on their activities and events for the prior month.

ALTERNATIVES / PROS / CONS:

By not reporting activities and events attended by members of Council, citizens are unaware of the events occurring within the region and are unaware of the participation of Council with regards to community events.

FINANCIAL IMPACT:

None at this time.

LEVEL OF PUBLIC PARTICIPATION:

☒ Inform	☐ Consult	☐ Involve	☐ Collaborate	☐ Empower

ATTACHMENTS:

2024 September Lethbridge County Council Attendance

Lethbridge County Council Attendance
September 2024

Division 1
Councillor Lorne Hickey

September 4	FCSS Meeting & Executive Director Review
September 5	Lethbridge County Council Meeting
September 12	Town of Nobleford Open House
September 18	Green Acres Finance Meeting
September 19	Lethbridge County Council Meeting
September 20	Foothills Little Bow Municipal Association
September 25	Green Acres Board Meeting

Division 2
Reeve Tory Campbell

September 5	Lethbridge County Council Meeting
September 6	Mayors and Reeves
September 18	EDL
September 19	Lethbridge County Council Meeting
September 19	Chinook Arch Finance and Personnel Committee Meeting
September 20	Foothills Little Bow Municipal Association
September 23	National Day for Truth and Reconciliation Flag Raising
September 23	Lethbridge Herald Media
September 28	War Brides and Families 13th Annual Reunion

Division 3
Councillor Mark Sayers

September 5	Lethbridge County Council Meeting
September 7	Iron Springs Parade
September 12	Town of Nobleford Open House
September 19	Lethbridge County Council Meeting
September 20	Foothills Little Bow Municipal Association
September 23	National Day for Truth and Reconciliation Flag Raising

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Division 4
Deputy Reeve John Kuerbis

September 5	Lethbridge County Council Meeting
September 10	Meeting with Community Futures Executive Director
September 12	Meeting with Prairies Can Representative
September 17	Meeting with Community Futures Executive Director
September 19	Lethbridge County Council Meeting
September 20	Foothills Little Bow Municipal Association
September 24	Meeting with Community Future Executive Director

Division 6
Councillor Klaas VanderVeen

September 4	Link Pathway Meeting
September 5	Lethbridge County Council Meeting

Division 7
Councillor Morris Zeinstra

September 4	Link Pathway Meeting
September 5	Lethbridge County Council Meeting
September 7	Iron Springs Parade
September 12	Town of Nobleford Open House
September 19	Lethbridge County Council Meeting
September 20	Foothills Little Bow Municipal Association
September 23	National Day for Truth and Reconciliation Flag Raising